Project

Name	**Hospital**
Location	**Al Jubail/SA**
Altitude	**17 m**
Air	
Use actual instead of design static pressure (Component, Duct)	**No**, **Yes**
Hydronic	
Use actual instead of design head loss (Component, Pipe)	**No**, **Yes**
Steam	
Use actual instead of design pressure drop (Component, Pipe)	**No**, **No**
Motor default cycles	**60 Hz**
Large motor minimum size	**0.55 kW**
Motor default voltage/phase (Large, Small)	**460v/3ph**, **120v/1ph**
Equipment motor default voltage/phase	
Energy recovery, air-to-air	**220v/1ph**
Fan coil	**220v/1ph**
Heat pump, fluid-to-air	**208v/1ph**
Indoor unit, VRF	**208v/1ph**
Terminal unit, single duct, electric coil	**277v/1ph**
Terminal unit, fan powered, no electric coil	**277v/1ph**
Terminal unit, fan powered, electric coil	**277v/1ph**
Terminal unit, fan powered, DOA	**277v/1ph**
Unit heater	**220v/1ph**

Scenario 1	Winter Heating
Air	
Outside air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**9.06°C**, 5°C, **52.3%**, 18.5 kJ/kg

Scenario 2	Summer Cooling
Air	
Outside air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**44°C**, **23.33°C**, 16.7%, 68.8 kJ/kg

Scenario 3	Economizer
Air	
Outside air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**10°C**, 5.5°C, **50%**, 19.6 kJ/kg

Air Handler

AH-1

Location, Classification	**(Blank)**, **New Equipment**
Component List	
Coil list	CC-1, HC-1.1, HC-1.2
Damper list	OD-1, RD-1, RLD-1
Fan list	RRLF-1, SF-1.1, SF-1.2
Filter list	F-1.1, F-1.2
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Width, Height, Weight	13005 mm, 4572 mm, **3251.2 mm**, 16742.1 kg
Inside width, Inside height	4470 mm, 2997 mm
Wall thickness, Base thickness	**50.8 mm**, **203.2 mm**
Single point connection	**No**
Marine lights voltage/phase	460v/3ph
Emergency power	**No**
Electrical power by	**Electrical**
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**

Scenario 1	Winter Heating
Airflow	15574 l/s

Scenario 2	Summer Cooling
Airflow	25957 l/s

Scenario 3	Economizer
Airflow	25957 l/s

AH-2	
Location, Classification	**(Blank)**, **New Equipment**
Component List	
Coil list	CC-2, HC-2.1, HC-2.2
Damper list	OD-2, RD-2, RLD-2
Fan list	RRLF-2, SF-2.1, SF-2.2
Filter list	F-2.1, F-2.2
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Width, Height, Weight	13005 mm, 4572 mm, **3251.2 mm**, 16742.1 kg
Inside width, Inside height	4470 mm, 2997 mm
Wall thickness, Base thickness	**50.8 mm**, **203.2 mm**
Single point connection	**No**
Marine lights voltage/phase	460v/3ph
Emergency power	**No**
Electrical power by	**Electrical**
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**

Scenario 1	Winter Heating
Airflow	15574 l/s

Scenario 2	Summer Cooling
Airflow	25957 l/s

Scenario 3	Economizer
Airflow	25957 l/s

AH-3	
Location, Classification	**(Blank)**, **New Equipment**
Component List	
Coil list	CC-3, HC-3
Damper list	OD-3, RD-3, RLD-3
Fan list	RRLF-3, SF-3.1, SF-3.2
Filter list	F-3
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Width, Height, Weight	14732 mm, 6071 mm, **3251.2 mm**, 24289.9 kg
Inside width, Inside height	5969 mm, 2997 mm
Wall thickness, Base thickness	**50.8 mm**, **203.2 mm**
Single point connection	**No**
Marine lights voltage/phase	460v/3ph
Emergency power	**No**
Electrical power by	**Electrical**
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**

Scenario 1	Winter Heating
Airflow	23503 l/s

Scenario 2	Summer Cooling
Airflow	39172 l/s

Scenario 3	Economizer
Airflow	39172 l/s

AH-4	
Location, Classification	**(Blank)**, **New Equipment**
Component List	
Coil list	CC-4, HC-4
Damper list	OD-4, RD-4, RLD-4
Fan list	RRLF-4, SF-4.1, SF-4.2
Filter list	F-4
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Width, Height, Weight	14732 mm, 6071 mm, **3251.2 mm**, 24289.9 kg
Inside width, Inside height	5969 mm, 2997 mm
Wall thickness, Base thickness	**50.8 mm**, **203.2 mm**
Single point connection	**No**
Marine lights voltage/phase	460v/3ph
Emergency power	**No**
Electrical power by	**Electrical**
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Scenario 1	Winter Heating
Airflow	23503 l/s
Scenario 2	Summer Cooling
Airflow	39172 l/s
Scenario 3	Economizer
Airflow	39172 l/s

AH-5	
Location, Classification	**(Blank)**, **New Equipment**
Component List	
Coil list	CC-5, HC-5.1, HC-5.2
Damper list	OD-5, RD-5, RLD-5
Fan list	RRLF-5, SF-5.1, SF-5.2
Filter list	F-5.1, F-5.2
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Width, Height, Weight	13106 mm, 5055 mm, **3251.2 mm**, 18669.9 kg
Inside width, Inside height	4953 mm, 2997 mm
Wall thickness, Base thickness	**50.8 mm**, **203.2 mm**
Single point connection	**No**
Marine lights voltage/phase	460v/3ph
Emergency power	**No**
Electrical power by	**Electrical**
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Scenario 1	Winter Heating
Airflow	18406 l/s
Scenario 2	Summer Cooling
Airflow	30677 l/s
Scenario 3	Economizer
Airflow	30677 l/s

Air Separator

AS-1	
Type, Location, Classification	**ACT (Tank, Tangential, Strainer)**, **(Blank)**, **New Equipment**

Fluid type, Volume	30% Propylene Glycol, **37.85 l**
System pressure	344.7 kPa
Automatic selection	**Yes**
Manufacturer, Model	TACO, ACT4F
Diameter, Height, Weight	356 mm, 813 mm, 50.3 kg
ASME certified, ASME certification required	Yes, **No**
Pipe size, Connection size, System NPT fitting	DN 0, DN 100, DN 40

Scenario 1	Winter Heating

Scenario data not shown because the flow is 0.

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

AS-2

Type, Location, Classification	**AC (Tank, Inline, Strainer)**, **(Blank)**, **New Equipment**
Fluid type, Volume	Water, **37.85 l**
System pressure	344.7 kPa
Automatic selection	**Yes**
Manufacturer, Model	TACO, AC4F
Diameter, Height, Weight	406 mm, 797 mm, 79.8 kg
ASME certified, ASME certification required	Yes, **No**
Pipe size, Connection size, System NPT fitting	DN 125, DN 100, DN 32

Scenario 1	Winter Heating

Flow portion	**100%**
Flow (System, Component)	23.21 l/s, 23.21 l/s
Component total head loss	9 kPa
Air separator (Design, Actual)	**8.97 kPa**, **3.23 kPa**
Dirty strainer	**0 kPa**
Other	**0 kPa**

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

Automatic Pump Trap

APT-1

Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**1**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Pressure rating	0 kPa
Filling head (Minimum, Maximum)	0 mm, n/a
Body construction (Selection, Actual)	**All**, Other
Pipe size (Condensate in, Condensate out)	DN 0, DN 0
Connection size (Condensate in, Condensate out)	DN 0, DN 0
Pipe size (Motive, Exhaust)	DN 0, DN 0
Connection size (Motive, Exhaust)	DN 0, DN 0

Scenario 1	Winter Heating

Scenario data not shown because the flow is 0.

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

APT-2

Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**1**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Pressure rating	0 kPa
Filling head (Minimum, Maximum)	0 mm, n/a
Body construction (Selection, Actual)	**All**, Other
Pipe size (Condensate in, Condensate out)	DN 0, DN 0
Connection size (Condensate in, Condensate out)	DN 0, DN 0
Pipe size (Motive, Exhaust)	DN 0, DN 0
Connection size (Motive, Exhaust)	DN 0, DN 0

Scenario 1	Winter Heating

Scenario data not shown because the flow is 0.

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

APT-3

Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**1**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Pressure rating	0 kPa
Filling head (Minimum, Maximum)	0 mm, n/a
Body construction (Selection, Actual)	**All**, Other
Pipe size (Condensate in, Condensate out)	DN 0, DN 0
Connection size (Condensate in, Condensate out)	DN 0, DN 0
Pipe size (Motive, Exhaust)	DN 0, DN 0
Connection size (Motive, Exhaust)	DN 0, DN 0

Scenario 1	Winter Heating

Scenario data not shown because the flow is 0.

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

APT-4

Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**1**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Pressure rating	0 kPa
Filling head (Minimum, Maximum)	0 mm, n/a
Body construction (Selection, Actual)	**All**, Other
Pipe size (Condensate in, Condensate out)	DN 0, DN 0
Connection size (Condensate in, Condensate out)	DN 0, DN 0
Pipe size (Motive, Exhaust)	DN 0, DN 0
Connection size (Motive, Exhaust)	DN 0, DN 0

Scenario 1	Winter Heating

Scenario data not shown because the flow is 0.

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

APT-5

Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**1**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Pressure rating	0 kPa
Filling head (Minimum, Maximum)	0 mm, n/a
Body construction (Selection, Actual)	**All**, Other
Pipe size (Condensate in, Condensate out)	DN 100, DN 32
Connection size (Condensate in, Condensate out)	DN 0, DN 0
Pipe size (Motive, Exhaust)	DN 20, DN 0
Connection size (Motive, Exhaust)	DN 0, DN 0

Scenario 1	Winter Heating

Flow portion	**100%**
Flow (System, Component, Safety)	2703.9 kg/h, 2703.9 kg/h, 2703.9 kg/h
Pressure (Entering, Pressure drop, Leaving)	89.6 kPa, 3.4 kPa, 86.2 kPa
Temperature (Entering, Change, Leaving)	118.7°C, -0.6°C, 118.2°C
Component total pressure drop	3.4 kPa
Component	**3.45 kPa**
Other	**0 kPa**
Motive pressure	689.5 kPa
Vertical lift	**4.572 m**
Component total back pressure	44.8 kPa
Back pressure summary	
APT-5 (Vertical lift)	44.8 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

APT-6

Location, Classification	**(Blank)**, **New Equipment**

Flow safety factor	**1**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Pressure rating	0 kPa
Filling head (Minimum, Maximum)	0 mm, n/a
Body construction (Selection, Actual)	**All**, Other
Pipe size (Condensate in, Condensate out)	DN 100, DN 32
Connection size (Condensate in, Condensate out)	DN 0, DN 0
Pipe size (Motive, Exhaust)	DN 20, DN 0
Connection size (Motive, Exhaust)	DN 0, DN 0

Scenario 1	Winter Heating
Flow portion	**100%**
Flow (System, Component, Safety)	2703.9 kg/h, 2703.9 kg/h, 2703.9 kg/h
Pressure (Entering, Pressure drop, Leaving)	89.6 kPa, 3.4 kPa, 86.2 kPa
Temperature (Entering, Change, Leaving)	118.7°C, -0.6°C, 118.2°C
Component total pressure drop	3.4 kPa
Component	**3.45 kPa**
Other	**0 kPa**
Motive pressure	689.5 kPa
Vertical lift	**4.572 m**
Component total back pressure	44.8 kPa
Back pressure summary	
APT-6 (Vertical lift)	44.8 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

APT-7

Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**1**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Pressure rating	0 kPa
Filling head (Minimum, Maximum)	0 mm, n/a
Body construction (Selection, Actual)	**All**, Other
Pipe size (Condensate in, Condensate out)	DN 100, DN 32
Connection size (Condensate in, Condensate out)	DN 0, DN 0
Pipe size (Motive, Exhaust)	DN 20, DN 0
Connection size (Motive, Exhaust)	DN 0, DN 0

Scenario 1	Winter Heating
Flow portion	**100%**
Flow (System, Component, Safety)	2703.9 kg/h, 2703.9 kg/h, 2703.9 kg/h
Pressure (Entering, Pressure drop, Leaving)	89.6 kPa, 3.4 kPa, 86.2 kPa
Temperature (Entering, Change, Leaving)	118.7°C, -0.6°C, 118.2°C
Component total pressure drop	3.4 kPa
Component	**3.45 kPa**
Other	**0 kPa**
Motive pressure	689.5 kPa
Vertical lift	**4.572 m**
Component total back pressure	44.8 kPa
Back pressure summary	
APT-7 (Vertical lift)	44.8 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

APT-8	
Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**1**
Automatic selection	**Yes**
Manufacturer, Model	SPIRAX SARCO, APT10-4.5
Length, Width, Height, Weight	277 mm, 188 mm, 272 mm, 14.1 kg
Pressure rating	448.2 kPa
Filling head (Minimum, Maximum)	406 mm, n/a
Body construction (Selection, Actual)	**All**, Ductile Iron
Pipe size (Condensate in, Condensate out)	DN 100, DN 32
Connection size (Condensate in, Condensate out)	DN 20, DN 20
Pipe size (Motive, Exhaust)	DN 20, DN 15
Connection size (Motive, Exhaust)	DN 15, DN 15

Scenario 1	Winter Heating
Flow portion	**100%**
Flow (System, Component, Safety)	2703.9 kg/h, 2703.9 kg/h, 2703.9 kg/h
Pressure (Entering, Pressure drop, Leaving)	89.6 kPa, 3.4 kPa, 86.2 kPa
Temperature (Entering, Change, Leaving)	118.7°C, -0.6°C, 118.2°C
Component total pressure drop	3.4 kPa
Component	**3.45 kPa**
Other	**0 kPa**
Motive pressure	689.5 kPa
Vertical lift	**4.572 m**
Component total back pressure	44.8 kPa
Back pressure summary	
APT-8 (Vertical lift)	44.8 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

APT-9	
Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**1**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Pressure rating	0 kPa
Filling head (Minimum, Maximum)	0 mm, n/a
Body construction (Selection, Actual)	**All**, Other
Pipe size (Condensate in, Condensate out)	DN 100, DN 32
Connection size (Condensate in, Condensate out)	DN 0, DN 0
Pipe size (Motive, Exhaust)	DN 20, DN 0
Connection size (Motive, Exhaust)	DN 0, DN 0

Scenario 1	Winter Heating
Flow portion	**100%**
Flow (System, Component, Safety)	2703.9 kg/h, 2703.9 kg/h, 2703.9 kg/h
Pressure (Entering, Pressure drop, Leaving)	89.6 kPa, 3.4 kPa, 86.2 kPa
Temperature (Entering, Change, Leaving)	118.7°C, -0.6°C, 118.2°C
Component total pressure drop	3.4 kPa
Component	**3.45 kPa**
Other	**0 kPa**
Motive pressure	689.5 kPa

Vertical lift	**4.572 m**
Component total back pressure	44.8 kPa
Back pressure summary	
APT-9 (Vertical lift)	44.8 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

APT-10

Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**1**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Pressure rating	0 kPa
Filling head (Minimum, Maximum)	0 mm, n/a
Body construction (Selection, Actual)	**All**, Other
Pipe size (Condensate in, Condensate out)	DN 100, DN 32
Connection size (Condensate in, Condensate out)	DN 0, DN 0
Pipe size (Motive, Exhaust)	DN 20, DN 0
Connection size (Motive, Exhaust)	DN 0, DN 0

Scenario 1	Winter Heating
Flow portion	**100%**
Flow (System, Component, Safety)	2703.9 kg/h, 2703.9 kg/h, 2703.9 kg/h
Pressure (Entering, Pressure drop, Leaving)	89.6 kPa, 3.4 kPa, 86.2 kPa
Temperature (Entering, Change, Leaving)	118.7°C, -0.6°C, 118.2°C
Component total pressure drop	3.4 kPa
Component	**3.45 kPa**
Other	**0 kPa**
Motive pressure	689.5 kPa
Vertical lift	**4.572 m**
Component total back pressure	44.8 kPa
Back pressure summary	
APT-10 (Vertical lift)	44.8 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

APT-11

Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**1**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Pressure rating	0 kPa
Filling head (Minimum, Maximum)	0 mm, n/a
Body construction (Selection, Actual)	**All**, Other
Pipe size (Condensate in, Condensate out)	DN 80, DN 32
Connection size (Condensate in, Condensate out)	DN 0, DN 0
Pipe size (Motive, Exhaust)	DN 20, DN 0
Connection size (Motive, Exhaust)	DN 0, DN 0

Scenario 1	Winter Heating

Flow portion	**100%**
Flow (System, Component, Safety)	1465.5 kg/h, 1465.5 kg/h, 1465.5 kg/h
Pressure (Entering, Pressure drop, Leaving)	20.7 kPa, 0 kPa, 79.3 kPa
Temperature (Entering, Change, Leaving)	105.2°C, 11.8°C, 117°C
Component total pressure drop	3.4 kPa
Component	**3.45 kPa**
Other	**0 kPa**
Motive pressure	689.5 kPa
Vertical lift	**4.572 m**
Component total back pressure	44.8 kPa
Back pressure summary	
APT-11 (Vertical lift)	44.8 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

APT-12

Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**1**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Pressure rating	0 kPa
Filling head (Minimum, Maximum)	0 mm, n/a
Body construction (Selection, Actual)	**All**, Other
Pipe size (Condensate in, Condensate out)	DN 80, DN 32
Connection size (Condensate in, Condensate out)	DN 0, DN 0
Pipe size (Motive, Exhaust)	DN 20, DN 0
Connection size (Motive, Exhaust)	DN 0, DN 0

Scenario 1	Winter Heating

Flow portion	**100%**
Flow (System, Component, Safety)	1465.5 kg/h, 1465.5 kg/h, 1465.5 kg/h
Pressure (Entering, Pressure drop, Leaving)	20.7 kPa, 0 kPa, 79.3 kPa
Temperature (Entering, Change, Leaving)	105.2°C, 11.8°C, 117°C
Component total pressure drop	3.4 kPa
Component	**3.45 kPa**
Other	**0 kPa**
Motive pressure	689.5 kPa
Vertical lift	**4.572 m**
Component total back pressure	44.8 kPa
Back pressure summary	
APT-12 (Vertical lift)	44.8 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

APT-13

Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**1**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg

Pressure rating	0 kPa
Filling head (Minimum, Maximum)	0 mm, n/a
Body construction (Selection, Actual)	**All**, Other
Pipe size (Condensate in, Condensate out)	DN 80, DN 32
Connection size (Condensate in, Condensate out)	DN 0, DN 0
Pipe size (Motive, Exhaust)	DN 20, DN 0
Connection size (Motive, Exhaust)	DN 0, DN 0

Scenario 1	Winter Heating
Flow portion	**100%**
Flow (System, Component, Safety)	1465.5 kg/h, 1465.5 kg/h, 1465.5 kg/h
Pressure (Entering, Pressure drop, Leaving)	20.7 kPa, 0 kPa, 79.3 kPa
Temperature (Entering, Change, Leaving)	105.2°C, 11.8°C, 117°C
Component total pressure drop	3.4 kPa
Component	**3.45 kPa**
Other	**0 kPa**
Motive pressure	689.5 kPa
Vertical lift	**4.572 m**
Component total back pressure	44.8 kPa
Back pressure summary	
APT-13 (Vertical lift)	44.8 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

APT-14

Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**1**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Pressure rating	0 kPa
Filling head (Minimum, Maximum)	0 mm, n/a
Body construction (Selection, Actual)	**All**, Other
Pipe size (Condensate in, Condensate out)	DN 80, DN 32
Connection size (Condensate in, Condensate out)	DN 0, DN 0
Pipe size (Motive, Exhaust)	DN 20, DN 0
Connection size (Motive, Exhaust)	DN 0, DN 0

Scenario 1	Winter Heating
Flow portion	**100%**
Flow (System, Component, Safety)	1465.5 kg/h, 1465.5 kg/h, 1465.5 kg/h
Pressure (Entering, Pressure drop, Leaving)	20.7 kPa, 0 kPa, 79.3 kPa
Temperature (Entering, Change, Leaving)	105.2°C, 11.8°C, 117°C
Component total pressure drop	3.4 kPa
Component	**3.45 kPa**
Other	**0 kPa**
Motive pressure	689.5 kPa
Vertical lift	**4.572 m**
Component total back pressure	44.8 kPa
Back pressure summary	
APT-14 (Vertical lift)	44.8 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

Boiler

Type, Location, Classification	**Firetube, Dryback, Forced**, **(Blank)**, **New Equipment**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Single point connection	**No**
Motor quantity, size, voltage/phase	0, 0 kW, n/a
Electrical starter by	**Electrical**
Electrical VSD by	**None**
Electrical disconnect by	**Electrical**
Emergency power	**No**
Electrical power by	**Electrical**
Control circuit voltage/phase	**120v/1ph**
Efficiency	80%
Derate (Altitude, Other)	0%, 0%
Pressure rating	0 kPa
Flue (Quantity, Diameter)	0, 0 mm
Blowdown connection size	DN 0
ASME certified, ASME certification required	No, **No**
Primary source medium	**Natural Gas**
Secondary source medium	**None**
Minimum gas pressure	**1.72 kPa**
Scenario 1	Winter Heating
Output load (System, Portion, Component)	3741520 W, **100%**, 3741520 W
Minimum input load	5299700 W
Minimum input flow, Natural gas heating value	602.4 m³/h, **31705 kJ/m³**
Flow	6573.5 kg/h
Operating pressure	**689.48 kPa**
Operating temperature	169.9°C
Load summary	
HX-3 (Heat Exchanger)	1539010 W
HX-4 (Heat Exchanger)	1539010 W
HX-5 (Heat Exchanger)	834150 W
HX-6 (Heat Exchanger)	834150 W
IHL-2 (Imposed Load)	175560 W
IHL-3 (Imposed Load)	222040 W
IHL-4 (Imposed Load)	154910 W
IHL-5 (Imposed Load)	154910 W
IHL-6 (Imposed Load)	222040 W
IHL-8 (Imposed Load)	438910 W
Scenario 2	Summer Cooling

Scenario data not shown because the load is 0.

Scenario 3	Economizer

Scenario data not shown because the load is 0.

Chiller, Air-Cooled

Type, Location, Classification	**Other**, **(Blank)**, **New Equipment**
Fluid type, Volume	**Water**, 1892.7 l
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Maximum kW, Total MCA	0 kW, 0 A
Maximum unit efficiency	0 kW/ton
Efficiency rating (EER)	0
Voltage/phase (Motor, Selection)	120v/1ph, 460v/3ph
Control circuit voltage/phase	**120v/1ph**

Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Refrigerant	R-22
Free cooling	
Capacity	0 kW
Entering fluid temperature	12.8°C
Outside air temperature	1.7°C

Scenario 1	Winter Heating

Scenario data not shown because the load is 0.

Scenario 2	Summer Cooling
Evaporator load (System, Portion, Component)	3949300 W, **100%**, 3949300 W 3949.3 kW, 3949.3 kW
Temperature (Entering, Change, Leaving)	15°C, -7.8°C, **7.22°C**
Flow	121.37 l/s
Thermodynamic factor	4180 W·s/l·°C
Component total head loss	0 kPa
Component (Design, Actual)	**0 kPa**, 0 kPa
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**
Ambient air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	44°C, 23.3°C, 16.7%, 68.8 kJ/kg
Load summary	
CC-1 (Coil)	590860 W
CC-2 (Coil)	687690 W
CC-3 (Coil)	874830 W
CC-4 (Coil)	874830 W
CC-5 (Coil)	707690 W
ICL-1 (Imposed Load)	4460 W
ICL-2 (Imposed Load)	4460 W
ICL-3 (Imposed Load)	167260 W
ICL-4 (Imposed Load)	37220 W

Scenario 3	Economizer
Evaporator load (System, Portion, Component)	213400 W, **100%**, 213400 W 213.4 kW, 213.4 kW
Temperature (Entering, Change, Leaving)	15.1°C, -7.9°C, **7.22°C**
Flow	6.46 l/s
Thermodynamic factor	4180 W·s/l·°C
Component total head loss	0 kPa
Component (Design, Actual)	**0 kPa**, 0 kPa
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**
Ambient air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Load summary	
CC-1 (Coil)	0 W
CC-2 (Coil)	0 W
CC-3 (Coil)	0 W
CC-4 (Coil)	0 W
CC-5 (Coil)	0 W
ICL-1 (Imposed Load)	4460 W
ICL-2 (Imposed Load)	4460 W
ICL-3 (Imposed Load)	167260 W
ICL-4 (Imposed Load)	37220 W

Coil

CC-1

Type, Location, Classification	**Serpentine**, AH-1, **New Equipment**
Fluid type, Volume	Water, **189.27 l**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Width, Height, Weight	**0 mm**, 4470 mm, **2997.2 mm**, **0 kg**
Coil width, Coil height	2032 mm, 876 mm
Maximum face velocity	**146.304 m/s**
Coils wide, Coils high, Number of coils	2, 3, 6
Maximum coil width, Maximum coil height	**3048 mm**, **1143 mm**
Flange, Header, Horizontal clearance, Vertical clearance	**38.1 mm**, **215.9 mm**, **12.7 mm**, **12.7 mm**
Rows, Fins per inch	**10**, **10**
Scenario 1	Winter Heating
Usage	None
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	17.8°C, 9.2°C, 29.5%, 27.3 kJ/kg
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	17.8°C, 9.2°C, 29.5%, 27.3 kJ/kg
Airflow	15574 l/s
Component total static pressure	187 Pa
Component	**186.6 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	**?°C**, **0°C**, ?°C
Flow	0 l/s
Thermodynamic factor	4181 W·s/l·°C
Component total head loss	44.9 kPa
Coil	**44.85 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**
Scenario 2	Summer Cooling
Usage	Cooling
Cooling load	590860 W
Sensible, Latent	510670 W, 80190 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	26.9°C, 16.8°C, 35.5%, 47 kJ/kg
Dehumidification efficiency	**90%**
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**10°C**, 9.2°C, 90%, 27.4 kJ/kg
Airflow	25957 l/s
Component total static pressure	187 Pa
Component	**186.6 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	7.2°C, **7.78°C**, 15°C
Flow	18.17 l/s
Thermodynamic factor	4180 W·s/l·°C
Component total head loss	44.9 kPa
Coil	**44.85 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**
Scenario 3	Economizer
Usage	Cooling
Cooling load	0 W
Sensible, Latent	0 W, 0 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Dehumidification efficiency	**90%**
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**10°C**, 5.5°C, 50%, 19.6 kJ/kg
Airflow	25957 l/s
Component total static pressure	187 Pa
Component	**186.6 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	7.2°C, **7.78°C**, 15°C

Flow	0 l/s
Thermodynamic factor	4180 W·s/l·°C
Component total head loss	44.9 kPa
Coil	**44.85 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

CC-2	
Type, Location, Classification	**Serpentine**, AH-2, **New Equipment**
Fluid type, Volume	Water, **189.27 l**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Width, Height, Weight	**0 mm**, 4470 mm, **2997.2 mm**, **0 kg**
Coil width, Coil height	2032 mm, 876 mm
Maximum face velocity	**146.304 m/s**
Coils wide, Coils high, Number of coils	2, 3, 6
Maximum coil width, Maximum coil height	**3048 mm**, **1143 mm**
Flange, Header, Horizontal clearance, Vertical clearance	**38.1 mm**, **215.9 mm**, **12.7 mm**, **12.7 mm**
Rows, Fins per inch	**10**, **10**

Scenario 1	Winter Heating
Usage	None
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	15.7°C, 8.2°C, 33.8%, 25.2 kJ/kg
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	15.7°C, 8.2°C, 33.8%, 25.2 kJ/kg
Airflow	15574 l/s
Component total static pressure	187 Pa
Component	**186.6 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	**?°C**, **0°C**, ?°C
Flow	0 l/s
Thermodynamic factor	4181 W·s/l·°C
Component total head loss	44.9 kPa
Coil	**44.85 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

Scenario 2	Summer Cooling
Usage	Cooling
Cooling load	687690 W
Sensible, Latent	586670 W, 101020 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	29.6°C, 18°C, 31.4%, 50.4 kJ/kg
Dehumidification efficiency	**90%**
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**10°C**, 9.2°C, 90%, 27.4 kJ/kg
Airflow	25957 l/s
Component total static pressure	187 Pa
Component	**186.6 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	7.2°C, **7.78°C**, 15°C
Flow	21.15 l/s
Thermodynamic factor	4180 W·s/l·°C
Component total head loss	44.9 kPa
Coil	**44.85 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

Scenario 3	Economizer
Usage	Cooling
Cooling load	0 W

Sensible, Latent	0 W, 0 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Dehumidification efficiency	**90%**
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**10°C**, 5.5°C, 50%, 19.6 kJ/kg
Airflow	25957 l/s
Component total static pressure	187 Pa
Component	**186.6 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	7.2°C, **7.78°C**, 15°C
Flow	0 l/s
Thermodynamic factor	4180 W·s/l·°C
Component total head loss	44.9 kPa
Coil	**44.85 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

CC-3	
Type, Location, Classification	**Serpentine**, AH-3, **New Equipment**
Fluid type, Volume	Water, **189.27 l**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Width, Height, Weight	**0 mm**, 5969 mm, **2997.2 mm**, **0 kg**
Coil width, Coil height	2870 mm, 876 mm
Maximum face velocity	**156.972 m/s**
Coils wide, Coils high, Number of coils	2, 3, 6
Maximum coil width, Maximum coil height	**3048 mm**, **1143 mm**
Flange, Header, Horizontal clearance, Vertical clearance	**38.1 mm**, **38.1 mm**, **12.7 mm**, **12.7 mm**
Rows, Fins per inch	**10**, **10**
Scenario 1	Winter Heating
Usage	None
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	17.8°C, 9.2°C, 29.5%, 27.4 kJ/kg
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	17.8°C, 9.2°C, 29.5%, 27.4 kJ/kg
Airflow	23503 l/s
Component total static pressure	187 Pa
Component	**186.6 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	?°C, **0°C**, ?°C
Flow	0 l/s
Thermodynamic factor	4181 W·s/l·°C
Component total head loss	44.9 kPa
Coil	**44.85 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**
Scenario 2	Summer Cooling
Usage	Cooling
Cooling load	874830 W
Sensible, Latent	757440 W, 117390 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	26.6°C, 16.7°C, 36%, 46.6 kJ/kg
Dehumidification efficiency	**90%**
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**10°C**, 9.2°C, 90%, 27.4 kJ/kg
Airflow	39172 l/s
Component total static pressure	187 Pa
Component	**186.6 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	7.2°C, **7.78°C**, 15°C
Flow	26.91 l/s
Thermodynamic factor	4180 W·s/l·°C

Component total head loss	44.9 kPa
Coil	**44.85 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

Scenario 3	Economizer
Usage	Cooling
Cooling load	0 W
Sensible, Latent	0 W, 0 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Dehumidification efficiency	**90%**
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**10°C**, 5.5°C, 50%, 19.6 kJ/kg
Airflow	39172 l/s
Component total static pressure	187 Pa
Component	**186.6 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	7.2°C, **7.78°C**, 15°C
Flow	0 l/s
Thermodynamic factor	4180 W·s/l·°C
Component total head loss	44.9 kPa
Coil	**44.85 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

CC-4	
Type, Location, Classification	**Serpentine**, AH-4, **New Equipment**
Fluid type, Volume	Water, **189.27 l**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Width, Height, Weight	**0 mm**, 5969 mm, **2997.2 mm**, **0 kg**
Coil width, Coil height	2870 mm, 876 mm
Maximum face velocity	**156.972 m/s**
Coils wide, Coils high, Number of coils	2, 3, 6
Maximum coil width, Maximum coil height	**3048 mm**, **1143 mm**
Flange, Header, Horizontal clearance, Vertical clearance	**38.1 mm**, **38.1 mm**, **12.7 mm**, **12.7 mm**
Rows, Fins per inch	**10**, **10**

Scenario 1	Winter Heating
Usage	None
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	17.8°C, 9.2°C, 29.5%, 27.4 kJ/kg
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	17.8°C, 9.2°C, 29.5%, 27.4 kJ/kg
Airflow	23503 l/s
Component total static pressure	187 Pa
Component	**186.6 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	**?°C**, **0°C**, ?°C
Flow	0 l/s
Thermodynamic factor	4181 W·s/l·°C
Component total head loss	44.9 kPa
Coil	**44.85 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

Scenario 2	Summer Cooling
Usage	Cooling
Cooling load	874830 W
Sensible, Latent	757440 W, 117390 W

Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	26.6°C, 16.7°C, 36%, 46.6 kJ/kg
Dehumidification efficiency	**90%**
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**10°C**, 9.2°C, 90%, 27.4 kJ/kg
Airflow	39172 l/s
Component total static pressure	187 Pa
Component	**186.6 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	7.2°C, **7.78°C**, 15°C
Flow	26.91 l/s
Thermodynamic factor	4180 W·s/l·°C
Component total head loss	44.9 kPa
Coil	**44.85 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

Scenario 3	Economizer
Usage	Cooling
Cooling load	0 W
Sensible, Latent	0 W, 0 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Dehumidification efficiency	**90%**
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**10°C**, 5.5°C, 50%, 19.6 kJ/kg
Airflow	39172 l/s
Component total static pressure	187 Pa
Component	**186.6 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	7.2°C, **7.78°C**, 15°C
Flow	0 l/s
Thermodynamic factor	4180 W·s/l·°C
Component total head loss	44.9 kPa
Coil	**44.85 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

CC-5	
Type, Location, Classification	**Serpentine**, AH-5, **New Equipment**
Fluid type, Volume	Water, **189.27 l**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Width, Height, Weight	**0 mm**, 4953 mm, **2997.2 mm**, **0 kg**
Coil width, Coil height	2311 mm, 876 mm
Maximum face velocity	**152.4 m/s**
Coils wide, Coils high, Number of coils	2, 3, 6
Maximum coil width, Maximum coil height	**3048 mm**, **1143 mm**
Flange, Header, Horizontal clearance, Vertical clearance	**38.1 mm**, **139.7 mm**, **12.7 mm**, **12.7 mm**
Rows, Fins per inch	**10**, **10**

Scenario 1	Winter Heating
Usage	None
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	15.1°C, 7.9°C, 35.2%, 24.5 kJ/kg
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	15.1°C, 7.9°C, 35.2%, 24.5 kJ/kg
Airflow	18406 l/s
Component total static pressure	187 Pa
Component	**186.6 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	**?°C**, **0°C**, ?°C
Flow	0 l/s
Thermodynamic factor	4181 W·s/l·°C
Component total head loss	44.9 kPa
Coil	**44.85 kPa**

Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

Scenario 2	Summer Cooling
Usage	Cooling
Cooling load	707690 W
Sensible, Latent	596870 W, 110820 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	26.7°C, 16.9°C, 36.7%, 47.2 kJ/kg
Dehumidification efficiency	**90%**
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**10°C**, 9.2°C, 90%, 27.4 kJ/kg
Airflow	30677 l/s
Component total static pressure	187 Pa
Component	**186.6 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	7.2°C, **7.78°C**, 15°C
Flow	21.77 l/s
Thermodynamic factor	4180 W·s/l·°C
Component total head loss	44.9 kPa
Coil	**44.85 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

Scenario 3	Economizer
Usage	Cooling
Cooling load	0 W
Sensible, Latent	0 W, 0 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Dehumidification efficiency	**90%**
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**10°C**, 5.5°C, 50%, 19.6 kJ/kg
Airflow	30677 l/s
Component total static pressure	187 Pa
Component	**186.6 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	7.2°C, **7.78°C**, 15°C
Flow	0 l/s
Thermodynamic factor	4180 W·s/l·°C
Component total head loss	44.9 kPa
Coil	**44.85 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

HC-1.1

Type, Location, Classification	**Serpentine**, AH-1, **New Equipment**
Fluid type, Volume	30% Propylene Glycol, **378.54 l**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Width, Height, Weight	**0 mm**, 4470 mm, **2997.2 mm**, **0 kg**
Coil width, Coil height	2032 mm, 876 mm
Maximum face velocity	**146.304 m/s**
Coils wide, Coils high, Number of coils	2, 3, 6
Maximum coil width, Maximum coil height	**3048 mm**, **1143 mm**
Flange, Header, Horizontal clearance, Vertical clearance	**38.1 mm**, **215.9 mm**, **12.7 mm**, **12.7 mm**
Rows, Fins per inch	**2**, **8**

Scenario 1	Winter Heating
Usage	Heating
Heating load	0 W

Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	17.8°C, 9.2°C, 29.5%, 27.4 kJ/kg
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**17.83°C**, 9.2°C, 29.5%, 27.4 kJ/kg
Airflow	15574 l/s
Component total static pressure	62 Pa
Component	**62.2 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	?°C, **-22.22°C**, ?°C
Flow	0 l/s
Thermodynamic factor	4181 W·s/l·°C
Component total head loss	15 kPa
Coil	**14.95 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

Scenario 2	Summer Cooling
Usage	None
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	26.9°C, 16.8°C, 35.5%, 47 kJ/kg
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	26.9°C, 16.8°C, 35.5%, 47 kJ/kg
Airflow	25957 l/s
Component total static pressure	62 Pa
Component	**62.2 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	**?°C**, **0°C**, ?°C
Flow	0 l/s
Thermodynamic factor	4181 W·s/l·°C
Component total head loss	15 kPa
Coil	**14.95 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

Scenario 3	Economizer
Usage	None
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Airflow	25957 l/s
Component total static pressure	62 Pa
Component	**62.2 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	**?°C**, **0°C**, ?°C
Flow	0 l/s
Thermodynamic factor	4181 W·s/l·°C
Component total head loss	15 kPa
Coil	**14.95 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

HC-1.2

Type, Location, Classification	**Serpentine**, AH-1, **New Equipment**
Fluid type, Volume	Water, **189.27 l**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Width, Height, Weight	**0 mm**, 4470 mm, **2997.2 mm**, **0 kg**
Coil width, Coil height	2032 mm, 876 mm
Maximum face velocity	**146.304 m/s**
Coils wide, Coils high, Number of coils	2, 3, 6
Maximum coil width, Maximum coil height	**3048 mm**, **1143 mm**
Flange, Header, Horizontal clearance, Vertical clearance	**38.1 mm**, **215.9 mm**, **12.7 mm**, **12.7 mm**
Rows, Fins per inch	**2**, **6**

Scenario 1	Winter Heating
Usage	None
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	17.8°C, 9.2°C, 29.5%, 27.3 kJ/kg
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	17.8°C, 9.2°C, 29.5%, 27.3 kJ/kg
Airflow	15574 l/s
Component total static pressure	37 Pa
Component	**37.3 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	?°C, **0°C**, ?°C
Flow	0 l/s
Thermodynamic factor	4181 W·s/l·°C
Component total head loss	15 kPa
Coil	**14.95 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

Scenario 2	Summer Cooling
Usage	Heating
Heating load	35660 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 9.2°C, 90%, 27.4 kJ/kg
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**11.11°C**, 9.7°C, 83.6%, 28.5 kJ/kg
Airflow	25957 l/s
Component total static pressure	37 Pa
Component	**37.3 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	?°C, **-22.22°C**, ?°C
Flow	0.38 l/s
Thermodynamic factor	4181 W·s/l·°C
Component total head loss	15 kPa
Coil	**14.95 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

Scenario 3	Economizer
Usage	Heating
Heating load	35840 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**11.11°C**, 6.1°C, 46.4%, 20.7 kJ/kg
Airflow	25957 l/s
Component total static pressure	37 Pa
Component	**37.3 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	?°C, **-22.22°C**, ?°C
Flow	0.39 l/s
Thermodynamic factor	4181 W·s/l·°C
Component total head loss	15 kPa
Coil	**14.95 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

HC-2.1	
Type, Location, Classification	**Serpentine**, AH-2, **New Equipment**
Fluid type, Volume	30% Propylene Glycol, **378.54 l**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Width, Height, Weight	**0 mm**, 4470 mm, **2997.2 mm**, **0 kg**

Coil width, Coil height	2032 mm, 876 mm
Maximum face velocity	**146.304 m/s**
Coils wide, Coils high, Number of coils	2, 3, 6
Maximum coil width, Maximum coil height	**3048 mm**, **1143 mm**
Flange, Header, Horizontal clearance, Vertical clearance	**38.1 mm**, **215.9 mm**, **12.7 mm**, **12.7 mm**
Rows, Fins per inch	**2**, **8**

Scenario 1	Winter Heating
Usage	Heating
Heating load	0 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	15.7°C, 8.2°C, 33.8%, 25.2 kJ/kg
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**15.69°C**, 8.2°C, 33.8%, 25.2 kJ/kg
Airflow	15574 l/s
Component total static pressure	62 Pa
Component	**62.2 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	?°C, **-22.22°C**, ?°C
Flow	0 l/s
Thermodynamic factor	4181 W·s/l·°C
Component total head loss	15 kPa
Coil	**14.95 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

Scenario 2	Summer Cooling
Usage	None
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	29.6°C, 18°C, 31.4%, 50.4 kJ/kg
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	29.6°C, 18°C, 31.4%, 50.4 kJ/kg
Airflow	25957 l/s
Component total static pressure	62 Pa
Component	**62.2 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	**?°C**, **0°C**, ?°C
Flow	0 l/s
Thermodynamic factor	4181 W·s/l·°C
Component total head loss	15 kPa
Coil	**14.95 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

Scenario 3	Economizer
Usage	None
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Airflow	25957 l/s
Component total static pressure	62 Pa
Component	**62.2 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	**?°C**, **0°C**, ?°C
Flow	0 l/s
Thermodynamic factor	4181 W·s/l·°C
Component total head loss	15 kPa
Coil	**14.95 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

Type, Location, Classification	**Serpentine**, AH-2, **New Equipment**
Fluid type, Volume	Water, **189.27 l**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Width, Height, Weight	**0 mm**, 4470 mm, **2997.2 mm**, **0 kg**
Coil width, Coil height	2032 mm, 876 mm
Maximum face velocity	**146.304 m/s**
Coils wide, Coils high, Number of coils	2, 3, 6
Maximum coil width, Maximum coil height	**3048 mm**, **1143 mm**
Flange, Header, Horizontal clearance, Vertical clearance	**38.1 mm**, **215.9 mm**, **12.7 mm**, **12.7 mm**
Rows, Fins per inch	**2**, **6**

Scenario 1	Winter Heating
Usage	None
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	15.7°C, 8.2°C, 33.8%, 25.2 kJ/kg
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	15.7°C, 8.2°C, 33.8%, 25.2 kJ/kg
Airflow	15574 l/s
Component total static pressure	37 Pa
Component	**37.3 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	?°C, **0°C**, ?°C
Flow	0 l/s
Thermodynamic factor	4181 W·s/l·°C
Component total head loss	15 kPa
Coil	**14.95 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

Scenario 2	Summer Cooling
Usage	Heating
Heating load	35660 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 9.2°C, 90%, 27.4 kJ/kg
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**11.11°C**, 9.7°C, 83.6%, 28.5 kJ/kg
Airflow	25957 l/s
Component total static pressure	37 Pa
Component	**37.3 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	?°C, **-22.22°C**, ?°C
Flow	0.38 l/s
Thermodynamic factor	4181 W·s/l·°C
Component total head loss	15 kPa
Coil	**14.95 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

Scenario 3	Economizer
Usage	Heating
Heating load	35840 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**11.11°C**, 6.1°C, 46.4%, 20.7 kJ/kg
Airflow	25957 l/s
Component total static pressure	37 Pa
Component	**37.3 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	?°C, **-22.22°C**, ?°C
Flow	0.39 l/s
Thermodynamic factor	4181 W·s/l·°C
Component total head loss	15 kPa
Coil	**14.95 kPa**

Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

HC-3	
Type, Location, Classification	**Serpentine**, AH-3, **New Equipment**
Fluid type, Volume	30% Propylene Glycol, **378.54 l**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Width, Height, Weight	**0 mm**, 5969 mm, **2997.2 mm**, **0 kg**
Coil width, Coil height	2870 mm, 876 mm
Maximum face velocity	**156.972 m/s**
Coils wide, Coils high, Number of coils	2, 3, 6
Maximum coil width, Maximum coil height	**3048 mm**, **1143 mm**
Flange, Header, Horizontal clearance, Vertical clearance	**38.1 mm**, **38.1 mm**, **12.7 mm**, **12.7 mm**
Rows, Fins per inch	**2**, **8**
Scenario 1	Winter Heating
Usage	Heating
Heating load	0 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	17.8°C, 9.2°C, 29.5%, 27.4 kJ/kg
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**17.83°C**, 9.2°C, 29.5%, 27.4 kJ/kg
Airflow	23503 l/s
Component total static pressure	62 Pa
Component	**62.2 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	?°C, **-22.22°C**, ?°C
Flow	0 l/s
Thermodynamic factor	4181 W·s/l·°C
Component total head loss	15 kPa
Coil	**14.95 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**
Scenario 2	Summer Cooling
Usage	None
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	26.6°C, 16.7°C, 36%, 46.6 kJ/kg
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	26.6°C, 16.7°C, 36%, 46.6 kJ/kg
Airflow	39172 l/s
Component total static pressure	62 Pa
Component	**62.2 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	**?°C**, **0°C**, ?°C
Flow	0 l/s
Thermodynamic factor	4181 W·s/l·°C
Component total head loss	15 kPa
Coil	**14.95 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**
Scenario 3	Economizer
Usage	None
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Airflow	39172 l/s
Component total static pressure	62 Pa
Component	**62.2 Pa**
Other	**0 Pa**

Temperature (Entering, Change, Leaving)	**?°C**, **0°C**, ?°C
Flow	0 l/s
Thermodynamic factor	4181 W·s/l·°C
Component total head loss	15 kPa
Coil	**14.95 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

HC-4	
Type, Location, Classification	**Serpentine**, AH-4, **New Equipment**
Fluid type, Volume	30% Propylene Glycol, **378.54 l**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Width, Height, Weight	**0 mm**, 5969 mm, **2997.2 mm**, **0 kg**
Coil width, Coil height	2870 mm, 876 mm
Maximum face velocity	**156.972 m/s**
Coils wide, Coils high, Number of coils	2, 3, 6
Maximum coil width, Maximum coil height	**3048 mm**, **1143 mm**
Flange, Header, Horizontal clearance, Vertical clearance	**38.1 mm**, **38.1 mm**, **12.7 mm**, **12.7 mm**
Rows, Fins per inch	**2**, **8**

Scenario 1	Winter Heating
Usage	Heating
Heating load	0 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	17.8°C, 9.2°C, 29.5%, 27.4 kJ/kg
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**17.83°C**, 9.2°C, 29.5%, 27.4 kJ/kg
Airflow	23503 l/s
Component total static pressure	62 Pa
Component	**62.2 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	?°C, **-22.22°C**, ?°C
Flow	0 l/s
Thermodynamic factor	4181 W·s/l·°C
Component total head loss	15 kPa
Coil	**14.95 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

Scenario 2	Summer Cooling
Usage	None
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	26.6°C, 16.7°C, 36%, 46.6 kJ/kg
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	26.6°C, 16.7°C, 36%, 46.6 kJ/kg
Airflow	39172 l/s
Component total static pressure	62 Pa
Component	**62.2 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	**?°C**, **0°C**, ?°C
Flow	0 l/s
Thermodynamic factor	4181 W·s/l·°C
Component total head loss	15 kPa
Coil	**14.95 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

Scenario 3	Economizer
Usage	None

Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Airflow	39172 l/s
Component total static pressure	62 Pa
Component	**62.2 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	**?°C**, **0°C**, ?°C
Flow	0 l/s
Thermodynamic factor	4181 W·s/l·°C
Component total head loss	15 kPa
Coil	**14.95 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

HC-5.1	
Type, Location, Classification	**Serpentine**, AH-5, **New Equipment**
Fluid type, Volume	30% Propylene Glycol, **378.54 l**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Width, Height, Weight	**0 mm**, 4953 mm, **2997.2 mm**, **0 kg**
Coil width, Coil height	2311 mm, 876 mm
Maximum face velocity	**152.4 m/s**
Coils wide, Coils high, Number of coils	2, 3, 6
Maximum coil width, Maximum coil height	**3048 mm**, **1143 mm**
Flange, Header, Horizontal clearance, Vertical clearance	**38.1 mm**, **139.7 mm**, **12.7 mm**, **12.7 mm**
Rows, Fins per inch	**2**, **8**

Scenario 1	Winter Heating
Usage	Heating
Heating load	0 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	15.1°C, 7.9°C, 35.2%, 24.5 kJ/kg
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**15.05°C**, 7.9°C, 35.2%, 24.5 kJ/kg
Airflow	18406 l/s
Component total static pressure	62 Pa
Component	**62.2 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	**82.22°C**, **-22.22°C**, 60°C
Flow	0 l/s
Thermodynamic factor	4181 W·s/l·°C
Component total head loss	15 kPa
Coil	**14.95 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

Scenario 2	Summer Cooling
Usage	None
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	26.7°C, 16.9°C, 36.7%, 47.2 kJ/kg
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	26.7°C, 16.9°C, 36.7%, 47.2 kJ/kg
Airflow	30677 l/s
Component total static pressure	62 Pa
Component	**62.2 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	**?°C**, **0°C**, ?°C
Flow	0 l/s
Thermodynamic factor	4181 W·s/l·°C
Component total head loss	15 kPa
Coil	**14.95 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

Scenario 3	Economizer
Usage	None
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Airflow	30677 l/s
Component total static pressure	62 Pa
Component	**62.2 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	**?°C**, **0°C**, ?°C
Flow	0 l/s
Thermodynamic factor	4181 W·s/l·°C
Component total head loss	15 kPa
Coil	**14.95 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

HC-5.2	
Type, Location, Classification	**Serpentine**, AH-5, **New Equipment**
Fluid type, Volume	Water, **189.27 l**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Width, Height, Weight	**0 mm**, 4953 mm, **2997.2 mm**, **0 kg**
Coil width, Coil height	2311 mm, 876 mm
Maximum face velocity	**152.4 m/s**
Coils wide, Coils high, Number of coils	2, 3, 6
Maximum coil width, Maximum coil height	**3048 mm**, **1143 mm**
Flange, Header, Horizontal clearance, Vertical clearance	**38.1 mm**, **139.7 mm**, **12.7 mm**, **12.7 mm**
Rows, Fins per inch	**2**, **6**

Scenario 1	Winter Heating
Usage	None
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	15.1°C, 7.9°C, 35.2%, 24.5 kJ/kg
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	15.1°C, 7.9°C, 35.2%, 24.5 kJ/kg
Airflow	18406 l/s
Component total static pressure	37 Pa
Component	**37.3 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	?°C, **0°C**, ?°C
Flow	0 l/s
Thermodynamic factor	4181 W·s/l·°C
Component total head loss	15 kPa
Coil	**14.95 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

Scenario 2	Summer Cooling
Usage	Heating
Heating load	42150 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 9.2°C, 90%, 27.4 kJ/kg
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**11.11°C**, 9.7°C, 83.6%, 28.5 kJ/kg
Airflow	30677 l/s
Component total static pressure	37 Pa
Component	**37.3 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	?°C, **-22.22°C**, ?°C
Flow	0.45 l/s

Thermodynamic factor	4181 W·s/l·°C
Component total head loss	15 kPa
Coil	**14.95 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

Scenario 3	Economizer
Usage	Heating
Heating load	42350 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**11.11°C**, 6.1°C, 46.4%, 20.7 kJ/kg
Airflow	30677 l/s
Component total static pressure	37 Pa
Component	**37.3 Pa**
Other	**0 Pa**
Temperature (Entering, Change, Leaving)	?°C, **-22.22°C**, ?°C
Flow	0.46 l/s
Thermodynamic factor	4181 W·s/l·°C
Component total head loss	15 kPa
Coil	**14.95 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

Condensate Receiver

REC-1

Type, Location, Classification	**Not Vented**, **(Blank)**, **New Equipment**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Diameter, Weight	610 mm, **152.4 mm**, **0 kg**
Velocity	**3.048 m/s**
Pressure rating	**1723.69 kPa**

Scenario 1	Winter Heating

Scenario data not shown because the flow is 0.

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

REC-2

Type, Location, Classification	**Not Vented**, **(Blank)**, **New Equipment**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Diameter, Weight	610 mm, **152.4 mm**, **0 kg**
Velocity	**3.048 m/s**
Pressure rating	**1723.69 kPa**

Scenario 1	Winter Heating

Scenario data not shown because the flow is 0.

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

REC-3	
Type, Location, Classification	**Not Vented**, **(Blank)**, **New Equipment**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Diameter, Weight	610 mm, **152.4 mm**, **0 kg**
Velocity	**3.048 m/s**
Pressure rating	**1723.69 kPa**
Scenario 1	Winter Heating
Flow	2703.9 kg/h, 0.78 l/s
Pressure (Entering, Pressure drop, Leaving)	96.5 kPa, 6.9 kPa, 89.6 kPa
Temperature (Entering, Change, Leaving)	119.8°C, -1.1°C, 118.7°C
Component total back pressure	0 kPa
Back pressure summary	
Scenario 2	Summer Cooling
Scenario data not shown because the flow is 0.	
Scenario 3	Economizer
Scenario data not shown because the flow is 0.	

REC-4	
Type, Location, Classification	**Not Vented**, **(Blank)**, **New Equipment**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Diameter, Weight	610 mm, **152.4 mm**, **0 kg**
Velocity	**3.048 m/s**
Pressure rating	**1723.69 kPa**
Scenario 1	Winter Heating
Flow	2703.9 kg/h, 0.78 l/s
Pressure (Entering, Pressure drop, Leaving)	96.5 kPa, 6.9 kPa, 89.6 kPa
Temperature (Entering, Change, Leaving)	119.8°C, -1.1°C, 118.7°C
Component total back pressure	0 kPa
Back pressure summary	
Scenario 2	Summer Cooling
Scenario data not shown because the flow is 0.	
Scenario 3	Economizer
Scenario data not shown because the flow is 0.	

REC-5	
Type, Location, Classification	**Not Vented**, **(Blank)**, **New Equipment**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Diameter, Weight	610 mm, **152.4 mm**, **0 kg**
Velocity	**3.048 m/s**
Pressure rating	**1723.69 kPa**
Scenario 1	Winter Heating
Flow	1465.5 kg/h, 0.42 l/s
Pressure (Entering, Pressure drop, Leaving)	27.6 kPa, 6.9 kPa, 20.7 kPa
Temperature (Entering, Change, Leaving)	106.8°C, -1.6°C, 105.2°C
Component total back pressure	0 kPa
Back pressure summary	
Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

REC-6

Type, Location, Classification	**Not Vented**, **(Blank)**, **New Equipment**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Diameter, Weight	610 mm, **152.4 mm**, **0 kg**
Velocity	**3.048 m/s**
Pressure rating	**1723.69 kPa**

Scenario 1	Winter Heating
Flow	1465.5 kg/h, 0.42 l/s
Pressure (Entering, Pressure drop, Leaving)	27.6 kPa, 6.9 kPa, 20.7 kPa
Temperature (Entering, Change, Leaving)	106.8°C, -1.6°C, 105.2°C
Component total back pressure	0 kPa
Back pressure summary	

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

Damper

DED-1

Air type, Location, Classification	**Exhaust Air**, **(Blank)**, **New Equipment**
Static pressure calculation method	**Input Static Pressure**
Manufacturer, Model	**(Blank)**, **(Blank)**
Width, Height, Weight	559 mm, **762 mm**, **0 kg**
Maximum velocity	**5.08 m/s**
Emergency power	**No**
Electrical power by	**Electrical**
Control circuit voltage/phase	**24v/1ph**
Temperature rating	**100°C**
Percentage open for normal operation	**100%**
Control type	**Modulating**
Blade operation	**Opposed**
Blade type	**Airfoil**
Construction (Selection, Actual)	**Aluminum**, Galvanized

Scenario 1	Winter Heating
Airflow (System, Portion, Component)	9911 l/s, **21.8%**, 2161 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 2	Summer Cooling
Airflow (System, Portion, Component)	9911 l/s, **21.8%**, 2161 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 3	Economizer
Airflow (System, Portion, Component)	9911 l/s, **21.8%**, 2161 l/s
Component total static pressure	25 Pa

Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

DED-2	
Air type, Location, Classification	**Exhaust Air**, **(Blank)**, **New Equipment**
Static pressure calculation method	**Input Static Pressure**
Manufacturer, Model	**(Blank)**, **(Blank)**
Width, Height, Weight	1600 mm, **762 mm**, **0 kg**
Maximum velocity	**5.08 m/s**
Emergency power	**No**
Electrical power by	**Electrical**
Control circuit voltage/phase	**24v/1ph**
Temperature rating	**100°C**
Percentage open for normal operation	**100%**
Control type	**Modulating**
Blade operation	**Opposed**
Blade type	**Airfoil**
Construction (Selection, Actual)	**Aluminum**, Galvanized

Scenario 1	Winter Heating
Airflow (System, Portion, Component)	9911 l/s, **62.3%**, 6175 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 2	Summer Cooling
Airflow (System, Portion, Component)	9911 l/s, **62.3%**, 6175 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 3	Economizer
Airflow (System, Portion, Component)	9911 l/s, **62.3%**, 6175 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

DED-3	
Air type, Location, Classification	**Exhaust Air**, **(Blank)**, **New Equipment**
Static pressure calculation method	**Input Static Pressure**
Manufacturer, Model	**(Blank)**, **(Blank)**
Width, Height, Weight	1092 mm, **762 mm**, **0 kg**
Maximum velocity	**5.08 m/s**
Emergency power	**No**
Electrical power by	**Electrical**
Control circuit voltage/phase	**24v/1ph**
Temperature rating	**100°C**
Percentage open for normal operation	**100%**
Control type	**Modulating**
Blade operation	**Opposed**
Blade type	**Airfoil**
Construction (Selection, Actual)	**Aluminum**, Galvanized

Scenario 1	Winter Heating
Airflow (System, Portion, Component)	4578 l/s, **90.8%**, 4157 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**

Component (C factor)	1.61
Other	**0 Pa**

Scenario 2	Summer Cooling
Airflow (System, Portion, Component)	4578 l/s, **90.8%**, 4157 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 3	Economizer
Airflow (System, Portion, Component)	4578 l/s, **90.8%**, 4157 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

DED-4

Air type, Location, Classification	**Exhaust Air**, **(Blank)**, **New Equipment**
Static pressure calculation method	**Input Static Pressure**
Manufacturer, Model	**(Blank)**, **(Blank)**
Width, Height, Weight	762 mm, **762 mm**, **0 kg**
Maximum velocity	**5.08 m/s**
Emergency power	**No**
Electrical power by	**Electrical**
Control circuit voltage/phase	**24v/1ph**
Temperature rating	**100°C**
Percentage open for normal operation	**100%**
Control type	**Modulating**
Blade operation	**Opposed**
Blade type	**Airfoil**
Construction (Selection, Actual)	**Aluminum**, Galvanized

Scenario 1	Winter Heating
Airflow (System, Portion, Component)	3068 l/s, **96.1%**, 2948 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 2	Summer Cooling
Airflow (System, Portion, Component)	3068 l/s, **96.1%**, 2948 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 3	Economizer
Airflow (System, Portion, Component)	3068 l/s, **96.1%**, 2948 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

DED-5

Air type, Location, Classification	**Exhaust Air**, **(Blank)**, **New Equipment**
Static pressure calculation method	**Input Static Pressure**
Manufacturer, Model	**(Blank)**, **(Blank)**
Width, Height, Weight	127 mm, **762 mm**, **0 kg**
Maximum velocity	**5.08 m/s**

Emergency power	**No**
Electrical power by	**Electrical**
Control circuit voltage/phase	**24v/1ph**
Temperature rating	**100°C**
Percentage open for normal operation	**100%**
Control type	**Modulating**
Blade operation	**Opposed**
Blade type	**Airfoil**
Construction (Selection, Actual)	**Aluminum**, Galvanized

Scenario 1	Winter Heating
Airflow (System, Portion, Component)	472 l/s, **100%**, 472 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 2	Summer Cooling
Airflow (System, Portion, Component)	472 l/s, **100%**, 472 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 3	Economizer
Airflow (System, Portion, Component)	472 l/s, **100%**, 472 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

DED-6

Air type, Location, Classification	**Exhaust Air**, **(Blank)**, **New Equipment**
Static pressure calculation method	**Input Static Pressure**
Manufacturer, Model	**(Blank)**, **(Blank)**
Width, Height, Weight	51 mm, **762 mm**, **0 kg**
Maximum velocity	**5.08 m/s**
Emergency power	**No**
Electrical power by	**Electrical**
Control circuit voltage/phase	**24v/1ph**
Temperature rating	**100°C**
Percentage open for normal operation	**100%**
Control type	**Modulating**
Blade operation	**Opposed**
Blade type	**Airfoil**
Construction (Selection, Actual)	**Aluminum**, Galvanized

Scenario 1	Winter Heating
Airflow (System, Portion, Component)	3068 l/s, **3.9%**, 120 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 2	Summer Cooling
Airflow (System, Portion, Component)	3068 l/s, **3.9%**, 120 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 3	Economizer
Airflow (System, Portion, Component)	3068 l/s, **3.9%**, 120 l/s

Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

DED-7

Air type, Location, Classification	**Exhaust Air**, **(Blank)**, **New Equipment**
Static pressure calculation method	**Input Static Pressure**
Manufacturer, Model	**(Blank)**, **(Blank)**
Width, Height, Weight	127 mm, **762 mm**, **0 kg**
Maximum velocity	**5.08 m/s**
Emergency power	**No**
Electrical power by	**Electrical**
Control circuit voltage/phase	**24v/1ph**
Temperature rating	**100°C**
Percentage open for normal operation	**100%**
Control type	**Modulating**
Blade operation	**Opposed**
Blade type	**Airfoil**
Construction (Selection, Actual)	**Aluminum**, Galvanized

Scenario 1	Winter Heating
Airflow (System, Portion, Component)	4578 l/s, **9.2%**, 421 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 2	Summer Cooling
Airflow (System, Portion, Component)	4578 l/s, **9.2%**, 421 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 3	Economizer
Airflow (System, Portion, Component)	4578 l/s, **9.2%**, 421 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

DED-8

Air type, Location, Classification	**Exhaust Air**, **(Blank)**, **New Equipment**
Static pressure calculation method	**Input Static Pressure**
Manufacturer, Model	**(Blank)**, **(Blank)**
Width, Height, Weight	76 mm, **762 mm**, **0 kg**
Maximum velocity	**5.08 m/s**
Emergency power	**No**
Electrical power by	**Electrical**
Control circuit voltage/phase	**24v/1ph**
Temperature rating	**100°C**
Percentage open for normal operation	**100%**
Control type	**Modulating**
Blade operation	**Opposed**
Blade type	**Airfoil**
Construction (Selection, Actual)	**Aluminum**, Galvanized

Scenario 1	Winter Heating
Airflow (System, Portion, Component)	261 l/s, **100%**, 261 l/s
Component total static pressure	25 Pa

Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 2	Summer Cooling
Airflow (System, Portion, Component)	261 l/s, **100%**, 261 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 3	Economizer
Airflow (System, Portion, Component)	261 l/s, **100%**, 261 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

DED-9

Air type, Location, Classification	**Exhaust Air**, **(Blank)**, **New Equipment**
Static pressure calculation method	**Input Static Pressure**
Manufacturer, Model	**(Blank)**, **(Blank)**
Width, Height, Weight	76 mm, **762 mm**, **0 kg**
Maximum velocity	**5.08 m/s**
Emergency power	**No**
Electrical power by	**Electrical**
Control circuit voltage/phase	**24v/1ph**
Temperature rating	**100°C**
Percentage open for normal operation	**100%**
Control type	**Modulating**
Blade operation	**Opposed**
Blade type	**Airfoil**
Construction (Selection, Actual)	**Aluminum**, Galvanized

Scenario 1	Winter Heating
Airflow (System, Portion, Component)	9911 l/s, **2.5%**, 248 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 2	Summer Cooling
Airflow (System, Portion, Component)	9911 l/s, **2.5%**, 248 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 3	Economizer
Airflow (System, Portion, Component)	9911 l/s, **2.5%**, 248 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

DED-10

Air type, Location, Classification	**Exhaust Air**, **(Blank)**, **New Equipment**
Static pressure calculation method	**Input Static Pressure**
Manufacturer, Model	**(Blank)**, **(Blank)**
Width, Height, Weight	76 mm, **762 mm**, **0 kg**

Maximum velocity	**5.08 m/s**
Emergency power	**No**
Electrical power by	**Electrical**
Control circuit voltage/phase	**24v/1ph**
Temperature rating	**100°C**
Percentage open for normal operation	**100%**
Control type	**Modulating**
Blade operation	**Opposed**
Blade type	**Airfoil**
Construction (Selection, Actual)	**Aluminum**, Galvanized
Scenario 1	Winter Heating
Airflow (System, Portion, Component)	9911 l/s, **2.5%**, 248 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**
Scenario 2	Summer Cooling
Airflow (System, Portion, Component)	9911 l/s, **2.5%**, 248 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**
Scenario 3	Economizer
Airflow (System, Portion, Component)	9911 l/s, **2.5%**, 248 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

DED-11	
Air type, Location, Classification	**Exhaust Air**, **(Blank)**, **New Equipment**
Static pressure calculation method	**Input Static Pressure**
Manufacturer, Model	**(Blank)**, **(Blank)**
Width, Height, Weight	279 mm, **762 mm**, **0 kg**
Maximum velocity	**5.08 m/s**
Emergency power	**No**
Electrical power by	**Electrical**
Control circuit voltage/phase	**24v/1ph**
Temperature rating	**100°C**
Percentage open for normal operation	**100%**
Control type	**Modulating**
Blade operation	**Opposed**
Blade type	**Airfoil**
Construction (Selection, Actual)	**Aluminum**, Galvanized
Scenario 1	Winter Heating
Airflow (System, Portion, Component)	9911 l/s, **10.9%**, 1080 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**
Scenario 2	Summer Cooling
Airflow (System, Portion, Component)	9911 l/s, **10.9%**, 1080 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**
Scenario 3	Economizer

Airflow (System, Portion, Component)	9911 l/s, **10.9%**, 1080 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

DRLD-1	
Air type, Location, Classification	**Relief Air**, **(Blank)**, **New Equipment**
Static pressure calculation method	**Input Static Pressure**
Manufacturer, Model	**(Blank)**, **(Blank)**
Width, Height, Weight	32817 mm, **762 mm**, **0 kg**
Maximum velocity	**5.08 m/s**
Emergency power	**No**
Electrical power by	**Electrical**
Control circuit voltage/phase	**24v/1ph**
Temperature rating	**100°C**
Percentage open for normal operation	**100%**
Control type	**Modulating**
Blade operation	**Opposed**
Blade type	**Airfoil**
Construction (Selection, Actual)	**Aluminum**, Galvanized

Scenario 1	Winter Heating
Airflow (System, Portion, Component)	11145 l/s, **100%**, 11145 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 2	Summer Cooling
Airflow (System, Portion, Component)	7339 l/s, **100%**, 7339 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 3	Economizer
Airflow (System, Portion, Component)	127024 l/s, **100%**, 127024 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

OD-1	
Air type, Location, Classification	**Outside Air**, AH-1, **New Equipment**
Static pressure calculation method	**Input Static Pressure**
Manufacturer, Model	**(Blank)**, **(Blank)**
Width, Height, Weight	6706 mm, **762 mm**, **0 kg**
Maximum velocity	**5.08 m/s**
Emergency power	**No**
Electrical power by	**Electrical**
Control circuit voltage/phase	**24v/1ph**
Temperature rating	**100°C**
Percentage open for normal operation	**100%**
Control type	**Modulating**
Blade operation	**Opposed**
Blade type	**Airfoil**
Construction (Selection, Actual)	**Aluminum**, Galvanized

Scenario 1	Winter Heating
Airflow (System, Portion, Component)	5191 l/s, **100%**, 5191 l/s

Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 2	Summer Cooling
Airflow (System, Portion, Component)	5558 l/s, **100%**, 5558 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 3	Economizer
Airflow (System, Portion, Component)	25957 l/s, **100%**, 25957 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

OD-2

Air type, Location, Classification	**Outside Air**, AH-2, **New Equipment**
Static pressure calculation method	**Input Static Pressure**
Manufacturer, Model	**(Blank)**, **(Blank)**
Width, Height, Weight	6706 mm, **762 mm**, **0 kg**
Maximum velocity	**5.08 m/s**
Emergency power	**No**
Electrical power by	**Electrical**
Control circuit voltage/phase	**24v/1ph**
Temperature rating	**100°C**
Percentage open for normal operation	**100%**
Control type	**Modulating**
Blade operation	**Opposed**
Blade type	**Airfoil**
Construction (Selection, Actual)	**Aluminum**, Galvanized

Scenario 1	Winter Heating
Airflow (System, Portion, Component)	7732 l/s, **100%**, 7732 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 2	Summer Cooling
Airflow (System, Portion, Component)	8770 l/s, **100%**, 8770 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 3	Economizer
Airflow (System, Portion, Component)	25957 l/s, **100%**, 25957 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

OD-3

Air type, Location, Classification	**Outside Air**, AH-3, **New Equipment**
Static pressure calculation method	**Input Static Pressure**
Manufacturer, Model	**(Blank)**, **(Blank)**

Width, Height, Weight	10135 mm, **762 mm**, **0 kg**
Maximum velocity	**5.08 m/s**
Emergency power	**No**
Electrical power by	**Electrical**
Control circuit voltage/phase	**24v/1ph**
Temperature rating	**100°C**
Percentage open for normal operation	**100%**
Control type	**Modulating**
Blade operation	**Opposed**
Blade type	**Airfoil**
Construction (Selection, Actual)	**Aluminum**, Galvanized
Scenario 1	Winter Heating
Airflow (System, Portion, Component)	7834 l/s, **100%**, 7834 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**
Scenario 2	Summer Cooling
Airflow (System, Portion, Component)	7834 l/s, **100%**, 7834 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**
Scenario 3	Economizer
Airflow (System, Portion, Component)	39172 l/s, **100%**, 39172 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

OD-4	
Air type, Location, Classification	**Outside Air**, AH-4, **New Equipment**
Static pressure calculation method	**Input Static Pressure**
Manufacturer, Model	**(Blank)**, **(Blank)**
Width, Height, Weight	10135 mm, **762 mm**, **0 kg**
Maximum velocity	**5.08 m/s**
Emergency power	**No**
Electrical power by	**Electrical**
Control circuit voltage/phase	**24v/1ph**
Temperature rating	**100°C**
Percentage open for normal operation	**100%**
Control type	**Modulating**
Blade operation	**Opposed**
Blade type	**Airfoil**
Construction (Selection, Actual)	**Aluminum**, Galvanized
Scenario 1	Winter Heating
Airflow (System, Portion, Component)	7834 l/s, **100%**, 7834 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**
Scenario 2	Summer Cooling
Airflow (System, Portion, Component)	7834 l/s, **100%**, 7834 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**
Scenario 3	Economizer

Airflow (System, Portion, Component)	39172 l/s, **100%**, 39172 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

OD-5	
Air type, Location, Classification	**Outside Air**, AH-5, **New Equipment**
Static pressure calculation method	**Input Static Pressure**
Manufacturer, Model	**(Blank)**, **(Blank)**
Width, Height, Weight	7925 mm, **762 mm**, **0 kg**
Maximum velocity	**5.08 m/s**
Emergency power	**No**
Electrical power by	**Electrical**
Control circuit voltage/phase	**24v/1ph**
Temperature rating	**100°C**
Percentage open for normal operation	**100%**
Control type	**Modulating**
Blade operation	**Opposed**
Blade type	**Airfoil**
Construction (Selection, Actual)	**Aluminum**, Galvanized
Scenario 1	Winter Heating
Airflow (System, Portion, Component)	10026 l/s, **100%**, 10026 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**
Scenario 2	Summer Cooling
Airflow (System, Portion, Component)	11253 l/s, **100%**, 11253 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**
Scenario 3	Economizer
Airflow (System, Portion, Component)	30677 l/s, **100%**, 30677 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

RD-1	
Air type, Location, Classification	**Return Air**, AH-1, **New Equipment**
Static pressure calculation method	**Input Static Pressure**
Manufacturer, Model	**(Blank)**, **(Blank)**
Width, Height, Weight	5283 mm, **762 mm**, **0 kg**
Maximum velocity	**5.08 m/s**
Emergency power	**No**
Electrical power by	**Electrical**
Control circuit voltage/phase	**24v/1ph**
Temperature rating	**100°C**
Percentage open for normal operation	**100%**
Control type	**Modulating**
Blade operation	**Opposed**
Blade type	**Airfoil**
Construction (Selection, Actual)	**Aluminum**, Galvanized
Scenario 1	Winter Heating

Airflow (System, Portion, Component)	10383 l/s, **100%**, 10383 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 2	Summer Cooling
Airflow (System, Portion, Component)	20400 l/s, **100%**, 20400 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 3	Economizer

Scenario data not shown because the airflow is 0.

RD-2

Air type, Location, Classification	**Return Air**, AH-2, **New Equipment**
Static pressure calculation method	**Input Static Pressure**
Manufacturer, Model	**(Blank)**, **(Blank)**
Width, Height, Weight	4445 mm, **762 mm**, **0 kg**
Maximum velocity	**5.08 m/s**
Emergency power	**No**
Electrical power by	**Electrical**
Control circuit voltage/phase	**24v/1ph**
Temperature rating	**100°C**
Percentage open for normal operation	**100%**
Control type	**Modulating**
Blade operation	**Opposed**
Blade type	**Airfoil**
Construction (Selection, Actual)	**Aluminum**, Galvanized

Scenario 1	Winter Heating
Airflow (System, Portion, Component)	7842 l/s, **100%**, 7842 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 2	Summer Cooling
Airflow (System, Portion, Component)	17187 l/s, **100%**, 17187 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 3	Economizer

Scenario data not shown because the airflow is 0.

RD-3

Air type, Location, Classification	**Return Air**, AH-3, **New Equipment**
Static pressure calculation method	**Input Static Pressure**
Manufacturer, Model	**(Blank)**, **(Blank)**
Width, Height, Weight	8103 mm, **762 mm**, **0 kg**
Maximum velocity	**5.08 m/s**
Emergency power	**No**
Electrical power by	**Electrical**
Control circuit voltage/phase	**24v/1ph**
Temperature rating	**100°C**
Percentage open for normal operation	**100%**

Control type	**Modulating**
Blade operation	**Opposed**
Blade type	**Airfoil**
Construction (Selection, Actual)	**Aluminum**, Galvanized

Scenario 1	Winter Heating
Airflow (System, Portion, Component)	15669 l/s, **100%**, 15669 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 2	Summer Cooling
Airflow (System, Portion, Component)	31337 l/s, **100%**, 31337 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 3	Economizer

Scenario data not shown because the airflow is 0.

RD-4

Air type, Location, Classification	**Return Air**, AH-4, **New Equipment**
Static pressure calculation method	**Input Static Pressure**
Manufacturer, Model	**(Blank)**, **(Blank)**
Width, Height, Weight	8103 mm, **762 mm**, **0 kg**
Maximum velocity	**5.08 m/s**
Emergency power	**No**
Electrical power by	**Electrical**
Control circuit voltage/phase	**24v/1ph**
Temperature rating	**100°C**
Percentage open for normal operation	**100%**
Control type	**Modulating**
Blade operation	**Opposed**
Blade type	**Airfoil**
Construction (Selection, Actual)	**Aluminum**, Galvanized

Scenario 1	Winter Heating
Airflow (System, Portion, Component)	15669 l/s, **100%**, 15669 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 2	Summer Cooling
Airflow (System, Portion, Component)	31337 l/s, **100%**, 31337 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 3	Economizer

Scenario data not shown because the airflow is 0.

RD-5

Air type, Location, Classification	**Return Air**, AH-5, **New Equipment**
Static pressure calculation method	**Input Static Pressure**
Manufacturer, Model	**(Blank)**, **(Blank)**

Width, Height, Weight	5029 mm, **762 mm**, **0 kg**
Maximum velocity	**5.08 m/s**
Emergency power	**No**
Electrical power by	**Electrical**
Control circuit voltage/phase	**24v/1ph**
Temperature rating	**100°C**
Percentage open for normal operation	**100%**
Control type	**Modulating**
Blade operation	**Opposed**
Blade type	**Airfoil**
Construction (Selection, Actual)	**Aluminum**, Galvanized

Scenario 1	Winter Heating
Airflow (System, Portion, Component)	8380 l/s, **100%**, 8380 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 2	Summer Cooling
Airflow (System, Portion, Component)	19424 l/s, **100%**, 19424 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 3	Economizer

Scenario data not shown because the airflow is 0.

RLD-1

Air type, Location, Classification	**Relief Air**, AH-1, **New Equipment**
Static pressure calculation method	**Input Static Pressure**
Manufacturer, Model	**(Blank)**, **(Blank)**
Width, Height, Weight	5283 mm, **762 mm**, **0 kg**
Maximum velocity	**5.08 m/s**
Emergency power	**No**
Electrical power by	**Electrical**
Control circuit voltage/phase	**24v/1ph**
Temperature rating	**100°C**
Percentage open for normal operation	**100%**
Control type	**Modulating**
Blade operation	**Opposed**
Blade type	**Airfoil**
Construction (Selection, Actual)	**Aluminum**, Galvanized

Scenario 1	Winter Heating
Airflow (System, Portion, Component)	672 l/s, **100%**, 672 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 2	Summer Cooling

Scenario data not shown because the airflow is 0.

Scenario 3	Economizer
Airflow (System, Portion, Component)	20400 l/s, **100%**, 20400 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

RLD-2	
Air type, Location, Classification	**Relief Air**, AH-2, **New Equipment**
Static pressure calculation method	**Input Static Pressure**
Manufacturer, Model	**(Blank)**, **(Blank)**
Width, Height, Weight	4445 mm, **762 mm**, **0 kg**
Maximum velocity	**5.08 m/s**
Emergency power	**No**
Electrical power by	**Electrical**
Control circuit voltage/phase	**24v/1ph**
Temperature rating	**100°C**
Percentage open for normal operation	**100%**
Control type	**Modulating**
Blade operation	**Opposed**
Blade type	**Airfoil**
Construction (Selection, Actual)	**Aluminum**, Galvanized
Scenario 1	Winter Heating
Scenario data not shown because the airflow is 0.	
Scenario 2	Summer Cooling
Scenario data not shown because the airflow is 0.	
Scenario 3	Economizer
Airflow (System, Portion, Component)	17187 l/s, **100%**, 17187 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

RLD-3	
Air type, Location, Classification	**Relief Air**, AH-3, **New Equipment**
Static pressure calculation method	**Input Static Pressure**
Manufacturer, Model	**(Blank)**, **(Blank)**
Width, Height, Weight	9068 mm, **762 mm**, **0 kg**
Maximum velocity	**5.08 m/s**
Emergency power	**No**
Electrical power by	**Electrical**
Control circuit voltage/phase	**24v/1ph**
Temperature rating	**100°C**
Percentage open for normal operation	**100%**
Control type	**Modulating**
Blade operation	**Opposed**
Blade type	**Airfoil**
Construction (Selection, Actual)	**Aluminum**, Galvanized
Scenario 1	Winter Heating
Airflow (System, Portion, Component)	5236 l/s, **100%**, 5236 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**
Scenario 2	Summer Cooling
Airflow (System, Portion, Component)	3669 l/s, **100%**, 3669 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**
Scenario 3	Economizer

Airflow (System, Portion, Component)	35007 l/s, **100%**, 35007 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

RLD-4	
Air type, Location, Classification	**Relief Air**, AH-4, **New Equipment**
Static pressure calculation method	**Input Static Pressure**
Manufacturer, Model	**(Blank)**, **(Blank)**
Width, Height, Weight	9068 mm, **762 mm**, **0 kg**
Maximum velocity	**5.08 m/s**
Emergency power	**No**
Electrical power by	**Electrical**
Control circuit voltage/phase	**24v/1ph**
Temperature rating	**100°C**
Percentage open for normal operation	**100%**
Control type	**Modulating**
Blade operation	**Opposed**
Blade type	**Airfoil**
Construction (Selection, Actual)	**Aluminum**, Galvanized

Scenario 1	Winter Heating
Airflow (System, Portion, Component)	5236 l/s, **100%**, 5236 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 2	Summer Cooling
Airflow (System, Portion, Component)	3669 l/s, **100%**, 3669 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Scenario 3	Economizer
Airflow (System, Portion, Component)	35007 l/s, **100%**, 35007 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

RLD-5	
Air type, Location, Classification	**Relief Air**, AH-5, **New Equipment**
Static pressure calculation method	**Input Static Pressure**
Manufacturer, Model	**(Blank)**, **(Blank)**
Width, Height, Weight	5029 mm, **762 mm**, **0 kg**
Maximum velocity	**5.08 m/s**
Emergency power	**No**
Electrical power by	**Electrical**
Control circuit voltage/phase	**24v/1ph**
Temperature rating	**100°C**
Percentage open for normal operation	**100%**
Control type	**Modulating**
Blade operation	**Opposed**
Blade type	**Airfoil**
Construction (Selection, Actual)	**Aluminum**, Galvanized

Scenario 1	Winter Heating

Scenario data not shown because the airflow is 0.

Scenario 2	Summer Cooling

Scenario data not shown because the airflow is 0.

Scenario 3	Economizer
Airflow (System, Portion, Component)	19424 l/s, **100%**, 19424 l/s
Component total static pressure	25 Pa
Component (Design, Actual)	**24.9 Pa**, **0 Pa**
Component (C factor)	1.61
Other	**0 Pa**

Deaerator

Type	**Low Profile Tray, 2 Pumps (Duplex)**
Location, Classification	**(Blank)**, **New Equipment**
Vertical lift	**0 m**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Width, Height	**0 mm**, **0 mm**, **0 mm**
Operating weight	**0 kg**
Motor size	**0 kW**
Motor speed	**1750 rpm**
Voltage/phase (Motor)	120v/1ph
Emergency power	**No**
Electrical power by	**Electrical**
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Control circuit voltage/phase	**120v/1ph**
Pressure rating	**1723.69 kPa**
Average discharge flow	**0 l/s**
Tank size	**0 l**
Construction (Selection, Actual)	**All**, **Welded Steel**

Scenario 1	Winter Heating
Input flow (System, Portion, Component)	24625.5 kg/h, **100%**, 24625.5 kg/h, 7.14 l/s
Output flow	7448.8 kg/h, 2.16 l/s
Pressure (Entering, Leaving)	**0 kPa**, 689.5 kPa
Component total back pressure	689.5 kPa
Back pressure summary	
(Boiler)	689.5 kPa
(Vertical lift)	0 kPa
SPIPE-5 (Pipe, Steam)	0 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

Expansion Tank

ET-1

Type, Location, Classification	**CA Series (Vertical, Bladder, Full Expansion)**, **(Blank)**, **New Equipment**
Fluid type	30% Propylene Glycol
Temperature (Minimum, Maximum)	4.4°C, 32.2°C
Static head above tank	**44.85 kPa**
System pressure below relief valve pressure	**10%**
Pressure (Minimum fill, Maximum working, Relief valve)	72.4 kPa, 310.3 kPa, **344.74 kPa**
Minimum tank volume, Minimum acceptance volume	64.2 l, 37.1 l
Volume portion	**100%**

Volume (Component)	3486.4 l
Connected system components	3482.6 l
Connected system piping	3.8 l
Other	**0 l**
Components volume summary	
AS-1	37.9 l
HC-1.1	378.5 l
HC-2.1	378.5 l
HC-3	378.5 l
HC-4	378.5 l
HC-5.1	378.5 l
HX-1	757.1 l
HX-2	757.1 l
P-1	18.9 l
P-2	18.9 l
Piping volume summary	
BV-1	0.4 l
BV-2	0.4 l
BV-3	0.4 l
BV-4	0.4 l
BV-5	0.4 l
CV-10	0.4 l
CV-6	0.4 l
CV-7	0.4 l
CV-8	0.4 l
CV-9	0.4 l
Automatic selection	**Yes**
Manufacturer, Model	TACO, CBX-300
Diameter, Height, Shipping weight, Maximum weight	610 mm, 1397 mm, 136.1 kg, 304.4 kg
Tank volume, Acceptance volume	299 l, 162.8 l
Pressure rating	861.8 kPa
ASME certified, ASME certification required	Yes, **No**
NPT fitting	DN 15

ET-2

Type, Location, Classification	**CA Series (Vertical, Bladder, Full Expansion)**, **(Blank)**, **New Equipment**
Fluid type	Water
Temperature (Minimum, Maximum)	4.4°C, 82.2°C
Static head above tank	**44.85 kPa**
System pressure below relief valve pressure	**10%**
Pressure (Minimum fill, Maximum working, Relief valve)	72.4 kPa, 310.3 kPa, **344.74 kPa**
Minimum tank volume, Minimum acceptance volume	84.5 l, 48.9 l
Volume portion	**50%**
Volume (Component)	1762.9 l
Connected system components	3520.4 l
Connected system piping	5.3 l
Other	**0 l**
Components volume summary	
AS-2	37.9 l
HX-3	757.1 l
HX-4	757.1 l
IHL-7	37.9 l
P-3	18.9 l
P-4	18.9 l
TBG-1	378.5 l
TBG-2	378.5 l
TBG-3	378.5 l
TBG-4	378.5 l
TBG-5	378.5 l
Piping volume summary	
BV-10	0.4 l
BV-19	0.4 l
BV-6	0.4 l
BV-7	0.4 l
BV-8	0.4 l
BV-9	0.4 l

CV-1	0.4 l
CV-2	0.4 l
CV-3	0.4 l
CV-32	0.4 l
CV-4	0.4 l
CV-5	0.4 l
V-1	0.4 l
V-2	0.4 l
Automatic selection	**Yes**
Manufacturer, Model	TACO, PAX-130
Diameter, Height, Shipping weight, Maximum weight	406 mm, 1397 mm, 90.7 kg, 162.6 kg
Tank volume, Acceptance volume	128.7 l, 71.9 l
Pressure rating	861.8 kPa
ASME certified, ASME certification required	Yes, **No**
NPT fitting	DN 15

ET-3

Type, Location, Classification	**CA Series (Vertical, Bladder, Full Expansion)**, **(Blank)**, **New Equipment**
Fluid type	Water
Temperature (Minimum, Maximum)	4.4°C, 82.2°C
Static head above tank	**44.85 kPa**
System pressure below relief valve pressure	**10%**
Pressure (Minimum fill, Maximum working, Relief valve)	72.4 kPa, 310.3 kPa, **344.74 kPa**
Minimum tank volume, Minimum acceptance volume	84.5 l, 48.9 l
Volume portion	**50%**
Volume (Component)	1762.9 l
Connected system components	3520.4 l
Connected system piping	5.3 l
Other	**0 l**
Components volume summary	
AS-2	37.9 l
HX-3	757.1 l
HX-4	757.1 l
IHL-7	37.9 l
P-3	18.9 l
P-4	18.9 l
TBG-1	378.5 l
TBG-2	378.5 l
TBG-3	378.5 l
TBG-4	378.5 l
TBG-5	378.5 l
Piping volume summary	
BV-10	0.4 l
BV-19	0.4 l
BV-6	0.4 l
BV-7	0.4 l
BV-8	0.4 l
BV-9	0.4 l
CV-1	0.4 l
CV-2	0.4 l
CV-3	0.4 l
CV-32	0.4 l
CV-4	0.4 l
CV-5	0.4 l
V-1	0.4 l
V-2	0.4 l
Automatic selection	**Yes**
Manufacturer, Model	TACO, PAX-130
Diameter, Height, Shipping weight, Maximum weight	406 mm, 1397 mm, 90.7 kg, 162.6 kg
Tank volume, Acceptance volume	128.7 l, 71.9 l
Pressure rating	861.8 kPa
ASME certified, ASME certification required	Yes, **No**
NPT fitting	DN 15

ET-4

Type, Location, Classification	**CA Series (Vertical, Bladder, Full Expansion)**, **(Blank)**, **New Equipment**
Fluid type	Water
Temperature (Minimum, Maximum)	4.4°C, 32.2°C
Static head above tank	**44.85 kPa**
System pressure below relief valve pressure	**10%**
Pressure (Minimum fill, Maximum working, Relief valve)	72.4 kPa, 186.2 kPa, **206.84 kPa**
Minimum tank volume, Minimum acceptance volume	12.6 l, 5 l
Volume portion	**40%**
Volume (Component)	1229.2 l
Connected system components	3066.2 l
Connected system piping	6.8 l
Other	**0 l**
Components volume summary	
	1892.7 l
CC-1	189.3 l
CC-2	189.3 l
CC-3	189.3 l
CC-4	189.3 l
CC-5	189.3 l
ICL-1	37.9 l
ICL-2	37.9 l
ICL-3	37.9 l
ICL-4	37.9 l
P-5	18.9 l
P-6	18.9 l
P-7	18.9 l
P-8	18.9 l
Piping volume summary	
BV-11	0.4 l
BV-12	0.4 l
BV-13	0.4 l
BV-14	0.4 l
BV-15	0.4 l
BV-16	0.4 l
BV-17	0.4 l
BV-18	0.4 l
BV-20	0.4 l
CV-16	0.4 l
CV-17	0.4 l
CV-18	0.4 l
CV-19	0.4 l
CV-20	0.4 l
CV-21	0.4 l
CV-22	0.4 l
CV-31	0.4 l
CV-34	0.4 l
Automatic selection	**Yes**
Manufacturer, Model	TACO, CBX-15
Diameter, Height, Shipping weight, Maximum weight	356 mm, 381 mm, 20.4 kg, 29.9 kg
Tank volume, Acceptance volume	15.1 l, 9.5 l
Pressure rating	861.8 kPa
ASME certified, ASME certification required	Yes, **No**
NPT fitting	DN 15

Fan

DEF-1

Air type, Type, Location, Classification	**Exhaust Air**, **BCV (Backward Inclined Centrifugal Vent Set, Belt)**, **(Blank)**, **New Equipment**
Quantity	**1**
Use space dimensions for zone data	**No**
Zone length, Zone width, Zone height	**0 m**, **0 m**, **0 m**
Zone area, Zone volume	0 m², 0 m³

Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Clearance, Maximum width, Maximum height	**304.8 mm**, **0 mm**, **0 mm**
Motor size, Brake horsepower (Estimated, Actual)	**0 kW**, 0 kW, **0 kW**
Motor size selection method	**Non-Overloading**
Motor speed	1750 rpm
Voltage/phase (Motor)	120v/1ph
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Static efficiency	0%
Wheel diameter	0 mm
Fan speed	0 rpm
Class	I
Inlet vanes	**No**
Outlet diffuser	**No**
Sound	
Maximum inlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual inlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB
Maximum outlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual outlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB

Scenario 1	Winter Heating
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.1°C, 22.5%, 31.8 kJ/kg
Apply fan heat to air	**No**, 0°C
Apply motor heat to air	**No**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.1°C, 22.5%, 31.8 kJ/kg
Exhaust calculation method - user defined airflow	**261 l/s**
Airflow (System, Portion, Component, Unit)	261 l/s, **100%**, 261 l/s, 261 l/s
Component total static pressure	353 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Extra dampers	**0 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Exhaust grille	**24.9 Pa**
Exhaust backdraft damper	**0 Pa**
Exhaust balancing damper	**24.9 Pa**
Stack + Phoenix valve	**273.7 Pa**
Total static pressure	378 Pa
Internal static pressure, External static pressure	0 Pa, 378 Pa
Internal static pressure summary	
External static pressure summary	
DED-8 (Damper)	25 Pa
DEF-1 (Fire and/or smoke damper)	0 Pa
DEF-1 (Stack + Phoenix valve)	274 Pa
DEF-1 (Plenum)	5 Pa
DEF-1 (Fan inlet)	12 Pa
DEF-1 (Fan outlet)	12 Pa
DEF-1 (Exhaust grille)	25 Pa
DEF-1 (Exhaust backdraft damper)	0 Pa
DEF-1 (Exhaust balancing damper)	25 Pa
DUCT-122 (Duct)	0 Pa
DUCT-130 (Duct)	0 Pa
DUCT-140 (Duct)	0 Pa
DUCT-141 (Duct)	0 Pa
DUCT-87 (Duct)	0 Pa

Scenario 2	Summer Cooling
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.7°C, 44.2%, 41 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.7°C, 44.2%, 41 kJ/kg
Exhaust calculation method - user defined airflow	**261 l/s**
Airflow (System, Portion, Component, Unit)	261 l/s, **100%**, 261 l/s, 261 l/s

Component total static pressure	353 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Extra dampers	**0 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Exhaust grille	**24.9 Pa**
Exhaust backdraft damper	**0 Pa**
Exhaust balancing damper	**24.9 Pa**
Stack + Phoenix valve	**273.7 Pa**
Total static pressure	378 Pa
Internal static pressure, External static pressure	0 Pa, 378 Pa
Internal static pressure summary	
External static pressure summary	
DED-8 (Damper)	25 Pa
DEF-1 (Fire and/or smoke damper)	0 Pa
DEF-1 (Stack + Phoenix valve)	274 Pa
DEF-1 (Plenum)	5 Pa
DEF-1 (Fan inlet)	12 Pa
DEF-1 (Fan outlet)	12 Pa
DEF-1 (Exhaust grille)	25 Pa
DEF-1 (Exhaust backdraft damper)	0 Pa
DEF-1 (Exhaust balancing damper)	25 Pa
DUCT-122 (Duct)	0 Pa
DUCT-130 (Duct)	0 Pa
DUCT-140 (Duct)	0 Pa
DUCT-141 (Duct)	0 Pa
DUCT-87 (Duct)	0 Pa

Scenario 3	Economizer
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.7°C, 25.8%, 33.2 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.7°C, 25.8%, 33.2 kJ/kg
Exhaust calculation method - user defined airflow	**261 l/s**
Airflow (System, Portion, Component, Unit)	261 l/s, **100%**, 261 l/s, 261 l/s
Component total static pressure	353 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Extra dampers	**0 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Exhaust grille	**24.9 Pa**
Exhaust backdraft damper	**0 Pa**
Exhaust balancing damper	**24.9 Pa**
Stack + Phoenix valve	**273.7 Pa**
Total static pressure	378 Pa
Internal static pressure, External static pressure	0 Pa, 378 Pa
Internal static pressure summary	
External static pressure summary	
DED-8 (Damper)	25 Pa
DEF-1 (Fire and/or smoke damper)	0 Pa
DEF-1 (Stack + Phoenix valve)	274 Pa
DEF-1 (Plenum)	5 Pa
DEF-1 (Fan inlet)	12 Pa
DEF-1 (Fan outlet)	12 Pa
DEF-1 (Exhaust grille)	25 Pa
DEF-1 (Exhaust backdraft damper)	0 Pa
DEF-1 (Exhaust balancing damper)	25 Pa
DUCT-122 (Duct)	0 Pa
DUCT-130 (Duct)	0 Pa
DUCT-140 (Duct)	0 Pa
DUCT-141 (Duct)	0 Pa
DUCT-87 (Duct)	0 Pa

DEF-2

Air type, Type, Location, Classification	**Exhaust Air**, **BCV (Backward Inclined Centrifugal Vent Set, Belt)**, **(Blank)**, **New Equipment**
Quantity	**1**
Use space dimensions for zone data	**No**
Zone length, Zone width, Zone height	**0 m**, **0 m**, **0 m**
Zone area, Zone volume	0 m², 0 m³
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Clearance, Maximum width, Maximum height	**304.8 mm**, **0 mm**, **0 mm**
Motor size, Brake horsepower (Estimated, Actual)	**0 kW**, 0 kW, **0 kW**
Motor size selection method	**Non-Overloading**
Motor speed	1750 rpm
Voltage/phase (Motor)	120v/1ph
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Static efficiency	0%
Wheel diameter	0 mm
Fan speed	0 rpm
Class	I
Inlet vanes	**No**
Outlet diffuser	**No**
Sound	
Maximum inlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual inlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB
Maximum outlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual outlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB

Scenario 1	Winter Heating
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.1°C, 40%, 39.3 kJ/kg
Apply fan heat to air	**No**, 0°C
Apply motor heat to air	**No**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.1°C, 40%, 39.3 kJ/kg
Exhaust calculation method - user defined airflow	**472 l/s**
Airflow (System, Portion, Component, Unit)	472 l/s, **100%**, 472 l/s, 472 l/s
Component total static pressure	309 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Extra dampers	**0 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Exhaust grille	**24.9 Pa**
Exhaust backdraft damper	**0 Pa**
Exhaust balancing damper	**24.9 Pa**
Stack + hood	**228.9 Pa**
Total static pressure	333 Pa
Internal static pressure, External static pressure	0 Pa, 333 Pa
Internal static pressure summary	
External static pressure summary	
DED-5 (Damper)	25 Pa
DEF-2 (Fire and/or smoke damper)	0 Pa
DEF-2 (Stack + hood)	229 Pa
DEF-2 (Plenum)	5 Pa
DEF-2 (Fan inlet)	12 Pa
DEF-2 (Fan outlet)	12 Pa
DEF-2 (Exhaust grille)	25 Pa
DEF-2 (Exhaust backdraft damper)	0 Pa
DEF-2 (Exhaust balancing damper)	25 Pa
DUCT-113 (Duct)	0 Pa
DUCT-117 (Duct)	0 Pa

Scenario 2	Summer Cooling

Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.1°C, 40%, 39.3 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.1°C, 40%, 39.3 kJ/kg
Exhaust calculation method - user defined airflow	**472 l/s**
Airflow (System, Portion, Component, Unit)	472 l/s, **100%**, 472 l/s, 472 l/s
Component total static pressure	309 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Extra dampers	**0 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Exhaust grille	**24.9 Pa**
Exhaust backdraft damper	**0 Pa**
Exhaust balancing damper	**24.9 Pa**
Stack + hood	**228.9 Pa**
Total static pressure	333 Pa
Internal static pressure, External static pressure	0 Pa, 333 Pa
Internal static pressure summary	
External static pressure summary	
DED-5 (Damper)	25 Pa
DEF-2 (Fire and/or smoke damper)	0 Pa
DEF-2 (Stack + hood)	229 Pa
DEF-2 (Plenum)	5 Pa
DEF-2 (Fan inlet)	12 Pa
DEF-2 (Fan outlet)	12 Pa
DEF-2 (Exhaust grille)	25 Pa
DEF-2 (Exhaust backdraft damper)	0 Pa
DEF-2 (Exhaust balancing damper)	25 Pa
DUCT-113 (Duct)	0 Pa
DUCT-117 (Duct)	0 Pa

Scenario 3	Economizer
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.1°C, 40%, 39.3 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.1°C, 40%, 39.3 kJ/kg
Exhaust calculation method - user defined airflow	**472 l/s**
Airflow (System, Portion, Component, Unit)	472 l/s, **100%**, 472 l/s, 472 l/s
Component total static pressure	309 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Extra dampers	**0 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Exhaust grille	**24.9 Pa**
Exhaust backdraft damper	**0 Pa**
Exhaust balancing damper	**24.9 Pa**
Stack + hood	**228.9 Pa**
Total static pressure	333 Pa
Internal static pressure, External static pressure	0 Pa, 333 Pa
Internal static pressure summary	
External static pressure summary	
DED-5 (Damper)	25 Pa
DEF-2 (Fire and/or smoke damper)	0 Pa
DEF-2 (Stack + hood)	229 Pa
DEF-2 (Plenum)	5 Pa
DEF-2 (Fan inlet)	12 Pa
DEF-2 (Fan outlet)	12 Pa
DEF-2 (Exhaust grille)	25 Pa
DEF-2 (Exhaust backdraft damper)	0 Pa
DEF-2 (Exhaust balancing damper)	25 Pa
DUCT-113 (Duct)	0 Pa
DUCT-117 (Duct)	0 Pa

DEF-3	
Air type, Type, Location, Classification	**Exhaust Air**, **TSL (Tubular Inline Centrifugal, Belt)**, **(Blank)**, **New Equipment**
Quantity	**1**
Use space dimensions for zone data	**No**
Zone length, Zone width, Zone height	**0 m**, **0 m**, **0 m**
Zone area, Zone volume	0 m², 0 m³
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Clearance, Maximum width, Maximum height	**304.8 mm**, **0 mm**, **0 mm**
Motor size, Brake horsepower (Estimated, Actual)	**0 kW**, 0 kW, **0 kW**
Motor size selection method	**Non-Overloading**
Motor speed	1750 rpm
Voltage/phase (Motor)	120v/1ph
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Static efficiency	0%
Wheel diameter	0 mm
Fan speed	0 rpm
Class	I
Inlet vanes	**No**
Outlet diffuser	**No**
Sound	
Maximum inlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual inlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB
Maximum outlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual outlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB

Scenario 1	Winter Heating
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.1°C, 22.5%, 31.8 kJ/kg
Apply fan heat to air	**No**, 0°C
Apply motor heat to air	**No**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.1°C, 22.5%, 31.8 kJ/kg
Exhaust calculation method - user defined airflow	**9911 l/s**
Airflow (System, Portion, Component, Unit)	9911 l/s, **100%**, 9911 l/s, 9911 l/s
Component total static pressure	129 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Extra dampers	**49.8 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Exhaust grille	**24.9 Pa**
Exhaust backdraft damper	**0 Pa**
Exhaust balancing damper	**24.9 Pa**
Other	**0 Pa**
Total static pressure	234 Pa
Internal static pressure, External static pressure	50 Pa, 184 Pa
Internal static pressure summary	
DEF-3 (Extra dampers)	50 Pa
External static pressure summary	
DED-1 (Damper)	25 Pa
DEF-3 (Fire and/or smoke damper)	0 Pa
DEF-3 (Plenum)	5 Pa
DEF-3 (Fan inlet)	12 Pa
DEF-3 (Fan outlet)	12 Pa
DEF-3 (Exhaust grille)	25 Pa
DEF-3 (Exhaust backdraft damper)	0 Pa
DEF-3 (Exhaust balancing damper)	25 Pa
DUCT-118 (Duct)	0 Pa
DUCT-120 (Duct)	0 Pa
DUCT-129 (Duct)	0 Pa

DUCT-132 (Duct)	0 Pa
DUCT-135 (Duct)	0 Pa
DUCT-87 (Duct)	0 Pa
DUCT-93 (Duct)	0 Pa
DUCT-94 (Duct)	0 Pa
L-3 (Louver)	25 Pa
L-3 (Backdraft Damper)	50 Pa
L-3 (Plenum)	5 Pa

Scenario 2	Summer Cooling
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	21.6°C, 14.5°C, 45.7%, 40.4 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	21.6°C, 14.5°C, 45.7%, 40.4 kJ/kg
Exhaust calculation method - user defined airflow	**9911 l/s**
Airflow (System, Portion, Component, Unit)	9911 l/s, **100%**, 9911 l/s, 9911 l/s
Component total static pressure	129 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Extra dampers	**49.8 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Exhaust grille	**24.9 Pa**
Exhaust backdraft damper	**0 Pa**
Exhaust balancing damper	**24.9 Pa**
Other	**0 Pa**
Total static pressure	234 Pa
Internal static pressure, External static pressure	50 Pa, 184 Pa
Internal static pressure summary	
DEF-3 (Extra dampers)	50 Pa
External static pressure summary	
DED-1 (Damper)	25 Pa
DEF-3 (Fire and/or smoke damper)	0 Pa
DEF-3 (Plenum)	5 Pa
DEF-3 (Fan inlet)	12 Pa
DEF-3 (Fan outlet)	12 Pa
DEF-3 (Exhaust grille)	25 Pa
DEF-3 (Exhaust backdraft damper)	0 Pa
DEF-3 (Exhaust balancing damper)	25 Pa
DUCT-118 (Duct)	0 Pa
DUCT-120 (Duct)	0 Pa
DUCT-129 (Duct)	0 Pa
DUCT-132 (Duct)	0 Pa
DUCT-135 (Duct)	0 Pa
DUCT-87 (Duct)	0 Pa
DUCT-93 (Duct)	0 Pa
DUCT-94 (Duct)	0 Pa
L-3 (Louver)	25 Pa
L-3 (Backdraft Damper)	50 Pa
L-3 (Plenum)	5 Pa

Scenario 3	Economizer
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	21.6°C, 11.4°C, 26.7%, 32.5 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	21.6°C, 11.4°C, 26.7%, 32.5 kJ/kg
Exhaust calculation method - user defined airflow	**9911 l/s**
Airflow (System, Portion, Component, Unit)	9911 l/s, **100%**, 9911 l/s, 9911 l/s
Component total static pressure	129 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Extra dampers	**49.8 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Exhaust grille	**24.9 Pa**
Exhaust backdraft damper	**0 Pa**
Exhaust balancing damper	**24.9 Pa**

Other	**0 Pa**
Total static pressure	234 Pa
Internal static pressure, External static pressure	50 Pa, 184 Pa
Internal static pressure summary	
DEF-3 (Extra dampers)	50 Pa
External static pressure summary	
DED-1 (Damper)	25 Pa
DEF-3 (Fire and/or smoke damper)	0 Pa
DEF-3 (Plenum)	5 Pa
DEF-3 (Fan inlet)	12 Pa
DEF-3 (Fan outlet)	12 Pa
DEF-3 (Exhaust grille)	25 Pa
DEF-3 (Exhaust backdraft damper)	0 Pa
DEF-3 (Exhaust balancing damper)	25 Pa
DUCT-118 (Duct)	0 Pa
DUCT-120 (Duct)	0 Pa
DUCT-129 (Duct)	0 Pa
DUCT-132 (Duct)	0 Pa
DUCT-135 (Duct)	0 Pa
DUCT-87 (Duct)	0 Pa
DUCT-93 (Duct)	0 Pa
DUCT-94 (Duct)	0 Pa
L-3 (Louver)	25 Pa
L-3 (Backdraft Damper)	50 Pa
L-3 (Plenum)	5 Pa

DEF-4

Air type, Type, Location, Classification	**Exhaust Air**, **TSL (Tubular Inline Centrifugal, Belt)**, **(Blank)**, **New Equipment**
Quantity	**1**
Use space dimensions for zone data	**No**
Zone length, Zone width, Zone height	**0 m**, **0 m**, **0 m**
Zone area, Zone volume	0 m², 0 m³
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Clearance, Maximum width, Maximum height	**304.8 mm**, **0 mm**, **0 mm**
Motor size, Brake horsepower (Estimated, Actual)	**0 kW**, 0 kW, **0 kW**
Motor size selection method	**Non-Overloading**
Motor speed	1750 rpm
Voltage/phase (Motor)	120v/1ph
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Static efficiency	0%
Wheel diameter	0 mm
Fan speed	0 rpm
Class	I
Inlet vanes	**No**
Outlet diffuser	**No**
Sound	
Maximum inlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual inlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB
Maximum outlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual outlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB

Scenario 1	Winter Heating
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.1°C, 40%, 39.3 kJ/kg
Apply fan heat to air	**No**, 0°C
Apply motor heat to air	**No**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.1°C, 40%, 39.3 kJ/kg
Exhaust calculation method - user defined airflow	**684 l/s**
Airflow (System, Portion, Component, Unit)	684 l/s, **100%**, 684 l/s, 684 l/s
Component total static pressure	80 Pa

Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Extra dampers	**0 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Exhaust grille	**24.9 Pa**
Exhaust backdraft damper	**0 Pa**
Exhaust balancing damper	**24.9 Pa**
Other	**0 Pa**
Total static pressure	159 Pa
Internal static pressure, External static pressure	0 Pa, 159 Pa
Internal static pressure summary	
External static pressure summary	
DEF-4 (Fire and/or smoke damper)	0 Pa
DEF-4 (Plenum)	5 Pa
DEF-4 (Fan inlet)	12 Pa
DEF-4 (Fan outlet)	12 Pa
DEF-4 (Exhaust grille)	25 Pa
DEF-4 (Exhaust backdraft damper)	0 Pa
DEF-4 (Exhaust balancing damper)	25 Pa
DUCT-114 (Duct)	0 Pa
DUCT-133 (Duct)	0 Pa
DUCT-92 (Duct)	0 Pa
DUCT-94 (Duct)	0 Pa
L-3 (Louver)	25 Pa
L-3 (Backdraft Damper)	50 Pa
L-3 (Plenum)	5 Pa

Scenario 2	Summer Cooling
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.1°C, 40%, 39.3 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.1°C, 40%, 39.3 kJ/kg
Exhaust calculation method - user defined airflow	**684 l/s**
Airflow (System, Portion, Component, Unit)	684 l/s, **100%**, 684 l/s, 684 l/s
Component total static pressure	80 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Extra dampers	**0 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Exhaust grille	**24.9 Pa**
Exhaust backdraft damper	**0 Pa**
Exhaust balancing damper	**24.9 Pa**
Other	**0 Pa**
Total static pressure	159 Pa
Internal static pressure, External static pressure	0 Pa, 159 Pa
Internal static pressure summary	
External static pressure summary	
DEF-4 (Fire and/or smoke damper)	0 Pa
DEF-4 (Plenum)	5 Pa
DEF-4 (Fan inlet)	12 Pa
DEF-4 (Fan outlet)	12 Pa
DEF-4 (Exhaust grille)	25 Pa
DEF-4 (Exhaust backdraft damper)	0 Pa
DEF-4 (Exhaust balancing damper)	25 Pa
DUCT-114 (Duct)	0 Pa
DUCT-133 (Duct)	0 Pa
DUCT-92 (Duct)	0 Pa
DUCT-94 (Duct)	0 Pa
L-3 (Louver)	25 Pa
L-3 (Backdraft Damper)	50 Pa
L-3 (Plenum)	5 Pa

Scenario 3	Economizer
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.1°C, 40%, 39.3 kJ/kg

Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.1°C, 40%, 39.3 kJ/kg
Exhaust calculation method - user defined airflow	**684 l/s**
Airflow (System, Portion, Component, Unit)	684 l/s, **100%**, 684 l/s, 684 l/s
Component total static pressure	80 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Extra dampers	**0 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Exhaust grille	**24.9 Pa**
Exhaust backdraft damper	**0 Pa**
Exhaust balancing damper	**24.9 Pa**
Other	**0 Pa**
Total static pressure	159 Pa
Internal static pressure, External static pressure	0 Pa, 159 Pa
Internal static pressure summary	
External static pressure summary	
DEF-4 (Fire and/or smoke damper)	0 Pa
DEF-4 (Plenum)	5 Pa
DEF-4 (Fan inlet)	12 Pa
DEF-4 (Fan outlet)	12 Pa
DEF-4 (Exhaust grille)	25 Pa
DEF-4 (Exhaust backdraft damper)	0 Pa
DEF-4 (Exhaust balancing damper)	25 Pa
DUCT-114 (Duct)	0 Pa
DUCT-133 (Duct)	0 Pa
DUCT-92 (Duct)	0 Pa
DUCT-94 (Duct)	0 Pa
L-3 (Louver)	25 Pa
L-3 (Backdraft Damper)	50 Pa
L-3 (Plenum)	5 Pa

DEF-5

Air type, Type, Location, Classification	**Exhaust Air**, **TSL (Tubular Inline Centrifugal, Belt)**, **(Blank)**, **New Equipment**
Quantity	**1**
Use space dimensions for zone data	**No**
Zone length, Zone width, Zone height	**0 m**, **0 m**, **0 m**
Zone area, Zone volume	0 m², 0 m³
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Clearance, Maximum width, Maximum height	**304.8 mm**, **0 mm**, **0 mm**
Motor size, Brake horsepower (Estimated, Actual)	**0 kW**, 0 kW, **0 kW**
Motor size selection method	**Non-Overloading**
Motor speed	1750 rpm
Voltage/phase (Motor)	120v/1ph
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Static efficiency	0%
Wheel diameter	0 mm
Fan speed	0 rpm
Class	I
Inlet vanes	**No**
Outlet diffuser	**No**
Sound	
Maximum inlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual inlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB
Maximum outlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual outlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB

Scenario 1	Winter Heating
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.1°C, 22.5%, 31.8 kJ/kg
Apply fan heat to air	**No**, 0°C
Apply motor heat to air	**No**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.1°C, 22.5%, 31.8 kJ/kg
Exhaust calculation method - user defined airflow	**3068 l/s**
Airflow (System, Portion, Component, Unit)	3068 l/s, **100%**, 3068 l/s, 3068 l/s
Component total static pressure	154 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Extra dampers	**74.7 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Exhaust grille	**24.9 Pa**
Exhaust backdraft damper	**0 Pa**
Exhaust balancing damper	**24.9 Pa**
Other	**0 Pa**
Total static pressure	259 Pa
Internal static pressure, External static pressure	75 Pa, 184 Pa
Internal static pressure summary	
DEF-5 (Extra dampers)	75 Pa
External static pressure summary	
DED-6 (Damper)	25 Pa
DEF-5 (Fire and/or smoke damper)	0 Pa
DEF-5 (Plenum)	5 Pa
DEF-5 (Fan inlet)	12 Pa
DEF-5 (Fan outlet)	12 Pa
DEF-5 (Exhaust grille)	25 Pa
DEF-5 (Exhaust backdraft damper)	0 Pa
DEF-5 (Exhaust balancing damper)	25 Pa
DUCT-121 (Duct)	0 Pa
DUCT-123 (Duct)	0 Pa
DUCT-124 (Duct)	0 Pa
DUCT-130 (Duct)	0 Pa
DUCT-132 (Duct)	0 Pa
DUCT-136 (Duct)	0 Pa
DUCT-87 (Duct)	0 Pa
DUCT-93 (Duct)	0 Pa
DUCT-94 (Duct)	0 Pa
L-3 (Louver)	25 Pa
L-3 (Backdraft Damper)	50 Pa
L-3 (Plenum)	5 Pa

Scenario 2	Summer Cooling
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	16.9°C, 12.4°C, 59.6%, 35 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	16.9°C, 12.4°C, 59.6%, 35 kJ/kg
Exhaust calculation method - user defined airflow	**3068 l/s**
Airflow (System, Portion, Component, Unit)	3068 l/s, **100%**, 3068 l/s, 3068 l/s
Component total static pressure	154 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Extra dampers	**74.7 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Exhaust grille	**24.9 Pa**
Exhaust backdraft damper	**0 Pa**
Exhaust balancing damper	**24.9 Pa**
Other	**0 Pa**
Total static pressure	259 Pa
Internal static pressure, External static pressure	75 Pa, 184 Pa
Internal static pressure summary	
DEF-5 (Extra dampers)	75 Pa
External static pressure summary	

DED-6 (Damper)	25 Pa
DEF-5 (Fire and/or smoke damper)	0 Pa
DEF-5 (Plenum)	5 Pa
DEF-5 (Fan inlet)	12 Pa
DEF-5 (Fan outlet)	12 Pa
DEF-5 (Exhaust grille)	25 Pa
DEF-5 (Exhaust backdraft damper)	0 Pa
DEF-5 (Exhaust balancing damper)	25 Pa
DUCT-121 (Duct)	0 Pa
DUCT-123 (Duct)	0 Pa
DUCT-124 (Duct)	0 Pa
DUCT-130 (Duct)	0 Pa
DUCT-132 (Duct)	0 Pa
DUCT-136 (Duct)	0 Pa
DUCT-87 (Duct)	0 Pa
DUCT-93 (Duct)	0 Pa
DUCT-94 (Duct)	0 Pa
L-3 (Louver)	25 Pa
L-3 (Backdraft Damper)	50 Pa
L-3 (Plenum)	5 Pa

Scenario 3	Economizer
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	16.9°C, 9.1°C, 34.1%, 27.2 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	16.9°C, 9.1°C, 34.1%, 27.2 kJ/kg
Exhaust calculation method - user defined airflow	**3068 l/s**
Airflow (System, Portion, Component, Unit)	3068 l/s, **100%**, 3068 l/s, 3068 l/s
Component total static pressure	154 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Extra dampers	**74.7 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Exhaust grille	**24.9 Pa**
Exhaust backdraft damper	**0 Pa**
Exhaust balancing damper	**24.9 Pa**
Other	**0 Pa**
Total static pressure	259 Pa
Internal static pressure, External static pressure	75 Pa, 184 Pa
Internal static pressure summary	
DEF-5 (Extra dampers)	75 Pa
External static pressure summary	
DED-6 (Damper)	25 Pa
DEF-5 (Fire and/or smoke damper)	0 Pa
DEF-5 (Plenum)	5 Pa
DEF-5 (Fan inlet)	12 Pa
DEF-5 (Fan outlet)	12 Pa
DEF-5 (Exhaust grille)	25 Pa
DEF-5 (Exhaust backdraft damper)	0 Pa
DEF-5 (Exhaust balancing damper)	25 Pa
DUCT-121 (Duct)	0 Pa
DUCT-123 (Duct)	0 Pa
DUCT-124 (Duct)	0 Pa
DUCT-130 (Duct)	0 Pa
DUCT-132 (Duct)	0 Pa
DUCT-136 (Duct)	0 Pa
DUCT-87 (Duct)	0 Pa
DUCT-93 (Duct)	0 Pa
DUCT-94 (Duct)	0 Pa
L-3 (Louver)	25 Pa
L-3 (Backdraft Damper)	50 Pa
L-3 (Plenum)	5 Pa

DEF-6	
Air type, Type, Location, Classification	**Exhaust Air**, **TSL (Tubular Inline Centrifugal, Belt)**, **(Blank)**, **New Equipment**

Quantity	**1**
Use space dimensions for zone data	**No**
Zone length, Zone width, Zone height	**0 m**, **0 m**, **0 m**
Zone area, Zone volume	0 m², 0 m³
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Clearance, Maximum width, Maximum height	**304.8 mm**, **0 mm**, **0 mm**
Motor size, Brake horsepower (Estimated, Actual)	**0 kW**, 0 kW, **0 kW**
Motor size selection method	**Non-Overloading**
Motor speed	1750 rpm
Voltage/phase (Motor)	120v/1ph
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Static efficiency	0%
Wheel diameter	0 mm
Fan speed	0 rpm
Class	I
Inlet vanes	**No**
Outlet diffuser	**No**
Sound	
Maximum inlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual inlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB
Maximum outlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual outlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB

Scenario 1	Winter Heating
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.1°C, 40%, 39.3 kJ/kg
Apply fan heat to air	**No**, 0°C
Apply motor heat to air	**No**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.1°C, 40%, 39.3 kJ/kg
Exhaust calculation method - user defined airflow	**684 l/s**
Airflow (System, Portion, Component, Unit)	684 l/s, **100%**, 684 l/s, 684 l/s
Component total static pressure	80 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Extra dampers	**0 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Exhaust grille	**24.9 Pa**
Exhaust backdraft damper	**0 Pa**
Exhaust balancing damper	**24.9 Pa**
Other	**0 Pa**
Total static pressure	159 Pa
Internal static pressure, External static pressure	0 Pa, 159 Pa
Internal static pressure summary	
External static pressure summary	
DEF-6 (Fire and/or smoke damper)	0 Pa
DEF-6 (Plenum)	5 Pa
DEF-6 (Fan inlet)	12 Pa
DEF-6 (Fan outlet)	12 Pa
DEF-6 (Exhaust grille)	25 Pa
DEF-6 (Exhaust backdraft damper)	0 Pa
DEF-6 (Exhaust balancing damper)	25 Pa
DUCT-115 (Duct)	0 Pa
DUCT-131 (Duct)	0 Pa
DUCT-93 (Duct)	0 Pa
DUCT-94 (Duct)	0 Pa
L-3 (Louver)	25 Pa
L-3 (Backdraft Damper)	50 Pa
L-3 (Plenum)	5 Pa

Scenario 2	Summer Cooling

Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.1°C, 40%, 39.3 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.1°C, 40%, 39.3 kJ/kg
Exhaust calculation method - user defined airflow	**684 l/s**
Airflow (System, Portion, Component, Unit)	684 l/s, **100%**, 684 l/s, 684 l/s
Component total static pressure	80 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Extra dampers	**0 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Exhaust grille	**24.9 Pa**
Exhaust backdraft damper	**0 Pa**
Exhaust balancing damper	**24.9 Pa**
Other	**0 Pa**
Total static pressure	159 Pa
Internal static pressure, External static pressure	0 Pa, 159 Pa
Internal static pressure summary	
External static pressure summary	
DEF-6 (Fire and/or smoke damper)	0 Pa
DEF-6 (Plenum)	5 Pa
DEF-6 (Fan inlet)	12 Pa
DEF-6 (Fan outlet)	12 Pa
DEF-6 (Exhaust grille)	25 Pa
DEF-6 (Exhaust backdraft damper)	0 Pa
DEF-6 (Exhaust balancing damper)	25 Pa
DUCT-115 (Duct)	0 Pa
DUCT-131 (Duct)	0 Pa
DUCT-93 (Duct)	0 Pa
DUCT-94 (Duct)	0 Pa
L-3 (Louver)	25 Pa
L-3 (Backdraft Damper)	50 Pa
L-3 (Plenum)	5 Pa

Scenario 3	Economizer
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.1°C, 40%, 39.3 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.1°C, 40%, 39.3 kJ/kg
Exhaust calculation method - user defined airflow	**684 l/s**
Airflow (System, Portion, Component, Unit)	684 l/s, **100%**, 684 l/s, 684 l/s
Component total static pressure	80 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Extra dampers	**0 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Exhaust grille	**24.9 Pa**
Exhaust backdraft damper	**0 Pa**
Exhaust balancing damper	**24.9 Pa**
Other	**0 Pa**
Total static pressure	159 Pa
Internal static pressure, External static pressure	0 Pa, 159 Pa
Internal static pressure summary	
External static pressure summary	
DEF-6 (Fire and/or smoke damper)	0 Pa
DEF-6 (Plenum)	5 Pa
DEF-6 (Fan inlet)	12 Pa
DEF-6 (Fan outlet)	12 Pa
DEF-6 (Exhaust grille)	25 Pa
DEF-6 (Exhaust backdraft damper)	0 Pa
DEF-6 (Exhaust balancing damper)	25 Pa
DUCT-115 (Duct)	0 Pa
DUCT-131 (Duct)	0 Pa
DUCT-93 (Duct)	0 Pa
DUCT-94 (Duct)	0 Pa

L-3 (Louver)	25 Pa
L-3 (Backdraft Damper)	50 Pa
L-3 (Plenum)	5 Pa

DEF-7	
Air type, Type, Location, Classification	**Exhaust Air**, **TSL (Tubular Inline Centrifugal, Belt)**, **(Blank)**, **New Equipment**
Quantity	**1**
Use space dimensions for zone data	**No**
Zone length, Zone width, Zone height	**0 m**, **0 m**, **0 m**
Zone area, Zone volume	0 m², 0 m³
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Clearance, Maximum width, Maximum height	**304.8 mm**, **0 mm**, **0 mm**
Motor size, Brake horsepower (Estimated, Actual)	**0 kW**, 0 kW, **0 kW**
Motor size selection method	**Non-Overloading**
Motor speed	1750 rpm
Voltage/phase (Motor)	120v/1ph
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Static efficiency	0%
Wheel diameter	0 mm
Fan speed	0 rpm
Class	I
Inlet vanes	**No**
Outlet diffuser	**No**
Sound	
Maximum inlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual inlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB
Maximum outlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual outlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB

Scenario 1	Winter Heating
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.1°C, 22.5%, 31.8 kJ/kg
Apply fan heat to air	**No**, 0°C
Apply motor heat to air	**No**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.1°C, 22.5%, 31.8 kJ/kg
Exhaust calculation method - user defined airflow	**4578 l/s**
Airflow (System, Portion, Component, Unit)	4578 l/s, **100%**, 4578 l/s, 4578 l/s
Component total static pressure	179 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Extra dampers	**99.5 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Exhaust grille	**24.9 Pa**
Exhaust backdraft damper	**0 Pa**
Exhaust balancing damper	**24.9 Pa**
Other	**0 Pa**
Total static pressure	284 Pa
Internal static pressure, External static pressure	100 Pa, 184 Pa
Internal static pressure summary	
DEF-7 (Extra dampers)	100 Pa
External static pressure summary	
DED-7 (Damper)	25 Pa
DEF-7 (Fire and/or smoke damper)	0 Pa
DEF-7 (Plenum)	5 Pa
DEF-7 (Fan inlet)	12 Pa
DEF-7 (Fan outlet)	12 Pa
DEF-7 (Exhaust grille)	25 Pa

DEF-7 (Exhaust backdraft damper)	0 Pa
DEF-7 (Exhaust balancing damper)	25 Pa
DUCT-122 (Duct)	0 Pa
DUCT-126 (Duct)	0 Pa
DUCT-127 (Duct)	0 Pa
DUCT-130 (Duct)	0 Pa
DUCT-134 (Duct)	0 Pa
DUCT-142 (Duct)	0 Pa
DUCT-87 (Duct)	0 Pa
DUCT-92 (Duct)	0 Pa
DUCT-94 (Duct)	0 Pa
L-3 (Louver)	25 Pa
L-3 (Backdraft Damper)	50 Pa
L-3 (Plenum)	5 Pa

Scenario 2	Summer Cooling
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	17.2°C, 12.5°C, 58.6%, 35.3 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	17.2°C, 12.5°C, 58.6%, 35.3 kJ/kg
Exhaust calculation method - user defined airflow	**4578 l/s**
Airflow (System, Portion, Component, Unit)	4578 l/s, **100%**, 4578 l/s, 4578 l/s
Component total static pressure	179 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Extra dampers	**99.5 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Exhaust grille	**24.9 Pa**
Exhaust backdraft damper	**0 Pa**
Exhaust balancing damper	**24.9 Pa**
Other	**0 Pa**
Total static pressure	284 Pa
Internal static pressure, External static pressure	100 Pa, 184 Pa
Internal static pressure summary	
DEF-7 (Extra dampers)	100 Pa
External static pressure summary	
DED-7 (Damper)	25 Pa
DEF-7 (Fire and/or smoke damper)	0 Pa
DEF-7 (Plenum)	5 Pa
DEF-7 (Fan inlet)	12 Pa
DEF-7 (Fan outlet)	12 Pa
DEF-7 (Exhaust grille)	25 Pa
DEF-7 (Exhaust backdraft damper)	0 Pa
DEF-7 (Exhaust balancing damper)	25 Pa
DUCT-122 (Duct)	0 Pa
DUCT-126 (Duct)	0 Pa
DUCT-127 (Duct)	0 Pa
DUCT-130 (Duct)	0 Pa
DUCT-134 (Duct)	0 Pa
DUCT-142 (Duct)	0 Pa
DUCT-87 (Duct)	0 Pa
DUCT-92 (Duct)	0 Pa
DUCT-94 (Duct)	0 Pa
L-3 (Louver)	25 Pa
L-3 (Backdraft Damper)	50 Pa
L-3 (Plenum)	5 Pa

Scenario 3	Economizer
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	17.2°C, 9.3°C, 33.5%, 27.6 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	17.2°C, 9.3°C, 33.5%, 27.6 kJ/kg
Exhaust calculation method - user defined airflow	**4578 l/s**
Airflow (System, Portion, Component, Unit)	4578 l/s, **100%**, 4578 l/s, 4578 l/s
Component total static pressure	179 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**

Fan outlet	**12.4 Pa**
Extra dampers	**99.5 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Exhaust grille	**24.9 Pa**
Exhaust backdraft damper	**0 Pa**
Exhaust balancing damper	**24.9 Pa**
Other	**0 Pa**
Total static pressure	284 Pa
Internal static pressure, External static pressure	100 Pa, 184 Pa
Internal static pressure summary	
DEF-7 (Extra dampers)	100 Pa
External static pressure summary	
DED-7 (Damper)	25 Pa
DEF-7 (Fire and/or smoke damper)	0 Pa
DEF-7 (Plenum)	5 Pa
DEF-7 (Fan inlet)	12 Pa
DEF-7 (Fan outlet)	12 Pa
DEF-7 (Exhaust grille)	25 Pa
DEF-7 (Exhaust backdraft damper)	0 Pa
DEF-7 (Exhaust balancing damper)	25 Pa
DUCT-122 (Duct)	0 Pa
DUCT-126 (Duct)	0 Pa
DUCT-127 (Duct)	0 Pa
DUCT-130 (Duct)	0 Pa
DUCT-134 (Duct)	0 Pa
DUCT-142 (Duct)	0 Pa
DUCT-87 (Duct)	0 Pa
DUCT-92 (Duct)	0 Pa
DUCT-94 (Duct)	0 Pa
L-3 (Louver)	25 Pa
L-3 (Backdraft Damper)	50 Pa
L-3 (Plenum)	5 Pa

DEF-8

Air type, Type, Location, Classification	**Exhaust Air**, **TSL (Tubular Inline Centrifugal, Belt)**, **(Blank)**, **New Equipment**
Quantity	**1**
Use space dimensions for zone data	**No**
Zone length, Zone width, Zone height	**0 m**, **0 m**, **0 m**
Zone area, Zone volume	0 m², 0 m³
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Clearance, Maximum width, Maximum height	**304.8 mm**, **0 mm**, **0 mm**
Motor size, Brake horsepower (Estimated, Actual)	**0 kW**, 0 kW, **0 kW**
Motor size selection method	**Non-Overloading**
Motor speed	1750 rpm
Voltage/phase (Motor)	120v/1ph
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Static efficiency	0%
Wheel diameter	0 mm
Fan speed	0 rpm
Class	I
Inlet vanes	**No**
Outlet diffuser	**No**
Sound	
Maximum inlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual inlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB
Maximum outlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual outlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB

Scenario 1	Winter Heating

Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.1°C, 40%, 39.3 kJ/kg
Apply fan heat to air	**No**, 0°C
Apply motor heat to air	**No**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.1°C, 40%, 39.3 kJ/kg
Exhaust calculation method - user defined airflow	**94 l/s**
Airflow (System, Portion, Component, Unit)	94 l/s, **100%**, 94 l/s, 94 l/s
Component total static pressure	25 Pa
Internal static pressure	
Plenum	**0 Pa**
Fan inlet	**0 Pa**
Fan outlet	**0 Pa**
Per Dan	**24.9 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Exhaust grille	**0 Pa**
Exhaust backdraft damper	**0 Pa**
Exhaust balancing damper	**0 Pa**
Other	**0 Pa**
Total static pressure	25 Pa
Internal static pressure, External static pressure	25 Pa, 0 Pa
Internal static pressure summary	
DEF-8 (Per Dan)	25 Pa
External static pressure summary	
DEF-8 (Fire and/or smoke damper)	0 Pa
DEF-8 (Plenum)	0 Pa
DEF-8 (Fan inlet)	0 Pa
DEF-8 (Fan outlet)	0 Pa
DEF-8 (Exhaust grille)	0 Pa
DEF-8 (Exhaust backdraft damper)	0 Pa
DEF-8 (Exhaust balancing damper)	0 Pa
DUCT-153 (Duct)	0 Pa

Scenario 2	Summer Cooling
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.1°C, 40%, 39.3 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.1°C, 40%, 39.3 kJ/kg
Exhaust calculation method - user defined airflow	**94 l/s**
Airflow (System, Portion, Component, Unit)	94 l/s, **100%**, 94 l/s, 94 l/s
Component total static pressure	25 Pa
Internal static pressure	
Plenum	**0 Pa**
Fan inlet	**0 Pa**
Fan outlet	**0 Pa**
Per Dan	**24.9 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Exhaust grille	**0 Pa**
Exhaust backdraft damper	**0 Pa**
Exhaust balancing damper	**0 Pa**
Other	**0 Pa**
Total static pressure	25 Pa
Internal static pressure, External static pressure	25 Pa, 0 Pa
Internal static pressure summary	
DEF-8 (Per Dan)	25 Pa
External static pressure summary	
DEF-8 (Fire and/or smoke damper)	0 Pa
DEF-8 (Plenum)	0 Pa
DEF-8 (Fan inlet)	0 Pa
DEF-8 (Fan outlet)	0 Pa
DEF-8 (Exhaust grille)	0 Pa
DEF-8 (Exhaust backdraft damper)	0 Pa
DEF-8 (Exhaust balancing damper)	0 Pa
DUCT-153 (Duct)	0 Pa

Scenario 3	Economizer
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.1°C, 40%, 39.3 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C

Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.1°C, 40%, 39.3 kJ/kg
Exhaust calculation method - user defined airflow	**94 l/s**
Airflow (System, Portion, Component, Unit)	94 l/s, **100%**, 94 l/s, 94 l/s
Component total static pressure	25 Pa
Internal static pressure	
Plenum	**0 Pa**
Fan inlet	**0 Pa**
Fan outlet	**0 Pa**
Per Dan	**24.9 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Exhaust grille	**0 Pa**
Exhaust backdraft damper	**0 Pa**
Exhaust balancing damper	**0 Pa**
Other	**0 Pa**
Total static pressure	25 Pa
Internal static pressure, External static pressure	25 Pa, 0 Pa
Internal static pressure summary	
DEF-8 (Per Dan)	25 Pa
External static pressure summary	
DEF-8 (Fire and/or smoke damper)	0 Pa
DEF-8 (Plenum)	0 Pa
DEF-8 (Fan inlet)	0 Pa
DEF-8 (Fan outlet)	0 Pa
DEF-8 (Exhaust grille)	0 Pa
DEF-8 (Exhaust backdraft damper)	0 Pa
DEF-8 (Exhaust balancing damper)	0 Pa
DUCT-153 (Duct)	0 Pa

DSF-1

Air type, Type, Location, Classification	**Supply Air**, **TSL (Tubular Inline Centrifugal, Belt)**, **(Blank)**, **New Equipment**
Quantity	**1**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Clearance, Maximum width, Maximum height	**304.8 mm**, **0 mm**, **0 mm**
Motor size, Brake horsepower (Estimated, Actual)	**0 kW**, 0 kW, **0 kW**
Motor size selection method	**Non-Overloading**
Motor speed	1750 rpm
Voltage/phase (Motor)	120v/1ph
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Static efficiency	0%
Wheel diameter	0 mm
Fan speed	0 rpm
Class	I
Inlet vanes	**No**
Outlet diffuser	**No**
Sound	
Maximum inlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual inlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB
Maximum outlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual outlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB

Scenario 1	Winter Heating
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	?°C, ?°C, 0%, -17.9 kJ/kg
Apply fan heat to air	**No**, 0°C
Apply motor heat to air	**No**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	?°C, ?°C, 0%, -17.9 kJ/kg
Airflow (System, Portion, Component, Unit)	2077 l/s, **100%**, 2077 l/s, 2077 l/s
Component total static pressure	174 Pa
Internal static pressure	

Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Dans number	**144.3 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Other	**0 Pa**
Total static pressure	224 Pa
Internal static pressure, External static pressure	144 Pa, 80 Pa
Internal static pressure summary	
DSF-1 (Dans number)	144 Pa
External static pressure summary	
DSF-1 (Fire and/or smoke damper)	0 Pa
DSF-1 (Plenum)	5 Pa
DSF-1 (Fan inlet)	12 Pa
DSF-1 (Fan outlet)	12 Pa
DUCT-137 (Duct)	0 Pa
SPC-9 (Supply Diffuser)	25 Pa
SPC-9 (Supply Balancing Damper)	25 Pa

Scenario 2	Summer Cooling
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	?°C, ?°C, 0%, -17.9 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	?°C, ?°C, 0%, -17.9 kJ/kg
Airflow (System, Portion, Component, Unit)	2077 l/s, **100%**, 2077 l/s, 2077 l/s
Component total static pressure	174 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Dans number	**144.3 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Other	**0 Pa**
Total static pressure	224 Pa
Internal static pressure, External static pressure	144 Pa, 80 Pa
Internal static pressure summary	
DSF-1 (Dans number)	144 Pa
External static pressure summary	
DSF-1 (Fire and/or smoke damper)	0 Pa
DSF-1 (Plenum)	5 Pa
DSF-1 (Fan inlet)	12 Pa
DSF-1 (Fan outlet)	12 Pa
DUCT-137 (Duct)	0 Pa
SPC-9 (Supply Diffuser)	25 Pa
SPC-9 (Supply Balancing Damper)	25 Pa

Scenario 3	Economizer
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	?°C, ?°C, 0%, -17.9 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	?°C, ?°C, 0%, -17.9 kJ/kg
Airflow (System, Portion, Component, Unit)	2077 l/s, **100%**, 2077 l/s, 2077 l/s
Component total static pressure	174 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Dans number	**144.3 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Other	**0 Pa**
Total static pressure	224 Pa
Internal static pressure, External static pressure	144 Pa, 80 Pa
Internal static pressure summary	
DSF-1 (Dans number)	144 Pa
External static pressure summary	
DSF-1 (Fire and/or smoke damper)	0 Pa

DSF-1 (Plenum)	5 Pa
DSF-1 (Fan inlet)	12 Pa
DSF-1 (Fan outlet)	12 Pa
DUCT-137 (Duct)	0 Pa
SPC-9 (Supply Diffuser)	25 Pa
SPC-9 (Supply Balancing Damper)	25 Pa

DSF-2

Air type, Type, Location, Classification	**Supply Air**, **TSL (Tubular Inline Centrifugal, Belt)**, **(Blank)**, **New Equipment**
Quantity	**1**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Clearance, Maximum width, Maximum height	**304.8 mm**, **0 mm**, **0 mm**
Motor size, Brake horsepower (Estimated, Actual)	**0 kW**, 0 kW, **0 kW**
Motor size selection method	**Non-Overloading**
Motor speed	1750 rpm
Voltage/phase (Motor)	120v/1ph
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Static efficiency	0%
Wheel diameter	0 mm
Fan speed	0 rpm
Class	I
Inlet vanes	**No**
Outlet diffuser	**No**
Sound	
Maximum inlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual inlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB
Maximum outlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual outlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB

Scenario 1	Winter Heating
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	?°C, ?°C, 0%, -17.9 kJ/kg
Apply fan heat to air	**No**, 0°C
Apply motor heat to air	**No**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	?°C, ?°C, 0%, -17.9 kJ/kg
Airflow (System, Portion, Component, Unit)	1746 l/s, **100%**, 1746 l/s, 1746 l/s
Component total static pressure	174 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Dans number	**144.3 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Other	**0 Pa**
Total static pressure	224 Pa
Internal static pressure, External static pressure	144 Pa, 80 Pa
Internal static pressure summary	
DSF-2 (Dans number)	144 Pa
External static pressure summary	
DSF-2 (Fire and/or smoke damper)	0 Pa
DSF-2 (Plenum)	5 Pa
DSF-2 (Fan inlet)	12 Pa
DSF-2 (Fan outlet)	12 Pa
DUCT-152 (Duct)	0 Pa
SPC-10 (Supply Diffuser)	25 Pa
SPC-10 (Supply Balancing Damper)	25 Pa

Scenario 2	Summer Cooling

Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	?°C, ?°C, 0%, -17.9 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	?°C, ?°C, 0%, -17.9 kJ/kg
Airflow (System, Portion, Component, Unit)	1746 l/s, **100%**, 1746 l/s, 1746 l/s
Component total static pressure	174 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Dans number	**144.3 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Other	**0 Pa**
Total static pressure	224 Pa
Internal static pressure, External static pressure	144 Pa, 80 Pa
Internal static pressure summary	
DSF-2 (Dans number)	144 Pa
External static pressure summary	
DSF-2 (Fire and/or smoke damper)	0 Pa
DSF-2 (Plenum)	5 Pa
DSF-2 (Fan inlet)	12 Pa
DSF-2 (Fan outlet)	12 Pa
DUCT-152 (Duct)	0 Pa
SPC-10 (Supply Diffuser)	25 Pa
SPC-10 (Supply Balancing Damper)	25 Pa

Scenario 3	Economizer

Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	?°C, ?°C, 0%, -17.9 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	?°C, ?°C, 0%, -17.9 kJ/kg
Airflow (System, Portion, Component, Unit)	1746 l/s, **100%**, 1746 l/s, 1746 l/s
Component total static pressure	174 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Dans number	**144.3 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Other	**0 Pa**
Total static pressure	224 Pa
Internal static pressure, External static pressure	144 Pa, 80 Pa
Internal static pressure summary	
DSF-2 (Dans number)	144 Pa
External static pressure summary	
DSF-2 (Fire and/or smoke damper)	0 Pa
DSF-2 (Plenum)	5 Pa
DSF-2 (Fan inlet)	12 Pa
DSF-2 (Fan outlet)	12 Pa
DUCT-152 (Duct)	0 Pa
SPC-10 (Supply Diffuser)	25 Pa
SPC-10 (Supply Balancing Damper)	25 Pa

DSF-3	

Air type, Type, Location, Classification	**Supply Air**, **TSL (Tubular Inline Centrifugal, Belt)**, **(Blank)**, **New Equipment**
Quantity	**1**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Clearance, Maximum width, Maximum height	**304.8 mm**, **0 mm**, **0 mm**
Motor size, Brake horsepower (Estimated, Actual)	**0 kW**, 0 kW, **0 kW**
Motor size selection method	**Non-Overloading**

Motor speed	1750 rpm
Voltage/phase (Motor)	120v/1ph
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Static efficiency	0%
Wheel diameter	0 mm
Fan speed	0 rpm
Class	I
Inlet vanes	**No**
Outlet diffuser	**No**
Sound	
Maximum inlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual inlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB
Maximum outlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual outlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB

Scenario 1	Winter Heating
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	?°C, ?°C, 0%, -17.9 kJ/kg
Apply fan heat to air	**No**, 0°C
Apply motor heat to air	**No**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	?°C, ?°C, 0%, -17.9 kJ/kg
Airflow (System, Portion, Component, Unit)	3256 l/s, **100%**, 3256 l/s, 3256 l/s
Component total static pressure	174 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Dans number	**144.3 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Other	**0 Pa**
Total static pressure	224 Pa
Internal static pressure, External static pressure	144 Pa, 80 Pa
Internal static pressure summary	
DSF-3 (Dans number)	144 Pa
External static pressure summary	
DSF-3 (Fire and/or smoke damper)	0 Pa
DSF-3 (Plenum)	5 Pa
DSF-3 (Fan inlet)	12 Pa
DSF-3 (Fan outlet)	12 Pa
DUCT-138 (Duct)	0 Pa
SPC-11 (Supply Diffuser)	25 Pa
SPC-11 (Supply Balancing Damper)	25 Pa

Scenario 2	Summer Cooling
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	?°C, ?°C, 0%, -17.9 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	?°C, ?°C, 0%, -17.9 kJ/kg
Airflow (System, Portion, Component, Unit)	3256 l/s, **100%**, 3256 l/s, 3256 l/s
Component total static pressure	174 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Dans number	**144.3 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Other	**0 Pa**
Total static pressure	224 Pa
Internal static pressure, External static pressure	144 Pa, 80 Pa
Internal static pressure summary	
DSF-3 (Dans number)	144 Pa
External static pressure summary	
DSF-3 (Fire and/or smoke damper)	0 Pa
DSF-3 (Plenum)	5 Pa
DSF-3 (Fan inlet)	12 Pa

DSF-3 (Fan outlet)	12 Pa
DUCT-138 (Duct)	0 Pa
SPC-11 (Supply Diffuser)	25 Pa
SPC-11 (Supply Balancing Damper)	25 Pa

Scenario 3	Economizer
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	?°C, ?°C, 0%, -17.9 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	?°C, ?°C, 0%, -17.9 kJ/kg
Airflow (System, Portion, Component, Unit)	3256 l/s, **100%**, 3256 l/s, 3256 l/s
Component total static pressure	174 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Dans number	**144.3 Pa**
External static pressure	
Fire and/or smoke damper	**0 Pa**
Other	**0 Pa**
Total static pressure	224 Pa
Internal static pressure, External static pressure	144 Pa, 80 Pa
Internal static pressure summary	
DSF-3 (Dans number)	144 Pa
External static pressure summary	
DSF-3 (Fire and/or smoke damper)	0 Pa
DSF-3 (Plenum)	5 Pa
DSF-3 (Fan inlet)	12 Pa
DSF-3 (Fan outlet)	12 Pa
DUCT-138 (Duct)	0 Pa
SPC-11 (Supply Diffuser)	25 Pa
SPC-11 (Supply Balancing Damper)	25 Pa

RRLF-1

Air type, Type, Location, Classification	**Return/Relief Air**, **EPQ (Plenum, Centrifugal, Belt, Better Sound Quality)**, AH-1, **New Equipment**
Quantity	**1**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Clearance, Maximum width, Maximum height	**304.8 mm**, **3860.8 mm**, **2692.4 mm**
Motor size, Brake horsepower (Estimated, Actual)	**0 kW**, 0 kW, **0 kW**
Motor size selection method	**Non-Overloading**
Motor speed	1750 rpm
Voltage/phase (Motor)	120v/1ph
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Static efficiency	0%
Wheel diameter	0 mm
Fan speed	0 rpm
Class	I
Inlet vanes	**No**
Outlet diffuser	**No**
Sound	
Maximum inlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual inlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB
Maximum outlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual outlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB

Scenario 1	Winter Heating
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.1°C, 22.5%, 31.8 kJ/kg
Apply fan heat to air	**No**, 0°C

Apply motor heat to air	**No**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.1°C, 22.5%, 31.8 kJ/kg
Airflow (System, Portion, Component, Unit)	11055 l/s, **100%**, 11055 l/s, 11055 l/s
Component total static pressure	294 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**189.1 Pa**
Total static pressure	423 Pa
Internal static pressure, External static pressure	55 Pa, 368 Pa
Internal static pressure summary	
DUCT-7 (Duct)	0 Pa
DUCT-9 (Duct)	0 Pa
RLD-1 (Damper)	25 Pa
RRLF-1 (Plenum)	5 Pa
RRLF-1 (Fan inlet)	12 Pa
RRLF-1 (Fan outlet)	12 Pa
External static pressure summary	
DRLD-1 (Damper)	25 Pa
DUCT-102 (Duct)	0 Pa
DUCT-111 (Duct)	0 Pa
DUCT-139 (Duct)	0 Pa
DUCT-5 (Duct)	0 Pa
L-2 (Louver)	25 Pa
L-2 (Backdraft Damper)	0 Pa
L-2 (Plenum)	5 Pa
RRLF-1 (Fire and/or smoke damper)	75 Pa
RRLF-1 (Extra)	189 Pa
SPC-1 (Return Grille)	25 Pa
SPC-1 (Return Balancing Damper)	25 Pa
SPC-1 (Return Plenum)	0 Pa

Scenario 2	Summer Cooling
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.7°C, 44.2%, 41 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.7°C, 44.2%, 41 kJ/kg
Airflow (System, Portion, Component, Unit)	20400 l/s, **100%**, 20400 l/s, 20400 l/s
Component total static pressure	294 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**189.1 Pa**
Total static pressure	398 Pa
Internal static pressure, External static pressure	30 Pa, 368 Pa
Internal static pressure summary	
DUCT-9 (Duct)	0 Pa
RRLF-1 (Plenum)	5 Pa
RRLF-1 (Fan inlet)	12 Pa
RRLF-1 (Fan outlet)	12 Pa
External static pressure summary	
DRLD-1 (Damper)	25 Pa
DUCT-111 (Duct)	0 Pa
DUCT-139 (Duct)	0 Pa
DUCT-5 (Duct)	0 Pa
L-2 (Louver)	25 Pa
L-2 (Backdraft Damper)	0 Pa
L-2 (Plenum)	5 Pa
RRLF-1 (Fire and/or smoke damper)	75 Pa
RRLF-1 (Extra)	189 Pa
SPC-1 (Return Grille)	25 Pa
SPC-1 (Return Balancing Damper)	25 Pa
SPC-1 (Return Plenum)	0 Pa

Scenario 3	Economizer
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.7°C, 25.8%, 33.2 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.7°C, 25.8%, 33.2 kJ/kg
Airflow (System, Portion, Component, Unit)	20400 l/s, **100%**, 20400 l/s, 20400 l/s
Component total static pressure	294 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**189.1 Pa**
Total static pressure	423 Pa
Internal static pressure, External static pressure	55 Pa, 368 Pa
Internal static pressure summary	
DUCT-7 (Duct)	0 Pa
DUCT-9 (Duct)	0 Pa
RLD-1 (Damper)	25 Pa
RRLF-1 (Plenum)	5 Pa
RRLF-1 (Fan inlet)	12 Pa
RRLF-1 (Fan outlet)	12 Pa
External static pressure summary	
DRLD-1 (Damper)	25 Pa
DUCT-102 (Duct)	0 Pa
DUCT-111 (Duct)	0 Pa
DUCT-139 (Duct)	0 Pa
DUCT-5 (Duct)	0 Pa
L-2 (Louver)	25 Pa
L-2 (Backdraft Damper)	0 Pa
L-2 (Plenum)	5 Pa
RRLF-1 (Fire and/or smoke damper)	75 Pa
RRLF-1 (Extra)	189 Pa
SPC-1 (Return Grille)	25 Pa
SPC-1 (Return Balancing Damper)	25 Pa
SPC-1 (Return Plenum)	0 Pa

RRLF-2	
Air type, Type, Location, Classification	**Return/Relief Air**, **EPQ (Plenum, Centrifugal, Belt, Better Sound Quality)**, AH-2, **New Equipment**
Quantity	**1**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Clearance, Maximum width, Maximum height	**304.8 mm**, **3860.8 mm**, **2692.4 mm**
Motor size, Brake horsepower (Estimated, Actual)	**0 kW**, 0 kW, **0 kW**
Motor size selection method	**Non-Overloading**
Motor speed	1750 rpm
Voltage/phase (Motor)	120v/1ph
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Static efficiency	0%
Wheel diameter	0 mm
Fan speed	0 rpm
Class	I
Inlet vanes	**No**
Outlet diffuser	**No**
Sound	
Maximum inlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual inlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB

Maximum outlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual outlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB

Scenario 1	Winter Heating
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.1°C, 22.5%, 31.8 kJ/kg
Apply fan heat to air	**No**, 0°C
Apply motor heat to air	**No**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.1°C, 22.5%, 31.8 kJ/kg
Airflow (System, Portion, Component, Unit)	7842 l/s, **100%**, 7842 l/s, 7842 l/s
Component total static pressure	294 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**189.1 Pa**
Total static pressure	398 Pa
Internal static pressure, External static pressure	30 Pa, 368 Pa
Internal static pressure summary	
DUCT-16 (Duct)	0 Pa
RRLF-2 (Plenum)	5 Pa
RRLF-2 (Fan inlet)	12 Pa
RRLF-2 (Fan outlet)	12 Pa
External static pressure summary	
DRLD-1 (Damper)	25 Pa
DUCT-111 (Duct)	0 Pa
DUCT-112 (Duct)	0 Pa
DUCT-13 (Duct)	0 Pa
DUCT-139 (Duct)	0 Pa
L-2 (Louver)	25 Pa
L-2 (Backdraft Damper)	0 Pa
L-2 (Plenum)	5 Pa
RRLF-2 (Fire and/or smoke damper)	75 Pa
RRLF-2 (Extra)	189 Pa
SPC-2 (Return Grille)	25 Pa
SPC-2 (Return Balancing Damper)	25 Pa
SPC-2 (Return Plenum)	0 Pa

Scenario 2	Summer Cooling
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.7°C, 44.2%, 41 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.7°C, 44.2%, 41 kJ/kg
Airflow (System, Portion, Component, Unit)	17187 l/s, **100%**, 17187 l/s, 17187 l/s
Component total static pressure	294 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**189.1 Pa**
Total static pressure	398 Pa
Internal static pressure, External static pressure	30 Pa, 368 Pa
Internal static pressure summary	
DUCT-16 (Duct)	0 Pa
RRLF-2 (Plenum)	5 Pa
RRLF-2 (Fan inlet)	12 Pa
RRLF-2 (Fan outlet)	12 Pa
External static pressure summary	
DRLD-1 (Damper)	25 Pa
DUCT-111 (Duct)	0 Pa
DUCT-112 (Duct)	0 Pa
DUCT-13 (Duct)	0 Pa
DUCT-139 (Duct)	0 Pa
L-2 (Louver)	25 Pa
L-2 (Backdraft Damper)	0 Pa

L-2 (Plenum)	5 Pa
RRLF-2 (Fire and/or smoke damper)	75 Pa
RRLF-2 (Extra)	189 Pa
SPC-2 (Return Grille)	25 Pa
SPC-2 (Return Balancing Damper)	25 Pa
SPC-2 (Return Plenum)	0 Pa

Scenario 3	Economizer
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.7°C, 25.8%, 33.2 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.7°C, 25.8%, 33.2 kJ/kg
Airflow (System, Portion, Component, Unit)	17187 l/s, **100%**, 17187 l/s, 17187 l/s
Component total static pressure	294 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**189.1 Pa**
Total static pressure	423 Pa
Internal static pressure, External static pressure	55 Pa, 368 Pa
Internal static pressure summary	
DUCT-14 (Duct)	0 Pa
DUCT-16 (Duct)	0 Pa
RLD-2 (Damper)	25 Pa
RRLF-2 (Plenum)	5 Pa
RRLF-2 (Fan inlet)	12 Pa
RRLF-2 (Fan outlet)	12 Pa
External static pressure summary	
DRLD-1 (Damper)	25 Pa
DUCT-107 (Duct)	0 Pa
DUCT-111 (Duct)	0 Pa
DUCT-112 (Duct)	0 Pa
DUCT-13 (Duct)	0 Pa
DUCT-139 (Duct)	0 Pa
L-2 (Louver)	25 Pa
L-2 (Backdraft Damper)	0 Pa
L-2 (Plenum)	5 Pa
RRLF-2 (Fire and/or smoke damper)	75 Pa
RRLF-2 (Extra)	189 Pa
SPC-2 (Return Grille)	25 Pa
SPC-2 (Return Balancing Damper)	25 Pa
SPC-2 (Return Plenum)	0 Pa

RRLF-3

Air type, Type, Location, Classification	**Return/Relief Air**, **EPQ (Plenum, Centrifugal, Belt, Better Sound Quality)**, AH-3, **New Equipment**
Quantity	**1**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Clearance, Maximum width, Maximum height	**304.8 mm**, **5359.4 mm**, **2692.4 mm**
Motor size, Brake horsepower (Estimated, Actual)	**0 kW**, 0 kW, **0 kW**
Motor size selection method	**Non-Overloading**
Motor speed	1750 rpm
Voltage/phase (Motor)	120v/1ph
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Static efficiency	0%
Wheel diameter	0 mm

Fan speed	0 rpm
Class	I
Inlet vanes	**No**
Outlet diffuser	**No**
Sound	
Maximum inlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual inlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB
Maximum outlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual outlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB

Scenario 1	Winter Heating
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.1°C, 22.5%, 31.8 kJ/kg
Apply fan heat to air	**No**, 0°C
Apply motor heat to air	**No**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.1°C, 22.5%, 31.8 kJ/kg
Airflow (System, Portion, Component, Unit)	20905 l/s, **100%**, 20905 l/s, 20905 l/s
Component total static pressure	249 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**144.3 Pa**
Total static pressure	440 Pa
Internal static pressure, External static pressure	55 Pa, 386 Pa
Internal static pressure summary	
DUCT-18 (Duct)	0 Pa
DUCT-20 (Duct)	0 Pa
RLD-3 (Damper)	25 Pa
RRLF-3 (Plenum)	5 Pa
RRLF-3 (Fan inlet)	12 Pa
RRLF-3 (Fan outlet)	12 Pa
External static pressure summary	
DRLD-1 (Damper)	25 Pa
DUCT-105 (Duct)	0 Pa
DUCT-108 (Duct)	0 Pa
DUCT-111 (Duct)	0 Pa
DUCT-112 (Duct)	0 Pa
DUCT-139 (Duct)	0 Pa
DUCT-17 (Duct)	0 Pa
L-2 (Louver)	25 Pa
L-2 (Backdraft Damper)	0 Pa
L-2 (Plenum)	5 Pa
RRLF-3 (Fire and/or smoke damper)	75 Pa
RRLF-3 (Extra)	144 Pa
SPC-3 (Return Grille)	25 Pa
SPC-3 (Return Balancing Damper)	25 Pa
SPC-3 (Return Plenum)	0 Pa
SPC-3 (Return plenum)	62 Pa

Scenario 2	Summer Cooling
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.7°C, 44.2%, 41 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.7°C, 44.2%, 41 kJ/kg
Airflow (System, Portion, Component, Unit)	35007 l/s, **100%**, 35007 l/s, 35007 l/s
Component total static pressure	249 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**144.3 Pa**
Total static pressure	440 Pa
Internal static pressure, External static pressure	55 Pa, 386 Pa
Internal static pressure summary	

DUCT-18 (Duct)	0 Pa
DUCT-20 (Duct)	0 Pa
RLD-3 (Damper)	25 Pa
RRLF-3 (Plenum)	5 Pa
RRLF-3 (Fan inlet)	12 Pa
RRLF-3 (Fan outlet)	12 Pa
External static pressure summary	
DRLD-1 (Damper)	25 Pa
DUCT-105 (Duct)	0 Pa
DUCT-108 (Duct)	0 Pa
DUCT-111 (Duct)	0 Pa
DUCT-112 (Duct)	0 Pa
DUCT-139 (Duct)	0 Pa
DUCT-17 (Duct)	0 Pa
L-2 (Louver)	25 Pa
L-2 (Backdraft Damper)	0 Pa
L-2 (Plenum)	5 Pa
RRLF-3 (Fire and/or smoke damper)	75 Pa
RRLF-3 (Extra)	144 Pa
SPC-3 (Return Grille)	25 Pa
SPC-3 (Return Balancing Damper)	25 Pa
SPC-3 (Return Plenum)	0 Pa
SPC-3 (Return plenum)	62 Pa

Scenario 3	Economizer
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.7°C, 25.8%, 33.2 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.7°C, 25.8%, 33.2 kJ/kg
Airflow (System, Portion, Component, Unit)	35007 l/s, **100%**, 35007 l/s, 35007 l/s
Component total static pressure	249 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**144.3 Pa**
Total static pressure	440 Pa
Internal static pressure, External static pressure	55 Pa, 386 Pa
Internal static pressure summary	
DUCT-18 (Duct)	0 Pa
DUCT-20 (Duct)	0 Pa
RLD-3 (Damper)	25 Pa
RRLF-3 (Plenum)	5 Pa
RRLF-3 (Fan inlet)	12 Pa
RRLF-3 (Fan outlet)	12 Pa
External static pressure summary	
DRLD-1 (Damper)	25 Pa
DUCT-105 (Duct)	0 Pa
DUCT-108 (Duct)	0 Pa
DUCT-111 (Duct)	0 Pa
DUCT-112 (Duct)	0 Pa
DUCT-139 (Duct)	0 Pa
DUCT-17 (Duct)	0 Pa
L-2 (Louver)	25 Pa
L-2 (Backdraft Damper)	0 Pa
L-2 (Plenum)	5 Pa
RRLF-3 (Fire and/or smoke damper)	75 Pa
RRLF-3 (Extra)	144 Pa
SPC-3 (Return Grille)	25 Pa
SPC-3 (Return Balancing Damper)	25 Pa
SPC-3 (Return Plenum)	0 Pa
SPC-3 (Return plenum)	62 Pa

RRLF-4	
Air type, Type, Location, Classification	**Return/Relief Air**, **EPQ (Plenum, Centrifugal, Belt, Better Sound Quality)**, AH-4, **New Equipment**

Quantity	**1**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Clearance, Maximum width, Maximum height	**304.8 mm**, **5359.4 mm**, **2692.4 mm**
Motor size, Brake horsepower (Estimated, Actual)	**0 kW**, 0 kW, **0 kW**
Motor size selection method	**Non-Overloading**
Motor speed	1750 rpm
Voltage/phase (Motor)	120v/1ph
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Static efficiency	0%
Wheel diameter	0 mm
Fan speed	0 rpm
Class	I
Inlet vanes	**No**
Outlet diffuser	**No**
Sound	
Maximum inlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual inlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB
Maximum outlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual outlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB

Scenario 1	Winter Heating
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.1°C, 22.5%, 31.8 kJ/kg
Apply fan heat to air	**No**, 0°C
Apply motor heat to air	**No**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.1°C, 22.5%, 31.8 kJ/kg
Airflow (System, Portion, Component, Unit)	20905 l/s, **100%**, 20905 l/s, 20905 l/s
Component total static pressure	249 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**144.3 Pa**
Total static pressure	440 Pa
Internal static pressure, External static pressure	55 Pa, 386 Pa
Internal static pressure summary	
DUCT-22 (Duct)	0 Pa
DUCT-24 (Duct)	0 Pa
RLD-4 (Damper)	25 Pa
RRLF-4 (Plenum)	5 Pa
RRLF-4 (Fan inlet)	12 Pa
RRLF-4 (Fan outlet)	12 Pa
External static pressure summary	
DRLD-1 (Damper)	25 Pa
DUCT-103 (Duct)	0 Pa
DUCT-106 (Duct)	0 Pa
DUCT-108 (Duct)	0 Pa
DUCT-111 (Duct)	0 Pa
DUCT-112 (Duct)	0 Pa
DUCT-139 (Duct)	0 Pa
DUCT-21 (Duct)	0 Pa
L-2 (Louver)	25 Pa
L-2 (Backdraft Damper)	0 Pa
L-2 (Plenum)	5 Pa
RRLF-4 (Fire and/or smoke damper)	75 Pa
RRLF-4 (Extra)	144 Pa
SPC-4 (Return Grille)	25 Pa
SPC-4 (Return Balancing Damper)	25 Pa
SPC-4 (Return Plenum)	0 Pa
SPC-4 (Return plenum)	62 Pa

Scenario 2	Summer Cooling
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.7°C, 44.2%, 41 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.7°C, 44.2%, 41 kJ/kg
Airflow (System, Portion, Component, Unit)	35007 l/s, **100%**, 35007 l/s, 35007 l/s
Component total static pressure	249 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**144.3 Pa**
Total static pressure	440 Pa
Internal static pressure, External static pressure	55 Pa, 386 Pa
Internal static pressure summary	
DUCT-22 (Duct)	0 Pa
DUCT-24 (Duct)	0 Pa
RLD-4 (Damper)	25 Pa
RRLF-4 (Plenum)	5 Pa
RRLF-4 (Fan inlet)	12 Pa
RRLF-4 (Fan outlet)	12 Pa
External static pressure summary	
DRLD-1 (Damper)	25 Pa
DUCT-103 (Duct)	0 Pa
DUCT-106 (Duct)	0 Pa
DUCT-108 (Duct)	0 Pa
DUCT-111 (Duct)	0 Pa
DUCT-112 (Duct)	0 Pa
DUCT-139 (Duct)	0 Pa
DUCT-21 (Duct)	0 Pa
L-2 (Louver)	25 Pa
L-2 (Backdraft Damper)	0 Pa
L-2 (Plenum)	5 Pa
RRLF-4 (Fire and/or smoke damper)	75 Pa
RRLF-4 (Extra)	144 Pa
SPC-4 (Return Grille)	25 Pa
SPC-4 (Return Balancing Damper)	25 Pa
SPC-4 (Return Plenum)	0 Pa
SPC-4 (Return plenum)	62 Pa

Scenario 3	Economizer
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.7°C, 25.8%, 33.2 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.7°C, 25.8%, 33.2 kJ/kg
Airflow (System, Portion, Component, Unit)	35007 l/s, **100%**, 35007 l/s, 35007 l/s
Component total static pressure	249 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**144.3 Pa**
Total static pressure	440 Pa
Internal static pressure, External static pressure	55 Pa, 386 Pa
Internal static pressure summary	
DUCT-22 (Duct)	0 Pa
DUCT-24 (Duct)	0 Pa
RLD-4 (Damper)	25 Pa
RRLF-4 (Plenum)	5 Pa
RRLF-4 (Fan inlet)	12 Pa
RRLF-4 (Fan outlet)	12 Pa
External static pressure summary	
DRLD-1 (Damper)	25 Pa
DUCT-103 (Duct)	0 Pa

DUCT-106 (Duct)	0 Pa
DUCT-108 (Duct)	0 Pa
DUCT-111 (Duct)	0 Pa
DUCT-112 (Duct)	0 Pa
DUCT-139 (Duct)	0 Pa
DUCT-21 (Duct)	0 Pa
L-2 (Louver)	25 Pa
L-2 (Backdraft Damper)	0 Pa
L-2 (Plenum)	5 Pa
RRLF-4 (Fire and/or smoke damper)	75 Pa
RRLF-4 (Extra)	144 Pa
SPC-4 (Return Grille)	25 Pa
SPC-4 (Return Balancing Damper)	25 Pa
SPC-4 (Return Plenum)	0 Pa
SPC-4 (Return plenum)	62 Pa

RRLF-5

Air type, Type, Location, Classification	**Return/Relief Air**, **EPQ (Plenum, Centrifugal, Belt, Better Sound Quality)**, AH-5, **New Equipment**
Quantity	**1**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Clearance, Maximum width, Maximum height	**304.8 mm**, **4343.4 mm**, **2692.4 mm**
Motor size, Brake horsepower (Estimated, Actual)	**0 kW**, 0 kW, **0 kW**
Motor size selection method	**Non-Overloading**
Motor speed	1750 rpm
Voltage/phase (Motor)	120v/1ph
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Static efficiency	0%
Wheel diameter	0 mm
Fan speed	0 rpm
Class	I
Inlet vanes	**No**
Outlet diffuser	**No**
Sound	
Maximum inlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual inlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB
Maximum outlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual outlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB

Scenario 1	Winter Heating
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.1°C, 22.5%, 31.8 kJ/kg
Apply fan heat to air	**No**, 0°C
Apply motor heat to air	**No**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.1°C, 22.5%, 31.8 kJ/kg
Airflow (System, Portion, Component, Unit)	8380 l/s, **100%**, 8380 l/s, 8380 l/s
Component total static pressure	294 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**189.1 Pa**
Total static pressure	398 Pa
Internal static pressure, External static pressure	30 Pa, 368 Pa

Internal static pressure summary	
DUCT-40 (Duct)	0 Pa
RRLF-5 (Plenum)	5 Pa
RRLF-5 (Fan inlet)	12 Pa

RRLF-5 (Fan outlet)	12 Pa
External static pressure summary	
DRLD-1 (Damper)	25 Pa
DUCT-106 (Duct)	0 Pa
DUCT-108 (Duct)	0 Pa
DUCT-111 (Duct)	0 Pa
DUCT-112 (Duct)	0 Pa
DUCT-139 (Duct)	0 Pa
DUCT-39 (Duct)	0 Pa
L-2 (Louver)	25 Pa
L-2 (Backdraft Damper)	0 Pa
L-2 (Plenum)	5 Pa
RRLF-5 (Fire and/or smoke damper)	75 Pa
RRLF-5 (Extra)	189 Pa
SPC-5 (Return Grille)	25 Pa
SPC-5 (Return Balancing Damper)	25 Pa
SPC-5 (Return Plenum)	0 Pa

Scenario 2	Summer Cooling
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	16.7°C, 12.3°C, 60.3%, 34.8 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	16.7°C, 12.3°C, 60.3%, 34.8 kJ/kg
Airflow (System, Portion, Component, Unit)	19424 l/s, **100%**, 19424 l/s, 19424 l/s
Component total static pressure	294 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**189.1 Pa**
Total static pressure	398 Pa
Internal static pressure, External static pressure	30 Pa, 368 Pa
Internal static pressure summary	
DUCT-40 (Duct)	0 Pa
RRLF-5 (Plenum)	5 Pa
RRLF-5 (Fan inlet)	12 Pa
RRLF-5 (Fan outlet)	12 Pa
External static pressure summary	
DRLD-1 (Damper)	25 Pa
DUCT-106 (Duct)	0 Pa
DUCT-108 (Duct)	0 Pa
DUCT-111 (Duct)	0 Pa
DUCT-112 (Duct)	0 Pa
DUCT-139 (Duct)	0 Pa
DUCT-39 (Duct)	0 Pa
L-2 (Louver)	25 Pa
L-2 (Backdraft Damper)	0 Pa
L-2 (Plenum)	5 Pa
RRLF-5 (Fire and/or smoke damper)	75 Pa
RRLF-5 (Extra)	189 Pa
SPC-5 (Return Grille)	25 Pa
SPC-5 (Return Balancing Damper)	25 Pa
SPC-5 (Return Plenum)	0 Pa

Scenario 3	Economizer
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	16.7°C, 9°C, 34.4%, 27 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	16.7°C, 9°C, 34.4%, 27 kJ/kg
Airflow (System, Portion, Component, Unit)	19424 l/s, **100%**, 19424 l/s, 19424 l/s
Component total static pressure	294 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**

Extra	**189.1 Pa**
Total static pressure	423 Pa
Internal static pressure, External static pressure	55 Pa, 368 Pa
Internal static pressure summary	
DUCT-40 (Duct)	0 Pa
DUCT-42 (Duct)	0 Pa
RLD-5 (Damper)	25 Pa
RRLF-5 (Plenum)	5 Pa
RRLF-5 (Fan inlet)	12 Pa
RRLF-5 (Fan outlet)	12 Pa
External static pressure summary	
DRLD-1 (Damper)	25 Pa
DUCT-104 (Duct)	0 Pa
DUCT-106 (Duct)	0 Pa
DUCT-108 (Duct)	0 Pa
DUCT-111 (Duct)	0 Pa
DUCT-112 (Duct)	0 Pa
DUCT-139 (Duct)	0 Pa
DUCT-39 (Duct)	0 Pa
L-2 (Louver)	25 Pa
L-2 (Backdraft Damper)	0 Pa
L-2 (Plenum)	5 Pa
RRLF-5 (Fire and/or smoke damper)	75 Pa
RRLF-5 (Extra)	189 Pa
SPC-5 (Return Grille)	25 Pa
SPC-5 (Return Balancing Damper)	25 Pa
SPC-5 (Return Plenum)	0 Pa

SF-1.1	
Air type, Type, Location, Classification	**Supply Air**, **QSL (Mixed Flow Centrifugal, Belt)**, AH-1, **New Equipment**
Quantity	**1**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Clearance, Maximum width, Maximum height	**304.8 mm**, **1625.6 mm**, **2692.4 mm**
Motor size, Brake horsepower (Estimated, Actual)	**0 kW**, 0 kW, **0 kW**
Motor size selection method	**Non-Overloading**
Motor speed	1750 rpm
Voltage/phase (Motor)	120v/1ph
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Static efficiency	0%
Wheel diameter	0 mm
Fan speed	0 rpm
Class	I
Inlet vanes	**No**
Outlet diffuser	**No**
Sound	
Maximum inlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual inlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB
Maximum outlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual outlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB

Scenario 1	Winter Heating
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	17.8°C, 9.2°C, 29.5%, 27.4 kJ/kg
Apply fan heat to air	**No**, 0°C
Apply motor heat to air	**No**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	17.8°C, 9.2°C, 29.5%, 27.4 kJ/kg
Airflow (System, Portion, Component, Unit)	15574 l/s, **50%**, 7787 l/s, 7787 l/s
Component total static pressure	199 Pa
Internal static pressure	
Plenum	**5 Pa**

Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**94.6 Pa**
Total static pressure	1100 Pa
Internal static pressure, External static pressure	689 Pa, 411 Pa
Internal static pressure summary	
CC-1 (Coil)	187 Pa
DUCT-11 (Duct)	0 Pa
DUCT-2 (Duct)	0 Pa
DUCT-3 (Duct)	0 Pa
DUCT-6 (Duct)	0 Pa
DUCT-80 (Duct)	0 Pa
DUCT-81 (Duct)	0 Pa
DUCT-83 (Duct)	0 Pa
DUCT-84 (Duct)	0 Pa
DUCT-85 (Duct)	0 Pa
F-1.1 (Dirty Filter)	100 Pa
F-1.2 (Dirty Filter)	249 Pa
HC-1.1 (Coil)	62 Pa
HC-1.2 (Coil)	37 Pa
OD-1 (Damper)	25 Pa
SF-1.1 (Plenum)	5 Pa
SF-1.1 (Fan inlet)	12 Pa
SF-1.1 (Fan outlet)	12 Pa
External static pressure summary	
DUCT-1 (Duct)	0 Pa
DUCT-109 (Duct)	0 Pa
DUCT-82 (Duct)	0 Pa
DUCT-95 (Duct)	0 Pa
L-1 (Louver)	25 Pa
L-1 (Backdraft Damper)	0 Pa
L-1 (Plenum)	5 Pa
SF-1.1 (Fire and/or smoke damper)	75 Pa
SF-1.1 (Extra)	95 Pa
SPC-1 (Supply Diffuser)	25 Pa
SPC-1 (Supply Balancing Damper)	25 Pa
TBG-1 (Box)	75 Pa
TBG-1 (Coil)	87 Pa

Scenario 2	Summer Cooling
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	26.9°C, 16.8°C, 35.5%, 47 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	26.9°C, 16.8°C, 35.5%, 47 kJ/kg
Airflow (System, Portion, Component, Unit)	25957 l/s, **50%**, 12979 l/s, 12979 l/s
Component total static pressure	199 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**94.6 Pa**
Total static pressure	1100 Pa
Internal static pressure, External static pressure	689 Pa, 411 Pa
Internal static pressure summary	
CC-1 (Coil)	187 Pa
DUCT-11 (Duct)	0 Pa
DUCT-2 (Duct)	0 Pa
DUCT-3 (Duct)	0 Pa
DUCT-6 (Duct)	0 Pa
DUCT-80 (Duct)	0 Pa
DUCT-81 (Duct)	0 Pa
DUCT-83 (Duct)	0 Pa
DUCT-84 (Duct)	0 Pa
DUCT-85 (Duct)	0 Pa
F-1.1 (Dirty Filter)	100 Pa

F-1.2 (Dirty Filter)	249 Pa
HC-1.1 (Coil)	62 Pa
HC-1.2 (Coil)	37 Pa
OD-1 (Damper)	25 Pa
SF-1.1 (Plenum)	5 Pa
SF-1.1 (Fan inlet)	12 Pa
SF-1.1 (Fan outlet)	12 Pa
External static pressure summary	
DUCT-1 (Duct)	0 Pa
DUCT-109 (Duct)	0 Pa
DUCT-82 (Duct)	0 Pa
DUCT-95 (Duct)	0 Pa
L-1 (Louver)	25 Pa
L-1 (Backdraft Damper)	0 Pa
L-1 (Plenum)	5 Pa
SF-1.1 (Fire and/or smoke damper)	75 Pa
SF-1.1 (Extra)	95 Pa
SPC-1 (Supply Diffuser)	25 Pa
SPC-1 (Supply Balancing Damper)	25 Pa
TBG-1 (Box)	75 Pa
TBG-1 (Coil)	87 Pa

Scenario 3	Economizer
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Airflow (System, Portion, Component, Unit)	25957 l/s, **50%**, 12979 l/s, 12979 l/s
Component total static pressure	199 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**94.6 Pa**
Total static pressure	1100 Pa
Internal static pressure, External static pressure	689 Pa, 411 Pa
Internal static pressure summary	
CC-1 (Coil)	187 Pa
DUCT-11 (Duct)	0 Pa
DUCT-2 (Duct)	0 Pa
DUCT-3 (Duct)	0 Pa
DUCT-6 (Duct)	0 Pa
DUCT-80 (Duct)	0 Pa
DUCT-81 (Duct)	0 Pa
DUCT-83 (Duct)	0 Pa
DUCT-84 (Duct)	0 Pa
DUCT-85 (Duct)	0 Pa
F-1.1 (Dirty Filter)	100 Pa
F-1.2 (Dirty Filter)	249 Pa
HC-1.1 (Coil)	62 Pa
HC-1.2 (Coil)	37 Pa
OD-1 (Damper)	25 Pa
SF-1.1 (Plenum)	5 Pa
SF-1.1 (Fan inlet)	12 Pa
SF-1.1 (Fan outlet)	12 Pa
External static pressure summary	
DUCT-1 (Duct)	0 Pa
DUCT-109 (Duct)	0 Pa
DUCT-82 (Duct)	0 Pa
DUCT-95 (Duct)	0 Pa
L-1 (Louver)	25 Pa
L-1 (Backdraft Damper)	0 Pa
L-1 (Plenum)	5 Pa
SF-1.1 (Fire and/or smoke damper)	75 Pa
SF-1.1 (Extra)	95 Pa
SPC-1 (Supply Diffuser)	25 Pa
SPC-1 (Supply Balancing Damper)	25 Pa
TBG-1 (Box)	75 Pa
TBG-1 (Coil)	87 Pa

SF-1.2	
Air type, Type, Location, Classification	**Supply Air**, **QSL (Mixed Flow Centrifugal, Belt)**, AH-1, **New Equipment**
Quantity	**1**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Clearance, Maximum width, Maximum height	**304.8 mm**, **1625.6 mm**, **2692.4 mm**
Motor size, Brake horsepower (Estimated, Actual)	**0 kW**, 0 kW, **0 kW**
Motor size selection method	**Non-Overloading**
Motor speed	1750 rpm
Voltage/phase (Motor)	120v/1ph
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Static efficiency	0%
Wheel diameter	0 mm
Fan speed	0 rpm
Class	I
Inlet vanes	**No**
Outlet diffuser	**No**
Sound	
Maximum inlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual inlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB
Maximum outlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual outlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB

Scenario 1	Winter Heating
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	17.8°C, 9.2°C, 29.5%, 27.4 kJ/kg
Apply fan heat to air	**No**, 0°C
Apply motor heat to air	**No**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	17.8°C, 9.2°C, 29.5%, 27.4 kJ/kg
Airflow (System, Portion, Component, Unit)	15574 l/s, **50%**, 7787 l/s, 7787 l/s
Component total static pressure	199 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**94.6 Pa**
Total static pressure	1100 Pa
Internal static pressure, External static pressure	689 Pa, 411 Pa
Internal static pressure summary	
CC-1 (Coil)	187 Pa
DUCT-11 (Duct)	0 Pa
DUCT-3 (Duct)	0 Pa
DUCT-4 (Duct)	0 Pa
DUCT-6 (Duct)	0 Pa
DUCT-80 (Duct)	0 Pa
DUCT-81 (Duct)	0 Pa
DUCT-83 (Duct)	0 Pa
DUCT-85 (Duct)	0 Pa
DUCT-86 (Duct)	0 Pa
F-1.1 (Dirty Filter)	100 Pa
F-1.2 (Dirty Filter)	249 Pa
HC-1.1 (Coil)	62 Pa
HC-1.2 (Coil)	37 Pa
OD-1 (Damper)	25 Pa
SF-1.2 (Plenum)	5 Pa
SF-1.2 (Fan inlet)	12 Pa
SF-1.2 (Fan outlet)	12 Pa

External static pressure summary	
DUCT-1 (Duct)	0 Pa
DUCT-109 (Duct)	0 Pa
DUCT-82 (Duct)	0 Pa
DUCT-95 (Duct)	0 Pa
L-1 (Louver)	25 Pa
L-1 (Backdraft Damper)	0 Pa
L-1 (Plenum)	5 Pa
SF-1.2 (Fire and/or smoke damper)	75 Pa
SF-1.2 (Extra)	95 Pa
SPC-1 (Supply Diffuser)	25 Pa
SPC-1 (Supply Balancing Damper)	25 Pa
TBG-1 (Box)	75 Pa
TBG-1 (Coil)	87 Pa

Scenario 2	Summer Cooling
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	26.9°C, 16.8°C, 35.5%, 47 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	26.9°C, 16.8°C, 35.5%, 47 kJ/kg
Airflow (System, Portion, Component, Unit)	25957 l/s, **50%**, 12979 l/s, 12979 l/s
Component total static pressure	199 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**94.6 Pa**
Total static pressure	1100 Pa
Internal static pressure, External static pressure	689 Pa, 411 Pa
Internal static pressure summary	
CC-1 (Coil)	187 Pa
DUCT-11 (Duct)	0 Pa
DUCT-3 (Duct)	0 Pa
DUCT-4 (Duct)	0 Pa
DUCT-6 (Duct)	0 Pa
DUCT-80 (Duct)	0 Pa
DUCT-81 (Duct)	0 Pa
DUCT-83 (Duct)	0 Pa
DUCT-85 (Duct)	0 Pa
DUCT-86 (Duct)	0 Pa
F-1.1 (Dirty Filter)	100 Pa
F-1.2 (Dirty Filter)	249 Pa
HC-1.1 (Coil)	62 Pa
HC-1.2 (Coil)	37 Pa
OD-1 (Damper)	25 Pa
SF-1.2 (Plenum)	5 Pa
SF-1.2 (Fan inlet)	12 Pa
SF-1.2 (Fan outlet)	12 Pa
External static pressure summary	
DUCT-1 (Duct)	0 Pa
DUCT-109 (Duct)	0 Pa
DUCT-82 (Duct)	0 Pa
DUCT-95 (Duct)	0 Pa
L-1 (Louver)	25 Pa
L-1 (Backdraft Damper)	0 Pa
L-1 (Plenum)	5 Pa
SF-1.2 (Fire and/or smoke damper)	75 Pa
SF-1.2 (Extra)	95 Pa
SPC-1 (Supply Diffuser)	25 Pa
SPC-1 (Supply Balancing Damper)	25 Pa
TBG-1 (Box)	75 Pa
TBG-1 (Coil)	87 Pa

Scenario 3	Economizer
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg

Airflow (System, Portion, Component, Unit)	25957 l/s, **50%**, 12979 l/s, 12979 l/s
Component total static pressure	199 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**94.6 Pa**
Total static pressure	1100 Pa
Internal static pressure, External static pressure	689 Pa, 411 Pa
Internal static pressure summary	
CC-1 (Coil)	187 Pa
DUCT-11 (Duct)	0 Pa
DUCT-3 (Duct)	0 Pa
DUCT-4 (Duct)	0 Pa
DUCT-6 (Duct)	0 Pa
DUCT-80 (Duct)	0 Pa
DUCT-81 (Duct)	0 Pa
DUCT-83 (Duct)	0 Pa
DUCT-85 (Duct)	0 Pa
DUCT-86 (Duct)	0 Pa
F-1.1 (Dirty Filter)	100 Pa
F-1.2 (Dirty Filter)	249 Pa
HC-1.1 (Coil)	62 Pa
HC-1.2 (Coil)	37 Pa
OD-1 (Damper)	25 Pa
SF-1.2 (Plenum)	5 Pa
SF-1.2 (Fan inlet)	12 Pa
SF-1.2 (Fan outlet)	12 Pa
External static pressure summary	
DUCT-1 (Duct)	0 Pa
DUCT-109 (Duct)	0 Pa
DUCT-82 (Duct)	0 Pa
DUCT-95 (Duct)	0 Pa
L-1 (Louver)	25 Pa
L-1 (Backdraft Damper)	0 Pa
L-1 (Plenum)	5 Pa
SF-1.2 (Fire and/or smoke damper)	75 Pa
SF-1.2 (Extra)	95 Pa
SPC-1 (Supply Diffuser)	25 Pa
SPC-1 (Supply Balancing Damper)	25 Pa
TBG-1 (Box)	75 Pa
TBG-1 (Coil)	87 Pa

SF-2.1

Air type, Type, Location, Classification	**Supply Air**, **QSL (Mixed Flow Centrifugal, Belt)**, AH-2, **New Equipment**
Quantity	**1**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Clearance, Maximum width, Maximum height	**304.8 mm**, **1625.6 mm**, **2692.4 mm**
Motor size, Brake horsepower (Estimated, Actual)	**0 kW**, 0 kW, **0 kW**
Motor size selection method	**Non-Overloading**
Motor speed	1750 rpm
Voltage/phase (Motor)	120v/1ph
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Static efficiency	0%
Wheel diameter	0 mm
Fan speed	0 rpm
Class	I

Inlet vanes	**No**
Outlet diffuser	**No**
Sound	
Maximum inlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual inlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB
Maximum outlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual outlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB

Scenario 1	Winter Heating
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	15.7°C, 8.2°C, 33.8%, 25.2 kJ/kg
Apply fan heat to air	**No**, 0°C
Apply motor heat to air	**No**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	15.7°C, 8.2°C, 33.8%, 25.2 kJ/kg
Airflow (System, Portion, Component, Unit)	15574 l/s, **50%**, 7787 l/s, 7787 l/s
Component total static pressure	199 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**94.6 Pa**
Total static pressure	1100 Pa
Internal static pressure, External static pressure	689 Pa, 411 Pa
Internal static pressure summary	
CC-2 (Coil)	187 Pa
DUCT-12 (Duct)	0 Pa
DUCT-67 (Duct)	0 Pa
DUCT-69 (Duct)	0 Pa
DUCT-70 (Duct)	0 Pa
DUCT-71 (Duct)	0 Pa
DUCT-72 (Duct)	0 Pa
DUCT-75 (Duct)	0 Pa
DUCT-77 (Duct)	0 Pa
DUCT-78 (Duct)	0 Pa
F-2.1 (Dirty Filter)	100 Pa
F-2.2 (Dirty Filter)	249 Pa
HC-2.1 (Coil)	62 Pa
HC-2.2 (Coil)	37 Pa
OD-2 (Damper)	25 Pa
SF-2.1 (Plenum)	5 Pa
SF-2.1 (Fan inlet)	12 Pa
SF-2.1 (Fan outlet)	12 Pa
External static pressure summary	
DUCT-100 (Duct)	0 Pa
DUCT-109 (Duct)	0 Pa
DUCT-110 (Duct)	0 Pa
DUCT-73 (Duct)	0 Pa
DUCT-74 (Duct)	0 Pa
L-1 (Louver)	25 Pa
L-1 (Backdraft Damper)	0 Pa
L-1 (Plenum)	5 Pa
SF-2.1 (Fire and/or smoke damper)	75 Pa
SF-2.1 (Extra)	95 Pa
SPC-2 (Supply Diffuser)	25 Pa
SPC-2 (Supply Balancing Damper)	25 Pa
TBG-2 (Box)	75 Pa
TBG-2 (Coil)	87 Pa

Scenario 2	Summer Cooling
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	29.6°C, 18°C, 31.4%, 50.4 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	29.6°C, 18°C, 31.4%, 50.4 kJ/kg
Airflow (System, Portion, Component, Unit)	25957 l/s, **50%**, 12979 l/s, 12979 l/s
Component total static pressure	199 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**

Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**94.6 Pa**
Total static pressure	1100 Pa
Internal static pressure, External static pressure	689 Pa, 411 Pa
Internal static pressure summary	
CC-2 (Coil)	187 Pa
DUCT-12 (Duct)	0 Pa
DUCT-67 (Duct)	0 Pa
DUCT-69 (Duct)	0 Pa
DUCT-70 (Duct)	0 Pa
DUCT-71 (Duct)	0 Pa
DUCT-72 (Duct)	0 Pa
DUCT-75 (Duct)	0 Pa
DUCT-77 (Duct)	0 Pa
DUCT-78 (Duct)	0 Pa
F-2.1 (Dirty Filter)	100 Pa
F-2.2 (Dirty Filter)	249 Pa
HC-2.1 (Coil)	62 Pa
HC-2.2 (Coil)	37 Pa
OD-2 (Damper)	25 Pa
SF-2.1 (Plenum)	5 Pa
SF-2.1 (Fan inlet)	12 Pa
SF-2.1 (Fan outlet)	12 Pa
External static pressure summary	
DUCT-100 (Duct)	0 Pa
DUCT-109 (Duct)	0 Pa
DUCT-110 (Duct)	0 Pa
DUCT-73 (Duct)	0 Pa
DUCT-74 (Duct)	0 Pa
L-1 (Louver)	25 Pa
L-1 (Backdraft Damper)	0 Pa
L-1 (Plenum)	5 Pa
SF-2.1 (Fire and/or smoke damper)	75 Pa
SF-2.1 (Extra)	95 Pa
SPC-2 (Supply Diffuser)	25 Pa
SPC-2 (Supply Balancing Damper)	25 Pa
TBG-2 (Box)	75 Pa
TBG-2 (Coil)	87 Pa

Scenario 3	Economizer
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Airflow (System, Portion, Component, Unit)	25957 l/s, **50%**, 12979 l/s, 12979 l/s
Component total static pressure	199 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**94.6 Pa**
Total static pressure	1100 Pa
Internal static pressure, External static pressure	689 Pa, 411 Pa
Internal static pressure summary	
CC-2 (Coil)	187 Pa
DUCT-12 (Duct)	0 Pa
DUCT-67 (Duct)	0 Pa
DUCT-69 (Duct)	0 Pa
DUCT-70 (Duct)	0 Pa
DUCT-71 (Duct)	0 Pa
DUCT-72 (Duct)	0 Pa
DUCT-75 (Duct)	0 Pa
DUCT-77 (Duct)	0 Pa
DUCT-78 (Duct)	0 Pa
F-2.1 (Dirty Filter)	100 Pa
F-2.2 (Dirty Filter)	249 Pa

HC-2.1 (Coil)	62 Pa
HC-2.2 (Coil)	37 Pa
OD-2 (Damper)	25 Pa
SF-2.1 (Plenum)	5 Pa
SF-2.1 (Fan inlet)	12 Pa
SF-2.1 (Fan outlet)	12 Pa
External static pressure summary	
DUCT-100 (Duct)	0 Pa
DUCT-109 (Duct)	0 Pa
DUCT-110 (Duct)	0 Pa
DUCT-73 (Duct)	0 Pa
DUCT-74 (Duct)	0 Pa
L-1 (Louver)	25 Pa
L-1 (Backdraft Damper)	0 Pa
L-1 (Plenum)	5 Pa
SF-2.1 (Fire and/or smoke damper)	75 Pa
SF-2.1 (Extra)	95 Pa
SPC-2 (Supply Diffuser)	25 Pa
SPC-2 (Supply Balancing Damper)	25 Pa
TBG-2 (Box)	75 Pa
TBG-2 (Coil)	87 Pa

SF-2.2

Air type, Type, Location, Classification	**Supply Air**, **QSL (Mixed Flow Centrifugal, Belt)**, AH-2, **New Equipment**
Quantity	**1**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Clearance, Maximum width, Maximum height	**304.8 mm**, **1625.6 mm**, **2692.4 mm**
Motor size, Brake horsepower (Estimated, Actual)	**0 kW**, 0 kW, **0 kW**
Motor size selection method	**Non-Overloading**
Motor speed	1750 rpm
Voltage/phase (Motor)	120v/1ph
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Static efficiency	0%
Wheel diameter	0 mm
Fan speed	0 rpm
Class	I
Inlet vanes	**No**
Outlet diffuser	**No**
Sound	
Maximum inlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual inlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB
Maximum outlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual outlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB

Scenario 1	Winter Heating
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	15.7°C, 8.2°C, 33.8%, 25.2 kJ/kg
Apply fan heat to air	**No**, 0°C
Apply motor heat to air	**No**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	15.7°C, 8.2°C, 33.8%, 25.2 kJ/kg
Airflow (System, Portion, Component, Unit)	15574 l/s, **50%**, 7787 l/s, 7787 l/s
Component total static pressure	199 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**94.6 Pa**
Total static pressure	1100 Pa

Internal static pressure, External static pressure	689 Pa, 411 Pa
Internal static pressure summary	
CC-2 (Coil)	187 Pa
DUCT-12 (Duct)	0 Pa
DUCT-67 (Duct)	0 Pa
DUCT-69 (Duct)	0 Pa
DUCT-70 (Duct)	0 Pa
DUCT-71 (Duct)	0 Pa
DUCT-72 (Duct)	0 Pa
DUCT-75 (Duct)	0 Pa
DUCT-76 (Duct)	0 Pa
DUCT-79 (Duct)	0 Pa
F-2.1 (Dirty Filter)	100 Pa
F-2.2 (Dirty Filter)	249 Pa
HC-2.1 (Coil)	62 Pa
HC-2.2 (Coil)	37 Pa
OD-2 (Damper)	25 Pa
SF-2.2 (Plenum)	5 Pa
SF-2.2 (Fan inlet)	12 Pa
SF-2.2 (Fan outlet)	12 Pa
External static pressure summary	
DUCT-100 (Duct)	0 Pa
DUCT-109 (Duct)	0 Pa
DUCT-110 (Duct)	0 Pa
DUCT-73 (Duct)	0 Pa
DUCT-74 (Duct)	0 Pa
L-1 (Louver)	25 Pa
L-1 (Backdraft Damper)	0 Pa
L-1 (Plenum)	5 Pa
SF-2.2 (Fire and/or smoke damper)	75 Pa
SF-2.2 (Extra)	95 Pa
SPC-2 (Supply Diffuser)	25 Pa
SPC-2 (Supply Balancing Damper)	25 Pa
TBG-2 (Box)	75 Pa
TBG-2 (Coil)	87 Pa

Scenario 2	Summer Cooling
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	29.6°C, 18°C, 31.4%, 50.4 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	29.6°C, 18°C, 31.4%, 50.4 kJ/kg
Airflow (System, Portion, Component, Unit)	25957 l/s, **50%**, 12979 l/s, 12979 l/s
Component total static pressure	199 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**94.6 Pa**
Total static pressure	1100 Pa
Internal static pressure, External static pressure	689 Pa, 411 Pa
Internal static pressure summary	
CC-2 (Coil)	187 Pa
DUCT-12 (Duct)	0 Pa
DUCT-67 (Duct)	0 Pa
DUCT-69 (Duct)	0 Pa
DUCT-70 (Duct)	0 Pa
DUCT-71 (Duct)	0 Pa
DUCT-72 (Duct)	0 Pa
DUCT-75 (Duct)	0 Pa
DUCT-76 (Duct)	0 Pa
DUCT-79 (Duct)	0 Pa
F-2.1 (Dirty Filter)	100 Pa
F-2.2 (Dirty Filter)	249 Pa
HC-2.1 (Coil)	62 Pa
HC-2.2 (Coil)	37 Pa
OD-2 (Damper)	25 Pa
SF-2.2 (Plenum)	5 Pa
SF-2.2 (Fan inlet)	12 Pa

SF-2.2 (Fan outlet)	12 Pa
External static pressure summary	
DUCT-100 (Duct)	0 Pa
DUCT-109 (Duct)	0 Pa
DUCT-110 (Duct)	0 Pa
DUCT-73 (Duct)	0 Pa
DUCT-74 (Duct)	0 Pa
L-1 (Louver)	25 Pa
L-1 (Backdraft Damper)	0 Pa
L-1 (Plenum)	5 Pa
SF-2.2 (Fire and/or smoke damper)	75 Pa
SF-2.2 (Extra)	95 Pa
SPC-2 (Supply Diffuser)	25 Pa
SPC-2 (Supply Balancing Damper)	25 Pa
TBG-2 (Box)	75 Pa
TBG-2 (Coil)	87 Pa

Scenario 3	Economizer
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Airflow (System, Portion, Component, Unit)	25957 l/s, **50%**, 12979 l/s, 12979 l/s
Component total static pressure	199 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**94.6 Pa**
Total static pressure	1100 Pa
Internal static pressure, External static pressure	689 Pa, 411 Pa
Internal static pressure summary	
CC-2 (Coil)	187 Pa
DUCT-12 (Duct)	0 Pa
DUCT-67 (Duct)	0 Pa
DUCT-69 (Duct)	0 Pa
DUCT-70 (Duct)	0 Pa
DUCT-71 (Duct)	0 Pa
DUCT-72 (Duct)	0 Pa
DUCT-75 (Duct)	0 Pa
DUCT-76 (Duct)	0 Pa
DUCT-79 (Duct)	0 Pa
F-2.1 (Dirty Filter)	100 Pa
F-2.2 (Dirty Filter)	249 Pa
HC-2.1 (Coil)	62 Pa
HC-2.2 (Coil)	37 Pa
OD-2 (Damper)	25 Pa
SF-2.2 (Plenum)	5 Pa
SF-2.2 (Fan inlet)	12 Pa
SF-2.2 (Fan outlet)	12 Pa
External static pressure summary	
DUCT-100 (Duct)	0 Pa
DUCT-109 (Duct)	0 Pa
DUCT-110 (Duct)	0 Pa
DUCT-73 (Duct)	0 Pa
DUCT-74 (Duct)	0 Pa
L-1 (Louver)	25 Pa
L-1 (Backdraft Damper)	0 Pa
L-1 (Plenum)	5 Pa
SF-2.2 (Fire and/or smoke damper)	75 Pa
SF-2.2 (Extra)	95 Pa
SPC-2 (Supply Diffuser)	25 Pa
SPC-2 (Supply Balancing Damper)	25 Pa
TBG-2 (Box)	75 Pa
TBG-2 (Coil)	87 Pa

SF-3.1

Air type, Type, Location, Classification	**Supply Air**, **QSL (Mixed Flow Centrifugal, Belt)**, AH-3, **New Equipment**
Quantity	**1**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Clearance, Maximum width, Maximum height	**304.8 mm**, **2374.9 mm**, **2692.4 mm**
Motor size, Brake horsepower (Estimated, Actual)	**0 kW**, 0 kW, **0 kW**
Motor size selection method	**Non-Overloading**
Motor speed	1750 rpm
Voltage/phase (Motor)	120v/1ph
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Static efficiency	0%
Wheel diameter	0 mm
Fan speed	0 rpm
Class	I
Inlet vanes	**No**
Outlet diffuser	**No**
Sound	
Maximum inlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual inlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB
Maximum outlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual outlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB

Scenario 1	Winter Heating
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	17.8°C, 9.2°C, 29.5%, 27.4 kJ/kg
Apply fan heat to air	**No**, 0°C
Apply motor heat to air	**No**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	17.8°C, 9.2°C, 29.5%, 27.4 kJ/kg
Airflow (System, Portion, Component, Unit)	23503 l/s, **50%**, 11752 l/s, 11752 l/s
Component total static pressure	455 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Future filter, humid	**286.2 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**64.7 Pa**
Total static pressure	1070 Pa
Internal static pressure, External static pressure	689 Pa, 381 Pa
Internal static pressure summary	
CC-3 (Coil)	187 Pa
DUCT-55 (Duct)	0 Pa
DUCT-56 (Duct)	0 Pa
DUCT-57 (Duct)	0 Pa
DUCT-59 (Duct)	0 Pa
DUCT-60 (Duct)	0 Pa
DUCT-64 (Duct)	0 Pa
DUCT-66 (Duct)	0 Pa
F-3 (Dirty Filter)	100 Pa
HC-3 (Coil)	62 Pa
OD-3 (Damper)	25 Pa
SF-3.1 (Future filter, humid)	286 Pa
SF-3.1 (Plenum)	5 Pa
SF-3.1 (Fan inlet)	12 Pa
SF-3.1 (Fan outlet)	12 Pa
External static pressure summary	
DUCT-101 (Duct)	0 Pa
DUCT-109 (Duct)	0 Pa
DUCT-110 (Duct)	0 Pa
DUCT-61 (Duct)	0 Pa
DUCT-62 (Duct)	0 Pa
DUCT-98 (Duct)	0 Pa

L-1 (Louver)	25 Pa
L-1 (Backdraft Damper)	0 Pa
L-1 (Plenum)	5 Pa
SF-3.1 (Fire and/or smoke damper)	75 Pa
SF-3.1 (Extra)	65 Pa
SPC-3 (Supply Diffuser)	25 Pa
SPC-3 (Supply Balancing Damper)	25 Pa
TBG-3 (Box)	75 Pa
TBG-3 (Coil)	87 Pa

Scenario 2	Summer Cooling
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	26.6°C, 16.7°C, 36%, 46.6 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	26.6°C, 16.7°C, 36%, 46.6 kJ/kg
Airflow (System, Portion, Component, Unit)	39172 l/s, **50%**, 19586 l/s, 19586 l/s
Component total static pressure	455 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Future filter, humid	**286.2 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**64.7 Pa**
Total static pressure	1070 Pa
Internal static pressure, External static pressure	689 Pa, 381 Pa
Internal static pressure summary	
CC-3 (Coil)	187 Pa
DUCT-55 (Duct)	0 Pa
DUCT-56 (Duct)	0 Pa
DUCT-57 (Duct)	0 Pa
DUCT-59 (Duct)	0 Pa
DUCT-60 (Duct)	0 Pa
DUCT-64 (Duct)	0 Pa
DUCT-66 (Duct)	0 Pa
F-3 (Dirty Filter)	100 Pa
HC-3 (Coil)	62 Pa
OD-3 (Damper)	25 Pa
SF-3.1 (Future filter, humid)	286 Pa
SF-3.1 (Plenum)	5 Pa
SF-3.1 (Fan inlet)	12 Pa
SF-3.1 (Fan outlet)	12 Pa
External static pressure summary	
DUCT-101 (Duct)	0 Pa
DUCT-109 (Duct)	0 Pa
DUCT-110 (Duct)	0 Pa
DUCT-61 (Duct)	0 Pa
DUCT-62 (Duct)	0 Pa
DUCT-98 (Duct)	0 Pa
L-1 (Louver)	25 Pa
L-1 (Backdraft Damper)	0 Pa
L-1 (Plenum)	5 Pa
SF-3.1 (Fire and/or smoke damper)	75 Pa
SF-3.1 (Extra)	65 Pa
SPC-3 (Supply Diffuser)	25 Pa
SPC-3 (Supply Balancing Damper)	25 Pa
TBG-3 (Box)	75 Pa
TBG-3 (Coil)	87 Pa

Scenario 3	Economizer
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Airflow (System, Portion, Component, Unit)	39172 l/s, **50%**, 19586 l/s, 19586 l/s
Component total static pressure	455 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**

Future filter, humid	**286.2 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**64.7 Pa**
Total static pressure	1070 Pa
Internal static pressure, External static pressure	689 Pa, 381 Pa
Internal static pressure summary	
CC-3 (Coil)	187 Pa
DUCT-55 (Duct)	0 Pa
DUCT-56 (Duct)	0 Pa
DUCT-57 (Duct)	0 Pa
DUCT-59 (Duct)	0 Pa
DUCT-60 (Duct)	0 Pa
DUCT-64 (Duct)	0 Pa
DUCT-66 (Duct)	0 Pa
F-3 (Dirty Filter)	100 Pa
HC-3 (Coil)	62 Pa
OD-3 (Damper)	25 Pa
SF-3.1 (Future filter, humid)	286 Pa
SF-3.1 (Plenum)	5 Pa
SF-3.1 (Fan inlet)	12 Pa
SF-3.1 (Fan outlet)	12 Pa
External static pressure summary	
DUCT-101 (Duct)	0 Pa
DUCT-109 (Duct)	0 Pa
DUCT-110 (Duct)	0 Pa
DUCT-61 (Duct)	0 Pa
DUCT-62 (Duct)	0 Pa
DUCT-98 (Duct)	0 Pa
L-1 (Louver)	25 Pa
L-1 (Backdraft Damper)	0 Pa
L-1 (Plenum)	5 Pa
SF-3.1 (Fire and/or smoke damper)	75 Pa
SF-3.1 (Extra)	65 Pa
SPC-3 (Supply Diffuser)	25 Pa
SPC-3 (Supply Balancing Damper)	25 Pa
TBG-3 (Box)	75 Pa
TBG-3 (Coil)	87 Pa

SF-3.2

Air type, Type, Location, Classification	**Supply Air**, **QSL (Mixed Flow Centrifugal, Belt)**, AH-3, **New Equipment**
Quantity	**1**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Clearance, Maximum width, Maximum height	**304.8 mm**, **2374.9 mm**, **2692.4 mm**
Motor size, Brake horsepower (Estimated, Actual)	**0 kW**, 0 kW, **0 kW**
Motor size selection method	**Non-Overloading**
Motor speed	1750 rpm
Voltage/phase (Motor)	120v/1ph
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Static efficiency	0%
Wheel diameter	0 mm
Fan speed	0 rpm
Class	I
Inlet vanes	**No**
Outlet diffuser	**No**
Sound	
Maximum inlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual inlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB
Maximum outlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual outlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB

Scenario 1	Winter Heating
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	17.8°C, 9.2°C, 29.5%, 27.4 kJ/kg
Apply fan heat to air	**No**, 0°C
Apply motor heat to air	**No**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	17.8°C, 9.2°C, 29.5%, 27.4 kJ/kg
Airflow (System, Portion, Component, Unit)	23503 l/s, **50%**, 11752 l/s, 11752 l/s
Component total static pressure	455 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Future filter, humid	**286.2 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**64.7 Pa**
Total static pressure	1070 Pa
Internal static pressure, External static pressure	689 Pa, 381 Pa
Internal static pressure summary	
CC-3 (Coil)	187 Pa
DUCT-56 (Duct)	0 Pa
DUCT-57 (Duct)	0 Pa
DUCT-59 (Duct)	0 Pa
DUCT-63 (Duct)	0 Pa
DUCT-64 (Duct)	0 Pa
DUCT-65 (Duct)	0 Pa
DUCT-66 (Duct)	0 Pa
F-3 (Dirty Filter)	100 Pa
HC-3 (Coil)	62 Pa
OD-3 (Damper)	25 Pa
SF-3.2 (Future filter, humid)	286 Pa
SF-3.2 (Plenum)	5 Pa
SF-3.2 (Fan inlet)	12 Pa
SF-3.2 (Fan outlet)	12 Pa
External static pressure summary	
DUCT-101 (Duct)	0 Pa
DUCT-109 (Duct)	0 Pa
DUCT-110 (Duct)	0 Pa
DUCT-61 (Duct)	0 Pa
DUCT-62 (Duct)	0 Pa
DUCT-98 (Duct)	0 Pa
L-1 (Louver)	25 Pa
L-1 (Backdraft Damper)	0 Pa
L-1 (Plenum)	5 Pa
SF-3.2 (Fire and/or smoke damper)	75 Pa
SF-3.2 (Extra)	65 Pa
SPC-3 (Supply Diffuser)	25 Pa
SPC-3 (Supply Balancing Damper)	25 Pa
TBG-3 (Box)	75 Pa
TBG-3 (Coil)	87 Pa

Scenario 2	Summer Cooling
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	26.6°C, 16.7°C, 36%, 46.6 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	26.6°C, 16.7°C, 36%, 46.6 kJ/kg
Airflow (System, Portion, Component, Unit)	39172 l/s, **50%**, 19586 l/s, 19586 l/s
Component total static pressure	455 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Future filter, humid	**286.2 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**64.7 Pa**
Total static pressure	1070 Pa
Internal static pressure, External static pressure	689 Pa, 381 Pa
Internal static pressure summary	
CC-3 (Coil)	187 Pa

DUCT-56 (Duct)	0 Pa
DUCT-57 (Duct)	0 Pa
DUCT-59 (Duct)	0 Pa
DUCT-63 (Duct)	0 Pa
DUCT-64 (Duct)	0 Pa
DUCT-65 (Duct)	0 Pa
DUCT-66 (Duct)	0 Pa
F-3 (Dirty Filter)	100 Pa
HC-3 (Coil)	62 Pa
OD-3 (Damper)	25 Pa
SF-3.2 (Future filter, humid)	286 Pa
SF-3.2 (Plenum)	5 Pa
SF-3.2 (Fan inlet)	12 Pa
SF-3.2 (Fan outlet)	12 Pa
External static pressure summary	
DUCT-101 (Duct)	0 Pa
DUCT-109 (Duct)	0 Pa
DUCT-110 (Duct)	0 Pa
DUCT-61 (Duct)	0 Pa
DUCT-62 (Duct)	0 Pa
DUCT-98 (Duct)	0 Pa
L-1 (Louver)	25 Pa
L-1 (Backdraft Damper)	0 Pa
L-1 (Plenum)	5 Pa
SF-3.2 (Fire and/or smoke damper)	75 Pa
SF-3.2 (Extra)	65 Pa
SPC-3 (Supply Diffuser)	25 Pa
SPC-3 (Supply Balancing Damper)	25 Pa
TBG-3 (Box)	75 Pa
TBG-3 (Coil)	87 Pa

Scenario 3	Economizer
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Airflow (System, Portion, Component, Unit)	39172 l/s, **50%**, 19586 l/s, 19586 l/s
Component total static pressure	455 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Future filter, humid	**286.2 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**64.7 Pa**
Total static pressure	1070 Pa
Internal static pressure, External static pressure	689 Pa, 381 Pa
Internal static pressure summary	
CC-3 (Coil)	187 Pa
DUCT-56 (Duct)	0 Pa
DUCT-57 (Duct)	0 Pa
DUCT-59 (Duct)	0 Pa
DUCT-63 (Duct)	0 Pa
DUCT-64 (Duct)	0 Pa
DUCT-65 (Duct)	0 Pa
DUCT-66 (Duct)	0 Pa
F-3 (Dirty Filter)	100 Pa
HC-3 (Coil)	62 Pa
OD-3 (Damper)	25 Pa
SF-3.2 (Future filter, humid)	286 Pa
SF-3.2 (Plenum)	5 Pa
SF-3.2 (Fan inlet)	12 Pa
SF-3.2 (Fan outlet)	12 Pa
External static pressure summary	
DUCT-101 (Duct)	0 Pa
DUCT-109 (Duct)	0 Pa
DUCT-110 (Duct)	0 Pa
DUCT-61 (Duct)	0 Pa
DUCT-62 (Duct)	0 Pa
DUCT-98 (Duct)	0 Pa
L-1 (Louver)	25 Pa

L-1 (Backdraft Damper)	0 Pa
L-1 (Plenum)	5 Pa
SF-3.2 (Fire and/or smoke damper)	75 Pa
SF-3.2 (Extra)	65 Pa
SPC-3 (Supply Diffuser)	25 Pa
SPC-3 (Supply Balancing Damper)	25 Pa
TBG-3 (Box)	75 Pa
TBG-3 (Coil)	87 Pa

SF-4.1

Air type, Type, Location, Classification	**Supply Air**, **QSL (Mixed Flow Centrifugal, Belt)**, AH-4, **New Equipment**
Quantity	**1**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Clearance, Maximum width, Maximum height	**304.8 mm**, **2374.9 mm**, **2692.4 mm**
Motor size, Brake horsepower (Estimated, Actual)	**0 kW**, 0 kW, **0 kW**
Motor size selection method	**Non-Overloading**
Motor speed	1750 rpm
Voltage/phase (Motor)	120v/1ph
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Static efficiency	0%
Wheel diameter	0 mm
Fan speed	0 rpm
Class	I
Inlet vanes	**No**
Outlet diffuser	**No**
Sound	
Maximum inlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual inlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB
Maximum outlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual outlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB

Scenario 1	Winter Heating
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	17.8°C, 9.2°C, 29.5%, 27.4 kJ/kg
Apply fan heat to air	**No**, 0°C
Apply motor heat to air	**No**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	17.8°C, 9.2°C, 29.5%, 27.4 kJ/kg
Airflow (System, Portion, Component, Unit)	23503 l/s, **50%**, 11752 l/s, 11752 l/s
Component total static pressure	455 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Future filter, humid	**286.2 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**64.7 Pa**
Total static pressure	1070 Pa
Internal static pressure, External static pressure	689 Pa, 381 Pa
Internal static pressure summary	
CC-4 (Coil)	187 Pa
DUCT-25 (Duct)	0 Pa
DUCT-45 (Duct)	0 Pa
DUCT-46 (Duct)	0 Pa
DUCT-47 (Duct)	0 Pa
DUCT-49 (Duct)	0 Pa
DUCT-52 (Duct)	0 Pa
DUCT-54 (Duct)	0 Pa
F-4 (Dirty Filter)	100 Pa
HC-4 (Coil)	62 Pa

OD-4 (Damper)	25 Pa
SF-4.1 (Future filter, humid)	286 Pa
SF-4.1 (Plenum)	5 Pa
SF-4.1 (Fan inlet)	12 Pa
SF-4.1 (Fan outlet)	12 Pa
External static pressure summary	
DUCT-101 (Duct)	0 Pa
DUCT-109 (Duct)	0 Pa
DUCT-110 (Duct)	0 Pa
DUCT-26 (Duct)	0 Pa
DUCT-50 (Duct)	0 Pa
DUCT-96 (Duct)	0 Pa
DUCT-99 (Duct)	0 Pa
L-1 (Louver)	25 Pa
L-1 (Backdraft Damper)	0 Pa
L-1 (Plenum)	5 Pa
SF-4.1 (Fire and/or smoke damper)	75 Pa
SF-4.1 (Extra)	65 Pa
SPC-4 (Supply Diffuser)	25 Pa
SPC-4 (Supply Balancing Damper)	25 Pa
TBG-4 (Box)	75 Pa
TBG-4 (Coil)	87 Pa

Scenario 2	Summer Cooling
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	26.6°C, 16.7°C, 36%, 46.6 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	26.6°C, 16.7°C, 36%, 46.6 kJ/kg
Airflow (System, Portion, Component, Unit)	39172 l/s, **50%**, 19586 l/s, 19586 l/s
Component total static pressure	455 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Future filter, humid	**286.2 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**64.7 Pa**
Total static pressure	1070 Pa
Internal static pressure, External static pressure	689 Pa, 381 Pa
Internal static pressure summary	
CC-4 (Coil)	187 Pa
DUCT-25 (Duct)	0 Pa
DUCT-45 (Duct)	0 Pa
DUCT-46 (Duct)	0 Pa
DUCT-47 (Duct)	0 Pa
DUCT-49 (Duct)	0 Pa
DUCT-52 (Duct)	0 Pa
DUCT-54 (Duct)	0 Pa
F-4 (Dirty Filter)	100 Pa
HC-4 (Coil)	62 Pa
OD-4 (Damper)	25 Pa
SF-4.1 (Future filter, humid)	286 Pa
SF-4.1 (Plenum)	5 Pa
SF-4.1 (Fan inlet)	12 Pa
SF-4.1 (Fan outlet)	12 Pa
External static pressure summary	
DUCT-101 (Duct)	0 Pa
DUCT-109 (Duct)	0 Pa
DUCT-110 (Duct)	0 Pa
DUCT-26 (Duct)	0 Pa
DUCT-50 (Duct)	0 Pa
DUCT-96 (Duct)	0 Pa
DUCT-99 (Duct)	0 Pa
L-1 (Louver)	25 Pa
L-1 (Backdraft Damper)	0 Pa
L-1 (Plenum)	5 Pa
SF-4.1 (Fire and/or smoke damper)	75 Pa
SF-4.1 (Extra)	65 Pa
SPC-4 (Supply Diffuser)	25 Pa
SPC-4 (Supply Balancing Damper)	25 Pa
TBG-4 (Box)	75 Pa

TBG-4 (Coil)	87 Pa

Scenario 3	Economizer
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Airflow (System, Portion, Component, Unit)	39172 l/s, **50%**, 19586 l/s, 19586 l/s
Component total static pressure	455 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Future filter, humid	**286.2 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**64.7 Pa**
Total static pressure	1070 Pa
Internal static pressure, External static pressure	689 Pa, 381 Pa
Internal static pressure summary	
CC-4 (Coil)	187 Pa
DUCT-25 (Duct)	0 Pa
DUCT-45 (Duct)	0 Pa
DUCT-46 (Duct)	0 Pa
DUCT-47 (Duct)	0 Pa
DUCT-49 (Duct)	0 Pa
DUCT-52 (Duct)	0 Pa
DUCT-54 (Duct)	0 Pa
F-4 (Dirty Filter)	100 Pa
HC-4 (Coil)	62 Pa
OD-4 (Damper)	25 Pa
SF-4.1 (Future filter, humid)	286 Pa
SF-4.1 (Plenum)	5 Pa
SF-4.1 (Fan inlet)	12 Pa
SF-4.1 (Fan outlet)	12 Pa
External static pressure summary	
DUCT-101 (Duct)	0 Pa
DUCT-109 (Duct)	0 Pa
DUCT-110 (Duct)	0 Pa
DUCT-26 (Duct)	0 Pa
DUCT-50 (Duct)	0 Pa
DUCT-96 (Duct)	0 Pa
DUCT-99 (Duct)	0 Pa
L-1 (Louver)	25 Pa
L-1 (Backdraft Damper)	0 Pa
L-1 (Plenum)	5 Pa
SF-4.1 (Fire and/or smoke damper)	75 Pa
SF-4.1 (Extra)	65 Pa
SPC-4 (Supply Diffuser)	25 Pa
SPC-4 (Supply Balancing Damper)	25 Pa
TBG-4 (Box)	75 Pa
TBG-4 (Coil)	87 Pa

SF-4.2	
Air type, Type, Location, Classification	**Supply Air**, **QSL (Mixed Flow Centrifugal, Belt)**, AH-4, **New Equipment**
Quantity	**1**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Clearance, Maximum width, Maximum height	**304.8 mm**, **2374.9 mm**, **2692.4 mm**
Motor size, Brake horsepower (Estimated, Actual)	**0 kW**, 0 kW, **0 kW**
Motor size selection method	**Non-Overloading**
Motor speed	1750 rpm
Voltage/phase (Motor)	120v/1ph
Electrical starter by	**Electrical**

Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Static efficiency	0%
Wheel diameter	0 mm
Fan speed	0 rpm
Class	I
Inlet vanes	**No**
Outlet diffuser	**No**
Sound	
Maximum inlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual inlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB
Maximum outlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual outlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB

Scenario 1	Winter Heating
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	17.8°C, 9.2°C, 29.5%, 27.4 kJ/kg
Apply fan heat to air	**No**, 0°C
Apply motor heat to air	**No**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	17.8°C, 9.2°C, 29.5%, 27.4 kJ/kg
Airflow (System, Portion, Component, Unit)	23503 l/s, **50%**, 11752 l/s, 11752 l/s
Component total static pressure	455 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Future filter, humid	**286.2 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**64.7 Pa**
Total static pressure	1070 Pa
Internal static pressure, External static pressure	689 Pa, 381 Pa
Internal static pressure summary	
CC-4 (Coil)	187 Pa
DUCT-25 (Duct)	0 Pa
DUCT-46 (Duct)	0 Pa
DUCT-47 (Duct)	0 Pa
DUCT-49 (Duct)	0 Pa
DUCT-51 (Duct)	0 Pa
DUCT-53 (Duct)	0 Pa
DUCT-54 (Duct)	0 Pa
F-4 (Dirty Filter)	100 Pa
HC-4 (Coil)	62 Pa
OD-4 (Damper)	25 Pa
SF-4.2 (Future filter, humid)	286 Pa
SF-4.2 (Plenum)	5 Pa
SF-4.2 (Fan inlet)	12 Pa
SF-4.2 (Fan outlet)	12 Pa
External static pressure summary	
DUCT-101 (Duct)	0 Pa
DUCT-109 (Duct)	0 Pa
DUCT-110 (Duct)	0 Pa
DUCT-26 (Duct)	0 Pa
DUCT-50 (Duct)	0 Pa
DUCT-96 (Duct)	0 Pa
DUCT-99 (Duct)	0 Pa
L-1 (Louver)	25 Pa
L-1 (Backdraft Damper)	0 Pa
L-1 (Plenum)	5 Pa
SF-4.2 (Fire and/or smoke damper)	75 Pa
SF-4.2 (Extra)	65 Pa
SPC-4 (Supply Diffuser)	25 Pa
SPC-4 (Supply Balancing Damper)	25 Pa
TBG-4 (Box)	75 Pa
TBG-4 (Coil)	87 Pa

Scenario 2	Summer Cooling
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	26.6°C, 16.7°C, 36%, 46.6 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C

Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	26.6°C, 16.7°C, 36%, 46.6 kJ/kg
Airflow (System, Portion, Component, Unit)	39172 l/s, **50%**, 19586 l/s, 19586 l/s
Component total static pressure	455 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Future filter, humid	**286.2 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**64.7 Pa**
Total static pressure	1070 Pa
Internal static pressure, External static pressure	689 Pa, 381 Pa
Internal static pressure summary	
CC-4 (Coil)	187 Pa
DUCT-25 (Duct)	0 Pa
DUCT-46 (Duct)	0 Pa
DUCT-47 (Duct)	0 Pa
DUCT-49 (Duct)	0 Pa
DUCT-51 (Duct)	0 Pa
DUCT-53 (Duct)	0 Pa
DUCT-54 (Duct)	0 Pa
F-4 (Dirty Filter)	100 Pa
HC-4 (Coil)	62 Pa
OD-4 (Damper)	25 Pa
SF-4.2 (Future filter, humid)	286 Pa
SF-4.2 (Plenum)	5 Pa
SF-4.2 (Fan inlet)	12 Pa
SF-4.2 (Fan outlet)	12 Pa
External static pressure summary	
DUCT-101 (Duct)	0 Pa
DUCT-109 (Duct)	0 Pa
DUCT-110 (Duct)	0 Pa
DUCT-26 (Duct)	0 Pa
DUCT-50 (Duct)	0 Pa
DUCT-96 (Duct)	0 Pa
DUCT-99 (Duct)	0 Pa
L-1 (Louver)	25 Pa
L-1 (Backdraft Damper)	0 Pa
L-1 (Plenum)	5 Pa
SF-4.2 (Fire and/or smoke damper)	75 Pa
SF-4.2 (Extra)	65 Pa
SPC-4 (Supply Diffuser)	25 Pa
SPC-4 (Supply Balancing Damper)	25 Pa
TBG-4 (Box)	75 Pa
TBG-4 (Coil)	87 Pa

Scenario 3	Economizer
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Airflow (System, Portion, Component, Unit)	39172 l/s, **50%**, 19586 l/s, 19586 l/s
Component total static pressure	455 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Future filter, humid	**286.2 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**64.7 Pa**
Total static pressure	1070 Pa
Internal static pressure, External static pressure	689 Pa, 381 Pa
Internal static pressure summary	
CC-4 (Coil)	187 Pa
DUCT-25 (Duct)	0 Pa
DUCT-46 (Duct)	0 Pa
DUCT-47 (Duct)	0 Pa
DUCT-49 (Duct)	0 Pa
DUCT-51 (Duct)	0 Pa

DUCT-53 (Duct)	0 Pa
DUCT-54 (Duct)	0 Pa
F-4 (Dirty Filter)	100 Pa
HC-4 (Coil)	62 Pa
OD-4 (Damper)	25 Pa
SF-4.2 (Future filter, humid)	286 Pa
SF-4.2 (Plenum)	5 Pa
SF-4.2 (Fan inlet)	12 Pa
SF-4.2 (Fan outlet)	12 Pa
External static pressure summary	
DUCT-101 (Duct)	0 Pa
DUCT-109 (Duct)	0 Pa
DUCT-110 (Duct)	0 Pa
DUCT-26 (Duct)	0 Pa
DUCT-50 (Duct)	0 Pa
DUCT-96 (Duct)	0 Pa
DUCT-99 (Duct)	0 Pa
L-1 (Louver)	25 Pa
L-1 (Backdraft Damper)	0 Pa
L-1 (Plenum)	5 Pa
SF-4.2 (Fire and/or smoke damper)	75 Pa
SF-4.2 (Extra)	65 Pa
SPC-4 (Supply Diffuser)	25 Pa
SPC-4 (Supply Balancing Damper)	25 Pa
TBG-4 (Box)	75 Pa
TBG-4 (Coil)	87 Pa

SF-5.1

Air type, Type, Location, Classification	**Supply Air**, **QSL (Mixed Flow Centrifugal, Belt)**, AH-5, **New Equipment**
Quantity	**1**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Clearance, Maximum width, Maximum height	**304.8 mm**, **1866.9 mm**, **2692.4 mm**
Motor size, Brake horsepower (Estimated, Actual)	**0 kW**, 0 kW, **0 kW**
Motor size selection method	**Non-Overloading**
Motor speed	1750 rpm
Voltage/phase (Motor)	120v/1ph
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Static efficiency	0%
Wheel diameter	0 mm
Fan speed	0 rpm
Class	I
Inlet vanes	**No**
Outlet diffuser	**No**
Sound	
Maximum inlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual inlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB
Maximum outlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual outlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB

Scenario 1	Winter Heating
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	15.1°C, 7.9°C, 35.2%, 24.5 kJ/kg
Apply fan heat to air	**No**, 0°C
Apply motor heat to air	**No**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	15.1°C, 7.9°C, 35.2%, 24.5 kJ/kg
Airflow (System, Portion, Component, Unit)	18406 l/s, **50%**, 9203 l/s, 9203 l/s
Component total static pressure	199 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**

Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**94.6 Pa**
Total static pressure	1100 Pa
Internal static pressure, External static pressure	689 Pa, 411 Pa
Internal static pressure summary	
CC-5 (Coil)	187 Pa
DUCT-27 (Duct)	0 Pa
DUCT-28 (Duct)	0 Pa
DUCT-29 (Duct)	0 Pa
DUCT-31 (Duct)	0 Pa
DUCT-33 (Duct)	0 Pa
DUCT-34 (Duct)	0 Pa
DUCT-35 (Duct)	0 Pa
DUCT-36 (Duct)	0 Pa
DUCT-44 (Duct)	0 Pa
F-5.1 (Dirty Filter)	100 Pa
F-5.2 (Dirty Filter)	249 Pa
HC-5.1 (Coil)	62 Pa
HC-5.2 (Coil)	37 Pa
OD-5 (Damper)	25 Pa
SF-5.1 (Plenum)	5 Pa
SF-5.1 (Fan inlet)	12 Pa
SF-5.1 (Fan outlet)	12 Pa
External static pressure summary	
DUCT-101 (Duct)	0 Pa
DUCT-109 (Duct)	0 Pa
DUCT-110 (Duct)	0 Pa
DUCT-37 (Duct)	0 Pa
DUCT-38 (Duct)	0 Pa
DUCT-97 (Duct)	0 Pa
DUCT-99 (Duct)	0 Pa
L-1 (Louver)	25 Pa
L-1 (Backdraft Damper)	0 Pa
L-1 (Plenum)	5 Pa
SF-5.1 (Fire and/or smoke damper)	75 Pa
SF-5.1 (Extra)	95 Pa
SPC-5 (Supply Diffuser)	25 Pa
SPC-5 (Supply Balancing Damper)	25 Pa
TBG-5 (Box)	75 Pa
TBG-5 (Coil)	87 Pa

Scenario 2	Summer Cooling
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	26.7°C, 16.9°C, 36.7%, 47.2 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	26.7°C, 16.9°C, 36.7%, 47.2 kJ/kg
Airflow (System, Portion, Component, Unit)	30677 l/s, **50%**, 15338 l/s, 15338 l/s
Component total static pressure	199 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**94.6 Pa**
Total static pressure	1100 Pa
Internal static pressure, External static pressure	689 Pa, 411 Pa
Internal static pressure summary	
CC-5 (Coil)	187 Pa
DUCT-27 (Duct)	0 Pa
DUCT-28 (Duct)	0 Pa
DUCT-29 (Duct)	0 Pa
DUCT-31 (Duct)	0 Pa
DUCT-33 (Duct)	0 Pa
DUCT-34 (Duct)	0 Pa
DUCT-35 (Duct)	0 Pa
DUCT-36 (Duct)	0 Pa
DUCT-44 (Duct)	0 Pa

F-5.1 (Dirty Filter)	100 Pa
F-5.2 (Dirty Filter)	249 Pa
HC-5.1 (Coil)	62 Pa
HC-5.2 (Coil)	37 Pa
OD-5 (Damper)	25 Pa
SF-5.1 (Plenum)	5 Pa
SF-5.1 (Fan inlet)	12 Pa
SF-5.1 (Fan outlet)	12 Pa
External static pressure summary	
DUCT-101 (Duct)	0 Pa
DUCT-109 (Duct)	0 Pa
DUCT-110 (Duct)	0 Pa
DUCT-37 (Duct)	0 Pa
DUCT-38 (Duct)	0 Pa
DUCT-97 (Duct)	0 Pa
DUCT-99 (Duct)	0 Pa
L-1 (Louver)	25 Pa
L-1 (Backdraft Damper)	0 Pa
L-1 (Plenum)	5 Pa
SF-5.1 (Fire and/or smoke damper)	75 Pa
SF-5.1 (Extra)	95 Pa
SPC-5 (Supply Diffuser)	25 Pa
SPC-5 (Supply Balancing Damper)	25 Pa
TBG-5 (Box)	75 Pa
TBG-5 (Coil)	87 Pa

Scenario 3	Economizer
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Airflow (System, Portion, Component, Unit)	30677 l/s, **50%**, 15338 l/s, 15338 l/s
Component total static pressure	199 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**94.6 Pa**
Total static pressure	1100 Pa
Internal static pressure, External static pressure	689 Pa, 411 Pa
Internal static pressure summary	
CC-5 (Coil)	187 Pa
DUCT-27 (Duct)	0 Pa
DUCT-28 (Duct)	0 Pa
DUCT-29 (Duct)	0 Pa
DUCT-31 (Duct)	0 Pa
DUCT-33 (Duct)	0 Pa
DUCT-34 (Duct)	0 Pa
DUCT-35 (Duct)	0 Pa
DUCT-36 (Duct)	0 Pa
DUCT-44 (Duct)	0 Pa
F-5.1 (Dirty Filter)	100 Pa
F-5.2 (Dirty Filter)	249 Pa
HC-5.1 (Coil)	62 Pa
HC-5.2 (Coil)	37 Pa
OD-5 (Damper)	25 Pa
SF-5.1 (Plenum)	5 Pa
SF-5.1 (Fan inlet)	12 Pa
SF-5.1 (Fan outlet)	12 Pa
External static pressure summary	
DUCT-101 (Duct)	0 Pa
DUCT-109 (Duct)	0 Pa
DUCT-110 (Duct)	0 Pa
DUCT-37 (Duct)	0 Pa
DUCT-38 (Duct)	0 Pa
DUCT-97 (Duct)	0 Pa
DUCT-99 (Duct)	0 Pa
L-1 (Louver)	25 Pa
L-1 (Backdraft Damper)	0 Pa

L-1 (Plenum)	5 Pa
SF-5.1 (Fire and/or smoke damper)	75 Pa
SF-5.1 (Extra)	95 Pa
SPC-5 (Supply Diffuser)	25 Pa
SPC-5 (Supply Balancing Damper)	25 Pa
TBG-5 (Box)	75 Pa
TBG-5 (Coil)	87 Pa

SF-5.2

Air type, Type, Location, Classification	**Supply Air**, **QSL (Mixed Flow Centrifugal, Belt)**, AH-5, **New Equipment**
Quantity	**1**
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Clearance, Maximum width, Maximum height	**304.8 mm**, **1866.9 mm**, **2692.4 mm**
Motor size, Brake horsepower (Estimated, Actual)	**0 kW**, 0 kW, **0 kW**
Motor size selection method	**Non-Overloading**
Motor speed	1750 rpm
Voltage/phase (Motor)	120v/1ph
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Static efficiency	0%
Wheel diameter	0 mm
Fan speed	0 rpm
Class	I
Inlet vanes	**No**
Outlet diffuser	**No**
Sound	
Maximum inlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual inlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB
Maximum outlet	**110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**, **110 dB**
Actual outlet	0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB, 0 dB

Scenario 1	Winter Heating
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	15.1°C, 7.9°C, 35.2%, 24.5 kJ/kg
Apply fan heat to air	**No**, 0°C
Apply motor heat to air	**No**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	15.1°C, 7.9°C, 35.2%, 24.5 kJ/kg
Airflow (System, Portion, Component, Unit)	18406 l/s, **50%**, 9203 l/s, 9203 l/s
Component total static pressure	199 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**94.6 Pa**
Total static pressure	1100 Pa
Internal static pressure, External static pressure	689 Pa, 411 Pa
Internal static pressure summary	
CC-5 (Coil)	187 Pa
DUCT-27 (Duct)	0 Pa
DUCT-28 (Duct)	0 Pa
DUCT-29 (Duct)	0 Pa
DUCT-30 (Duct)	0 Pa
DUCT-32 (Duct)	0 Pa
DUCT-34 (Duct)	0 Pa
DUCT-35 (Duct)	0 Pa
DUCT-36 (Duct)	0 Pa
DUCT-44 (Duct)	0 Pa
F-5.1 (Dirty Filter)	100 Pa

F-5.2 (Dirty Filter)	249 Pa
HC-5.1 (Coil)	62 Pa
HC-5.2 (Coil)	37 Pa
OD-5 (Damper)	25 Pa
SF-5.2 (Plenum)	5 Pa
SF-5.2 (Fan inlet)	12 Pa
SF-5.2 (Fan outlet)	12 Pa
External static pressure summary	
DUCT-101 (Duct)	0 Pa
DUCT-109 (Duct)	0 Pa
DUCT-110 (Duct)	0 Pa
DUCT-37 (Duct)	0 Pa
DUCT-38 (Duct)	0 Pa
DUCT-97 (Duct)	0 Pa
DUCT-99 (Duct)	0 Pa
L-1 (Louver)	25 Pa
L-1 (Backdraft Damper)	0 Pa
L-1 (Plenum)	5 Pa
SF-5.2 (Fire and/or smoke damper)	75 Pa
SF-5.2 (Extra)	95 Pa
SPC-5 (Supply Diffuser)	25 Pa
SPC-5 (Supply Balancing Damper)	25 Pa
TBG-5 (Box)	75 Pa
TBG-5 (Coil)	87 Pa

Scenario 2	Summer Cooling
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	26.7°C, 16.9°C, 36.7%, 47.2 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	26.7°C, 16.9°C, 36.7%, 47.2 kJ/kg
Airflow (System, Portion, Component, Unit)	30677 l/s, **50%**, 15338 l/s, 15338 l/s
Component total static pressure	199 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**94.6 Pa**
Total static pressure	1100 Pa
Internal static pressure, External static pressure	689 Pa, 411 Pa
Internal static pressure summary	
CC-5 (Coil)	187 Pa
DUCT-27 (Duct)	0 Pa
DUCT-28 (Duct)	0 Pa
DUCT-29 (Duct)	0 Pa
DUCT-30 (Duct)	0 Pa
DUCT-32 (Duct)	0 Pa
DUCT-34 (Duct)	0 Pa
DUCT-35 (Duct)	0 Pa
DUCT-36 (Duct)	0 Pa
DUCT-44 (Duct)	0 Pa
F-5.1 (Dirty Filter)	100 Pa
F-5.2 (Dirty Filter)	249 Pa
HC-5.1 (Coil)	62 Pa
HC-5.2 (Coil)	37 Pa
OD-5 (Damper)	25 Pa
SF-5.2 (Plenum)	5 Pa
SF-5.2 (Fan inlet)	12 Pa
SF-5.2 (Fan outlet)	12 Pa
External static pressure summary	
DUCT-101 (Duct)	0 Pa
DUCT-109 (Duct)	0 Pa
DUCT-110 (Duct)	0 Pa
DUCT-37 (Duct)	0 Pa
DUCT-38 (Duct)	0 Pa
DUCT-97 (Duct)	0 Pa
DUCT-99 (Duct)	0 Pa
L-1 (Louver)	25 Pa
L-1 (Backdraft Damper)	0 Pa
L-1 (Plenum)	5 Pa

SF-5.2 (Fire and/or smoke damper)	75 Pa
SF-5.2 (Extra)	95 Pa
SPC-5 (Supply Diffuser)	25 Pa
SPC-5 (Supply Balancing Damper)	25 Pa
TBG-5 (Box)	75 Pa
TBG-5 (Coil)	87 Pa

Scenario 3	Economizer
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Apply fan heat to air	**Yes**, 0°C
Apply motor heat to air	**Yes**, 0°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Airflow (System, Portion, Component, Unit)	30677 l/s, **50%**, 15338 l/s, 15338 l/s
Component total static pressure	199 Pa
Internal static pressure	
Plenum	**5 Pa**
Fan inlet	**12.4 Pa**
Fan outlet	**12.4 Pa**
Other	**0 Pa**
External static pressure	
Fire and/or smoke damper	**74.7 Pa**
Extra	**94.6 Pa**
Total static pressure	1100 Pa
Internal static pressure, External static pressure	689 Pa, 411 Pa
Internal static pressure summary	
CC-5 (Coil)	187 Pa
DUCT-27 (Duct)	0 Pa
DUCT-28 (Duct)	0 Pa
DUCT-29 (Duct)	0 Pa
DUCT-30 (Duct)	0 Pa
DUCT-32 (Duct)	0 Pa
DUCT-34 (Duct)	0 Pa
DUCT-35 (Duct)	0 Pa
DUCT-36 (Duct)	0 Pa
DUCT-44 (Duct)	0 Pa
F-5.1 (Dirty Filter)	100 Pa
F-5.2 (Dirty Filter)	249 Pa
HC-5.1 (Coil)	62 Pa
HC-5.2 (Coil)	37 Pa
OD-5 (Damper)	25 Pa
SF-5.2 (Plenum)	5 Pa
SF-5.2 (Fan inlet)	12 Pa
SF-5.2 (Fan outlet)	12 Pa
External static pressure summary	
DUCT-101 (Duct)	0 Pa
DUCT-109 (Duct)	0 Pa
DUCT-110 (Duct)	0 Pa
DUCT-37 (Duct)	0 Pa
DUCT-38 (Duct)	0 Pa
DUCT-97 (Duct)	0 Pa
DUCT-99 (Duct)	0 Pa
L-1 (Louver)	25 Pa
L-1 (Backdraft Damper)	0 Pa
L-1 (Plenum)	5 Pa
SF-5.2 (Fire and/or smoke damper)	75 Pa
SF-5.2 (Extra)	95 Pa
SPC-5 (Supply Diffuser)	25 Pa
SPC-5 (Supply Balancing Damper)	25 Pa
TBG-5 (Box)	75 Pa
TBG-5 (Coil)	87 Pa

Filter

F-1.1

Filtration type, Type, Arrangement	**MERV 8 (Non-Degrading)**, **Cartridge**, **Flat**
Location, Classification	AH-1, **New Equipment**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Bank width, Bank height, Weight	**304.8 mm**, 4470 mm, **2997.2 mm**, **0 kg**
Maximum velocity	**1.937 m/s**

Thickness	**50.8 mm**
Number of 24" x 24" filters (Wide, High, Total)	7, 4, 28
Number of half filters (Side, Top, Total)	0, 7, 7

Scenario 1	Winter Heating
Airflow	15574 l/s
Component total static pressure	100 Pa
Dirty filter	**99.5 Pa**
Other	**0 Pa**
Static pressure (Clean filter)	**49.8 Pa**

Scenario 2	Summer Cooling
Airflow	25957 l/s
Component total static pressure	100 Pa
Dirty filter	**99.5 Pa**
Other	**0 Pa**
Static pressure (Clean filter)	**49.8 Pa**

Scenario 3	Economizer
Airflow	25957 l/s
Component total static pressure	100 Pa
Dirty filter	**99.5 Pa**
Other	**0 Pa**
Static pressure (Clean filter)	**49.8 Pa**

F-1.2

Filtration type, Type, Arrangement	**MERV 14 (Non-Degrading)**, **Bag**, **Flat**
Location, Classification	AH-1, **New Equipment**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Bank width, Bank height, Weight	**304.8 mm**, 4470 mm, **2997.2 mm**, **0 kg**
Maximum velocity	**1.937 m/s**
Thickness	**50.8 mm**
Number of 24" x 24" filters (Wide, High, Total)	7, 4, 28
Number of half filters (Side, Top, Total)	0, 7, 7

Scenario 1	Winter Heating
Airflow	15574 l/s
Component total static pressure	249 Pa
Dirty filter	**248.8 Pa**
Other	**0 Pa**
Static pressure (Clean filter)	**174.2 Pa**

Scenario 2	Summer Cooling
Airflow	25957 l/s
Component total static pressure	249 Pa
Dirty filter	**248.8 Pa**
Other	**0 Pa**
Static pressure (Clean filter)	**174.2 Pa**

Scenario 3	Economizer
Airflow	25957 l/s
Component total static pressure	249 Pa
Dirty filter	**248.8 Pa**
Other	**0 Pa**
Static pressure (Clean filter)	**174.2 Pa**

F-2.1

Filtration type, Type, Arrangement	**MERV 8 (Non-Degrading)**, **Cartridge**, **Flat**
Location, Classification	AH-2, **New Equipment**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Bank width, Bank height, Weight	**304.8 mm**, 4470 mm, **2997.2 mm**, **0 kg**

Maximum velocity	**1.937 m/s**
Thickness	**50.8 mm**
Number of 24" x 24" filters (Wide, High, Total)	7, 4, 28
Number of half filters (Side, Top, Total)	0, 7, 7

Scenario 1	Winter Heating
Airflow	15574 l/s
Component total static pressure	100 Pa
Dirty filter	**99.5 Pa**
Other	**0 Pa**
Static pressure (Clean filter)	**49.8 Pa**

Scenario 2	Summer Cooling
Airflow	25957 l/s
Component total static pressure	100 Pa
Dirty filter	**99.5 Pa**
Other	**0 Pa**
Static pressure (Clean filter)	**49.8 Pa**

Scenario 3	Economizer
Airflow	25957 l/s
Component total static pressure	100 Pa
Dirty filter	**99.5 Pa**
Other	**0 Pa**
Static pressure (Clean filter)	**49.8 Pa**

F-2.2

Filtration type, Type, Arrangement	**MERV 14 (Non-Degrading)**, **Bag**, **Flat**
Location, Classification	AH-2, **New Equipment**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Bank width, Bank height, Weight	**304.8 mm**, 4470 mm, **2997.2 mm**, **0 kg**
Maximum velocity	**1.937 m/s**
Thickness	**50.8 mm**
Number of 24" x 24" filters (Wide, High, Total)	7, 4, 28
Number of half filters (Side, Top, Total)	0, 7, 7

Scenario 1	Winter Heating
Airflow	15574 l/s
Component total static pressure	249 Pa
Dirty filter	**248.8 Pa**
Other	**0 Pa**
Static pressure (Clean filter)	**174.2 Pa**

Scenario 2	Summer Cooling
Airflow	25957 l/s
Component total static pressure	249 Pa
Dirty filter	**248.8 Pa**
Other	**0 Pa**
Static pressure (Clean filter)	**174.2 Pa**

Scenario 3	Economizer
Airflow	25957 l/s
Component total static pressure	249 Pa
Dirty filter	**248.8 Pa**
Other	**0 Pa**
Static pressure (Clean filter)	**174.2 Pa**

F-3

Filtration type, Type, Arrangement	**MERV 8 (Non-Degrading)**, **Cartridge**, **Flat**
Location, Classification	AH-3, **New Equipment**
Manufacturer, Model	**(Blank)**, **(Blank)**

Length, Bank width, Bank height, Weight	**304.8 mm**, 5969 mm, **2997.2 mm**, **0 kg**
Maximum velocity	**2.19 m/s**
Thickness	**50.8 mm**
Number of 24" x 24" filters (Wide, High, Total)	9, 4, 36
Number of half filters (Side, Top, Total)	4, 9, 13

Scenario 1	Winter Heating
Airflow	23503 l/s
Component total static pressure	100 Pa
Dirty filter	**99.5 Pa**
Other	**0 Pa**
Static pressure (Clean filter)	**49.8 Pa**

Scenario 2	Summer Cooling
Airflow	39172 l/s
Component total static pressure	100 Pa
Dirty filter	**99.5 Pa**
Other	**0 Pa**
Static pressure (Clean filter)	**49.8 Pa**

Scenario 3	Economizer
Airflow	39172 l/s
Component total static pressure	100 Pa
Dirty filter	**99.5 Pa**
Other	**0 Pa**
Static pressure (Clean filter)	**49.8 Pa**

F-4

Filtration type, Type, Arrangement	**MERV 8 (Non-Degrading)**, **Cartridge**, **Flat**
Location, Classification	AH-4, **New Equipment**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Bank width, Bank height, Weight	**304.8 mm**, 5969 mm, **2997.2 mm**, **0 kg**
Maximum velocity	**2.19 m/s**
Thickness	**50.8 mm**
Number of 24" x 24" filters (Wide, High, Total)	9, 4, 36
Number of half filters (Side, Top, Total)	4, 9, 13

Scenario 1	Winter Heating
Airflow	23503 l/s
Component total static pressure	100 Pa
Dirty filter	**99.5 Pa**
Other	**0 Pa**
Static pressure (Clean filter)	**49.8 Pa**

Scenario 2	Summer Cooling
Airflow	39172 l/s
Component total static pressure	100 Pa
Dirty filter	**99.5 Pa**
Other	**0 Pa**
Static pressure (Clean filter)	**49.8 Pa**

Scenario 3	Economizer
Airflow	39172 l/s
Component total static pressure	100 Pa
Dirty filter	**99.5 Pa**
Other	**0 Pa**
Static pressure (Clean filter)	**49.8 Pa**

F-5.1

Filtration type, Type, Arrangement	**MERV 8 (Non-Degrading)**, **Cartridge**, **Flat**
Location, Classification	AH-5, **New Equipment**

Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Bank width, Bank height, Weight	**304.8 mm**, 4953 mm, **2997.2 mm**, **0 kg**
Maximum velocity	**2.066 m/s**
Thickness	**50.8 mm**
Number of 24" x 24" filters (Wide, High, Total)	8, 4, 32
Number of half filters (Side, Top, Total)	0, 8, 8

Scenario 1	Winter Heating
Airflow	18406 l/s
Component total static pressure	100 Pa
Dirty filter	**99.5 Pa**
Other	**0 Pa**
Static pressure (Clean filter)	**49.8 Pa**

Scenario 2	Summer Cooling
Airflow	30677 l/s
Component total static pressure	100 Pa
Dirty filter	**99.5 Pa**
Other	**0 Pa**
Static pressure (Clean filter)	**49.8 Pa**

Scenario 3	Economizer
Airflow	30677 l/s
Component total static pressure	100 Pa
Dirty filter	**99.5 Pa**
Other	**0 Pa**
Static pressure (Clean filter)	**49.8 Pa**

F-5.2

Filtration type, Type, Arrangement	**MERV 14 (Non-Degrading)**, **Bag**, **Flat**
Location, Classification	AH-5, **New Equipment**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Bank width, Bank height, Weight	**304.8 mm**, 4953 mm, **2997.2 mm**, **0 kg**
Maximum velocity	**2.066 m/s**
Thickness	**50.8 mm**
Number of 24" x 24" filters (Wide, High, Total)	8, 4, 32
Number of half filters (Side, Top, Total)	0, 8, 8

Scenario 1	Winter Heating
Airflow	18406 l/s
Component total static pressure	249 Pa
Dirty filter	**248.8 Pa**
Other	**0 Pa**
Static pressure (Clean filter)	**174.2 Pa**

Scenario 2	Summer Cooling
Airflow	30677 l/s
Component total static pressure	249 Pa
Dirty filter	**248.8 Pa**
Other	**0 Pa**
Static pressure (Clean filter)	**174.2 Pa**

Scenario 3	Economizer
Airflow	30677 l/s
Component total static pressure	249 Pa
Dirty filter	**248.8 Pa**
Other	**0 Pa**
Static pressure (Clean filter)	**174.2 Pa**

Flash Vessel

FV-1

Location, Classification	**(Blank)**, **New Equipment**

Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Diameter, Height, Weight	0 mm, 0 mm, 0 kg
Pressure rating	0 kPa

Scenario 1	Winter Heating
Flow (Component, Flash steam)	952.6 kg/h, 94.3 kg/h
Pressure (Entering, Leaving)	517.1 kPa, 34.5 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

Heat Exchanger

HX-1

Type, Location, Classification	**G/E Series (Shell and Tube)**, **(Blank)**, **New Equipment**
Source fluid in tube	No
Transfer	
Fluid type, Volume	**30% Propylene Glycol**, 757.1 l
Maximum velocity, Fouling factor	**1.219 m/s**, **0**
Source	
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Maximum length	**1.219 m**
Shell diameter	0 mm
Number of passes	0
Heating surface area	0 m²
Pressure rating (Transfer, Source)	0 kPa, 0 kPa
ASME certified, ASME certification required	No, **No**
Tube type, Double wall tubes	**Cu 0.889 mm**, **No**

Scenario 1	Winter Heating

Scenario data not shown because the load is 0.

Scenario 2	Summer Cooling

Scenario data not shown because the load is 0.

Scenario 3	Economizer

Scenario data not shown because the load is 0.

HX-2

Type, Location, Classification	**G/E Series (Shell and Tube)**, **(Blank)**, **New Equipment**
Source fluid in tube	No
Transfer	
Fluid type, Volume	**30% Propylene Glycol**, 757.1 l
Maximum velocity, Fouling factor	**1.219 m/s**, **0**
Source	
Automatic selection	**Yes**
Manufacturer, Model	(Blank), (Blank)
Length, Width, Height, Weight	0 mm, 0 mm, 0 mm, 0 kg
Maximum length	**1.219 m**
Shell diameter	0 mm
Number of passes	0
Heating surface area	0 m²
Pressure rating (Transfer, Source)	0 kPa, 0 kPa

ASME certified, ASME certification required	No, **No**
Tube type, Double wall tubes	**Cu 0.889 mm**, **No**

Scenario 1	Winter Heating

Scenario data not shown because the load is 0.

Scenario 2	Summer Cooling

Scenario data not shown because the load is 0.

Scenario 3	Economizer

Scenario data not shown because the load is 0.

HX-3

Type, Location, Classification	**G/E Series (Shell and Tube)**, **(Blank)**, **New Equipment**
Source fluid in tube	No
Transfer	
Fluid type, Volume	Water, 757.1 l
Maximum velocity, Fouling factor	**1.219 m/s**, **0**
Source	
Automatic selection	**Yes**
Manufacturer, Model	TACO, E14206-S
Length, Width, Height, Weight	1413 mm, 527 mm, 527 mm, 257.6 kg
Maximum length	**1.219 m**
Shell diameter	356 mm
Number of passes	2
Heating surface area	7.03 m²
Pressure rating (Transfer, Source)	1034.2 kPa, 1034.2 kPa
ASME certified, ASME certification required	Yes, **No**
Tube type, Double wall tubes	**Cu 0.889 mm**, **No**

Scenario 1	Winter Heating
Usage	Heating
Load portion	**100%**
Load (System, Component)	1539010 W, 1539010 W
Transfer	
Temperature (Entering, Change, Leaving)	66°C, 16.3°C, **82.22°C**
Flow	23.21 l/s
Thermodynamic factor	4077 W·s/l·°C
Component total head loss	44.9 kPa
Component (Design, Actual)	**44.85 kPa**, **3.65 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**
Source	
Flow	2703.9 kg/h
Pressure (Entering, Pressure drop, Leaving)	103.4 kPa, 6.9 kPa, 96.5 kPa
Temperature (Entering, Change, Leaving)	120.9°C, -1.1°C, 119.8°C
Component total pressure drop	6.9 kPa
Component	**6.89 kPa**
Control valve	**0 kPa**
Other	**0 kPa**
Load summary	
IHL-7 (Imposed Load)	75790 W
TBG-1 (Terminal Unit, Single Duct Group)	218680 W
TBG-2 (Terminal Unit, Single Duct Group)	261060 W
TBG-3 (Terminal Unit, Single Duct Group)	330000 W
TBG-4 (Terminal Unit, Single Duct Group)	330000 W
TBG-5 (Terminal Unit, Single Duct Group)	323470 W

Scenario 2	Summer Cooling

Scenario data not shown because the load is 0.

Scenario 3	Economizer

Scenario data not shown because the load is 0.

HX-4	
Type, Location, Classification	**G/E Series (Shell and Tube)**, **(Blank)**, **New Equipment**
Source fluid in tube	No
Transfer	
Fluid type, Volume	Water, 757.1 l
Maximum velocity, Fouling factor	**1.219 m/s**, **0**
Source	
Automatic selection	**Yes**
Manufacturer, Model	TACO, E14206-S
Length, Width, Height, Weight	1413 mm, 527 mm, 527 mm, 257.6 kg
Maximum length	**1.219 m**
Shell diameter	356 mm
Number of passes	2
Heating surface area	7.03 m²
Pressure rating (Transfer, Source)	1034.2 kPa, 1034.2 kPa
ASME certified, ASME certification required	Yes, **No**
Tube type, Double wall tubes	**Cu 0.889 mm**, **No**

Scenario 1	Winter Heating
Usage	Heating
Load portion	**100%**
Load (System, Component)	1539010 W, 1539010 W
Transfer	
Temperature (Entering, Change, Leaving)	66°C, 16.3°C, **82.22°C**
Flow	23.21 l/s
Thermodynamic factor	4077 W·s/l·°C
Component total head loss	44.9 kPa
Component (Design, Actual)	**44.85 kPa**, **3.65 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**
Source	
Flow	2703.9 kg/h
Pressure (Entering, Pressure drop, Leaving)	103.4 kPa, 6.9 kPa, 96.5 kPa
Temperature (Entering, Change, Leaving)	120.9°C, -1.1°C, 119.8°C
Component total pressure drop	6.9 kPa
Component	**6.89 kPa**
Control valve	**0 kPa**
Other	**0 kPa**
Load summary	
IHL-7 (Imposed Load)	75790 W
TBG-1 (Terminal Unit, Single Duct Group)	218680 W
TBG-2 (Terminal Unit, Single Duct Group)	261060 W
TBG-3 (Terminal Unit, Single Duct Group)	330000 W
TBG-4 (Terminal Unit, Single Duct Group)	330000 W
TBG-5 (Terminal Unit, Single Duct Group)	323470 W

Scenario 2	Summer Cooling

Scenario data not shown because the load is 0.

Scenario 3	Economizer

Scenario data not shown because the load is 0.

HX-5	
Type, Location, Classification	**G/E Series (Shell and Tube)**, **(Blank)**, **New Equipment**
Source fluid in tube	No

Transfer	
Fluid type, Volume	Water, 757.1 l
Maximum velocity, Fouling factor	**1.219 m/s**, **0**
Source	
Automatic selection	**Yes**
Manufacturer, Model	TACO, E08210-S
Length, Width, Height, Weight	1524 mm, 378 mm, 378 mm, 147.9 kg
Maximum length	**1.829 m**
Shell diameter	219 mm
Number of passes	2
Heating surface area	3.94 m²
Pressure rating (Transfer, Source)	1034.2 kPa, 1034.2 kPa
ASME certified, ASME certification required	Yes, **No**
Tube type, Double wall tubes	**Cu 0.889 mm**, **No**

Scenario 1	Winter Heating
Usage	Heating
Load portion	**100%**
Load (System, Component)	834150 W, 834150 W
Transfer	
Temperature (Entering, Change, Leaving)	5.7°C, 43.2°C, **48.89°C**
Flow	4.67 l/s
Thermodynamic factor	4136 W·s/l·°C
Component total head loss	44.9 kPa
Component (Design, Actual)	**44.85 kPa**, **2.96 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**
Source	
Flow	1465.5 kg/h
Pressure (Entering, Pressure drop, Leaving)	34.5 kPa, 6.9 kPa, 27.6 kPa
Temperature (Entering, Change, Leaving)	108.3°C, -1.5°C, 106.8°C
Component total pressure drop	6.9 kPa
Component	**6.89 kPa**
Control valve	**0 kPa**
Other	**0 kPa**
Load summary	
IHL-1 (Imposed Load)	834150 W

Scenario 2	Summer Cooling

Scenario data not shown because the load is 0.

Scenario 3	Economizer

Scenario data not shown because the load is 0.

HX-6

Type, Location, Classification	**G/E Series (Shell and Tube)**, **(Blank)**, **New Equipment**
Source fluid in tube	No
Transfer	
Fluid type, Volume	Water, 757.1 l
Maximum velocity, Fouling factor	**1.219 m/s**, **0**
Source	
Automatic selection	**Yes**
Manufacturer, Model	TACO, E08210-S
Length, Width, Height, Weight	1524 mm, 378 mm, 378 mm, 147.9 kg
Maximum length	**1.829 m**
Shell diameter	219 mm
Number of passes	2
Heating surface area	3.94 m²
Pressure rating (Transfer, Source)	1034.2 kPa, 1034.2 kPa
ASME certified, ASME certification required	Yes, **No**
Tube type, Double wall tubes	**Cu 0.889 mm**, **No**

Scenario 1	Winter Heating
Usage	Heating
Load portion	**100%**
Load (System, Component)	834150 W, 834150 W
Transfer	
Temperature (Entering, Change, Leaving)	5.7°C, 43.2°C, **48.89°C**
Flow	4.67 l/s
Thermodynamic factor	4136 W·s/l·°C
Component total head loss	44.9 kPa
Component (Design, Actual)	**44.85 kPa**, **2.96 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**
Source	
Flow	1465.5 kg/h
Pressure (Entering, Pressure drop, Leaving)	34.5 kPa, 6.9 kPa, 27.6 kPa
Temperature (Entering, Change, Leaving)	108.3°C, -1.5°C, 106.8°C
Component total pressure drop	6.9 kPa
Component	**6.89 kPa**
Control valve	**0 kPa**
Other	**0 kPa**
Load summary	
IHL-1 (Imposed Load)	834150 W

Scenario 2	Summer Cooling

Scenario data not shown because the load is 0.

Scenario 3	Economizer

Scenario data not shown because the load is 0.

Imposed Load

ICL-1

Type, Location, Classification	**Terminal, Other**, **(Blank)**, **New Equipment**
Fluid type, Volume	Water, **37.85 l**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Width, Height, Weight	**0 mm**, **0 mm**, **0 mm**, **0 kg**

Scenario 1	Winter Heating

Scenario data not shown because the load is 0.

Scenario 2	Summer Cooling
Usage	Cooling
Load	**4460 W**
Temperature (Entering, Change, Leaving)	**12.78°C**, **6.67°C**, 19.4°C
Flow	0.16 l/s
Thermodynamic factor	4180 W·s/l·°C
Component total head loss	322.9 kPa
Imposed load	**322.92 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

Scenario 3	Economizer
Usage	Cooling
Load	**4460 W**

Temperature (Entering, Change, Leaving)	**12.78°C**, **6.67°C**, 19.4°C
Flow	0.16 l/s
Thermodynamic factor	4180 W·s/l·°C
Component total head loss	322.9 kPa
Imposed load	**322.92 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

ICL-2	
Type, Location, Classification	**Terminal, Other**, **(Blank)**, **New Equipment**
Fluid type, Volume	Water, **37.85 l**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Width, Height, Weight	**0 mm**, **0 mm**, **0 mm**, **0 kg**

Scenario 1	Winter Heating

Scenario data not shown because the load is 0.

Scenario 2	Summer Cooling
Usage	Cooling
Load	**4460 W**
Temperature (Entering, Change, Leaving)	**12.78°C**, **6.67°C**, 19.4°C
Flow	0.16 l/s
Thermodynamic factor	4180 W·s/l·°C
Component total head loss	322.9 kPa
Imposed load	**322.92 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

Scenario 3	Economizer
Usage	Cooling
Load	**4460 W**
Temperature (Entering, Change, Leaving)	**12.78°C**, **6.67°C**, 19.4°C
Flow	0.16 l/s
Thermodynamic factor	4180 W·s/l·°C
Component total head loss	322.9 kPa
Imposed load	**322.92 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

ICL-3	
Type, Location, Classification	**Terminal, Other**, **(Blank)**, **New Equipment**
Fluid type, Volume	Water, **37.85 l**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Width, Height, Weight	**0 mm**, **0 mm**, **0 mm**, **0 kg**

Scenario 1	Winter Heating

Scenario data not shown because the load is 0.

Scenario 2	Summer Cooling
Usage	Cooling
Load	**167255.7 W**

Temperature (Entering, Change, Leaving)	7.2°C, **7.78°C**, 15°C
Flow	5.14 l/s
Thermodynamic factor	4180 W·s/l·°C
Component total head loss	137.5 kPa
Imposed load	**137.54 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

Scenario 3	Economizer
Usage	Cooling
Load	**167255.7 W**
Temperature (Entering, Change, Leaving)	7.2°C, **7.78°C**, 15°C
Flow	5.14 l/s
Thermodynamic factor	4180 W·s/l·°C
Component total head loss	137.5 kPa
Imposed load	**137.54 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

ICL-4

Type, Location, Classification	**Terminal, Other**, **(Blank)**, **New Equipment**
Fluid type, Volume	Water, **37.85 l**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Width, Height, Weight	**0 mm**, **0 mm**, **0 mm**, **0 kg**

Scenario 1	Winter Heating

Scenario data not shown because the load is 0.

Scenario 2	Summer Cooling
Usage	Cooling
Load	**37220 W**
Temperature (Entering, Change, Leaving)	7.2°C, **7.78°C**, 15°C
Flow	1.14 l/s
Thermodynamic factor	4180 W·s/l·°C
Component total head loss	137.5 kPa
Imposed load	**137.54 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

Scenario 3	Economizer
Usage	Cooling
Load	**37220 W**
Temperature (Entering, Change, Leaving)	7.2°C, **7.78°C**, 15°C
Flow	1.14 l/s
Thermodynamic factor	4180 W·s/l·°C
Component total head loss	137.5 kPa
Imposed load	**137.54 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

IHL-1

Type, Location, Classification	**Terminal, Other**, **(Blank)**, **New Equipment**

Fluid type, Volume	Water, **37.85 l**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Width, Height, Weight	**0 mm**, **0 mm**, **0 mm**, **0 kg**
Scenario 1	Winter Heating
Usage	Heating
Load	834150 W
Temperature (Entering, Change, Leaving)	48.9°C, -43.2°C, 5.7°C
Flow	**4.669 l/s**
Thermodynamic factor	4136 W·s/l·°C
Component total head loss	15 kPa
Imposed load	**14.95 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**
Scenario 2	Summer Cooling
Scenario data not shown because the load is 0.	
Scenario 3	Economizer
Scenario data not shown because the load is 0.	

IHL-2

Type, Location, Classification	**Process, Humidifier**, **(Blank)**, **New Equipment**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Width, Height, Weight	**0 mm**, **0 mm**, **0 mm**, **0 kg**
Scenario 1	Winter Heating
Usage	Heating
Load	175560 W
Flow	**308.45 kg/h**
Pressure (Entering, Pressure drop, Leaving)	46.4 kPa, 0 kPa, 46.4 kPa
Temperature (Entering, Change, Leaving)	110.9°C, 0°C, 110.9°C
Component total pressure drop	0 kPa
Component	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**
Scenario 2	Summer Cooling
Scenario data not shown because the load is 0.	
Scenario 3	Economizer
Scenario data not shown because the load is 0.	

IHL-3

Type, Location, Classification	**Process, Humidifier**, **(Blank)**, **New Equipment**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Width, Height, Weight	**0 mm**, **0 mm**, **0 mm**, **0 kg**
Scenario 1	Winter Heating
Usage	Heating
Load	222040 W

Flow	**390.1 kg/h**
Pressure (Entering, Pressure drop, Leaving)	46.4 kPa, 0 kPa, 46.4 kPa
Temperature (Entering, Change, Leaving)	110.9°C, 0°C, 110.9°C
Component total pressure drop	0 kPa
Component	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

Scenario 2	Summer Cooling

Scenario data not shown because the load is 0.

Scenario 3	Economizer

Scenario data not shown because the load is 0.

IHL-4

Type, Location, Classification	**Process, Humidifier**, **(Blank)**, **New Equipment**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Width, Height, Weight	**0 mm**, **0 mm**, **0 mm**, **0 kg**

Scenario 1	Winter Heating
Usage	Heating
Load	154910 W
Flow	**272.16 kg/h**
Pressure (Entering, Pressure drop, Leaving)	46.4 kPa, 0 kPa, 46.4 kPa
Temperature (Entering, Change, Leaving)	110.9°C, 0°C, 110.9°C
Component total pressure drop	0 kPa
Component	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

Scenario 2	Summer Cooling

Scenario data not shown because the load is 0.

Scenario 3	Economizer

Scenario data not shown because the load is 0.

IHL-5

Type, Location, Classification	**Process, Humidifier**, **(Blank)**, **New Equipment**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Width, Height, Weight	**0 mm**, **0 mm**, **0 mm**, **0 kg**

Scenario 1	Winter Heating
Usage	Heating
Load	154910 W
Flow	**272.16 kg/h**
Pressure (Entering, Pressure drop, Leaving)	46.4 kPa, 0 kPa, 46.4 kPa
Temperature (Entering, Change, Leaving)	110.9°C, 0°C, 110.9°C
Component total pressure drop	0 kPa
Component	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

Scenario 2	Summer Cooling

Scenario data not shown because the load is 0.

Scenario 3	Economizer

Scenario data not shown because the load is 0.

IHL-6	
Type, Location, Classification	**Process, Humidifier**, **(Blank)**, **New Equipment**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Width, Height, Weight	**0 mm**, **0 mm**, **0 mm**, **0 kg**
Scenario 1	Winter Heating
Usage	Heating
Load	222040 W
Flow	**390.1 kg/h**
Pressure (Entering, Pressure drop, Leaving)	46.4 kPa, 0 kPa, 46.4 kPa
Temperature (Entering, Change, Leaving)	110.9°C, 0°C, 110.9°C
Component total pressure drop	0 kPa
Component	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**
Scenario 2	Summer Cooling

Scenario data not shown because the load is 0.

Scenario 3	Economizer

Scenario data not shown because the load is 0.

IHL-7	
Type, Location, Classification	**Terminal, Other**, **(Blank)**, **New Equipment**
Fluid type, Volume	Water, **37.85 l**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Width, Height, Weight	**0 mm**, **0 mm**, **0 mm**, **0 kg**
Scenario 1	Winter Heating
Usage	Heating
Load	**75788.2 W**
Temperature (Entering, Change, Leaving)	82.2°C, **-11.11°C**, 71.1°C
Flow	1.67 l/s
Thermodynamic factor	4077 W·s/l·°C
Component total head loss	15 kPa
Imposed load	**14.95 kPa**
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Other	**0 kPa**
Scenario 2	Summer Cooling

Scenario data not shown because the load is 0.

Scenario 3	Economizer

Scenario data not shown because the load is 0.

IHL-8

Type, Location, Classification	**Terminal, Other**, **(Blank)**, **New Equipment**
Manufacturer, Model	**(Blank)**, **(Blank)**
Length, Width, Height, Weight	**0 mm**, **0 mm**, **0 mm**, **0 kg**

Scenario 1	Winter Heating
Usage	Heating
Load	438910 W
Flow	**771.12 kg/h**
Pressure (Entering, Pressure drop, Leaving)	261.9 kPa, 68.9 kPa, 192.9 kPa
Temperature (Entering, Change, Leaving)	140.1°C, -7.3°C, 132.8°C
Component total pressure drop	68.9 kPa
Component	**68.95 kPa**
Control valve	**0 kPa**
Other	**0 kPa**

Scenario 2	Summer Cooling

Scenario data not shown because the load is 0.

Scenario 3	Economizer

Scenario data not shown because the load is 0.

Pump

P-1

Type, Location, Classification	**FI Series (Base-Mounted, End Suction)**, **(Blank)**, **New Equipment**
Fluid type, Volume	30% Propylene Glycol, **18.93 l**
Adjust head loss for cold start	**No**
Automatic selection	**Yes**
Manufacturer, Model	TACO, FI2506
Length, Width, Height, Weight	813 mm, 360 mm, 454 mm, 0 kg
Motor size, Brake horsepower (Estimated, Actual)	1.5 kW, 0 kW, 1.03 kW
Motor speed	1760 rpm
Voltage/phase (Motor)	460v/3ph
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Efficiency	69%
NPSHR	7.9 kPa
Construction, casing/impeller (Selection, Actual)	**Any**, Iron / Bronze
Suction size, Discharge size	DN 80, DN 65
Pipe size (Suction side, Discharge side)	DN 0, DN 0
Suction diffuser (suction side), Grooved, Model	**No**, **No**, (Blank)

Scenario 1	Winter Heating

Scenario data not shown because the flow is 0.

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

P-2

Type, Location, Classification	**FI Series (Base-Mounted, End Suction)**, **(Blank)**, **New Equipment**
Fluid type, Volume	30% Propylene Glycol, **18.93 l**

Adjust head loss for cold start	**No**
Automatic selection	**Yes**
Manufacturer, Model	TACO, FI2506
Length, Width, Height, Weight	813 mm, 360 mm, 454 mm, 0 kg
Motor size, Brake horsepower (Estimated, Actual)	1.5 kW, 0 kW, 1.03 kW
Motor speed	1760 rpm
Voltage/phase (Motor)	460v/3ph
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Efficiency	69%
NPSHR	7.9 kPa
Construction, casing/impeller (Selection, Actual)	**Any**, Iron / Bronze
Suction size, Discharge size	DN 80, DN 65
Pipe size (Suction side, Discharge side)	DN 0, DN 0
Suction diffuser (suction side), Grooved, Model	**No**, **No**, (Blank)

Scenario 1	Winter Heating

Scenario data not shown because the flow is 0.

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

P-3

Type, Location, Classification	**FI Series (Base-Mounted, End Suction)**, **(Blank)**, **New Equipment**
Fluid type, Volume	Water, **18.93 l**
Adjust head loss for cold start	**No**
Automatic selection	**Yes**
Manufacturer, Model	TACO, FI3007
Length, Width, Height, Weight	1054 mm, 411 mm, 544 mm, 0 kg
Motor size, Brake horsepower (Estimated, Actual)	5.5 kW, 3.99 kW, 3.39 kW
Motor speed	1760 rpm
Voltage/phase (Motor)	460v/3ph
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Efficiency	76.7%
NPSHR	9.4 kPa
Construction, casing/impeller (Selection, Actual)	**Any**, Iron / Bronze
Suction size, Discharge size	DN 100, DN 80
Pipe size (Suction side, Discharge side)	DN 125, DN 125
Suction diffuser (suction side), Grooved, Model	**No**, **No**, (Blank)

Scenario 1	Winter Heating
Minimum system temperature	65.6°C
Flow portion	**100%**
Flow (System, Component)	23.21 l/s, 23.21 l/s
Component total head loss	20.9 kPa
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Venturi	**0 kPa**
Miscellaneous valves	**20.93 kPa**
Suction diffuser	**0 kPa**
Other	**0 kPa**
Component fluid head loss factor	1
Head loss (System major components, System minor components, System piping, Total)	98.7 kPa, 36.1 kPa, 0 kPa, 134.7 kPa

System major components head loss summary	
AS-2 (Air Separator)	9 kPa
AS-2 (Dirty Strainer)	0 kPa
HX-3 (Heat Exchanger)	44.9 kPa
HX-3 (Balancing Valve)	0 kPa
HX-3 (Control Valve)	0 kPa
P-3 (Balancing Valve)	0 kPa
P-3 (Control Valve)	0 kPa
P-3 (Venturi)	0 kPa
P-3 (Miscellaneous Valves)	20.9 kPa
TBG-1 (Terminal Unit, Single Duct Group)	6 kPa
TBG-1 (Balancing Valve)	9 kPa
TBG-1 (Control Valve)	9 kPa
System minor components head loss summary	
BV-9 (Valve, Balancing)	15 kPa
CV-2 (Valve, Control, 2-Way)	21.1 kPa
System piping head loss summary	
PIPE-106 (Pipe, Hydronic)	0 kPa
PIPE-107 (Pipe, Hydronic)	0 kPa
PIPE-115 (Pipe, Hydronic)	0 kPa
PIPE-117 (Pipe, Hydronic)	0 kPa
PIPE-120 (Pipe, Hydronic)	0 kPa
PIPE-123 (Pipe, Hydronic)	0 kPa
PIPE-136 (Pipe, Hydronic)	0 kPa
PIPE-139 (Pipe, Hydronic)	0 kPa
PIPE-151 (Pipe, Hydronic)	0 kPa
PIPE-163 (Pipe, Hydronic)	0 kPa
PIPE-165 (Pipe, Hydronic)	0 kPa
PIPE-40 (Pipe, Hydronic)	0 kPa
PIPE-41 (Pipe, Hydronic)	0 kPa
PIPE-42 (Pipe, Hydronic)	0 kPa
PIPE-43 (Pipe, Hydronic)	0 kPa
PIPE-44 (Pipe, Hydronic)	0 kPa
PIPE-46 (Pipe, Hydronic)	0 kPa
PIPE-47 (Pipe, Hydronic)	0 kPa
PIPE-49 (Pipe, Hydronic)	0 kPa
PIPE-50 (Pipe, Hydronic)	0 kPa
PIPE-7 (Pipe, Hydronic)	0 kPa
PIPE-9 (Pipe, Hydronic)	0 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

P-4

Type, Location, Classification	**FI Series (Base-Mounted, End Suction)**, **(Blank)**, **New Equipment**
Fluid type, Volume	Water, **18.93 l**
Adjust head loss for cold start	**No**
Automatic selection	**Yes**
Manufacturer, Model	TACO, FI3007
Length, Width, Height, Weight	1054 mm, 411 mm, 544 mm, 0 kg
Motor size, Brake horsepower (Estimated, Actual)	5.5 kW, 3.99 kW, 3.39 kW
Motor speed	1760 rpm
Voltage/phase (Motor)	460v/3ph
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Efficiency	76.7%
NPSHR	9.4 kPa
Construction, casing/impeller (Selection, Actual)	**Any**, Iron / Bronze
Suction size, Discharge size	DN 100, DN 80
Pipe size (Suction side, Discharge side)	DN 125, DN 125
Suction diffuser (suction side), Grooved, Model	**No**, **No**, (Blank)

Scenario 1	Winter Heating
Minimum system temperature	65.6°C
Flow portion	**100%**
Flow (System, Component)	23.21 l/s, 23.21 l/s
Component total head loss	20.9 kPa
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Venturi	**0 kPa**
Miscellaneous valves	**20.93 kPa**
Suction diffuser	**0 kPa**
Other	**0 kPa**
Component fluid head loss factor	1
Head loss (System major components, System minor components, System piping, Total)	98.7 kPa, 36.1 kPa, 0 kPa, 134.7 kPa
System major components head loss summary	
AS-2 (Air Separator)	9 kPa
AS-2 (Dirty Strainer)	0 kPa
HX-4 (Heat Exchanger)	44.9 kPa
HX-4 (Balancing Valve)	0 kPa
HX-4 (Control Valve)	0 kPa
P-4 (Balancing Valve)	0 kPa
P-4 (Control Valve)	0 kPa
P-4 (Venturi)	0 kPa
P-4 (Miscellaneous Valves)	20.9 kPa
TBG-2 (Terminal Unit, Single Duct Group)	6 kPa
TBG-2 (Balancing Valve)	9 kPa
TBG-2 (Control Valve)	9 kPa
System minor components head loss summary	
BV-8 (Valve, Balancing)	15 kPa
CV-5 (Valve, Control, 2-Way)	21.1 kPa
System piping head loss summary	
PIPE-112 (Pipe, Hydronic)	0 kPa
PIPE-113 (Pipe, Hydronic)	0 kPa
PIPE-115 (Pipe, Hydronic)	0 kPa
PIPE-117 (Pipe, Hydronic)	0 kPa
PIPE-120 (Pipe, Hydronic)	0 kPa
PIPE-126 (Pipe, Hydronic)	0 kPa
PIPE-138 (Pipe, Hydronic)	0 kPa
PIPE-140 (Pipe, Hydronic)	0 kPa
PIPE-151 (Pipe, Hydronic)	0 kPa
PIPE-163 (Pipe, Hydronic)	0 kPa
PIPE-165 (Pipe, Hydronic)	0 kPa
PIPE-48 (Pipe, Hydronic)	0 kPa
PIPE-49 (Pipe, Hydronic)	0 kPa
PIPE-50 (Pipe, Hydronic)	0 kPa
PIPE-6 (Pipe, Hydronic)	0 kPa
PIPE-8 (Pipe, Hydronic)	0 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

P-5	
Type, Location, Classification	**TA Series (Horizontal, Split Case, Double Suction, Single-Stage)**, **(Blank)**, **New Equipment**
Fluid type, Volume	Water, **18.93 l**
Adjust head loss for cold start	**No**
Automatic selection	**Yes**
Manufacturer, Model	TACO, TA1224
Length, Width, Height, Weight	1245 mm, 584 mm, 668 mm, 0 kg
Motor size, Brake horsepower (Estimated, Actual)	15 kW, 13.86 kW, 11.09 kW
Motor speed	1760 rpm
Voltage/phase (Motor)	460v/3ph

Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Efficiency	81%
NPSHR	22.8 kPa
Construction, casing/impeller (Selection, Actual)	**Any**, Iron / Bronze
Suction size, Discharge size	DN 150, DN 125
Pipe size (Suction side, Discharge side)	DN 200, DN 200
Suction diffuser (suction side), Grooved, Model	**No**, **No**, (Blank)
Suction diffuser (discharge side), Grooved, Model	**No**, **No**, (Blank)

Scenario 1	Winter Heating

Scenario data not shown because the flow is 0.

Scenario 2	Summer Cooling
Minimum system temperature	7.2°C
Flow portion	**50%**
Flow (System, Component)	121.37 l/s, 60.68 l/s
Component total head loss	12 kPa
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Venturi	**0 kPa**
Miscellaneous valves	**11.96 kPa**
Suction diffuser	**0 kPa**
Other	**0 kPa**
Component fluid head loss factor	1
Head loss (System major components, System minor components, System piping, Total)	149.5 kPa, 35.7 kPa, 0 kPa, 185.2 kPa
System major components head loss summary	
(Chiller, Air-Cooled)	0 kPa
(Balancing Valve)	0 kPa
(Control Valve)	0 kPa
ICL-3 (Imposed Load)	137.5 kPa
ICL-3 (Balancing Valve)	0 kPa
ICL-3 (Control Valve)	0 kPa
P-5 (Balancing Valve)	0 kPa
P-5 (Control Valve)	0 kPa
P-5 (Venturi)	0 kPa
P-5 (Miscellaneous Valves)	12 kPa
System minor components head loss summary	
BV-18 (Valve, Balancing)	15 kPa
CV-31 (Valve, Control, 2-Way)	20.7 kPa
System piping head loss summary	
PIPE-152 (Pipe, Hydronic)	0 kPa
PIPE-154 (Pipe, Hydronic)	0 kPa
PIPE-155 (Pipe, Hydronic)	0 kPa
PIPE-156 (Pipe, Hydronic)	0 kPa
PIPE-157 (Pipe, Hydronic)	0 kPa
PIPE-158 (Pipe, Hydronic)	0 kPa
PIPE-19 (Pipe, Hydronic)	0 kPa
PIPE-21 (Pipe, Hydronic)	0 kPa
PIPE-23 (Pipe, Hydronic)	0 kPa
PIPE-25 (Pipe, Hydronic)	0 kPa
PIPE-77 (Pipe, Hydronic)	0 kPa
PIPE-89 (Pipe, Hydronic)	0 kPa

Scenario 3	Economizer
Minimum system temperature	7.2°C
Flow portion	**50%**
Flow (System, Component)	6.46 l/s, 3.23 l/s
Component total head loss	12 kPa
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Venturi	**0 kPa**
Miscellaneous valves	**11.96 kPa**
Suction diffuser	**0 kPa**
Other	**0 kPa**
Component fluid head loss factor	1

Head loss (System major components, System minor components, System piping, Total)	149.5 kPa, 35.7 kPa, 0 kPa, 185.2 kPa
System major components head loss summary	
(Chiller, Air-Cooled)	0 kPa
(Balancing Valve)	0 kPa
(Control Valve)	0 kPa
ICL-3 (Imposed Load)	137.5 kPa
ICL-3 (Balancing Valve)	0 kPa
ICL-3 (Control Valve)	0 kPa
P-5 (Balancing Valve)	0 kPa
P-5 (Control Valve)	0 kPa
P-5 (Venturi)	0 kPa
P-5 (Miscellaneous Valves)	12 kPa
System minor components head loss summary	
BV-18 (Valve, Balancing)	15 kPa
CV-31 (Valve, Control, 2-Way)	20.7 kPa
System piping head loss summary	
PIPE-152 (Pipe, Hydronic)	0 kPa
PIPE-154 (Pipe, Hydronic)	0 kPa
PIPE-155 (Pipe, Hydronic)	0 kPa
PIPE-156 (Pipe, Hydronic)	0 kPa
PIPE-157 (Pipe, Hydronic)	0 kPa
PIPE-158 (Pipe, Hydronic)	0 kPa
PIPE-19 (Pipe, Hydronic)	0 kPa
PIPE-21 (Pipe, Hydronic)	0 kPa
PIPE-23 (Pipe, Hydronic)	0 kPa
PIPE-25 (Pipe, Hydronic)	0 kPa
PIPE-77 (Pipe, Hydronic)	0 kPa
PIPE-89 (Pipe, Hydronic)	0 kPa

P-6

Type, Location, Classification	**TA Series (Horizontal, Split Case, Double Suction, Single-Stage)**, **(Blank)**, **New Equipment**
Fluid type, Volume	Water, **18.93 l**
Adjust head loss for cold start	**No**
Automatic selection	**Yes**
Manufacturer, Model	TACO, TA1224
Length, Width, Height, Weight	1245 mm, 584 mm, 668 mm, 0 kg
Motor size, Brake horsepower (Estimated, Actual)	15 kW, 13.86 kW, 11.09 kW
Motor speed	1760 rpm
Voltage/phase (Motor)	460v/3ph
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Efficiency	81%
NPSHR	22.8 kPa
Construction, casing/impeller (Selection, Actual)	**Any**, Iron / Bronze
Suction size, Discharge size	DN 150, DN 125
Pipe size (Suction side, Discharge side)	DN 200, DN 200
Suction diffuser (suction side), Grooved, Model	**No**, **No**, (Blank)
Suction diffuser (discharge side), Grooved, Model	**No**, **No**, (Blank)

Scenario 1	Winter Heating

Scenario data not shown because the flow is 0.

Scenario 2	Summer Cooling
Minimum system temperature	7.2°C
Flow portion	**50%**
Flow (System, Component)	121.37 l/s, 60.68 l/s
Component total head loss	12 kPa
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Venturi	**0 kPa**
Miscellaneous valves	**11.96 kPa**
Suction diffuser	**0 kPa**

Other	**0 kPa**
Component fluid head loss factor	1
Head loss (System major components, System minor components, System piping, Total)	149.5 kPa, 35.7 kPa, 0 kPa, 185.2 kPa
System major components head loss summary	
(Chiller, Air-Cooled)	0 kPa
(Balancing Valve)	0 kPa
(Control Valve)	0 kPa
ICL-4 (Imposed Load)	137.5 kPa
ICL-4 (Balancing Valve)	0 kPa
ICL-4 (Control Valve)	0 kPa
P-6 (Balancing Valve)	0 kPa
P-6 (Control Valve)	0 kPa
P-6 (Venturi)	0 kPa
P-6 (Miscellaneous Valves)	12 kPa
System minor components head loss summary	
BV-20 (Valve, Balancing)	15 kPa
CV-34 (Valve, Control, 2-Way)	20.7 kPa
System piping head loss summary	
PIPE-152 (Pipe, Hydronic)	0 kPa
PIPE-159 (Pipe, Hydronic)	0 kPa
PIPE-166 (Pipe, Hydronic)	0 kPa
PIPE-167 (Pipe, Hydronic)	0 kPa
PIPE-168 (Pipe, Hydronic)	0 kPa
PIPE-170 (Pipe, Hydronic)	0 kPa
PIPE-171 (Pipe, Hydronic)	0 kPa
PIPE-19 (Pipe, Hydronic)	0 kPa
PIPE-20 (Pipe, Hydronic)	0 kPa
PIPE-22 (Pipe, Hydronic)	0 kPa
PIPE-25 (Pipe, Hydronic)	0 kPa
PIPE-74 (Pipe, Hydronic)	0 kPa
PIPE-77 (Pipe, Hydronic)	0 kPa

Scenario 3	Economizer
Minimum system temperature	7.2°C
Flow portion	**50%**
Flow (System, Component)	6.46 l/s, 3.23 l/s
Component total head loss	12 kPa
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Venturi	**0 kPa**
Miscellaneous valves	**11.96 kPa**
Suction diffuser	**0 kPa**
Other	**0 kPa**
Component fluid head loss factor	1
Head loss (System major components, System minor components, System piping, Total)	149.5 kPa, 35.7 kPa, 0 kPa, 185.2 kPa
System major components head loss summary	
(Chiller, Air-Cooled)	0 kPa
(Balancing Valve)	0 kPa
(Control Valve)	0 kPa
ICL-4 (Imposed Load)	137.5 kPa
ICL-4 (Balancing Valve)	0 kPa
ICL-4 (Control Valve)	0 kPa
P-6 (Balancing Valve)	0 kPa
P-6 (Control Valve)	0 kPa
P-6 (Venturi)	0 kPa
P-6 (Miscellaneous Valves)	12 kPa
System minor components head loss summary	
BV-20 (Valve, Balancing)	15 kPa
CV-34 (Valve, Control, 2-Way)	20.7 kPa
System piping head loss summary	
PIPE-152 (Pipe, Hydronic)	0 kPa
PIPE-159 (Pipe, Hydronic)	0 kPa
PIPE-166 (Pipe, Hydronic)	0 kPa
PIPE-167 (Pipe, Hydronic)	0 kPa
PIPE-168 (Pipe, Hydronic)	0 kPa
PIPE-170 (Pipe, Hydronic)	0 kPa
PIPE-171 (Pipe, Hydronic)	0 kPa
PIPE-19 (Pipe, Hydronic)	0 kPa
PIPE-20 (Pipe, Hydronic)	0 kPa

PIPE-22 (Pipe, Hydronic)	0 kPa
PIPE-25 (Pipe, Hydronic)	0 kPa
PIPE-74 (Pipe, Hydronic)	0 kPa
PIPE-77 (Pipe, Hydronic)	0 kPa

P-7

Type, Location, Classification	**KS Series (Vertical, Split-Coupled, In-Line)**, **(Blank)**, **New Equipment**
Fluid type, Volume	Water, **18.93 l**
Adjust head loss for cold start	**No**
Automatic selection	**Yes**
Manufacturer, Model	GRUNDFOS, CRIE 1-5
Length, Width, Height, Weight	254 mm, 254 mm, 533 mm, 0 kg
Motor size, Brake horsepower (Estimated, Actual)	0.37 kW, 0.16 kW, 0.37 kW
Motor speed	3500 rpm
Voltage/phase (Motor)	**208v/1ph**
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Efficiency	36%
NPSHR	0 kPa
Construction, casing/impeller (Selection, Actual)	**Any**, Stainless Steel / Stainless Steel
Suction size, Discharge size	DN 0, DN 0
Pipe size (Suction side, Discharge side)	DN 20, DN 20
Suction diffuser (suction side), Grooved, Model	**No**, **No**, (Blank)
Suction diffuser (discharge side), Grooved, Model	**No**, **No**, (Blank)

Scenario 1	Winter Heating

Scenario data not shown because the flow is 0.

Scenario 2	Summer Cooling
Minimum system temperature	7.2°C
Flow portion	**100%**
Flow (System, Component)	0.16 l/s, 0.16 l/s
Component total head loss	12 kPa
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Venturi	**0 kPa**
Miscellaneous valves	**11.96 kPa**
Suction diffuser	**0 kPa**
Other	**0 kPa**
Component fluid head loss factor	1
Head loss (System major components, System minor components, System piping, Total)	334.9 kPa, 15 kPa, 0 kPa, 349.8 kPa
System major components head loss summary	
ICL-1 (Imposed Load)	322.9 kPa
ICL-1 (Balancing Valve)	0 kPa
ICL-1 (Control Valve)	0 kPa
P-7 (Balancing Valve)	0 kPa
P-7 (Control Valve)	0 kPa
P-7 (Venturi)	0 kPa
P-7 (Miscellaneous Valves)	12 kPa
System minor components head loss summary	
BV-16 (Valve, Balancing)	15 kPa
System piping head loss summary	
PIPE-66 (Pipe, Hydronic)	0 kPa
PIPE-67 (Pipe, Hydronic)	0 kPa
PIPE-68 (Pipe, Hydronic)	0 kPa
PIPE-69 (Pipe, Hydronic)	0 kPa
PIPE-71 (Pipe, Hydronic)	0 kPa

Scenario 3	Economizer
Minimum system temperature	7.2°C
Flow portion	**100%**

Flow (System, Component)	0.16 l/s, 0.16 l/s
Component total head loss	12 kPa
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Venturi	**0 kPa**
Miscellaneous valves	**11.96 kPa**
Suction diffuser	**0 kPa**
Other	**0 kPa**
Component fluid head loss factor	1
Head loss (System major components, System minor components, System piping, Total)	334.9 kPa, 15 kPa, 0 kPa, 349.8 kPa
System major components head loss summary	
ICL-1 (Imposed Load)	322.9 kPa
ICL-1 (Balancing Valve)	0 kPa
ICL-1 (Control Valve)	0 kPa
P-7 (Balancing Valve)	0 kPa
P-7 (Control Valve)	0 kPa
P-7 (Venturi)	0 kPa
P-7 (Miscellaneous Valves)	12 kPa
System minor components head loss summary	
BV-16 (Valve, Balancing)	15 kPa
System piping head loss summary	
PIPE-66 (Pipe, Hydronic)	0 kPa
PIPE-67 (Pipe, Hydronic)	0 kPa
PIPE-68 (Pipe, Hydronic)	0 kPa
PIPE-69 (Pipe, Hydronic)	0 kPa
PIPE-71 (Pipe, Hydronic)	0 kPa

P-8

Type, Location, Classification	**KS Series (Vertical, Split-Coupled, In-Line)**, **(Blank)**, **New Equipment**
Fluid type, Volume	Water, **18.93 l**
Adjust head loss for cold start	**No**
Automatic selection	**Yes**
Manufacturer, Model	GRUNDFOS, CRIE 1-5
Length, Width, Height, Weight	254 mm, 254 mm, 533 mm, 0 kg
Motor size, Brake horsepower (Estimated, Actual)	0.37 kW, 0.16 kW, 0.37 kW
Motor speed	3500 rpm
Voltage/phase (Motor)	**208v/1ph**
Electrical starter by	**Electrical**
Electrical disconnect by	**Electrical**
Electrical VSD by	**None**
Emergency power	**No**
Electrical power by	**Electrical**
Efficiency	36%
NPSHR	0 kPa
Construction, casing/impeller (Selection, Actual)	**Any**, Stainless Steel / Stainless Steel
Suction size, Discharge size	DN 0, DN 0
Pipe size (Suction side, Discharge side)	DN 20, DN 20
Suction diffuser (suction side), Grooved, Model	**No**, **No**, (Blank)
Suction diffuser (discharge side), Grooved, Model	**No**, **No**, (Blank)

Scenario 1	Winter Heating

Scenario data not shown because the flow is 0.

Scenario 2	Summer Cooling

Minimum system temperature	7.2°C
Flow portion	**100%**
Flow (System, Component)	0.16 l/s, 0.16 l/s
Component total head loss	12 kPa
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Venturi	**0 kPa**
Miscellaneous valves	**11.96 kPa**
Suction diffuser	**0 kPa**
Other	**0 kPa**
Component fluid head loss factor	1

Head loss (System major components, System minor components, System piping, Total)	334.9 kPa, 15 kPa, 0 kPa, 349.8 kPa
System major components head loss summary	
ICL-2 (Imposed Load)	322.9 kPa
ICL-2 (Balancing Valve)	0 kPa
ICL-2 (Control Valve)	0 kPa
P-8 (Balancing Valve)	0 kPa
P-8 (Control Valve)	0 kPa
P-8 (Venturi)	0 kPa
P-8 (Miscellaneous Valves)	12 kPa
System minor components head loss summary	
BV-17 (Valve, Balancing)	15 kPa
System piping head loss summary	
PIPE-78 (Pipe, Hydronic)	0 kPa
PIPE-79 (Pipe, Hydronic)	0 kPa
PIPE-80 (Pipe, Hydronic)	0 kPa
PIPE-81 (Pipe, Hydronic)	0 kPa
PIPE-83 (Pipe, Hydronic)	0 kPa

Scenario 3	Economizer
Minimum system temperature	7.2°C
Flow portion	**100%**
Flow (System, Component)	0.16 l/s, 0.16 l/s
Component total head loss	12 kPa
Balancing valve	**0 kPa**
Control valve	**0 kPa**
Venturi	**0 kPa**
Miscellaneous valves	**11.96 kPa**
Suction diffuser	**0 kPa**
Other	**0 kPa**
Component fluid head loss factor	1
Head loss (System major components, System minor components, System piping, Total)	334.9 kPa, 15 kPa, 0 kPa, 349.8 kPa
System major components head loss summary	
ICL-2 (Imposed Load)	322.9 kPa
ICL-2 (Balancing Valve)	0 kPa
ICL-2 (Control Valve)	0 kPa
P-8 (Balancing Valve)	0 kPa
P-8 (Control Valve)	0 kPa
P-8 (Venturi)	0 kPa
P-8 (Miscellaneous Valves)	12 kPa
System minor components head loss summary	
BV-17 (Valve, Balancing)	15 kPa
System piping head loss summary	
PIPE-78 (Pipe, Hydronic)	0 kPa
PIPE-79 (Pipe, Hydronic)	0 kPa
PIPE-80 (Pipe, Hydronic)	0 kPa
PIPE-81 (Pipe, Hydronic)	0 kPa
PIPE-83 (Pipe, Hydronic)	0 kPa

Space

SPC-1

Location, Classification	**(Blank)**, **New Equipment**
Use ASHRAE 170	**No**
Length, Width, Height	**0 m**, **0 m**, **2.438 m**
Area, Volume	0 m², 0 m³

Scenario 1	Winter Heating
Space heat loss	**0 W**
Pick-up time	**1 h**
Pick-up load	0 W
Other	**0 W**
Minimum temperature heat loss	133370 W
Total heat loss	133370 W

Target space air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**22.22°C**, 14.1°C, **40%**, 39.3 kJ/kg
Space air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.1°C, 22.5%, 31.8 kJ/kg
Supply heating air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	29.4°C, 16.7°C, 26.1%, 46.6 kJ/kg
Supply method: user defined airflow	**15574 l/s**
Supply airflow	15574 l/s
Return airflow	10383 l/s
Relief airflow	672 l/s
Outside airflow	5191 l/s
Exhaust airflow	2962 l/s
Pressurization airflow, Percentage of supply	1557 l/s, **10%**
Number of people, Airflow per person rate	**1**, **5191 l/s**
Ventilation airflow	5191 l/s
Supply total static pressure	50 Pa
Supply diffuser	**24.9 Pa**
Balancing damper	**24.9 Pa**
Other	**0 Pa**
Return total static pressure	50 Pa
Return grille	**24.9 Pa**
Balancing damper	**24.9 Pa**
Return plenum	**0 Pa**
Other	**0 Pa**
Transfer in total static pressure	12 Pa
Transfer in diffuser	**12.4 Pa**
Other	**0 Pa**
Transfer out total static pressure	12 Pa
Transfer out grille	**12.4 Pa**
Other	**0 Pa**

Scenario 2	Summer Cooling
Space heat gain (Sensible, Latent, Total)	**341982.8 W**, **42337.2 W**, 384320 W
Other (Sensible, Latent, Total)	**0 W**, **0 W**, 0 W
Maximum temperature heat gain (Sensible, Latent, Total)	0 W, 0 W, 0 W
Total heat gain (Sensible, Latent, Total)	341980 W, 42340 W, 384320 W
Target space air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**22.22°C**, 14.1°C, **40%**, 39.3 kJ/kg
Space air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.7°C, 44.2%, 41 kJ/kg
Supply cooling air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**11.11°C**, 8.9°C, 75.1%, 26.7 kJ/kg
Supply method: user defined airflow	**25957 l/s**
Supply airflow	25957 l/s
Return airflow	20400 l/s
Relief airflow	0 l/s
Outside airflow	5558 l/s
Exhaust airflow	2962 l/s
Pressurization airflow, Percentage of supply	2596 l/s, **10%**
Number of people, Airflow per person rate	**1**, **5191 l/s**
Ventilation airflow	5191 l/s
Supply total static pressure	50 Pa
Supply diffuser	**24.9 Pa**
Balancing damper	**24.9 Pa**
Other	**0 Pa**
Return total static pressure	50 Pa
Return grille	**24.9 Pa**
Balancing damper	**24.9 Pa**
Return plenum	**0 Pa**
Other	**0 Pa**
Transfer in total static pressure	12 Pa
Transfer in diffuser	**12.4 Pa**
Other	**0 Pa**
Transfer out total static pressure	12 Pa
Transfer out grille	**12.4 Pa**
Other	**0 Pa**

Scenario 3	Economizer
Space heat gain (Sensible, Latent, Total)	**341982.8 W**, **42337.2 W**, 384320 W
Other (Sensible, Latent, Total)	**0 W**, **0 W**, 0 W
Maximum temperature heat gain (Sensible, Latent, Total)	0 W, 0 W, 0 W
Total heat gain (Sensible, Latent, Total)	341980 W, 42340 W, 384320 W
Target space air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**22.22°C**, 14.1°C, **40%**, 39.3 kJ/kg
Space air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.7°C, 25.8%, 33.2 kJ/kg
Supply cooling air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**11.11°C**, 8.9°C, 75.1%, 26.7 kJ/kg
Supply method: user defined airflow	**25957 l/s**
Supply airflow	25957 l/s
Return airflow	0 l/s

Relief airflow	20400 l/s
Outside airflow	25957 l/s
Exhaust airflow	2962 l/s
Pressurization airflow, Percentage of supply	2596 l/s, **10%**
Number of people, Airflow per person rate	**1**, **5191 l/s**
Ventilation airflow	5191 l/s
Supply total static pressure	50 Pa
Supply diffuser	**24.9 Pa**
Balancing damper	**24.9 Pa**
Other	**0 Pa**
Return total static pressure	50 Pa
Return grille	**24.9 Pa**
Balancing damper	**24.9 Pa**
Return plenum	**0 Pa**
Other	**0 Pa**
Transfer in total static pressure	12 Pa
Transfer in diffuser	**12.4 Pa**
Other	**0 Pa**
Transfer out total static pressure	12 Pa
Transfer out grille	**12.4 Pa**
Other	**0 Pa**

SPC-2	
Location, Classification	**(Blank)**, **New Equipment**
Use ASHRAE 170	**No**
Length, Width, Height	**0 m**, **0 m**, **2.438 m**
Area, Volume	0 m², 0 m³

Scenario 1	Winter Heating
Space heat loss	**0 W**
Pick-up time	**1 h**
Pick-up load	0 W
Other	**0 W**
Minimum temperature heat loss	133370 W
Total heat loss	133370 W
Target space air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**22.22°C**, 14.1°C, **40%**, 39.3 kJ/kg
Space air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.1°C, 22.5%, 31.8 kJ/kg
Supply heating air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	29.4°C, 16.7°C, 26.1%, 46.6 kJ/kg
Supply method: user defined airflow	**15574 l/s**
Supply airflow	15574 l/s
Return airflow	7842 l/s
Relief airflow	0 l/s
Outside airflow	7732 l/s
Exhaust airflow	6175 l/s
Pressurization airflow, Percentage of supply	1557 l/s, **10%**
Number of people, Airflow per person rate	**1**, **5191 l/s**
Ventilation airflow	5191 l/s
Supply total static pressure	50 Pa
Supply diffuser	**24.9 Pa**
Balancing damper	**24.9 Pa**
Other	**0 Pa**
Return total static pressure	50 Pa
Return grille	**24.9 Pa**
Balancing damper	**24.9 Pa**
Return plenum	**0 Pa**
Other	**0 Pa**
Transfer in total static pressure	12 Pa
Transfer in diffuser	**12.4 Pa**
Other	**0 Pa**
Transfer out total static pressure	12 Pa
Transfer out grille	**12.4 Pa**
Other	**0 Pa**

Scenario 2	Summer Cooling
Space heat gain (Sensible, Latent, Total)	**341982.8 W**, **42337.2 W**, 384320 W
Other (Sensible, Latent, Total)	**0 W**, **0 W**, 0 W
Maximum temperature heat gain (Sensible, Latent, Total)	0 W, 0 W, 0 W
Total heat gain (Sensible, Latent, Total)	341980 W, 42340 W, 384320 W

Target space air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**22.22°C**, 14.1°C, **40%**, 39.3 kJ/kg
Space air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.7°C, 44.2%, 41 kJ/kg
Supply cooling air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**11.11°C**, 8.9°C, 75.1%, 26.7 kJ/kg
Supply method: user defined airflow	**25957 l/s**
Supply airflow	25957 l/s
Return airflow	17187 l/s
Relief airflow	0 l/s
Outside airflow	8770 l/s
Exhaust airflow	6175 l/s
Pressurization airflow, Percentage of supply	2596 l/s, **10%**
Number of people, Airflow per person rate	**1**, **5191 l/s**
Ventilation airflow	5191 l/s
Supply total static pressure	50 Pa
Supply diffuser	**24.9 Pa**
Balancing damper	**24.9 Pa**
Other	**0 Pa**
Return total static pressure	50 Pa
Return grille	**24.9 Pa**
Balancing damper	**24.9 Pa**
Return plenum	**0 Pa**
Other	**0 Pa**
Transfer in total static pressure	12 Pa
Transfer in diffuser	**12.4 Pa**
Other	**0 Pa**
Transfer out total static pressure	12 Pa
Transfer out grille	**12.4 Pa**
Other	**0 Pa**

Scenario 3	Economizer
Space heat gain (Sensible, Latent, Total)	**341982.8 W**, **42337.2 W**, 384320 W
Other (Sensible, Latent, Total)	**0 W**, **0 W**, 0 W
Maximum temperature heat gain (Sensible, Latent, Total)	0 W, 0 W, 0 W
Total heat gain (Sensible, Latent, Total)	341980 W, 42340 W, 384320 W
Target space air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**22.22°C**, 14.1°C, **40%**, 39.3 kJ/kg
Space air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.7°C, 25.8%, 33.2 kJ/kg
Supply cooling air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**11.11°C**, 8.9°C, 75.1%, 26.7 kJ/kg
Supply method: user defined airflow	**25957 l/s**
Supply airflow	25957 l/s
Return airflow	0 l/s
Relief airflow	17187 l/s
Outside airflow	25957 l/s
Exhaust airflow	6175 l/s
Pressurization airflow, Percentage of supply	2596 l/s, **10%**
Number of people, Airflow per person rate	**1**, **5191 l/s**
Ventilation airflow	5191 l/s
Supply total static pressure	50 Pa
Supply diffuser	**24.9 Pa**
Balancing damper	**24.9 Pa**
Other	**0 Pa**
Return total static pressure	50 Pa
Return grille	**24.9 Pa**
Balancing damper	**24.9 Pa**
Return plenum	**0 Pa**
Other	**0 Pa**
Transfer in total static pressure	12 Pa
Transfer in diffuser	**12.4 Pa**
Other	**0 Pa**
Transfer out total static pressure	12 Pa
Transfer out grille	**12.4 Pa**
Other	**0 Pa**

SPC-3	
Location, Classification	**(Blank)**, **New Equipment**
Use ASHRAE 170	**No**
Length, Width, Height	**0 m**, **0 m**, **2.438 m**
Area, Volume	0 m², 0 m³

Scenario 1	Winter Heating
Space heat loss	**0 W**
Pick-up time	**1 h**
Pick-up load	0 W
Other	**0 W**
Minimum temperature heat loss	201270 W
Total heat loss	201270 W
Target space air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**22.22°C**, 14.1°C, **40%**, 39.3 kJ/kg
Space air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.1°C, 22.5%, 31.8 kJ/kg
Supply heating air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	29.4°C, 16.7°C, 26.1%, 46.6 kJ/kg
Supply method: user defined airflow	**23503 l/s**
Supply airflow	23503 l/s
Return airflow	15669 l/s
Relief airflow	5236 l/s
Outside airflow	7834 l/s
Exhaust airflow	248 l/s
Pressurization airflow, Percentage of supply	2350 l/s, **10%**
Number of people, Airflow per person rate	**1**, **7834 l/s**
Ventilation airflow	7834 l/s
Supply total static pressure	50 Pa
Supply diffuser	**24.9 Pa**
Balancing damper	**24.9 Pa**
Other	**0 Pa**
Return total static pressure	112 Pa
Return grille	**24.9 Pa**
Balancing damper	**24.9 Pa**
Return plenum	**0 Pa**
Return plenum	**62.2 Pa**
Transfer in total static pressure	12 Pa
Transfer in diffuser	**12.4 Pa**
Other	**0 Pa**
Transfer out total static pressure	12 Pa
Transfer out grille	**12.4 Pa**
Other	**0 Pa**

Scenario 2	Summer Cooling
Space heat gain (Sensible, Latent, Total)	**516083.1 W**, **63890.6 W**, 579970 W
Other (Sensible, Latent, Total)	**0 W**, **0 W**, 0 W
Maximum temperature heat gain (Sensible, Latent, Total)	0 W, 0 W, 0 W
Total heat gain (Sensible, Latent, Total)	516080 W, 63890 W, 579970 W
Target space air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**22.22°C**, 14.1°C, **40%**, 39.3 kJ/kg
Space air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.7°C, 44.2%, 41 kJ/kg
Supply cooling air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**11.11°C**, 8.9°C, 75.1%, 26.7 kJ/kg
Supply method: user defined airflow	**39172 l/s**
Supply airflow	39172 l/s
Return airflow	31337 l/s
Relief airflow	3669 l/s
Outside airflow	7834 l/s
Exhaust airflow	248 l/s
Pressurization airflow, Percentage of supply	3917 l/s, **10%**
Number of people, Airflow per person rate	**1**, **7834 l/s**
Ventilation airflow	7834 l/s
Supply total static pressure	50 Pa
Supply diffuser	**24.9 Pa**
Balancing damper	**24.9 Pa**
Other	**0 Pa**
Return total static pressure	112 Pa
Return grille	**24.9 Pa**
Balancing damper	**24.9 Pa**
Return plenum	**0 Pa**
Return plenum	**62.2 Pa**
Transfer in total static pressure	12 Pa
Transfer in diffuser	**12.4 Pa**
Other	**0 Pa**
Transfer out total static pressure	12 Pa
Transfer out grille	**12.4 Pa**
Other	**0 Pa**

Scenario 3	Economizer
Space heat gain (Sensible, Latent, Total)	**516083.1 W**, **63890.6 W**, 579970 W
Other (Sensible, Latent, Total)	**0 W**, **0 W**, 0 W
Maximum temperature heat gain (Sensible, Latent, Total)	0 W, 0 W, 0 W

Total heat gain (Sensible, Latent, Total)	516080 W, 63890 W, 579970 W
Target space air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**22.22°C**, 14.1°C, **40%**, 39.3 kJ/kg
Space air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.7°C, 25.8%, 33.2 kJ/kg
Supply cooling air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**11.11°C**, 8.9°C, 75.1%, 26.7 kJ/kg
Supply method: user defined airflow	**39172 l/s**
Supply airflow	39172 l/s
Return airflow	0 l/s
Relief airflow	35007 l/s
Outside airflow	39172 l/s
Exhaust airflow	248 l/s
Pressurization airflow, Percentage of supply	3917 l/s, **10%**
Number of people, Airflow per person rate	**1**, **7834 l/s**
Ventilation airflow	7834 l/s
Supply total static pressure	50 Pa
Supply diffuser	**24.9 Pa**
Balancing damper	**24.9 Pa**
Other	**0 Pa**
Return total static pressure	112 Pa
Return grille	**24.9 Pa**
Balancing damper	**24.9 Pa**
Return plenum	**0 Pa**
Return plenum	**62.2 Pa**
Transfer in total static pressure	12 Pa
Transfer in diffuser	**12.4 Pa**
Other	**0 Pa**
Transfer out total static pressure	12 Pa
Transfer out grille	**12.4 Pa**
Other	**0 Pa**

SPC-4	
Location, Classification	**(Blank)**, **New Equipment**
Use ASHRAE 170	**No**
Length, Width, Height	**0 m**, **0 m**, **2.438 m**
Area, Volume	0 m², 0 m³

Scenario 1	Winter Heating
Space heat loss	**0 W**
Pick-up time	**1 h**
Pick-up load	0 W
Other	**0 W**
Minimum temperature heat loss	201270 W
Total heat loss	201270 W
Target space air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**22.22°C**, 14.1°C, **40%**, 39.3 kJ/kg
Space air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.1°C, 22.5%, 31.8 kJ/kg
Supply heating air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	29.4°C, 16.7°C, 26.1%, 46.6 kJ/kg
Supply method: user defined airflow	**23503 l/s**
Supply airflow	23503 l/s
Return airflow	15669 l/s
Relief airflow	5236 l/s
Outside airflow	7834 l/s
Exhaust airflow	248 l/s
Pressurization airflow, Percentage of supply	2350 l/s, **10%**
Number of people, Airflow per person rate	**1**, **7834 l/s**
Ventilation airflow	7834 l/s
Supply total static pressure	50 Pa
Supply diffuser	**24.9 Pa**
Balancing damper	**24.9 Pa**
Other	**0 Pa**
Return total static pressure	112 Pa
Return grille	**24.9 Pa**
Balancing damper	**24.9 Pa**
Return plenum	**0 Pa**
Return plenum	**62.2 Pa**
Transfer in total static pressure	12 Pa
Transfer in diffuser	**12.4 Pa**
Other	**0 Pa**
Transfer out total static pressure	12 Pa

Transfer out grille	**12.4 Pa**
Other	**0 Pa**

Scenario 2	Summer Cooling
Space heat gain (Sensible, Latent, Total)	**516083.1 W**, **63890.6 W**, 579970 W
Other (Sensible, Latent, Total)	**0 W**, **0 W**, 0 W
Maximum temperature heat gain (Sensible, Latent, Total)	0 W, 0 W, 0 W
Total heat gain (Sensible, Latent, Total)	516080 W, 63890 W, 579970 W
Target space air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**22.22°C**, 14.1°C, **40%**, 39.3 kJ/kg
Space air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 14.7°C, 44.2%, 41 kJ/kg
Supply cooling air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**11.11°C**, 8.9°C, 75.1%, 26.7 kJ/kg
Supply method: user defined airflow	**39172 l/s**
Supply airflow	39172 l/s
Return airflow	31337 l/s
Relief airflow	3669 l/s
Outside airflow	7834 l/s
Exhaust airflow	248 l/s
Pressurization airflow, Percentage of supply	3917 l/s, **10%**
Number of people, Airflow per person rate	**1**, **7834 l/s**
Ventilation airflow	7834 l/s
Supply total static pressure	50 Pa
Supply diffuser	**24.9 Pa**
Balancing damper	**24.9 Pa**
Other	**0 Pa**
Return total static pressure	112 Pa
Return grille	**24.9 Pa**
Balancing damper	**24.9 Pa**
Return plenum	**0 Pa**
Return plenum	**62.2 Pa**
Transfer in total static pressure	12 Pa
Transfer in diffuser	**12.4 Pa**
Other	**0 Pa**
Transfer out total static pressure	12 Pa
Transfer out grille	**12.4 Pa**
Other	**0 Pa**

Scenario 3	Economizer
Space heat gain (Sensible, Latent, Total)	**516083.1 W**, **63890.6 W**, 579970 W
Other (Sensible, Latent, Total)	**0 W**, **0 W**, 0 W
Maximum temperature heat gain (Sensible, Latent, Total)	0 W, 0 W, 0 W
Total heat gain (Sensible, Latent, Total)	516080 W, 63890 W, 579970 W
Target space air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**22.22°C**, 14.1°C, **40%**, 39.3 kJ/kg
Space air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.7°C, 25.8%, 33.2 kJ/kg
Supply cooling air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**11.11°C**, 8.9°C, 75.1%, 26.7 kJ/kg
Supply method: user defined airflow	**39172 l/s**
Supply airflow	39172 l/s
Return airflow	0 l/s
Relief airflow	35007 l/s
Outside airflow	39172 l/s
Exhaust airflow	248 l/s
Pressurization airflow, Percentage of supply	3917 l/s, **10%**
Number of people, Airflow per person rate	**1**, **7834 l/s**
Ventilation airflow	7834 l/s
Supply total static pressure	50 Pa
Supply diffuser	**24.9 Pa**
Balancing damper	**24.9 Pa**
Other	**0 Pa**
Return total static pressure	112 Pa
Return grille	**24.9 Pa**
Balancing damper	**24.9 Pa**
Return plenum	**0 Pa**
Return plenum	**62.2 Pa**
Transfer in total static pressure	12 Pa
Transfer in diffuser	**12.4 Pa**
Other	**0 Pa**
Transfer out total static pressure	12 Pa
Transfer out grille	**12.4 Pa**
Other	**0 Pa**

SPC-5

Location, Classification	**(Blank)**, **New Equipment**
Use ASHRAE 170	**No**
Length, Width, Height	**0 m**, **0 m**, **2.438 m**
Area, Volume	0 m², 0 m³

Scenario 1	Winter Heating
Space heat loss	**0 W**
Pick-up time	**1 h**
Pick-up load	0 W
Other	**0 W**
Minimum temperature heat loss	157620 W
Total heat loss	157620 W
Target space air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**22.22°C**, 14.1°C, **40%**, 39.3 kJ/kg
Space air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	22.2°C, 11.1°C, 22.5%, 31.8 kJ/kg
Supply heating air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	29.4°C, 16.7°C, 26.1%, 46.6 kJ/kg
Supply method: user defined airflow	**18406 l/s**
Supply airflow	18406 l/s
Return airflow	8380 l/s
Relief airflow	0 l/s
Outside airflow	10026 l/s
Exhaust airflow	8185 l/s
Pressurization airflow, Percentage of supply	1841 l/s, **10%**
Number of people, Airflow per person rate	**1**, **6135 l/s**
Ventilation airflow	6135 l/s
Supply total static pressure	50 Pa
Supply diffuser	**24.9 Pa**
Balancing damper	**24.9 Pa**
Other	**0 Pa**
Return total static pressure	50 Pa
Return grille	**24.9 Pa**
Balancing damper	**24.9 Pa**
Return plenum	**0 Pa**
Other	**0 Pa**
Transfer in total static pressure	12 Pa
Transfer in diffuser	**12.4 Pa**
Other	**0 Pa**
Transfer out total static pressure	12 Pa
Transfer out grille	**12.4 Pa**
Other	**0 Pa**

Scenario 2	Summer Cooling
Space heat gain (Sensible, Latent, Total)	**289239.4 W**, **34728.4 W**, 323970 W
Other (Sensible, Latent, Total)	**0 W**, **0 W**, 0 W
Maximum temperature heat gain (Sensible, Latent, Total)	0 W, 0 W, 0 W
Total heat gain (Sensible, Latent, Total)	289240 W, 34730 W, 323970 W
Target space air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**16.67°C**, 9.8°C, **40%**, 28.6 kJ/kg
Space air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	16.7°C, 12.3°C, 60.3%, 34.8 kJ/kg
Supply cooling air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**8.89°C**, 5.7°C, 61.7%, 19.9 kJ/kg
Supply method: user defined airflow	**30677 l/s**
Supply airflow	30677 l/s
Return airflow	19424 l/s
Relief airflow	0 l/s
Outside airflow	11253 l/s
Exhaust airflow	8185 l/s
Pressurization airflow, Percentage of supply	3068 l/s, **10%**
Number of people, Airflow per person rate	**1**, **6135 l/s**
Ventilation airflow	6135 l/s
Supply total static pressure	50 Pa
Supply diffuser	**24.9 Pa**
Balancing damper	**24.9 Pa**
Other	**0 Pa**
Return total static pressure	50 Pa
Return grille	**24.9 Pa**
Balancing damper	**24.9 Pa**
Return plenum	**0 Pa**
Other	**0 Pa**
Transfer in total static pressure	12 Pa
Transfer in diffuser	**12.4 Pa**
Other	**0 Pa**

Transfer out total static pressure	12 Pa
Transfer out grille	**12.4 Pa**
Other	**0 Pa**

Scenario 3	Economizer
Space heat gain (Sensible, Latent, Total)	**289239.4 W**, **34728.4 W**, 323970 W
Other (Sensible, Latent, Total)	**0 W**, **0 W**, 0 W
Maximum temperature heat gain (Sensible, Latent, Total)	0 W, 0 W, 0 W
Total heat gain (Sensible, Latent, Total)	289240 W, 34730 W, 323970 W
Target space air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**16.67°C**, 9.8°C, **40%**, 28.6 kJ/kg
Space air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	16.7°C, 9°C, 34.4%, 27 kJ/kg
Supply cooling air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	**8.89°C**, 5.7°C, 61.7%, 19.9 kJ/kg
Supply method: user defined airflow	**30677 l/s**
Supply airflow	30677 l/s
Return airflow	0 l/s
Relief airflow	19424 l/s
Outside airflow	30677 l/s
Exhaust airflow	8185 l/s
Pressurization airflow, Percentage of supply	3068 l/s, **10%**
Number of people, Airflow per person rate	**1**, **6135 l/s**
Ventilation airflow	6135 l/s
Supply total static pressure	50 Pa
Supply diffuser	**24.9 Pa**
Balancing damper	**24.9 Pa**
Other	**0 Pa**
Return total static pressure	50 Pa
Return grille	**24.9 Pa**
Balancing damper	**24.9 Pa**
Return plenum	**0 Pa**
Other	**0 Pa**
Transfer in total static pressure	12 Pa
Transfer in diffuser	**12.4 Pa**
Other	**0 Pa**
Transfer out total static pressure	12 Pa
Transfer out grille	**12.4 Pa**
Other	**0 Pa**

Steam Trap

ST-1

Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**2**
Vertical lift	**0 m**
Automatic selection	**Yes**
Manufacturer, Model	SPIRAX SARCO, FT-30
Length, Width, Height, Weight	216 mm, 108 mm, 213 mm, 8.2 kg
Pressure rating	206.8 kPa
Body construction (Selection, Actual)	**All**, Cast Iron
Inlet pipe size, Outlet pipe size, Connection size	DN 40, DN 20, DN 40

Scenario 1	Winter Heating
Flow (Component, Safety)	**136.08 kg/h**, 272.2 kg/h
Pressure (Entering, Pressure drop, Leaving)	206.8 kPa, 51.7 kPa, 155.1 kPa
Temperature (Entering, Change, Leaving)	134.4°C, -6.2°C, 128.2°C
Component total pressure drop	51.7 kPa
Component	**51.71 kPa**
Other	**0 kPa**
Component total back pressure	0 kPa
Back pressure summary	
ST-1 (Vertical lift)	0 kPa
Drip trap flow summary	
SPIPE-126 (Pipe, Steam)	0 kPa
SPIPE-127 (Pipe, Steam)	0 kPa
SPIPE-166 (Pipe, Steam)	0 kPa
SPIPE-189 (Pipe, Steam)	0 kPa
SPIPE-192 (Pipe, Steam)	0 kPa
SPIPE-20 (Pipe, Steam)	0 kPa
SPIPE-210 (Pipe, Steam)	0 kPa

SPIPE-211 (Pipe, Steam)	0 kPa
SPIPE-219 (Pipe, Steam)	0 kPa
SPIPE-220 (Pipe, Steam)	0 kPa
SPIPE-246 (Pipe, Steam)	0 kPa
SPIPE-247 (Pipe, Steam)	0 kPa
SPIPE-248 (Pipe, Steam)	0 kPa
SPIPE-35 (Pipe, Steam)	0 kPa
SPIPE-60 (Pipe, Steam)	0 kPa
SPIPE-91 (Pipe, Steam)	0 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

ST-2

Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**2**
Vertical lift	**0 m**
Automatic selection	**Yes**
Manufacturer, Model	SPIRAX SARCO, FT14-10
Length, Width, Height, Weight	269 mm, 269 mm, 239 mm, 17.5 kg
Pressure rating	999.7 kPa
Body construction (Selection, Actual)	**All**, Cast Iron
Inlet pipe size, Outlet pipe size, Connection size	DN 40, DN 20, DN 40

Scenario 1	Winter Heating
Flow (Component, Safety)	**136.08 kg/h**, 272.2 kg/h
Pressure (Entering, Pressure drop, Leaving)	689.5 kPa, 172.4 kPa, 517.1 kPa
Temperature (Entering, Change, Leaving)	169.9°C, -9.9°C, 160°C
Component total pressure drop	172.4 kPa
Component	**172.37 kPa**
Other	**0 kPa**
Component total back pressure	0 kPa
Back pressure summary	
ST-2 (Vertical lift)	0 kPa
Drip trap flow summary	
SPIPE-1 (Pipe, Steam)	0 kPa
SPIPE-17 (Pipe, Steam)	0 kPa
SPIPE-209 (Pipe, Steam)	0 kPa
SPIPE-223 (Pipe, Steam)	0 kPa
SPIPE-245 (Pipe, Steam)	0 kPa
SPIPE-249 (Pipe, Steam)	0 kPa
SPIPE-250 (Pipe, Steam)	0 kPa
SPIPE-251 (Pipe, Steam)	0 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

ST-3

Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**2**
Vertical lift	**0 m**
Automatic selection	**Yes**
Manufacturer, Model	SPIRAX SARCO, FT-30
Length, Width, Height, Weight	216 mm, 108 mm, 213 mm, 8.2 kg

Pressure rating	206.8 kPa
Body construction (Selection, Actual)	**All**, Cast Iron
Inlet pipe size, Outlet pipe size, Connection size	DN 40, DN 20, DN 40

Scenario 1	Winter Heating
Flow (Component, Safety)	**136.08 kg/h**, 272.2 kg/h
Pressure (Entering, Pressure drop, Leaving)	206.8 kPa, 51.7 kPa, 155.1 kPa
Temperature (Entering, Change, Leaving)	134.4°C, -6.2°C, 128.2°C
Component total pressure drop	51.7 kPa
Component	**51.71 kPa**
Other	**0 kPa**
Component total back pressure	0 kPa
Back pressure summary	
ST-3 (Vertical lift)	0 kPa
Drip trap flow summary	
SPIPE-126 (Pipe, Steam)	0 kPa
SPIPE-127 (Pipe, Steam)	0 kPa
SPIPE-166 (Pipe, Steam)	0 kPa
SPIPE-169 (Pipe, Steam)	0 kPa
SPIPE-182 (Pipe, Steam)	0 kPa
SPIPE-189 (Pipe, Steam)	0 kPa
SPIPE-20 (Pipe, Steam)	0 kPa
SPIPE-211 (Pipe, Steam)	0 kPa
SPIPE-219 (Pipe, Steam)	0 kPa
SPIPE-220 (Pipe, Steam)	0 kPa
SPIPE-246 (Pipe, Steam)	0 kPa
SPIPE-247 (Pipe, Steam)	0 kPa
SPIPE-248 (Pipe, Steam)	0 kPa
SPIPE-35 (Pipe, Steam)	0 kPa
SPIPE-60 (Pipe, Steam)	0 kPa
SPIPE-91 (Pipe, Steam)	0 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

ST-4

Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**2**
Vertical lift	**0 m**
Automatic selection	**Yes**
Manufacturer, Model	SPIRAX SARCO, FT14-10
Length, Width, Height, Weight	269 mm, 269 mm, 239 mm, 17.5 kg
Pressure rating	999.7 kPa
Body construction (Selection, Actual)	**All**, Cast Iron
Inlet pipe size, Outlet pipe size, Connection size	DN 40, DN 20, DN 40

Scenario 1	Winter Heating
Flow (Component, Safety)	**136.08 kg/h**, 272.2 kg/h
Pressure (Entering, Pressure drop, Leaving)	689.5 kPa, 172.4 kPa, 517.1 kPa
Temperature (Entering, Change, Leaving)	169.9°C, -9.9°C, 160°C
Component total pressure drop	172.4 kPa
Component	**172.37 kPa**
Other	**0 kPa**
Component total back pressure	0 kPa
Back pressure summary	
ST-4 (Vertical lift)	0 kPa
Drip trap flow summary	
SPIPE-1 (Pipe, Steam)	0 kPa
SPIPE-17 (Pipe, Steam)	0 kPa
SPIPE-222 (Pipe, Steam)	0 kPa
SPIPE-223 (Pipe, Steam)	0 kPa
SPIPE-245 (Pipe, Steam)	0 kPa

SPIPE-249 (Pipe, Steam)	0 kPa
SPIPE-250 (Pipe, Steam)	0 kPa
SPIPE-251 (Pipe, Steam)	0 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

ST-5

Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**2**
Vertical lift	**0 m**
Automatic selection	**Yes**
Manufacturer, Model	SPIRAX SARCO, FT-30
Length, Width, Height, Weight	216 mm, 108 mm, 213 mm, 8.2 kg
Pressure rating	206.8 kPa
Body construction (Selection, Actual)	**All**, Cast Iron
Inlet pipe size, Outlet pipe size, Connection size	DN 40, DN 20, DN 40

Scenario 1	Winter Heating
Flow (Component, Safety)	**136.08 kg/h**, 272.2 kg/h
Pressure (Entering, Pressure drop, Leaving)	206.8 kPa, 51.7 kPa, 155.1 kPa
Temperature (Entering, Change, Leaving)	134.4°C, -6.2°C, 128.2°C
Component total pressure drop	51.7 kPa
Component	**51.71 kPa**
Other	**0 kPa**
Component total back pressure	0 kPa
Back pressure summary	
ST-5 (Vertical lift)	0 kPa
Drip trap flow summary	
SPIPE-125 (Pipe, Steam)	0 kPa
SPIPE-126 (Pipe, Steam)	0 kPa
SPIPE-127 (Pipe, Steam)	0 kPa
SPIPE-166 (Pipe, Steam)	0 kPa
SPIPE-189 (Pipe, Steam)	0 kPa
SPIPE-20 (Pipe, Steam)	0 kPa
SPIPE-211 (Pipe, Steam)	0 kPa
SPIPE-219 (Pipe, Steam)	0 kPa
SPIPE-220 (Pipe, Steam)	0 kPa
SPIPE-246 (Pipe, Steam)	0 kPa
SPIPE-247 (Pipe, Steam)	0 kPa
SPIPE-248 (Pipe, Steam)	0 kPa
SPIPE-35 (Pipe, Steam)	0 kPa
SPIPE-60 (Pipe, Steam)	0 kPa
SPIPE-91 (Pipe, Steam)	0 kPa
SPIPE-94 (Pipe, Steam)	0 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

ST-6

Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**2**
Vertical lift	**0 m**
Automatic selection	**Yes**

Manufacturer, Model	SPIRAX SARCO, FT14-10
Length, Width, Height, Weight	269 mm, 269 mm, 239 mm, 17.5 kg
Pressure rating	999.7 kPa
Body construction (Selection, Actual)	**All**, Cast Iron
Inlet pipe size, Outlet pipe size, Connection size	DN 40, DN 20, DN 40

Scenario 1	Winter Heating
Flow (Component, Safety)	**136.08 kg/h**, 272.2 kg/h
Pressure (Entering, Pressure drop, Leaving)	689.5 kPa, 172.4 kPa, 517.1 kPa
Temperature (Entering, Change, Leaving)	169.9°C, -9.9°C, 160°C
Component total pressure drop	172.4 kPa
Component	**172.37 kPa**
Other	**0 kPa**
Component total back pressure	0 kPa
Back pressure summary	
ST-6 (Vertical lift)	0 kPa
Drip trap flow summary	
SPIPE-1 (Pipe, Steam)	0 kPa
SPIPE-122 (Pipe, Steam)	0 kPa
SPIPE-17 (Pipe, Steam)	0 kPa
SPIPE-245 (Pipe, Steam)	0 kPa
SPIPE-249 (Pipe, Steam)	0 kPa
SPIPE-250 (Pipe, Steam)	0 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

ST-7

Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**2**
Vertical lift	**0 m**
Automatic selection	**Yes**
Manufacturer, Model	SPIRAX SARCO, FT-30
Length, Width, Height, Weight	216 mm, 108 mm, 213 mm, 8.2 kg
Pressure rating	206.8 kPa
Body construction (Selection, Actual)	**All**, Cast Iron
Inlet pipe size, Outlet pipe size, Connection size	DN 40, DN 20, DN 40

Scenario 1	Winter Heating
Flow (Component, Safety)	**136.08 kg/h**, 272.2 kg/h
Pressure (Entering, Pressure drop, Leaving)	206.8 kPa, 51.7 kPa, 155.1 kPa
Temperature (Entering, Change, Leaving)	134.4°C, -6.2°C, 128.2°C
Component total pressure drop	51.7 kPa
Component	**51.71 kPa**
Other	**0 kPa**
Component total back pressure	0 kPa
Back pressure summary	
ST-7 (Vertical lift)	0 kPa
Drip trap flow summary	
SPIPE-126 (Pipe, Steam)	0 kPa
SPIPE-127 (Pipe, Steam)	0 kPa
SPIPE-166 (Pipe, Steam)	0 kPa
SPIPE-189 (Pipe, Steam)	0 kPa
SPIPE-20 (Pipe, Steam)	0 kPa
SPIPE-211 (Pipe, Steam)	0 kPa
SPIPE-219 (Pipe, Steam)	0 kPa
SPIPE-220 (Pipe, Steam)	0 kPa
SPIPE-246 (Pipe, Steam)	0 kPa
SPIPE-247 (Pipe, Steam)	0 kPa
SPIPE-248 (Pipe, Steam)	0 kPa
SPIPE-35 (Pipe, Steam)	0 kPa
SPIPE-60 (Pipe, Steam)	0 kPa

SPIPE-63 (Pipe, Steam)	0 kPa
SPIPE-81 (Pipe, Steam)	0 kPa
SPIPE-91 (Pipe, Steam)	0 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

ST-8

Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**2**
Vertical lift	**0 m**
Automatic selection	**Yes**
Manufacturer, Model	SPIRAX SARCO, FT14-10
Length, Width, Height, Weight	269 mm, 269 mm, 239 mm, 17.5 kg
Pressure rating	999.7 kPa
Body construction (Selection, Actual)	**All**, Cast Iron
Inlet pipe size, Outlet pipe size, Connection size	DN 40, DN 20, DN 40

Scenario 1	Winter Heating
Flow (Component, Safety)	**136.08 kg/h**, 272.2 kg/h
Pressure (Entering, Pressure drop, Leaving)	689.5 kPa, 172.4 kPa, 517.1 kPa
Temperature (Entering, Change, Leaving)	169.9°C, -9.9°C, 160°C
Component total pressure drop	172.4 kPa
Component	**172.37 kPa**
Other	**0 kPa**
Component total back pressure	0 kPa
Back pressure summary	
ST-8 (Vertical lift)	0 kPa
Drip trap flow summary	
SPIPE-1 (Pipe, Steam)	0 kPa
SPIPE-123 (Pipe, Steam)	0 kPa
SPIPE-17 (Pipe, Steam)	0 kPa
SPIPE-245 (Pipe, Steam)	0 kPa
SPIPE-249 (Pipe, Steam)	0 kPa
SPIPE-250 (Pipe, Steam)	0 kPa
SPIPE-251 (Pipe, Steam)	0 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

ST-9

Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**2**
Vertical lift	**0 m**
Automatic selection	**Yes**
Manufacturer, Model	SPIRAX SARCO, FT-30
Length, Width, Height, Weight	216 mm, 108 mm, 213 mm, 8.2 kg
Pressure rating	206.8 kPa
Body construction (Selection, Actual)	**All**, Cast Iron
Inlet pipe size, Outlet pipe size, Connection size	DN 40, DN 20, DN 40

Scenario 1	Winter Heating
Flow (Component, Safety)	**136.08 kg/h**, 272.2 kg/h

Pressure (Entering, Pressure drop, Leaving)	206.8 kPa, 51.7 kPa, 155.1 kPa
Temperature (Entering, Change, Leaving)	134.4°C, -6.2°C, 128.2°C
Component total pressure drop	51.7 kPa
Component	**51.71 kPa**
Other	**0 kPa**
Component total back pressure	0 kPa
Back pressure summary	
ST-9 (Vertical lift)	0 kPa
Drip trap flow summary	
SPIPE-126 (Pipe, Steam)	0 kPa
SPIPE-127 (Pipe, Steam)	0 kPa
SPIPE-141 (Pipe, Steam)	0 kPa
SPIPE-166 (Pipe, Steam)	0 kPa
SPIPE-189 (Pipe, Steam)	0 kPa
SPIPE-20 (Pipe, Steam)	0 kPa
SPIPE-211 (Pipe, Steam)	0 kPa
SPIPE-212 (Pipe, Steam)	0 kPa
SPIPE-219 (Pipe, Steam)	0 kPa
SPIPE-220 (Pipe, Steam)	0 kPa
SPIPE-246 (Pipe, Steam)	0 kPa
SPIPE-247 (Pipe, Steam)	0 kPa
SPIPE-248 (Pipe, Steam)	0 kPa
SPIPE-35 (Pipe, Steam)	0 kPa
SPIPE-60 (Pipe, Steam)	0 kPa
SPIPE-91 (Pipe, Steam)	0 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

ST-10	
Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**2**
Vertical lift	**0 m**
Automatic selection	**Yes**
Manufacturer, Model	SPIRAX SARCO, FT14-10
Length, Width, Height, Weight	269 mm, 269 mm, 239 mm, 17.5 kg
Pressure rating	999.7 kPa
Body construction (Selection, Actual)	**All**, Cast Iron
Inlet pipe size, Outlet pipe size, Connection size	DN 40, DN 20, DN 40

Scenario 1	Winter Heating
Flow (Component, Safety)	**136.08 kg/h**, 272.2 kg/h
Pressure (Entering, Pressure drop, Leaving)	689.5 kPa, 172.4 kPa, 517.1 kPa
Temperature (Entering, Change, Leaving)	169.9°C, -9.9°C, 160°C
Component total pressure drop	172.4 kPa
Component	**172.37 kPa**
Other	**0 kPa**
Component total back pressure	0 kPa
Back pressure summary	
ST-10 (Vertical lift)	0 kPa
Drip trap flow summary	
SPIPE-1 (Pipe, Steam)	0 kPa
SPIPE-164 (Pipe, Steam)	0 kPa
SPIPE-17 (Pipe, Steam)	0 kPa
SPIPE-245 (Pipe, Steam)	0 kPa
SPIPE-249 (Pipe, Steam)	0 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

ST-11	
Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**2**
Vertical lift	**0 m**
Automatic selection	**Yes**
Manufacturer, Model	SPIRAX SARCO, FT-30
Length, Width, Height, Weight	216 mm, 108 mm, 213 mm, 8.2 kg
Pressure rating	206.8 kPa
Body construction (Selection, Actual)	**All**, Cast Iron
Inlet pipe size, Outlet pipe size, Connection size	DN 40, DN 20, DN 40

Scenario 1	Winter Heating
Flow (Component, Safety)	**136.08 kg/h**, 272.2 kg/h
Pressure (Entering, Pressure drop, Leaving)	206.8 kPa, 51.7 kPa, 155.1 kPa
Temperature (Entering, Change, Leaving)	134.4°C, -6.2°C, 128.2°C
Component total pressure drop	51.7 kPa
Component	**51.71 kPa**
Other	**0 kPa**
Component total back pressure	0 kPa
Back pressure summary	
ST-11 (Vertical lift)	0 kPa
Drip trap flow summary	
SPIPE-126 (Pipe, Steam)	0 kPa
SPIPE-127 (Pipe, Steam)	0 kPa
SPIPE-166 (Pipe, Steam)	0 kPa
SPIPE-189 (Pipe, Steam)	0 kPa
SPIPE-20 (Pipe, Steam)	0 kPa
SPIPE-211 (Pipe, Steam)	0 kPa
SPIPE-213 (Pipe, Steam)	0 kPa
SPIPE-214 (Pipe, Steam)	0 kPa
SPIPE-219 (Pipe, Steam)	0 kPa
SPIPE-220 (Pipe, Steam)	0 kPa
SPIPE-246 (Pipe, Steam)	0 kPa
SPIPE-247 (Pipe, Steam)	0 kPa
SPIPE-248 (Pipe, Steam)	0 kPa
SPIPE-35 (Pipe, Steam)	0 kPa
SPIPE-60 (Pipe, Steam)	0 kPa
SPIPE-91 (Pipe, Steam)	0 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

ST-12	
Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**2**
Vertical lift	**0 m**
Automatic selection	**Yes**
Manufacturer, Model	SPIRAX SARCO, FT14-10
Length, Width, Height, Weight	269 mm, 269 mm, 239 mm, 17.5 kg
Pressure rating	999.7 kPa
Body construction (Selection, Actual)	**All**, Cast Iron
Inlet pipe size, Outlet pipe size, Connection size	DN 40, DN 20, DN 40

Scenario 1	Winter Heating
Flow (Component, Safety)	**136.08 kg/h**, 272.2 kg/h
Pressure (Entering, Pressure drop, Leaving)	689.5 kPa, 172.4 kPa, 517.1 kPa

Temperature (Entering, Change, Leaving)	169.9°C, -9.9°C, 160°C
Component total pressure drop	172.4 kPa
Component	**172.37 kPa**
Other	**0 kPa**
Component total back pressure	0 kPa
Back pressure summary	
ST-12 (Vertical lift)	0 kPa
Drip trap flow summary	
SPIPE-1 (Pipe, Steam)	0 kPa
SPIPE-17 (Pipe, Steam)	0 kPa
SPIPE-215 (Pipe, Steam)	0 kPa
SPIPE-245 (Pipe, Steam)	0 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

ST-13

Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**2**
Vertical lift	**0 m**
Automatic selection	**Yes**
Manufacturer, Model	SPIRAX SARCO, FT-15
Length, Width, Height, Weight	157 mm, 119 mm, 146 mm, 4.2 kg
Pressure rating	103.4 kPa
Body construction (Selection, Actual)	**All**, Cast Iron
Inlet pipe size, Outlet pipe size, Connection size	DN 32, DN 20, DN 32

Scenario 1	Winter Heating
Flow (Component, Safety)	**136.08 kg/h**, 272.2 kg/h
Pressure (Entering, Pressure drop, Leaving)	103.4 kPa, 25.9 kPa, 77.6 kPa
Temperature (Entering, Change, Leaving)	120.9°C, -4.2°C, 116.7°C
Component total pressure drop	25.9 kPa
Component	**25.86 kPa**
Other	**0 kPa**
Component total back pressure	0 kPa
Back pressure summary	
ST-13 (Vertical lift)	0 kPa
Drip trap flow summary	
SPIPE-226 (Pipe, Steam)	0 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

ST-14

Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**2**
Vertical lift	**0 m**
Automatic selection	**Yes**
Manufacturer, Model	SPIRAX SARCO, FT-30
Length, Width, Height, Weight	216 mm, 108 mm, 213 mm, 8.2 kg
Pressure rating	206.8 kPa
Body construction (Selection, Actual)	**All**, Cast Iron
Inlet pipe size, Outlet pipe size, Connection size	DN 40, DN 20, DN 40

Scenario 1	Winter Heating
Flow (Component, Safety)	**136.08 kg/h**, 272.2 kg/h
Pressure (Entering, Pressure drop, Leaving)	206.8 kPa, 51.7 kPa, 155.1 kPa
Temperature (Entering, Change, Leaving)	134.4°C, -6.2°C, 128.2°C
Component total pressure drop	51.7 kPa
Component	**51.71 kPa**
Other	**0 kPa**
Component total back pressure	0 kPa
Back pressure summary	
ST-14 (Vertical lift)	0 kPa
Drip trap flow summary	
SPIPE-126 (Pipe, Steam)	0 kPa
SPIPE-127 (Pipe, Steam)	0 kPa
SPIPE-166 (Pipe, Steam)	0 kPa
SPIPE-189 (Pipe, Steam)	0 kPa
SPIPE-19 (Pipe, Steam)	0 kPa
SPIPE-20 (Pipe, Steam)	0 kPa
SPIPE-21 (Pipe, Steam)	0 kPa
SPIPE-211 (Pipe, Steam)	0 kPa
SPIPE-219 (Pipe, Steam)	0 kPa
SPIPE-22 (Pipe, Steam)	0 kPa
SPIPE-220 (Pipe, Steam)	0 kPa
SPIPE-246 (Pipe, Steam)	0 kPa
SPIPE-247 (Pipe, Steam)	0 kPa
SPIPE-248 (Pipe, Steam)	0 kPa
SPIPE-35 (Pipe, Steam)	0 kPa
SPIPE-60 (Pipe, Steam)	0 kPa
SPIPE-91 (Pipe, Steam)	0 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

ST-15

Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**2**
Vertical lift	**0 m**
Automatic selection	**Yes**
Manufacturer, Model	SPIRAX SARCO, FT14-10
Length, Width, Height, Weight	269 mm, 269 mm, 239 mm, 17.5 kg
Pressure rating	999.7 kPa
Body construction (Selection, Actual)	**All**, Cast Iron
Inlet pipe size, Outlet pipe size, Connection size	DN 40, DN 20, DN 40

Scenario 1	Winter Heating
Flow (Component, Safety)	**136.08 kg/h**, 272.2 kg/h
Pressure (Entering, Pressure drop, Leaving)	689.5 kPa, 172.4 kPa, 517.1 kPa
Temperature (Entering, Change, Leaving)	169.9°C, -9.9°C, 160°C
Component total pressure drop	172.4 kPa
Component	**172.37 kPa**
Other	**0 kPa**
Component total back pressure	0 kPa
Back pressure summary	
ST-15 (Vertical lift)	0 kPa
Drip trap flow summary	
SPIPE-1 (Pipe, Steam)	0 kPa
SPIPE-18 (Pipe, Steam)	0 kPa
SPIPE-23 (Pipe, Steam)	0 kPa
SPIPE-24 (Pipe, Steam)	0 kPa
SPIPE-245 (Pipe, Steam)	0 kPa
SPIPE-259 (Pipe, Steam)	0 kPa
SPIPE-260 (Pipe, Steam)	0 kPa
SPIPE-37 (Pipe, Steam)	0 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

ST-16

Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**2**
Vertical lift	**0 m**
Automatic selection	**Yes**
Manufacturer, Model	SPIRAX SARCO, FTB-125
Length, Width, Height, Weight	396 mm, 235 mm, 396 mm, 40.8 kg
Pressure rating	517.1 kPa
Body construction (Selection, Actual)	**All**, Cast Iron
Inlet pipe size, Outlet pipe size, Connection size	DN 65, DN 0, DN 65

Scenario 1	Winter Heating

Scenario data not shown because the flow is 0.

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

ST-17

Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**2**
Vertical lift	**0 m**
Automatic selection	**Yes**
Manufacturer, Model	SPIRAX SARCO, FT-15
Length, Width, Height, Weight	157 mm, 119 mm, 146 mm, 4.2 kg
Pressure rating	103.4 kPa
Body construction (Selection, Actual)	**All**, Cast Iron
Inlet pipe size, Outlet pipe size, Connection size	DN 32, DN 20, DN 32

Scenario 1	Winter Heating
Flow (Component, Safety)	**136.08 kg/h**, 272.2 kg/h
Pressure (Entering, Pressure drop, Leaving)	103.4 kPa, 25.9 kPa, 77.6 kPa
Temperature (Entering, Change, Leaving)	120.9°C, -4.2°C, 116.7°C
Component total pressure drop	25.9 kPa
Component	**25.86 kPa**
Other	**0 kPa**
Component total back pressure	0 kPa
Back pressure summary	
ST-17 (Vertical lift)	0 kPa
Drip trap flow summary	
SPIPE-10 (Pipe, Steam)	0 kPa
SPIPE-12 (Pipe, Steam)	0 kPa
SPIPE-14 (Pipe, Steam)	0 kPa
SPIPE-25 (Pipe, Steam)	0 kPa
SPIPE-41 (Pipe, Steam)	0 kPa
SPIPE-8 (Pipe, Steam)	0 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

ST-18	
Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**2**
Vertical lift	**0 m**
Automatic selection	**Yes**
Manufacturer, Model	SPIRAX SARCO, FT-15
Length, Width, Height, Weight	157 mm, 119 mm, 146 mm, 4.2 kg
Pressure rating	103.4 kPa
Body construction (Selection, Actual)	**All**, Cast Iron
Inlet pipe size, Outlet pipe size, Connection size	DN 32, DN 20, DN 32

Scenario 1	Winter Heating
Flow (Component, Safety)	**136.08 kg/h**, 272.2 kg/h
Pressure (Entering, Pressure drop, Leaving)	103.4 kPa, 25.9 kPa, 77.6 kPa
Temperature (Entering, Change, Leaving)	120.9°C, -4.2°C, 116.7°C
Component total pressure drop	25.9 kPa
Component	**25.86 kPa**
Other	**0 kPa**
Component total back pressure	0 kPa
Back pressure summary	
ST-18 (Vertical lift)	0 kPa
Drip trap flow summary	
SPIPE-10 (Pipe, Steam)	0 kPa
SPIPE-12 (Pipe, Steam)	0 kPa
SPIPE-14 (Pipe, Steam)	0 kPa
SPIPE-26 (Pipe, Steam)	0 kPa
SPIPE-43 (Pipe, Steam)	0 kPa
SPIPE-8 (Pipe, Steam)	0 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

ST-19	
Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**2**
Vertical lift	**0 m**
Automatic selection	**Yes**
Manufacturer, Model	SPIRAX SARCO, FT-15
Length, Width, Height, Weight	157 mm, 119 mm, 146 mm, 4.2 kg
Pressure rating	103.4 kPa
Body construction (Selection, Actual)	**All**, Cast Iron
Inlet pipe size, Outlet pipe size, Connection size	DN 32, DN 20, DN 32

Scenario 1	Winter Heating
Flow (Component, Safety)	**136.08 kg/h**, 272.2 kg/h
Pressure (Entering, Pressure drop, Leaving)	103.4 kPa, 25.9 kPa, 77.6 kPa
Temperature (Entering, Change, Leaving)	120.9°C, -4.2°C, 116.7°C
Component total pressure drop	25.9 kPa
Component	**25.86 kPa**
Other	**0 kPa**
Component total back pressure	0 kPa
Back pressure summary	
ST-19 (Vertical lift)	0 kPa

Drip trap flow summary	
SPIPE-10 (Pipe, Steam)	0 kPa
SPIPE-12 (Pipe, Steam)	0 kPa
SPIPE-14 (Pipe, Steam)	0 kPa
SPIPE-27 (Pipe, Steam)	0 kPa
SPIPE-45 (Pipe, Steam)	0 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

ST-20

Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**2**
Vertical lift	**0 m**
Automatic selection	**Yes**
Manufacturer, Model	SPIRAX SARCO, FT-15
Length, Width, Height, Weight	157 mm, 119 mm, 146 mm, 4.2 kg
Pressure rating	103.4 kPa
Body construction (Selection, Actual)	**All**, Cast Iron
Inlet pipe size, Outlet pipe size, Connection size	DN 32, DN 20, DN 32

Scenario 1	Winter Heating
Flow (Component, Safety)	**136.08 kg/h**, 272.2 kg/h
Pressure (Entering, Pressure drop, Leaving)	103.4 kPa, 25.9 kPa, 77.6 kPa
Temperature (Entering, Change, Leaving)	120.9°C, -4.2°C, 116.7°C
Component total pressure drop	25.9 kPa
Component	**25.86 kPa**
Other	**0 kPa**
Component total back pressure	0 kPa
Back pressure summary	
ST-20 (Vertical lift)	0 kPa
Drip trap flow summary	
SPIPE-12 (Pipe, Steam)	0 kPa
SPIPE-14 (Pipe, Steam)	0 kPa
SPIPE-28 (Pipe, Steam)	0 kPa
SPIPE-47 (Pipe, Steam)	0 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

ST-21

Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**2**
Vertical lift	**0 m**
Automatic selection	**Yes**
Manufacturer, Model	SPIRAX SARCO, FT-15
Length, Width, Height, Weight	157 mm, 119 mm, 146 mm, 4.2 kg
Pressure rating	103.4 kPa
Body construction (Selection, Actual)	**All**, Cast Iron
Inlet pipe size, Outlet pipe size, Connection size	DN 32, DN 20, DN 32

Scenario 1	Winter Heating
Flow (Component, Safety)	**136.08 kg/h**, 272.2 kg/h

Pressure (Entering, Pressure drop, Leaving)	103.4 kPa, 25.9 kPa, 77.6 kPa
Temperature (Entering, Change, Leaving)	120.9°C, -4.2°C, 116.7°C
Component total pressure drop	25.9 kPa
Component	**25.86 kPa**
Other	**0 kPa**
Component total back pressure	0 kPa
Back pressure summary	
ST-21 (Vertical lift)	0 kPa
Drip trap flow summary	
SPIPE-14 (Pipe, Steam)	0 kPa
SPIPE-29 (Pipe, Steam)	0 kPa
SPIPE-49 (Pipe, Steam)	0 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

ST-22

Location, Classification	**(Blank)**, **New Equipment**
Flow safety factor	**2**
Vertical lift	**0 m**
Automatic selection	**Yes**
Manufacturer, Model	SPIRAX SARCO, FT14-10
Length, Width, Height, Weight	269 mm, 269 mm, 239 mm, 17.5 kg
Pressure rating	999.7 kPa
Body construction (Selection, Actual)	**All**, Cast Iron
Inlet pipe size, Outlet pipe size, Connection size	DN 40, DN 20, DN 40

Scenario 1	Winter Heating
Flow (Component, Safety)	**136.08 kg/h**, 272.2 kg/h
Pressure (Entering, Pressure drop, Leaving)	689.5 kPa, 172.4 kPa, 517.1 kPa
Temperature (Entering, Change, Leaving)	169.9°C, -9.9°C, 160°C
Component total pressure drop	172.4 kPa
Component	**172.37 kPa**
Other	**0 kPa**
Component total back pressure	0 kPa
Back pressure summary	
ST-22 (Vertical lift)	0 kPa
Drip trap flow summary	
SPIPE-1 (Pipe, Steam)	0 kPa
SPIPE-242 (Pipe, Steam)	0 kPa
SPIPE-258 (Pipe, Steam)	0 kPa

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

Terminal Unit, Single Duct Group

TBG-1

Location	SPC-1
Fluid type, Total volume	Water, **378.54 l**
Component list	Quantity

Scenario 1	Winter Heating
Usage	Heating

Load portion	**100%**
Total heating load	218680 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	17.8°C, 9.2°C, 29.5%, 27.3 kJ/kg
Target leaving air (Dry bulb)	29.4°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	29.4°C, 14.1°C, 14.6%, 39.1 kJ/kg
Airflow (Total, Space)	0 l/s, 15574 l/s
Maximum component total internal static pressure	162 Pa
Box	**74.7 Pa**
Coil	**87.1 Pa**
Other	**0 Pa**
Maximum component total downstream static pressure	50 Pa
Downstream (calculated)	**49.8 Pa**
Other	**0 Pa**
Maximum component downstream static pressure summary	
DUCT-1 (Duct)	0 Pa
SPC-1 (Supply Diffuser)	25 Pa
SPC-1 (Supply Balancing Damper)	25 Pa
Target temperature (Change, Leaving)	**-16.67°C**, 65.6°C
Temperature (Entering, Change, Leaving)	82.2°C, -16.7°C, 65.6°C
Target flow portion	**100%**
Total flow	3.22 l/s
Thermodynamic factor	4077 W·s/l·°C
Maximum component total head loss	23.9 kPa
Component	**5.98 kPa**
Balancing valve	**8.97 kPa**
Control valve	**8.97 kPa**
Other	**0 kPa**

Scenario 2	Summer Cooling
Usage	Reheat
Load portion	**100%**
Total heating load	0 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	11.1°C, 9.7°C, 83.6%, 28.5 kJ/kg
Target leaving air (Dry bulb)	11.1°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	11.1°C, 9.7°C, 83.6%, 28.5 kJ/kg
Airflow (Total, Space)	0 l/s, 25957 l/s
Maximum component total internal static pressure	162 Pa
Box	**74.7 Pa**
Coil	**87.1 Pa**
Other	**0 Pa**
Maximum component total downstream static pressure	50 Pa
Downstream (calculated)	**49.8 Pa**
Other	**0 Pa**
Maximum component downstream static pressure summary	
DUCT-1 (Duct)	0 Pa
SPC-1 (Supply Diffuser)	25 Pa
SPC-1 (Supply Balancing Damper)	25 Pa
Target temperature (Change, Leaving)	**-16.67°C**, ?°C
Temperature (Entering, Change, Leaving)	?°C, 0°C, ?°C
Target flow portion	**100%**
Total flow	0 l/s
Thermodynamic factor	4181 W·s/l·°C
Maximum component total head loss	23.9 kPa
Component	**5.98 kPa**
Balancing valve	**8.97 kPa**
Control valve	**8.97 kPa**
Other	**0 kPa**

Scenario 3	Economizer
Usage	Reheat
Load portion	**100%**
Total heating load	0 W

Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	11.1°C, 6.1°C, 46.4%, 20.7 kJ/kg
Target leaving air (Dry bulb)	11.1°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	11.1°C, 6.1°C, 46.4%, 20.7 kJ/kg
Airflow (Total, Space)	0 l/s, 25957 l/s
Maximum component total internal static pressure	162 Pa
Box	**74.7 Pa**
Coil	**87.1 Pa**
Other	**0 Pa**
Maximum component total downstream static pressure	50 Pa
Downstream (calculated)	**49.8 Pa**
Other	**0 Pa**
Maximum component downstream static pressure summary	
DUCT-1 (Duct)	0 Pa
SPC-1 (Supply Diffuser)	25 Pa
SPC-1 (Supply Balancing Damper)	25 Pa
Target temperature (Change, Leaving)	**-16.67°C**, ?°C
Temperature (Entering, Change, Leaving)	?°C, 0°C, ?°C
Target flow portion	**100%**
Total flow	0 l/s
Thermodynamic factor	4181 W·s/l·°C
Maximum component total head loss	23.9 kPa
Component	**5.98 kPa**
Balancing valve	**8.97 kPa**
Control valve	**8.97 kPa**
Other	**0 kPa**

TBG-2	
Location	SPC-2
Fluid type, Total volume	Water, **378.54 l**
Component list	Quantity
Scenario 1	Winter Heating
Usage	Heating
Load portion	**100%**
Total heating load	261060 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	15.7°C, 8.2°C, 33.8%, 25.2 kJ/kg
Target leaving air (Dry bulb)	29.4°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	29.4°C, 14.1°C, 14.7%, 39.1 kJ/kg
Airflow (Total, Space)	0 l/s, 15574 l/s
Maximum component total internal static pressure	162 Pa
Box	**74.7 Pa**
Coil	**87.1 Pa**
Other	**0 Pa**
Maximum component total downstream static pressure	50 Pa
Downstream (calculated)	**49.8 Pa**
Other	**0 Pa**
Maximum component downstream static pressure summary	
DUCT-74 (Duct)	0 Pa
SPC-2 (Supply Diffuser)	25 Pa
SPC-2 (Supply Balancing Damper)	25 Pa
Target temperature (Change, Leaving)	**-16.67°C**, 65.6°C
Temperature (Entering, Change, Leaving)	82.2°C, -16.7°C, 65.6°C
Target flow portion	**100%**
Total flow	3.84 l/s
Thermodynamic factor	4077 W·s/l·°C
Maximum component total head loss	23.9 kPa
Component	**5.98 kPa**
Balancing valve	**8.97 kPa**
Control valve	**8.97 kPa**
Other	**0 kPa**
Scenario 2	Summer Cooling

Usage	Reheat
Load portion	**100%**
Total heating load	0 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	11.1°C, 9.7°C, 83.6%, 28.5 kJ/kg
Target leaving air (Dry bulb)	11.1°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	11.1°C, 9.7°C, 83.6%, 28.5 kJ/kg
Airflow (Total, Space)	0 l/s, 25957 l/s
Maximum component total internal static pressure	162 Pa
Box	**74.7 Pa**
Coil	**87.1 Pa**
Other	**0 Pa**
Maximum component total downstream static pressure	50 Pa
Downstream (calculated)	**49.8 Pa**
Other	**0 Pa**
Maximum component downstream static pressure summary	
DUCT-74 (Duct)	0 Pa
SPC-2 (Supply Diffuser)	25 Pa
SPC-2 (Supply Balancing Damper)	25 Pa
Target temperature (Change, Leaving)	**-16.67°C**, ?°C
Temperature (Entering, Change, Leaving)	?°C, 0°C, ?°C
Target flow portion	**100%**
Total flow	0 l/s
Thermodynamic factor	4181 W·s/l·°C
Maximum component total head loss	23.9 kPa
Component	**5.98 kPa**
Balancing valve	**8.97 kPa**
Control valve	**8.97 kPa**
Other	**0 kPa**

Scenario 3	Economizer
Usage	Reheat
Load portion	**100%**
Total heating load	0 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	11.1°C, 6.1°C, 46.4%, 20.7 kJ/kg
Target leaving air (Dry bulb)	11.1°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	11.1°C, 6.1°C, 46.4%, 20.7 kJ/kg
Airflow (Total, Space)	0 l/s, 25957 l/s
Maximum component total internal static pressure	162 Pa
Box	**74.7 Pa**
Coil	**87.1 Pa**
Other	**0 Pa**
Maximum component total downstream static pressure	50 Pa
Downstream (calculated)	**49.8 Pa**
Other	**0 Pa**
Maximum component downstream static pressure summary	
DUCT-74 (Duct)	0 Pa
SPC-2 (Supply Diffuser)	25 Pa
SPC-2 (Supply Balancing Damper)	25 Pa
Target temperature (Change, Leaving)	**-16.67°C**, ?°C
Temperature (Entering, Change, Leaving)	?°C, 0°C, ?°C
Target flow portion	**100%**
Total flow	0 l/s
Thermodynamic factor	4181 W·s/l·°C
Maximum component total head loss	23.9 kPa
Component	**5.98 kPa**
Balancing valve	**8.97 kPa**
Control valve	**8.97 kPa**
Other	**0 kPa**

TBG-3	
Location	SPC-3
Fluid type, Total volume	Water, **378.54 l**

Component list	Quantity
Scenario 1	Winter Heating
Usage	Heating
Load portion	**100%**
Total heating load	330000 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	17.8°C, 9.2°C, 29.5%, 27.4 kJ/kg
Target leaving air (Dry bulb)	29.4°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	29.4°C, 14.1°C, 14.7%, 39.1 kJ/kg
Airflow (Total, Space)	0 l/s, 23503 l/s
Maximum component total internal static pressure	162 Pa
Box	**74.7 Pa**
Coil	**87.1 Pa**
Other	**0 Pa**
Maximum component total downstream static pressure	50 Pa
Downstream (calculated)	**49.8 Pa**
Other	**0 Pa**
Maximum component downstream static pressure summary	
DUCT-62 (Duct)	0 Pa
SPC-3 (Supply Diffuser)	25 Pa
SPC-3 (Supply Balancing Damper)	25 Pa
Target temperature (Change, Leaving)	**-16.67°C**, 65.6°C
Temperature (Entering, Change, Leaving)	82.2°C, -16.7°C, 65.6°C
Target flow portion	**100%**
Total flow	4.86 l/s
Thermodynamic factor	4077 W·s/l·°C
Maximum component total head loss	23.9 kPa
Component	**5.98 kPa**
Balancing valve	**8.97 kPa**
Control valve	**8.97 kPa**
Other	**0 kPa**
Scenario 2	Summer Cooling
Usage	Reheat
Load portion	**100%**
Total heating load	53820 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 9.2°C, 90%, 27.4 kJ/kg
Target leaving air (Dry bulb)	11.1°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	11.1°C, 9.7°C, 83.6%, 28.5 kJ/kg
Airflow (Total, Space)	0 l/s, 39172 l/s
Maximum component total internal static pressure	162 Pa
Box	**74.7 Pa**
Coil	**87.1 Pa**
Other	**0 Pa**
Maximum component total downstream static pressure	50 Pa
Downstream (calculated)	**49.8 Pa**
Other	**0 Pa**
Maximum component downstream static pressure summary	
DUCT-62 (Duct)	0 Pa
SPC-3 (Supply Diffuser)	25 Pa
SPC-3 (Supply Balancing Damper)	25 Pa
Target temperature (Change, Leaving)	**-16.67°C**, ?°C
Temperature (Entering, Change, Leaving)	?°C, -16.7°C, ?°C
Target flow portion	**100%**
Total flow	0.77 l/s
Thermodynamic factor	4181 W·s/l·°C
Maximum component total head loss	23.9 kPa
Component	**5.98 kPa**
Balancing valve	**8.97 kPa**
Control valve	**8.97 kPa**
Other	**0 kPa**
Scenario 3	Economizer

Usage	Reheat
Load portion	**100%**
Total heating load	54080 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Target leaving air (Dry bulb)	11.1°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	11.1°C, 6.1°C, 46.4%, 20.7 kJ/kg
Airflow (Total, Space)	0 l/s, 39172 l/s
Maximum component total internal static pressure	162 Pa
Box	**74.7 Pa**
Coil	**87.1 Pa**
Other	**0 Pa**
Maximum component total downstream static pressure	50 Pa
Downstream (calculated)	**49.8 Pa**
Other	**0 Pa**
Maximum component downstream static pressure summary	
DUCT-62 (Duct)	0 Pa
SPC-3 (Supply Diffuser)	25 Pa
SPC-3 (Supply Balancing Damper)	25 Pa
Target temperature (Change, Leaving)	**-16.67°C**, ?°C
Temperature (Entering, Change, Leaving)	?°C, -16.7°C, ?°C
Target flow portion	**100%**
Total flow	0.78 l/s
Thermodynamic factor	4181 W·s/l·°C
Maximum component total head loss	23.9 kPa
Component	**5.98 kPa**
Balancing valve	**8.97 kPa**
Control valve	**8.97 kPa**
Other	**0 kPa**

TBG-4	
Location	SPC-4
Fluid type, Total volume	Water, **378.54 l**
Component list	Quantity
Scenario 1	Winter Heating
Usage	Heating
Load portion	**100%**
Total heating load	330000 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	17.8°C, 9.2°C, 29.5%, 27.4 kJ/kg
Target leaving air (Dry bulb)	29.4°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	29.4°C, 14.1°C, 14.7%, 39.1 kJ/kg
Airflow (Total, Space)	0 l/s, 23503 l/s
Maximum component total internal static pressure	162 Pa
Box	**74.7 Pa**
Coil	**87.1 Pa**
Other	**0 Pa**
Maximum component total downstream static pressure	50 Pa
Downstream (calculated)	**49.8 Pa**
Other	**0 Pa**
Maximum component downstream static pressure summary	
DUCT-50 (Duct)	0 Pa
SPC-4 (Supply Diffuser)	25 Pa
SPC-4 (Supply Balancing Damper)	25 Pa
Target temperature (Change, Leaving)	**-16.67°C**, 65.6°C
Temperature (Entering, Change, Leaving)	82.2°C, -16.7°C, 65.6°C
Target flow portion	**100%**
Total flow	4.86 l/s
Thermodynamic factor	4077 W·s/l·°C
Maximum component total head loss	23.9 kPa
Component	**5.98 kPa**

Balancing valve	**8.97 kPa**
Control valve	**8.97 kPa**
Other	**0 kPa**

Scenario 2	Summer Cooling
Usage	Reheat
Load portion	**100%**
Total heating load	53820 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 9.2°C, 90%, 27.4 kJ/kg
Target leaving air (Dry bulb)	11.1°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	11.1°C, 9.7°C, 83.6%, 28.5 kJ/kg
Airflow (Total, Space)	0 l/s, 39172 l/s
Maximum component total internal static pressure	162 Pa
Box	**74.7 Pa**
Coil	**87.1 Pa**
Other	**0 Pa**
Maximum component total downstream static pressure	50 Pa
Downstream (calculated)	**49.8 Pa**
Other	**0 Pa**
Maximum component downstream static pressure summary	
DUCT-50 (Duct)	0 Pa
SPC-4 (Supply Diffuser)	25 Pa
SPC-4 (Supply Balancing Damper)	25 Pa
Target temperature (Change, Leaving)	**-16.67°C**, ?°C
Temperature (Entering, Change, Leaving)	?°C, -16.7°C, ?°C
Target flow portion	**100%**
Total flow	0.77 l/s
Thermodynamic factor	4181 W·s/l·°C
Maximum component total head loss	23.9 kPa
Component	**5.98 kPa**
Balancing valve	**8.97 kPa**
Control valve	**8.97 kPa**
Other	**0 kPa**

Scenario 3	Economizer
Usage	Reheat
Load portion	**100%**
Total heating load	54080 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	10°C, 5.5°C, 50%, 19.6 kJ/kg
Target leaving air (Dry bulb)	11.1°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	11.1°C, 6.1°C, 46.4%, 20.7 kJ/kg
Airflow (Total, Space)	0 l/s, 39172 l/s
Maximum component total internal static pressure	162 Pa
Box	**74.7 Pa**
Coil	**87.1 Pa**
Other	**0 Pa**
Maximum component total downstream static pressure	50 Pa
Downstream (calculated)	**49.8 Pa**
Other	**0 Pa**
Maximum component downstream static pressure summary	
DUCT-50 (Duct)	0 Pa
SPC-4 (Supply Diffuser)	25 Pa
SPC-4 (Supply Balancing Damper)	25 Pa
Target temperature (Change, Leaving)	**-16.67°C**, ?°C
Temperature (Entering, Change, Leaving)	?°C, -16.7°C, ?°C
Target flow portion	**100%**
Total flow	0.78 l/s
Thermodynamic factor	4181 W·s/l·°C
Maximum component total head loss	23.9 kPa
Component	**5.98 kPa**
Balancing valve	**8.97 kPa**
Control valve	**8.97 kPa**
Other	**0 kPa**

TBG-5	
Location	SPC-5
Fluid type, Total volume	Water, **378.54 l**
Component list	Quantity
Scenario 1	Winter Heating
Usage	Heating
Load portion	**100%**
Total heating load	323470 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	15.1°C, 7.9°C, 35.2%, 24.5 kJ/kg
Target leaving air (Dry bulb)	29.4°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	29.4°C, 14.1°C, 14.7%, 39.1 kJ/kg
Airflow (Total, Space)	0 l/s, 18406 l/s
Maximum component total internal static pressure	162 Pa
Box	**74.7 Pa**
Coil	**87.1 Pa**
Other	**0 Pa**
Maximum component total downstream static pressure	50 Pa
Downstream (calculated)	**49.8 Pa**
Other	**0 Pa**
Maximum component downstream static pressure summary	
DUCT-38 (Duct)	0 Pa
SPC-5 (Supply Diffuser)	25 Pa
SPC-5 (Supply Balancing Damper)	25 Pa
Target temperature (Change, Leaving)	**-16.67°C**, 65.6°C
Temperature (Entering, Change, Leaving)	82.2°C, -16.7°C, 65.6°C
Target flow portion	**100%**
Total flow	4.76 l/s
Thermodynamic factor	4077 W·s/l·°C
Maximum component total head loss	23.9 kPa
Component	**5.98 kPa**
Balancing valve	**8.97 kPa**
Control valve	**8.97 kPa**
Other	**0 kPa**
Scenario 2	Summer Cooling
Usage	Reheat
Load portion	**100%**
Total heating load	0 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	11.1°C, 9.7°C, 83.6%, 28.5 kJ/kg
Target leaving air (Dry bulb)	11.1°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	11.1°C, 9.7°C, 83.6%, 28.5 kJ/kg
Airflow (Total, Space)	0 l/s, 30677 l/s
Maximum component total internal static pressure	162 Pa
Box	**74.7 Pa**
Coil	**87.1 Pa**
Other	**0 Pa**
Maximum component total downstream static pressure	50 Pa
Downstream (calculated)	**49.8 Pa**
Other	**0 Pa**
Maximum component downstream static pressure summary	
DUCT-38 (Duct)	0 Pa
SPC-5 (Supply Diffuser)	25 Pa
SPC-5 (Supply Balancing Damper)	25 Pa
Target temperature (Change, Leaving)	**-16.67°C**, ?°C
Temperature (Entering, Change, Leaving)	?°C, 0°C, ?°C
Target flow portion	**100%**
Total flow	0 l/s
Thermodynamic factor	4181 W·s/l·°C
Maximum component total head loss	23.9 kPa

Component	**5.98 kPa**
Balancing valve	**8.97 kPa**
Control valve	**8.97 kPa**
Other	**0 kPa**

Scenario 3	Economizer
Usage	Reheat
Load portion	**100%**
Total heating load	0 W
Entering air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	11.1°C, 6.1°C, 46.4%, 20.7 kJ/kg
Target leaving air (Dry bulb)	11.1°C
Leaving air (Dry bulb, Wet bulb, Relative humidity, Enthalpy)	11.1°C, 6.1°C, 46.4%, 20.7 kJ/kg
Airflow (Total, Space)	0 l/s, 30677 l/s
Maximum component total internal static pressure	162 Pa
Box	**74.7 Pa**
Coil	**87.1 Pa**
Other	**0 Pa**
Maximum component total downstream static pressure	50 Pa
Downstream (calculated)	**49.8 Pa**
Other	**0 Pa**
Maximum component downstream static pressure summary	
DUCT-38 (Duct)	0 Pa
SPC-5 (Supply Diffuser)	25 Pa
SPC-5 (Supply Balancing Damper)	25 Pa
Target temperature (Change, Leaving)	**-16.67°C**, ?°C
Temperature (Entering, Change, Leaving)	?°C, 0°C, ?°C
Target flow portion	**100%**
Total flow	0 l/s
Thermodynamic factor	4181 W·s/l·°C
Maximum component total head loss	23.9 kPa
Component	**5.98 kPa**
Balancing valve	**8.97 kPa**
Control valve	**8.97 kPa**
Other	**0 kPa**

Valve, Pressure-Reducing

PRV-1

Type, Location, Classification	**25P (Pilot-Operated)**, **PHOUSE**, **New Equipment**
Automatic selection	**Yes**
Manufacturer, Model	SPIRAX SARCO, 25P 2.5"
Length, Width, Height, Weight	345 mm, 345 mm, 709 mm, 71.2 kg
Pressure rating	861.8 kPa
Body construction (Selection, Actual)	**All**, Cast Iron
Pipe size, Connection size	DN 100, **DN 65**

Scenario 1	Winter Heating
Flow portion	67%
Flow (System, Component)	4169.4 kg/h, 2793.5 kg/h
Pressure (Entering, Leaving)	689.5 kPa, **206.84 kPa**

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

PRV-2

Type, Location, Classification	**25P (Pilot-Operated)**, **PHOUSE**, **New Equipment**
Automatic selection	**Yes**

Manufacturer, Model	SPIRAX SARCO, 25P 1.5"
Length, Width, Height, Weight	218 mm, 218 mm, 502 mm, 20 kg
Pressure rating	861.8 kPa
Body construction (Selection, Actual)	**All**, Cast Iron
Pipe size, Connection size	DN 80, **DN 40**

Scenario 1	Winter Heating
Flow portion	33%
Flow (System, Component)	4169.4 kg/h, 1375.9 kg/h
Pressure (Entering, Leaving)	689.5 kPa, **206.84 kPa**

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.

PRV-3

Type, Location, Classification	**25P (Pilot-Operated)**, **PHOUSE**, **New Equipment**
Automatic selection	**Yes**
Manufacturer, Model	SPIRAX SARCO, 25P 2"
Length, Width, Height, Weight	269 mm, 269 mm, 546 mm, 31.3 kg
Pressure rating	861.8 kPa
Body construction (Selection, Actual)	**All**, Cast Iron
Pipe size, Connection size	DN 80, **DN 50**

Scenario 1	Winter Heating
Flow portion	100%
Flow (System, Component)	1633 kg/h, 1633 kg/h
Pressure (Entering, Leaving)	689.5 kPa, **103.42 kPa**

Scenario 2	Summer Cooling

Scenario data not shown because the flow is 0.

Scenario 3	Economizer

Scenario data not shown because the flow is 0.