

Datasheet: 02037296
Project: Mc Donalds DK
Ronnede
Location:
Unit: Kitchen

Position: 729602
Side: 1 by 8
Date: 21.08.2024
Tender Position:



Clerk: M.Leis **Quantity:** 1 Piece
Construction: HYD S Outside installation, VDI
6022
Base Frame: reinforced 120 mm, 224,55 kg
Base Frame top unit: Without
Total Weight: 1114 kg
Thermal Decoupling: T2/TB4
CAL (R)@-400 Pa: 0,327 dm³/(sm²)
CAL (R)@+400 Pa: 0,403 dm³/(sm²)
Accessories: Roof overhang 100mm
Transport Steel Pipes
insulation strips

Cert. No: 02.03.036
Efficiency Factor Winter: 1,00
Efficiency Factor Summer: 1,00
Reference city: DK-Hvide Sande
Dry bulb temperature: 25,30
Wet bulb temperature: 20,20
Dew point temperature: 17,80



Software ALAG
[02.05.2024]
Version 1.23/4.2



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Unit: Kitchen **Tender Position:**



Technical Data Supply Air

Outside Metal Sheet:	mm	1,0 galvanized coated RAL 9002	Unit Size:	Special
Inside Metal Sheet:	mm	1,0 galvanized	Position of Access Side:	Left
Inside Floor Metal Sheet:	mm	53,0 galvanized	Position of Piping Side:	Left
Wall Thickness:	mm	53,0 galvanized	Insulation Roof/Floor:	Mineral Wool 99kg/m ³
Dimensions (L x W x H):	mm	3900x1046x825	Insulation Walls:	Mineral Wool 99kg/m ³
Air velocity:	m/sec	1,67	Class of Velocity:	V2
Weight:	kg	998	Design:	VDI 6022

(SUP) Air Inlet Section **GSC/GSC/GS** **Weight: 93 kg** **Length: 494 mm** **Pressure Drop: 20 Pa**

Connection:

Layer: Roof
Material: galvanized
Design: Damping Connection VDI6022
Potential Equalisation: Yes

Damper Size:

Assembly: Inside
Material: Aluminium
Design: Gear
Tightness: Class 2
Shaft Position: Inside
Actuator: Open/Close 24V
Dimensions (W x H x D): 687 x 314 x 115

Dimensions (W x H) 687 x 314

Grating: Without

Design: Access Door
Lockers: Lockers
Hinges: 3D-Hinges

Condensate Trough: RAL/V2A (AISI304)

Accessories

Item Number	Description	Weight
	Door locker	

Additional air duct components

1x	Straight section 762mm x 314mm x 700mm
1x	Straight section 762mm x 314mm 1000mm slanted with grid as suction side
1x	90°duct elbow 762mm x 314mm

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Tender Position:



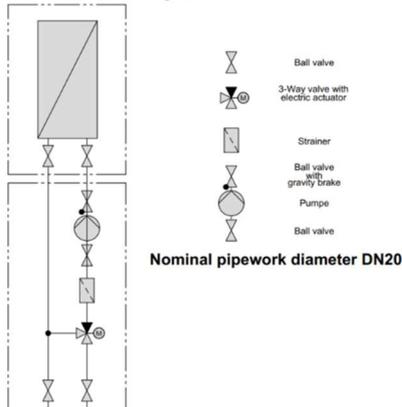
(SUP) Filter	GSC/GSC/GS	Weight: 76 kg	Length: 605 mm	Pressure Drop: 135 Pa
Brand:	Rox	Filter Maintenance:	Clamp Rail	
Spare Filter:	No	Frame:	V2A (AISI304)	
		Manometer:	DPA2500 with display	
1st Filter step				
Filter Type:	Bag Filter short	Energy Efficiency Class:	C	
Filter Class EN779:2012:	F7	Filter Surface:	m ²	6,5
Filter Class ISO16890:	ePM1 60%	Medium:	Glass Fibre	
ΔP Initial:	Pa 71			
ΔP End:	Pa 200			
Max. Pressure Drop:	Pa 250			
ΔP Dim:	Pa 135			
Type/Size/Quantity	Hi-Flo XLT 7/370 50+	592*592*370 mm	1 Piece	
	Hi-Flo XLT 7/370 50+	287*592*370 mm	1 Piece	
Design:	Access Door	Condensate Trough:	RAL/V2A (AISI304)	
Lockers:	Lockers	Condensate Drain:	Yes	
Hinges:	3D-Hinges			
Accessories				
Item Number	Description	Weight		
	Siphon SN			
	Door locker			

(SUP) Heat recovery **GSC/GS/GS** **Weight: 62 kg** **Length: 660 mm** **Pressure Drop: 0 Pa**
 Empty section for run around Coil system heat exchanger

Design: Fixed Panel

(SUP) Piping Chamber **GSC/GS/GS** **Weight: 42 kg** **Length: 425 mm** **Pressure Drop: 0 Pa**

System limit Air handling unit



Warm Water Control group.
 Piped according to the following scheme and piped to the outside on the operating side through a wide profile.
 Ball valve in DN 20 on the outside of the appliance on the supply and return lines.
 Pipe cross section DN20

- 2x Kugelhahn DN25 – 1"
- 2x Kugelhahn DN20 – 3/4"
- 1x Schmutzfänger DN20 – 3/4"
- 1x 3-Wege Ventil
- 1x Elektrischer Stellantrieb VA500C.1

Design: Access Panel

Lockers: Lockers

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Management System
 ISO 9001:2015
 www.tuv.com
 ID 0910083041

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 Ronnede
Location: **Date:** 21.08.2024
Unit: Kitchen **Tender Position:**



(SUP) Heater		GSC/GS/GS	Weight: 68 kg	Length: 445 mm	Pressure Drop: 49 Pa
Brand:	Rox		Type:	W / 27 / 701 / 3 R / 11 K / 2,9 Cu,9.5x0.50/Al-L1	
Pipes:	Copper/Aluminium		Weight Heat Exchanger:	kg	16
Fin:	Aluminium		Medium		
Collector:	Copper		Heat Transfer Medium:	Water glycol 34%	
Frame:	Galvanized Steel		Flow-Rate:	m³/h	1,43
Separation (A x B):	mm 22x25		Temp. In:	°C	50
Quantity Pipe Rows:	2		Temp. Out:	°C	30,00
Fin Distance:	mm 2,9		Charge:	l	5
Connections:	Straight		Pressure Drop:	kPa	12,2
Connection Inlet:	DN 25		Medium Velocity:	m/s	0,58
Connection Outlet:	DN 25		Air		
Finned height:	mm 675		Air Volume:	m³/h	4000
Finned width:	mm 701		Temp. In:	°C	-12,00
Pressure Stage:			Temp. Out:	°C	10,00
Freeze protection:	°C -20		Pressure Drop:	Pa	49
Frost Protection Support Frame:	Fixing eyelets		Air velocity:	m/s	2,4
			Surface Reserve:	%	10,31
			Capacity:	kW	29,62
Design:	Access Panel				
Lockers:	Lockers				



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Location: **Date:** 21.08.2024
Unit: Kitchen **Tender Position:**



(SUP) Cooler/Heater		GSC/GS/GS	Weight: 483 kg	Length: 230 mm	Pressure Drop: 95 Pa
Brand:	Rox		Type:	DV / 20 / 723 / 6 R / 10 K / 3.1 Cu,12x0.70/Al-L1	
Pipes:	Copper 9,5x0,5		Weight Heat Exchanger:	kg	26,1
Fin:	Aluminium		Medium		
Collector:	Copper		Refrigerant:	R32	
Frame:	Aluminium		Flow-Rate:	kg/h	357,4
Separation (A x B):	mm 22x25		Evaporation temperature:	°C	8,5
Quantity Pipe Rows:	6		Condensation temperature:	°C	45
Number of Circuits:	12		Charge:	l	7
Fin Distance:	mm 3,0		Pressure Drop:	kPa	103
Connections:	Straight		Air	Cooling	Heating
Connection Inlet:	2x 16mm		Air Volume:	m³/h	4000
Connection Outlet:	2x 22 mm		Temp. In:	°C	34
Finned height:	mm 600		Rel. Humidity In:	%	35
Finned width:	mm 743		Temp. Out:	°C	18,4
Freeze protection:	°C 0		Rel. Humidity out:	%	86,4
			Pressure Drop:	Pa	95
			Pressure Drop dry:	Pa	94
			Dehumidification:	kg/h	1
			Surface Reserve:	%	12,17
			Capacity:	kW	22,16
					18,85

Design: Access Panel **Condensate Trough:** RAL/V2A (AISI304)
Lockers: Lockers

Accessories

Item Number	Description	Weight
Heat Pump	2x Samsung AM 040DXMDNG	
EEV-Kit	2x Samsung MXD K 050AN	
	The heat pump will be mounted on the Roof of the Unit and will be delivered piped and pre-filled at the Rox factory.	

(SUP) Droplet Eliminator		GSC/GS/GS	Weight: 63 kg	Length: 475 mm	Pressure Drop: 18 Pa
Brand:	Rox		Guiding Rail:	V2A (AISI304)	
Material:	PPTV		Condensate Trough:	RAL/V2A (AISI304)	
Design:	Access Panel		Condensate Drain:	Yes	
Lockers:	Lockers				

Accessories

Item Number	Description	Weight
	Siphon SN	



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Unit: Kitchen **Tender Position:**



(SUP) Fan		GSC/GS/GS	Weight: 80 kg	Length: 370 mm	Pressure Drop: 0 Pa
Brand:		Rox	Construction:		Free Running
Fan Type:		1 x GKHM 355-CII.118.6FF IE Gen3	Drivetrain:		Motor in Airstream
SFP-Data with FC:	m³/s	1091	SFP-Class with FC:		SFP3
Air Volume:	m³/h	4000	Motor type:		EC
ΔP ext.:	Pa	300	Voltage / Frequency:	V/Hz	3~200-240 / 50/60
Dyn. Pressure Drop:	Pa	33	Nominal Power:	kW	2,77
Installation loss:	Pa	20	Nominal Current:	A	7,25
Static Pressure Drop:	Pa	650	Nominal Rotation Speed:	1/min	3115
Total Pressure Drop:	Pa	683	Frequency Converter:		Integrated
electrical Power Input:	kW	1,19 / P1	Nozzle Pressure Difference:	Pa	725,90
Reference Power Input:	kW	1,59	k-Factor:	m²s/h	115
Nominal Rotation Speed:	1/min	2311			
Maximum Rotation Speed:	1/min	3115			
Rotation Speed Spare:	%	25,12			
Total Efficiency:	%	62,90			
Static System Efficiency:	%	59,90			
Total Efficiency in Efficiency Optimum:	%	69			
Air Volume Measuring Point:		Air Volume Measuring Point with Pressure Sensor DPA 2500			
Total Sound Power level:	dB(A)	76,9			

f	125	250	500	1000	2000	4000	8000	Hz
Lw o	50	74	74	75	73	72	69	dB
Lw i	44	70	71	70	69	68	65	dB

Design: Access Door
Lockers: Lockers
Hinges: 3D-Hinges

Accessories

Item Number	Description	Weight
	Door locker	

Hints: The Installation losses of the fan are considered in the Fan Performances
 Designed for wet conditions
 Motor wired to Repair Switch

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(SUP) Air Outlet Section

GSC/GS/GS **Weight: 31 kg** **Length: 1 mm** **Pressure Drop: 15 Pa**

Connection:

Layer: Front Side
Material: galvanized
Design: Damping Connection
 VDI6022
Potential Equalisation: Yes
Dimensions (W x H) 881 x 360

Grating: Without

Design: Fixed Panel

Supply Air Acoustic Data

Supply Air Connector

Frequency f in Hz	125	250	500	1k	2k	4k	8k	Sum
Residue Sound Power in dB	49	73	73	74	72	71	68	80
Residue Sound Power in dB(A)	33	64	70	74	73	72	67	79

Outside Air Connector

Frequency f in Hz	125	250	500	1k	2k	4k	8k	Sum
Residue Sound Power in dB	33	55	55	54	47	47	46	60
Residue Sound Power in dB(A)	17	46	52	54	48	48	45	58

Surrounding Acoustic Emission (Casing Emission)

Wall Thickness: 53 mm

Frequency f in Hz	125	250	500	1k	2k	4k	8k	Sum
Residue Sound Power in dB	36	64	62	54	45	35	28	66
Residue Sound Power in dB(A)	20	56	58	54	46	36	27	61

The Acoustic Data refer only on the inside fan
 Possibly the Supply Air and Extract Air Data have to be added together



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Unit Type	NRVU	Construction of Unit	UVU
Non residential ventilation unit		Unidirectional ventilation unit	

Total unit characteristics:	
Type of HR:	None
Temperature ratio dry:	0,00 %
Highest External Leakage rate (+400Pa/-400Pa):	0,00 %
Highest Internal Leakage rate (250Pa):	0,00 %

SFPint:	123,19 [W/(m³/s)]
SFPint max. 2016:	250,00 [W/(m³/s)]
SFPint max. 2018:	230,00 [W/(m³/s)]



Supply air features	
Air Volume:	1,11 m ³ /s
ΔP ext:	300 Pa
ΔP s, add:	249 Pa
ΔP s, int:	104 Pa
Filter:	ePM1 60% (F7)
Filter pressure drop beginning:	71 Pa
Heat recovery pressure drop dry:	0 Pa
Fan pressure drop total:	663 Pa
Fan pressure drop dynamic:	33 Pa
Fan electric power input:	1,19 kW
Fan efficiency static:	59,90 %
SFPv:	929,12 [W/(m ³ /s)]

Hints	
Filter warn indication	The Filter warn indication is realized by a differential pressure manometer. According to the guideline 1253/2014/EU the filter monitoring has to be mounted onsite if it is not contained in the equipment.
Thermal Bypass	The required thermal bypass of the HRS according to the guideline 1253/2014/EU is realized by a bypass of the HR-System.
Drivetrain	If the unit is ordered and delivered without DDC, a governor or a cascade drive is provided to fulfil the requirements of the guideline 1253/2014/EU.
Disposal note	Further information under www.rox-online.de

