



GURCAN

ISTANBUL TUZLA ORG SAN 12.CAD NO:4 IS TTURKEY

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Customer	GURCAN	Date	4.01.2018
To the k. a. of	IMALAT	Our Offer	GR 32 N6
EVAP ISI SC3		IMALAT KODU:	32.412.135.6.500

DIRECT EXPANSION COIL - 123328_S_S 12T 4NR 500A 6P 2NC

Geometry	123328_S_S	Coil Length	500,0	mm	
Nr of Tubes per Row	12	Fin Pitch	6,00	mm	
Nr of Rows	4	Nr of Circuits	2		Tube Shape
					Circular
Capacity			1320		W
Sensible Capacity			1139		W
Latent Capacity			181		W
Sensible/Total Capacity Ratio			0,8629		
Quantity of Produced Water			0,28		kg/h
Exchange Surface			7,39		m ²
Global Exchange Coefficient			25		W kg/(m ² kJ)
DHML			7,24		kJ / kg
Fins Material / Tubes Material			Aluminium / Copper		
Fin Thickness			0,1200		mm
Coil Internal Volume			2,4		l
Tubes External Diameter			12,0		mm
Tubes Internal Diameter			11,3		mm
Number of skipped tube			0		

AIR SIDE

Atmospheric Pressure / Altitude	1,01 / 0,00	bar A / m
Volumetric Air Flow	2450,0	m ³ /h
Mass Air Flow	3388	kg/h
Face Velocity on the Coil	3,44	m/s
Inlet Air Density	1,38	kg/m ³
Inlet Air Temperature	-18,0	°C
Inlet Air Relative Humidity	100,00	%
Inlet Air Specific Humidity	0,80	g/kg AS
Inlet Air Enthalpy	-16,25	kJ / kg
Outlet Air Temperature	-19,2	°C
Outlet Air Relative Humidity	100,00	%
Outlet Air Specific Humidity	0,70	g/kg AS
Outlet Air Enthalpy	-17,66	kJ / kg
Pressure Drop	71	Pa
Partial Exchange Coefficient	69	W/(m ² K)
Fouling Factor	0,000000	(m ² K)/W

REFRIGERANT SIDE**Manifolds****Vertical****Out: 19x1 [3/4"]**

Fluid		R404A
Mass Fluid Flow / Mass velocity	36 / 50	kg/h / kg/(m ² s)
Fluid Velocity (Gaseous Phase / Liquid Phase)	3,48 / 0,04	m/s
Subcooling Degrees	0,0	K
Overheating Degrees	0,0	K
Evaporating Temperature - Middle	-25,0	°C
Condensing Temperature - Middle	15,0	°C
Fluid Pressure Drop	2,901294	kPa
Manifold Pressure Drop	0,245324	kPa
Total Pressure Drop Fluid Side	3,146618	kPa
Partial Exchange Coefficient	515	W/(m ² K)
Fouling Factor	0,000000	(m ² K)/W



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Customer	GURCAN	Date	4.01.2018
To the k. a. of	IMALAT	MODEL	GR 32 N9
EVAP ISI SC3		IMALAT KODU:	32.612.135.6.550

DIRECT EXPANSION COIL - 123328_S_S 12T 6NR 550A 6P 4NC

Geometry	123328_S_S	Coil Length	550,0 mm		
Nr of Tubes per Row	12	Fin Pitch	6,00 mm		
Nr of Rows	6	Nr of Circuits	4	Tube Shape	Circular
Capacity			1686		W
Sensible Capacity			1455		W
Latent Capacity			230		W
Sensible/Total Capacity Ratio			0,8634		
Quantity of Produced Water			0,35		kg/h
Exchange Surface			12,20		m ²
Global Exchange Coefficient			20		W kg/(m ² kJ)
DHML			7,03		kJ / kg
Fins Material / Tubes Material			Aluminium / Copper		
Fin Thickness			0,1200		mm
Coil Internal Volume			4,0		l
Tubes External Diameter			12,0		mm
Tubes Internal Diameter			11,3		mm
Number of skipped tube			0		

AIR SIDE

Atmospheric Pressure / Altitude	1,01 / 0,00	bar A / m
Volumetric Air Flow	2450,0	m ³ /h
Mass Air Flow	3388	kg/h
Face Velocity on the Coil	3,12	m/s
Inlet Air Density	1,38	kg/m ³
Inlet Air Temperature	-18,0	°C
Inlet Air Relative Humidity	100,00	%
Inlet Air Specific Humidity	0,80	g/kg AS
Inlet Air Enthalpy	-16,25	kJ / kg
Outlet Air Temperature	-19,5	°C
Outlet Air Relative Humidity	100,00	%
Outlet Air Specific Humidity	0,70	g/kg AS
Outlet Air Enthalpy	-18,05	kJ / kg
Pressure Drop	91	Pa
Partial Exchange Coefficient	65	W/(m ² K)
Fouling Factor	0,000000	(m ² K)/W

REFRIGERANT SIDE**Manifolds****Vertical****Out: 28x1 [1 1/8"]**

Fluid		R404A
Mass Fluid Flow / Mass velocity	46 / 32	kg/h / kg/(m ² s)
Fluid Velocity (Gaseous Phase / Liquid Phase)	2,11 / 0,02	m/s
Subcooling Degrees	3,0	K
Overheating Degrees	3,0	K
Evaporating Temperature - Middle	-25,0	°C
Condensing Temperature - Middle	18,0	°C
Fluid Pressure Drop	1,133822	kPa
Manifold Pressure Drop	0,05941584	kPa
Total Pressure Drop Fluid Side	1,193238	kPa
Partial Exchange Coefficient	339	W/(m ² K)
Fouling Factor	0,000000	(m ² K)/W



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Customer	GURCAN	Date	4.01.2018
To the k. a. of	IMALAT	MODEL	GR 32 N12
EVAP SC3		IMALAT KODU	:32.412.235.900

DIRECT EXPANSION COIL - 123328_S_S 12T 4NR 900A 6P 4NC

Geometry	123328_S_S	Coil Length	900,0 mm		
Nr of Tubes per Row	12	Fin Pitch	6,00 mm		
Nr of Rows	4	Nr of Circuits	4	Tube Shape	Circular
Capacity				2318	W
Sensible Capacity				1998	W
Latent Capacity				321	W
Sensible/Total Capacity Ratio				0,8616	
Quantity of Produced Water				0,49	kg/h
Exchange Surface				13,31	m ²
Global Exchange Coefficient				24	W kg/(m ² kJ)
DHML				7,34	kJ / kg
Fins Material / Tubes Material				Aluminium / Copper	
Fin Thickness				0,1200	mm
Coil Internal Volume				4,3	l
Tubes External Diameter				12,0	mm
Tubes Internal Diameter				11,3	mm
Number of skipped tube				0	

AIR SIDE

Atmospheric Pressure / Altitude	1,01 / 0,00	bar A / m
Volumetric Air Flow	4905,0	m ³ /h
Mass Air Flow	6783	kg/h
Face Velocity on the Coil	3,82	m/s
Inlet Air Density	1,38	kg/m ³
Inlet Air Temperature	-18,0	°C
Inlet Air Relative Humidity	100,00	%
Inlet Air Specific Humidity	0,80	g/kg AS
Inlet Air Enthalpy	-16,25	kJ / kg
Outlet Air Temperature	-19,1	°C
Outlet Air Relative Humidity	100,00	%
Outlet Air Specific Humidity	0,70	g/kg AS
Outlet Air Enthalpy	-17,48	kJ / kg
Pressure Drop	86	Pa
Partial Exchange Coefficient	74	W/(m ² K)
Fouling Factor	0,000000	(m ² K)/W

REFRIGERANT SIDE**Manifolds****Vertical****Out: 28x1 [1 1/8"]**

Fluid		R404A
Mass Fluid Flow / Mass velocity	63 / 44	kg/h / kg/(m ² s)
Fluid Velocity (Gaseous Phase / Liquid Phase)	2,94 / 0,03	m/s
Subcooling Degrees	3,0	K
Overheating Degrees	3,0	K
Evaporating Temperature - Middle	-25,0	°C
Condensing Temperature - Middle	18,0	°C
Fluid Pressure Drop	1,746003	kPa
Manifold Pressure Drop	0,108834	kPa
Total Pressure Drop Fluid Side	1,854837	kPa
Partial Exchange Coefficient	441	W/(m ² K)
Fouling Factor	0,000000	(m ² K)/W



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Customer	GURCAN	Date	5.01.2018
To the k. a. of	IMALAT	Our Offer	GR 32 N15
EVAP ISI SC3		IMALAT KODU	:32.612.335.6.1000

DIRECT EXPANSION COIL - 123328_S_S 12T 6NR 1000A 6P 6NC

Geometry	123328_S_S	Coil Length	1000,0	mm
Nr of Tubes per Row	12	Fin Pitch	6,00	mm
Nr of Rows	6	Nr of Circuits	6	Tube Shape
				Circular
Capacity			3602	W
Sensible Capacity			3114	W
Latent Capacity			488	W
Sensible/Total Capacity Ratio			0,8646	
Quantity of Produced Water			0,74	kg/h
Exchange Surface			22,18	m ²
Global Exchange Coefficient			23	W kg/(m ² kJ)
DHML			6,95	kJ / kg
Fins Material / Tubes Material			Aluminium / Copper	
Fin Thickness			0,1200	mm
Coil Internal Volume			7,2	l
Tubes External Diameter			12,0	mm
Tubes Internal Diameter			11,3	mm
Number of skipped tube			0	

AIR SIDE

Atmospheric Pressure / Altitude	1,01 / 0,00	bar A / m
Volumetric Air Flow	4835,0	m ³ /h
Mass Air Flow	6686	kg/h
Face Velocity on the Coil	3,39	m/s
Inlet Air Density	1,38	kg/m ³
Inlet Air Temperature	-18,0	°C
Inlet Air Relative Humidity	100,00	%
Inlet Air Specific Humidity	0,80	g/kg AS
Inlet Air Enthalpy	-16,25	kJ / kg
Outlet Air Temperature	-19,7	°C
Outlet Air Relative Humidity	100,00	%
Outlet Air Specific Humidity	0,60	g/kg AS
Outlet Air Enthalpy	-18,20	kJ / kg
Pressure Drop	105	Pa
Partial Exchange Coefficient	69	W/(m ² K)
Fouling Factor	0,000000	(m ² K)/W

REFRIGERANT SIDE

Fluid		R404A
Mass Fluid Flow / Mass velocity	98 / 45	kg/h / kg/(m ² s)
Fluid Velocity (Gaseous Phase / Liquid Phase)	3,11 / 0,03	m/s
Subcooling Degrees	3,0	K
Overheating Degrees	3,0	K
Evaporating Temperature - Middle	-25,0	°C
Condensing Temperature - Middle	18,0	°C
Fluid Pressure Drop	1,996051	kPa
Manifold Pressure Drop	0	kPa
Total Pressure Drop Fluid Side	1,996051	kPa
Partial Exchange Coefficient	463	W/(m ² K)
Fouling Factor	0,000000	(m ² K)/W



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Customer	GURCAN	Date	14.02.2018
To the k. a. of	IMALAT	Our Offer	GR 32 N18
Your Reference	TASHAROKIYAH	PRODUCTION CODE	32.612.335.6.1400

DIRECT EXPANSION COIL - 133227_C_G 12T 6NR 1400A 6P 6NC

Geometry	133227_C_G	Coil Length	1400 mm		
Nr of Tubes per Row	12	Fin Pitch	6,00 mm		
Nr of Rows	6	Nr of Circuits	6	Tube Shape	Circular
Capacity			6369		W
Sensible Capacity			5529		W
Latent Capacity			839		W
Sensible/Total Capacity Ratio			0,8682		
Quantity of Produced Water			1,30		kg/h
Exchange Surface			30,51		m ²
Global Exchange Coefficient			31		W kg/(m ² kJ)
DHML			6,70		kJ / kg
Fins Material / Tubes Material			Aluminium / Copper		
Fin Thickness			0,2000		mm
Coil Internal Volume			6,2		l
Tubes External Diameter			9,54		mm
Tubes Internal Diameter			8,84		mm
Number of skipped tube			0		

AIR SIDE

Atmospheric Pressure / Altitude	1,01 / 0,00	bar A / m
Volumetric Air Flow	6975,0	m ³ /h
Mass Air Flow	9645	kg/h
Face Velocity on the Coil	3,60	m/s
Inlet Air Density	1,38	kg/m ³
Inlet Air Temperature	-18,0	°C
Inlet Air Relative Humidity	100,00	%
Inlet Air Specific Humidity	0,80	g/kg AS
Inlet Air Enthalpy	-16,25	kJ / kg
Outlet Air Temperature	-20,0	°C
Outlet Air Relative Humidity	100,00	%
Outlet Air Specific Humidity	0,60	g/kg AS
Outlet Air Enthalpy	-18,64	kJ / kg
Pressure Drop	125	Pa
Partial Exchange Coefficient	78	W/(m ² K)
Fouling Factor	0,000000	(m ² K)/W

REFRIGERANT SIDE

Fluid		R404A
Mass Fluid Flow / Mass velocity	168 / 127	kg/h / kg/(m ² s)
Fluid Velocity (Gaseous Phase / Liquid Phase)	11,52 / 0,12	m/s
Subcooling Degrees	2,6	K
Overheating Degrees	3,0	K
Evaporating Temperature - Middle	-25,0	°C
Condensing Temperature - Middle	15,0	°C
Fluid Pressure Drop	24,43	kPa
Manifold Pressure Drop	0	kPa
Total Pressure Drop Fluid Side	24,43	kPa
Partial Exchange Coefficient	2131	W/(m ² K)
Fouling Factor	0,000000	(m ² K)/W



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Customer	GURCAN	Date	14.02.2018
To the k. a. of	IMALAT	Our Offer	GR 32 N21
Your Reference	TASHAROKIYAH	Description	PRODUT ION CODE 32..614.340.6.1600

DIRECT EXPANSION COIL - 133227_C_G 14T 6NR 1600A 6P 7NC

Geometry	133227_C_G	Coil Length	1600 mm		
Nr of Tubes per Row	14	Fin Pitch	6,00 mm		
Nr of Rows	6	Nr of Circuits	7	Tube Shape	Circular
Capacity			8266		W
Sensible Capacity			7170		W
Latent Capacity			1096		W
Sensible/Total Capacity Ratio			0,8674		
Quantity of Produced Water			1,69		kg/h
Exchange Surface			40,68		m ²
Global Exchange Coefficient			30		W kg/(m ² kJ)
DHML			6,83		kJ / kg
Fins Material / Tubes Material			Aluminium / Copper		
Fin Thickness			0,2000		mm
Coil Internal Volume			8,2		l
Tubes External Diameter			9,54		mm
Tubes Internal Diameter			8,84		mm
Number of skipped tube			0		

AIR SIDE

Atmospheric Pressure / Altitude		1,01 / 0,00		bar A / m
Volumetric Air Flow		9990,0		m ³ /h
Mass Air Flow		13814		kg/h
Face Velocity on the Coil		3,87		m/s
Inlet Air Density		1,38		kg/m ³
Inlet Air Temperature		-18,0		°C
Inlet Air Relative Humidity		100,00		%
Inlet Air Specific Humidity		0,80		g/kg AS
Inlet Air Enthalpy		-16,25		kJ / kg
Outlet Air Temperature		-19,9		°C
Outlet Air Relative Humidity		100,00		%
Outlet Air Specific Humidity		0,60		g/kg AS
Outlet Air Enthalpy		-18,42		kJ / kg
Pressure Drop		141		Pa
Partial Exchange Coefficient		81		W/(m ² K)
Fouling Factor		0,000000		(m ² K)/W

REFRIGERANT SIDE

Fluid				R404A
Mass Fluid Flow / Mass velocity		218 / 141		kg/h / kg/(m ² s)
Fluid Velocity (Gaseous Phase / Liquid Phase)		13,90 / 0,14		m/s
Subcooling Degrees		2,6		K
Overheating Degrees		3,0		K
Evaporating Temperature - Middle		-25,0		°C
Condensing Temperature - Middle		15,0		°C
Fluid Pressure Drop		32,54		kPa
Manifold Pressure Drop		0		kPa
Total Pressure Drop Fluid Side		32,54		kPa
Partial Exchange Coefficient		2444		W/(m ² K)
Fouling Factor		0,000000		(m ² K)/W



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Customer	GURCAN	Date	14.02.2018
To the k. a. of	IMALAT	Our Offer	
Your Reference		Description	GR32 N24 3X450

DIRECT EXPANSION COIL - 133227_C_G 16T 6NR 1700A 6P 8NC

Geometry	133227_C_G	Coil Length	1700	mm	
Nr of Tubes per Row	16	Fin Pitch	6,00	mm	
Nr of Rows	6	Nr of Circuits	8		Tube Shape
					Circular
Capacity			11856		W
Sensible Capacity			10291		W
Latent Capacity			1566		W
Sensible/Total Capacity Ratio			0,8680		
Quantity of Produced Water			2,42		kg/h
Exchange Surface			49,40		m ²
Global Exchange Coefficient			34		W kg/(m ² kJ)
DHML			7,06		kJ / kg
Fins Material / Tubes Material			Aluminium / Copper		
Fin Thickness			0,2000		mm
Coil Internal Volume			10,0		l
Tubes External Diameter			9,54		mm
Tubes Internal Diameter			8,84		mm
Number of skipped tube			0		

AIR SIDE

Atmospheric Pressure / Altitude	1,01 / 0,00	bar A / m
Volumetric Air Flow	13600,0	m ³ /h
Mass Air Flow	18806	kg/h
Face Velocity on the Coil	4,34	m/s
Inlet Air Density	1,38	kg/m ³
Inlet Air Temperature	-18,0	°C
Inlet Air Relative Humidity	100,00	%
Inlet Air Specific Humidity	0,80	g/kg AS
Inlet Air Enthalpy	-16,25	kJ / kg
Outlet Air Temperature	-20,0	°C
Outlet Air Relative Humidity	100,00	%
Outlet Air Specific Humidity	0,60	g/kg AS
Outlet Air Enthalpy	-18,53	kJ / kg
Pressure Drop	171	Pa
Partial Exchange Coefficient	87	W/(m ² K)
Fouling Factor	0,000000	(m ² K)/W

REFRIGERANT SIDE

Manifolds

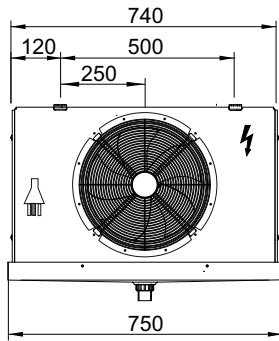
Vertical

Out: 8 x 28x1 [1 1/8"]

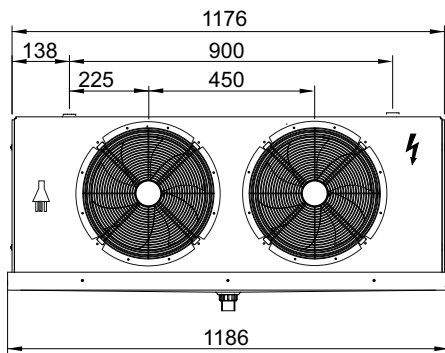
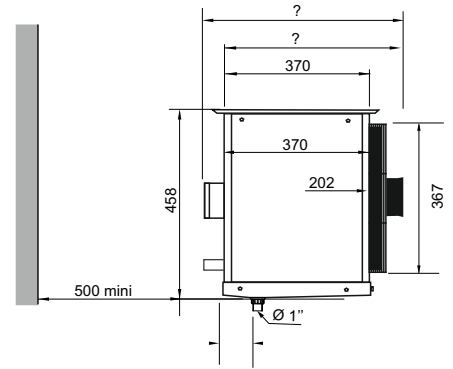
Fluid		R404A
Mass Fluid Flow / Mass velocity	312 / 177	kg/h / kg/(m ² s)
Fluid Velocity (Gaseous Phase / Liquid Phase)	15,80 / 0,16	m/s
Subcooling Degrees	3,0	K
Overheating Degrees	3,0	K
Evaporating Temperature - Dew	-25,0	°C
Condensing Temperature - Middle	15,0	°C
Fluid Pressure Drop	54,53	kPa
Manifold Pressure Drop	0,03337722	kPa
Total Pressure Drop Fluid Side	54,57	kPa
Partial Exchange Coefficient	2673	W/(m ² K)
Fouling Factor	0,000000	(m ² K)/W

DIMENSIONS

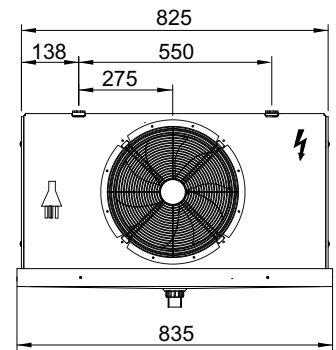
Ø 350 mm



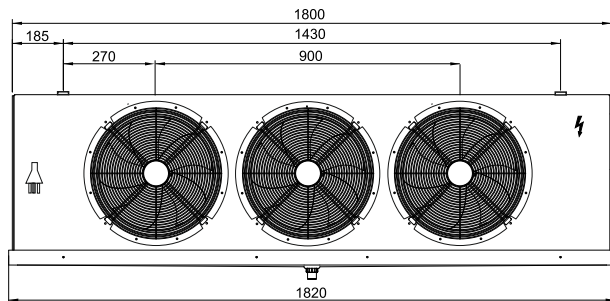
GR 32 N6



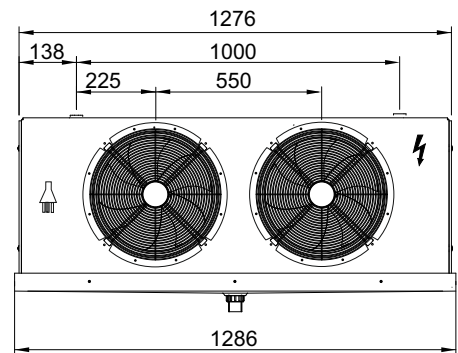
GR 32 N12



GR 32 N9

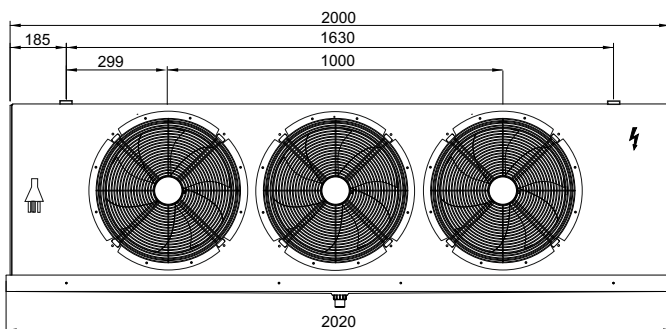


GR 32 N18



GR 32 N15

Ø 400 mm



GR 32 N21

