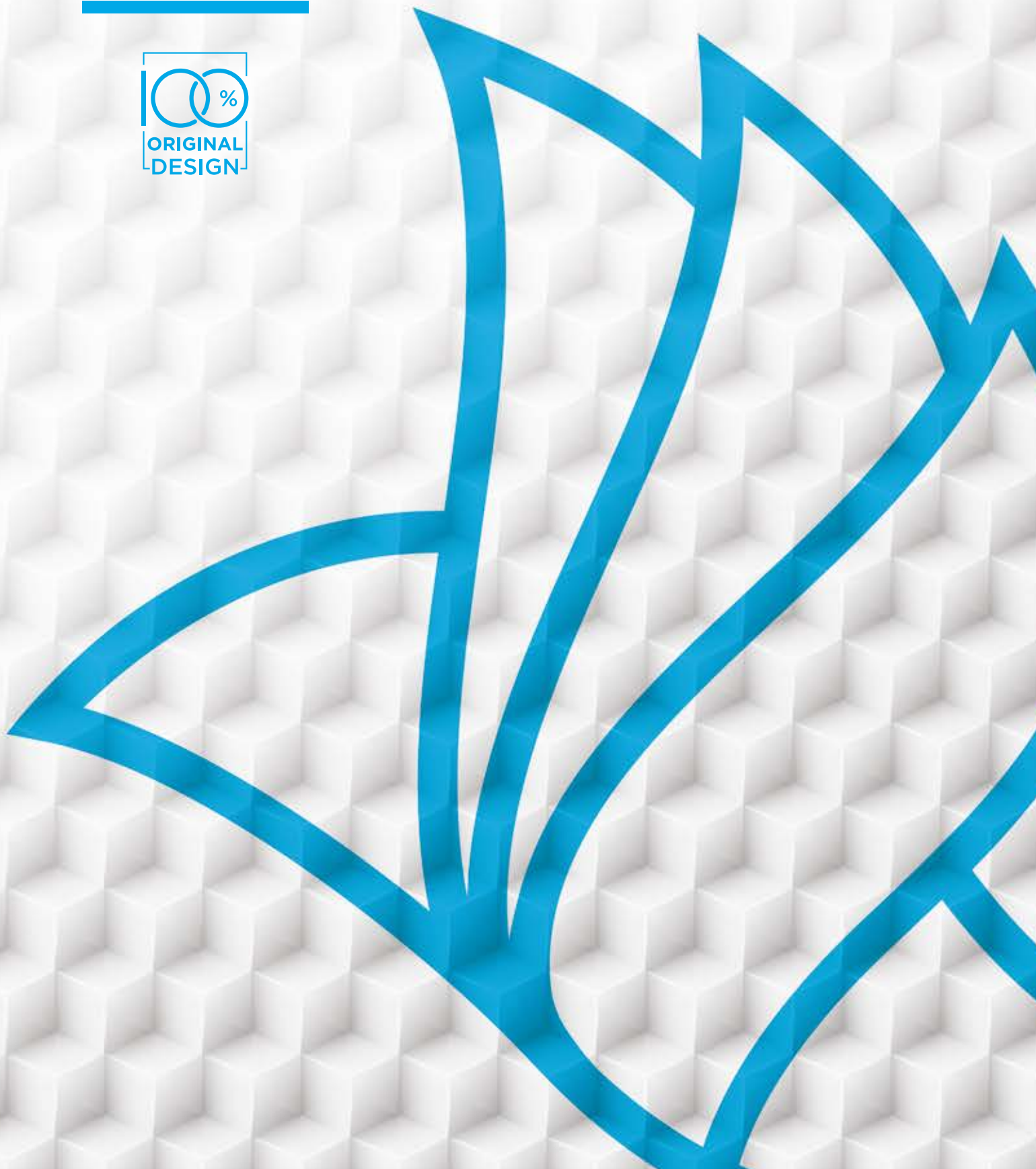




2018



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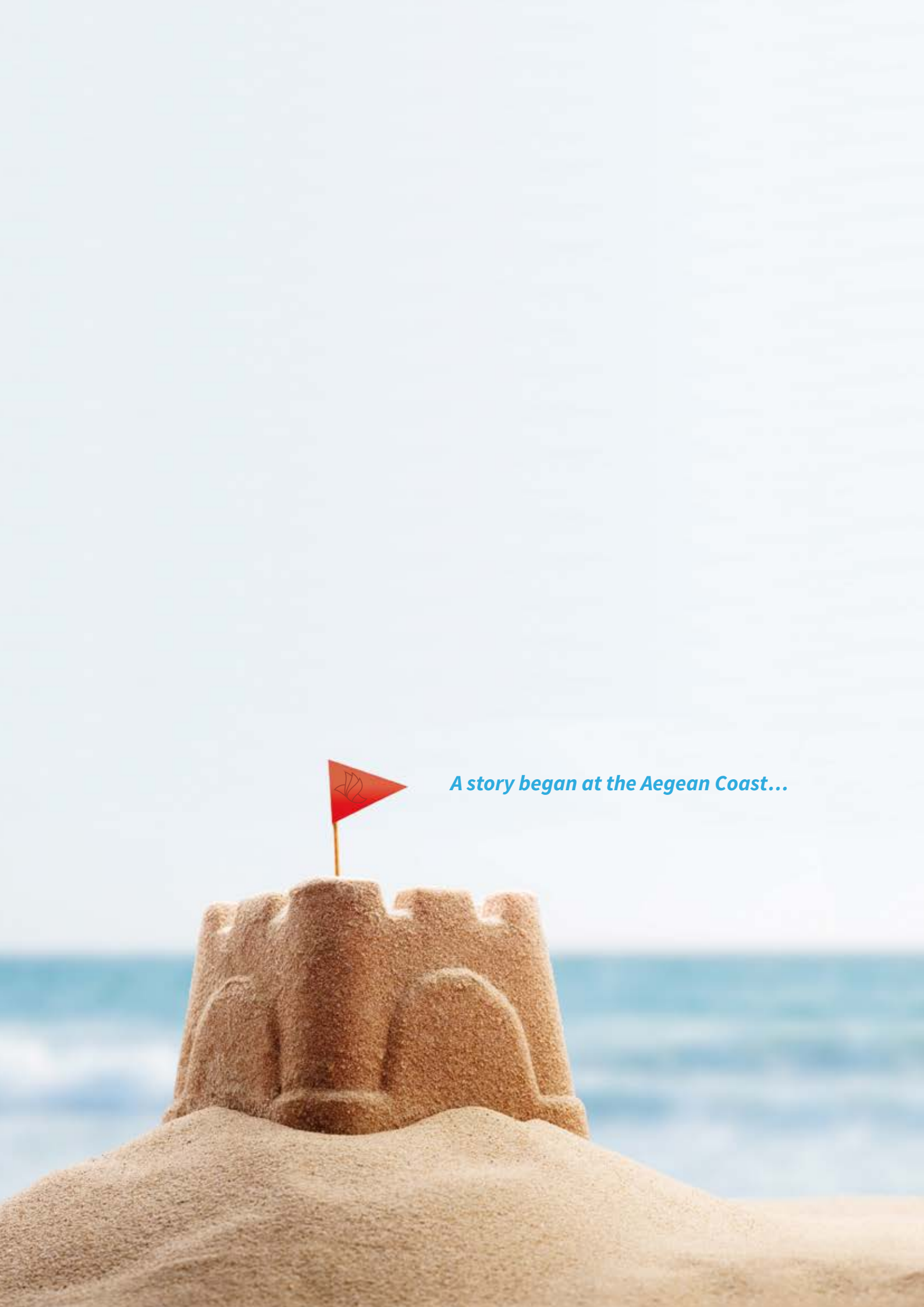
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A story began at the Aegean Coast...

Bringing the offshore breeze of the Aegean to the world...



└ İmbat for us...

Is the wind by the wing of a bird, sustaining the cool of the Aegean Sea and the intimacy of the Aegean people...

1991... The year that the breeze of İmbat starts to blow... We are full of excitement. We are taking the first steps on the sector with the knowledge we have and the work force we trust. As the years go by, we are still as excited as the first day. We travel the whole city, the whole country and the World. In 30 countries, everywhere we travel, we reflect the spirit of İmbat.

Here comes an experienced young adult at the age of 26; arbiter in its field, profound and confiding...



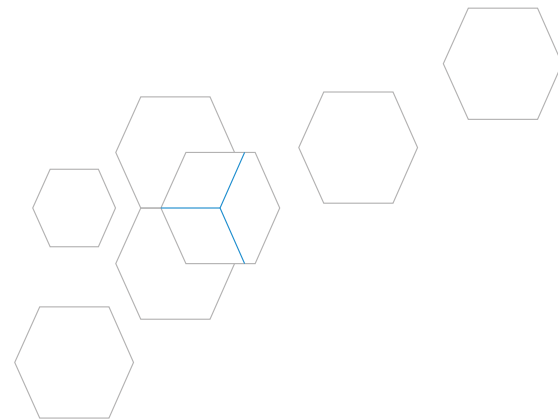


RIGHT SOLUTIONS AND INNOVATIVE IDEAS

- The key for the real efficiency is to find suitable solutions and to use the technology right. İmbat's R&D department's mission is beyond the utilization of technology; the mission is improving the technology. İmbat combines the design with innovation and creates unique product specifications with its innovative solutions.

The main principle at the basis of İmbat's products is "the right solutions for effective utilization". Improving its R&D and P&D activities, İmbat produces energy-saving and high performance products. Possessing a wide range of products for various utilization areas, İmbat creates difference with project-specific resolutions and original designs.

İmbat proves reliability and quality of its designs with the certifications given by the international authorities.

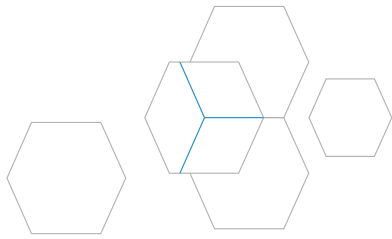




WE CAN DO SOMETHING FOR THE WORLD!

"Creating a value for the World" is the philosophy İmbat stands for. Thus, while working to obtain the persistence of healthy and comfortable life, we care about the environment and how our resources are not exactly sustainable. We work on efficiency-oriented systems and design products with low energy consumption and high efficiency. We save so much energy every year and therefore contribute to the 'green' culture, we are happy to say that we do our part for a better future. We believe that with the right actions and intentions, any one of us can do something good for the World.

İMBAT'S EFFECT *ON LIFE*



What we offer are; trust, relief, freshness and comfort... Wherever we touch, becomes livable; goods preserve their natural freshness. The effect of İmbat is not visible but perceptible.

Having a wide product range, İmbat is able to offer products suitable for different projects, improving efficiency. İmbat provides solutions for cinemas, hospitals, factories, malls, residential and commercial buildings, swimming pools, system rooms, sterile and hygienic rooms and/or areas with high heat, dust and vibration with its air conditioning and refrigeration systems.

RESIDENTIAL AND COMMERCIAL BUILDINGS



**Water Chillers/Fancoil/Air Handling Unit
Heat Recovery**

HOTELS



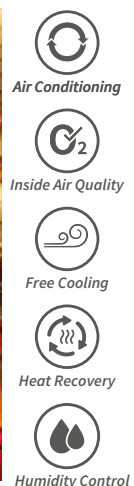
**Rooftop/Water Chiller/Fancoil/Air Handling Unit
Heat Recovery**

SHOPPING MALLS



**Rooftop/Air Handling Unit/Water Chiller
Heat Recovery**

CULTURAL AREAS



**Rooftop/Water Chiller/Fancoil/Air Handling Unit
Heat Recovery/Close Control Unit**

FOOD INDUSTRY

-  Air Conditioning
-  Hygiene
-  Cold Storage
-  Process Cooling



Rooftop/Air Handling Unit/Water Chiller
Cold Storage Unit

FACTORIES

-  Air Conditioning
-  Free Cooling
-  Heat Recovery
-  Process Cooling



Air Handling Unit/Rooftop/Water Chiller
Cooling Tower

HOSPITALS

-  Air Conditioning
-  Hygiene
-  Free Cooling
-  Heat Recovery



Air Handling Unit/Water Chiller/Fancoil
Hygienic Air Conditioners

LABORATORIES

-  Air Conditioning
-  Indoor Air Quality
-  Close Control
-  Humidity Control



Close Control Unit

DATA CENTERS

-  Air Conditioning
-  Close Control
-  Free Cooling
-  Humidity Control



Close Control Unit/Water Chiller/Air Conditioner

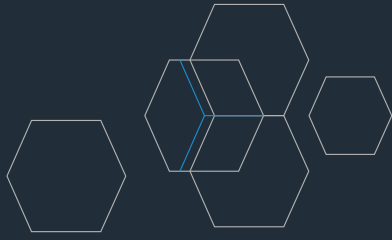
INDOOR SWIMMING POOLS

-  Air Conditioning
-  Indoor Air Quality
-  Heat Recovery
-  Humidity Control



Swimming Pool Dehumidification Unit

İMBAT'S EFFECT ON SECTOR



İmbat brought countless innovations to the sector while trying to create efficiency orientated, project specific solutions for our customers. İmbat, with its improved specifications, offers high performance products and unique solutions suited for different projects.



HIGH EFFICIENCY

İmbat products are developed with the aim of providing the maximum level of energy efficiency. İmbat uses wide heat transfer area on the condenser whereas the evaporator is kept standard. By using mostly heat recovery, initial investment cost and the operating costs are reduced. Minimum consumption of energy is accomplished by using highly efficient and technologic equipments.

DUAL SKIN INSULATED PANEL BODY

The body of our rooftop units is insulated with a dual skin panel of 70kg/m³ density rockwool between two galvanized and electrostatically painted plate sheets. This type of body structure offers better isolation and fire resistance.



THERMODYNAMIC HEAT RECOVERY

Our rooftop units with mixed air provides heat recovery by transmitting all the exhaust air over the condenser. Since there is a lower temperature air flow than the actual air temperature passed through the condenser, the condensation occurs at lower temperatures, which leads to efficiency on compressors and energy saving up to %30 .



ASYMMETRIC COOLING

Is the technology of using multiple compressors with different capacities and uses all İmbat units with scroll compressors. In asymmetric compressor application, the efficiency of the unit working under partial loads is increased. Each compressor provides a different capacity output, therefore the number of engagement for each compressor is reduced which in turn leads to longer life span. The most efficient capacity output for any amount of partial load is provided via the asymmetric compressor application

INDOOR AIR QUALITY

İmbat air conditioning units evacuate the saturated inside air and intakes the fresh air already filtered, thus increases the indoor air quality. By lowering the CO2 emission, it prevents pollution.

ROOFTOP AIR CONDITIONER

STANDARD



kW Capacity Range



Refrigerant Fluid



Scroll Compressor



Heating



Cooling



Wired Remote Control



Asymmetric Cooling



Dual Skin Panel Body



Cooling+Heatpump



Cooling+Heatpump+Gas Burner



Thermodynamic Heat Recovery



Filter Alarm

OPTIONAL

- Rotary and plate heat recovery
- Variable air flow with AC plug or EC fan models
- Electronic expansion valve
- Smoke detector
- Hot water, steam and electric heating
- Gas fired heater
- Automatic adjustment of fresh air ratio between %0-100
- Thermal and enthalpic free cooling (economizer)
- CO2 indoor air control
- Condenser fan speed control
- Three steps filtration (G4+F7+F9)
- Digital and inverter scroll compressors
- Hydrophilic/epoxy coating on evaporator and condenser surface
- Protection mesh for condenser surface
- Water-cooled models
- Ability to operate at high ambient temperatures
- Low sound levels
- Custom designs for special projects and flexible production



WHAT MAKES **IMBAT** DIFFERENT

THERMODYNAMIC HEAT RECOVERY

Our units with mixed air provides heat recovery by transmitting all the exhaust air over the condenser. Since there is a lower temperature air flow than the actual air temperature passed through the condenser, the condensation occurs at lower temperatures, which leads to efficiency on compressors and energy saving up to %30.

ASYMMETRIC COOLING

Is the technology of using multiple compressors with different capacities. In asymmetric compressor application, the efficiency of the unit working under partial loads is increased. Each compressor provides a different capacity output, therefore the number of engagement for each compressor is reduced which in turn leads to longer life span. The most efficient capacity output for any amount of partial load is provided via the asymmetric compressor application.





THERMAL OR ENTHALPIC FREE COOLING (ECONOMIZER)

On condition that the outside temperature and humidity are suitable conditions, our units make climatization by using %100 fresh air without cooling, thus saves energy.

INDOOR AIR QUALITY

Indoor air quality is preserved by high efficient filters, filter alarm and CO2 indoor air quality sensor. Controlling the pollution rate of the return air, the CO2 indoor air quality sensor works integrated with the economizer and saves energy by taking in fresh air at deficient amount.

GAS FIRED HEATING

With the rooftop air conditioners with gas burner, independent heating is possible without the necessity of any connection to a central system, even at the lowest climates. Maximum efficiency is obtained with the burner capable of working 17-55 mbar range and aluminated steel pipe heat exchanger.

ENERGY EFFICIENCY

İmbat rooftop air conditioners are both environment-friendly and economic thanks to the high performance with low energy consumption. All our models are at A and B rate energy class. Saving energy, İmbat rooftop air conditioners provides efficiency both for the place they are used and for the World.



WHAT MAKES İMBAT DIFFERENT

DUAL SKIN INSULATED PANEL BODY

The body of our units is insulated with a dual skin panel of 70kg/m³ density rockwool between two galvanized and electrostatically painted plate sheets. With this type of body structure offers better insulation and fire resistance.



MAIN SPECIFICATIONS

MODEL HSE...		61	91	131	162	182	
Cooling							
Cooling capacity	kW	19.15	26.5	38.8	48.45	57.0	
Power input	kW	6.43	8.95	13.43	16.76	19.59	
EER		2.98	2.96	2.89	2.89	2.91	
Eurovent energy class		B	B	B	B	B	
Heating-Heat Pump							
Heating capacity	kW	19.85	27.8	41.0	51.0	56.4	
Power input	kW	6.15	8.1	11.42	14.21	16.59	
COP		3.23	3.43	3.59	3.59	3.4	
Eurovent energy class		B	A	A	A	B	
Compressor							
Refrigerant		R-410a					
Number of compressor	pcs	1	1	1	2	2	
Compressor type		Scroll					
Compressor connection type		Standard	Standard	Standard	Standard	Asymmetric	
Cooling circuit	pcs	1	1	1	1	1	
Capacity control	step	1	1	1	2	3	
Ventilator							
MIN.	Fan type	Radial					
	Air flow rate	m³ / h	2660	3900	5850	7300	8000
	Static pressure	Pa	250	250	300	300	300
	Number of fan	pcs	1	1	1	1	1
STND.	Air flow rate	m³ / h	3350	4900	7400	9200	10000
	Static pressure	Pa	250	250	300	300	300
	Number of fan	pcs	1	1	1	1	1
MAX.	Air flow rate	m³ / h	3800	5500	8300	10300	11400
	Static pressure	Pa	250	250	300	300	300
	Number of fan	pcs	1	1	1	1	1
Aspirator							
MIN.	Fan type	Radial					
	Air flow rate	m³ / h	2660	3900	5850	7300	8000
	Static pressure	Pa	200	200	200	200	200
	Number of fan	pcs	1	1	1	1	1
STND.	Air flow rate	m³ / h	3350	4900	7400	9200	10000
	Static pressure	Pa	200	200	200	200	200
	Number of fan	pcs	1	1	1	1	1
MAX	Air flow rate	m³ / h	3800	5500	8300	10300	11400
	Static pressure	Pa	200	200	200	200	200
	Number of fan	pcs	1	1	1	1	1
*Heating-Gas Burner							
Capacity	kW	25	43	55	55	63	
Gas flow rate	Nm³ / h	2,61	4,48	5,73	5,73	6,57	
Burner pressure (Min/Max)	m/bar	17/55					
Power input	w	550	550	1100	1100	1100	
*Heating- Electric Resistance							
Capacity (ΔT=15 C)	kW	18	25	38	47	51	
Capacity (ΔT=30 C)	kW	36	52	78	97	106	
*Heating- Hot Water							
Capacity	kW	47,7	61,1	94,1	118,9	125,4	
Hot water fluctuation		80/60					
*Heating-Steam							
Capacity	kW	56,3	69,8	109,13	142,36	149,25	
Steam pressure	bar	3					
Condenser							
Fan type		Axial					
Number of fan	pcs	2	2	2	2	2	
Air flow rate (Cooling)	m³ / h	14620	13200	14800	34200	34000	
Sound Pressure Level							
Sound Pressure Level / 1mt distance	dB(A)	83	83	90	86	95	
Sound Pressure Level / 10mt distance	dB(A)	65	65	72	68	76	
Dimensions							
Width	mm	2100	2100	2150	2360	2360	
Length	mm	1750	1750	1800	2176	2176	
Height	mm	1900	1900	2054	2346	2346	

For units at different capacities, on different operation conditions and for more information, please apply to Imbat.

* Optional.

MAIN SPECIFICATIONS

MODEL HSE...		222	252	272	302	352
Cooling						
Cooling capacity	kW	67.0	78.7	82.3	90.9	113.17
Power input	kW	23.18	26.68	28.48	31.67	39.85
EER		2.89	2.95	2.89	2.87	2.84
Eurovent energy class		B	B	B	B	B
Heating-Heat Pump						
Heating capacity	kW	69.2	81.6	85.7	94.4	115.34
Power input	kW	19.55	22.3	23.22	25.58	31.95
COP		3.54	3.66	3.69	3.69	3.61
Eurovent energy class		A	A	A	A	A
Compressor						
Refrigerant	R-410a					
Number of compressor	pcs	2	2	2	2	2
Compressor type	Scroll					
Compressor connection type	Standard	Asymmetric	Asymmetric	Asymmetric	Standard	Asymmetric
Cooling circuit	pcs	1	1	1	1	1
Capacity control	step	3	3	3	2	3
Vantilator						
MIN.	Fan type	Radial				
	Air flow rate	m³ / h	9900	11550	12100	13500
	Static pressure	Pa	300	300	300	350
STND.	Number of fan	pcs	1	1	1	1
	Air flow rate	m³ / h	12400	14500	15200	17000
	Static pressure	Pa	300	300	300	350
MAX.	Number of fan	pcs	1	1	1	1
	Air flow rate	m³ / h	14000	16300	17100	19100
	Static pressure	Pa	300	300	300	350
	Number of fan	pcs	1	1	1	1
Aspirator						
MIN.	Fan type	Radial				
	Air flow rate	m³ / h	9900	11550	12100	13500
	Static pressure	Pa	250	250	250	250
STND.	Number of fan	pcs	1	1	1	1
	Air flow rate	m³ / h	12400	14500	15200	17000
	Static pressure	Pa	250	250	250	250
MAX.	Number of fan	pcs	1	1	1	1
	Air flow rate	m³ / h	14000	16300	17100	19100
	Static pressure	Pa	250	250	250	250
	Number of fan	pcs	1	1	1	1
*Heating-Gas Burner						
Capacity	kW	63	86	86	100	121
Gas flow rate	Nm³ / h	6,57	8,96	8,96	10,42	12,61
Burner pressure (Min/Max)	m/bar	17/55				
Power input	w	1100	1100	1100	1100	1650
*Heating- Electric Resistance						
Capacity (ΔT=15 C)	kW	64	74	78	87	101
Capacity (ΔT=30 C)	kW	131	153	160	179	209
*Heating- Hot Water						
Capacity	kW	143,5	207	213,2	228,6	250,8
Hot water fluctuation		80/60	80/60	80/60	80/60	80/60
*Heating-Steam						
Capacity	kW	167,98	241,47	247,76	263,05	284,9
Steam pressure	bar	3				
Condenser						
Fan type	Axial					
Number of fan	pcs	2	2	2	2	2
Air flow rate (Cooling)	m³ / h	32800	33000	35800	34600	31000
Sound Pressure Level						
Sound Pressure Level / 1mt distance	dB(A)	95	92	92	92	89
Sound Pressure Level / 10mt distance	dB(A)	76	74	74	74	71
Dimensions						
Width	mm	2360	2104	2104	2104	2104
Length	mm	2176	3543	3543	3543	3543
Height	mm	2346	2487	2487	2487	2487

For units at different capacities, on different operation conditions and for more information, please apply to İmbat.

* Optional.

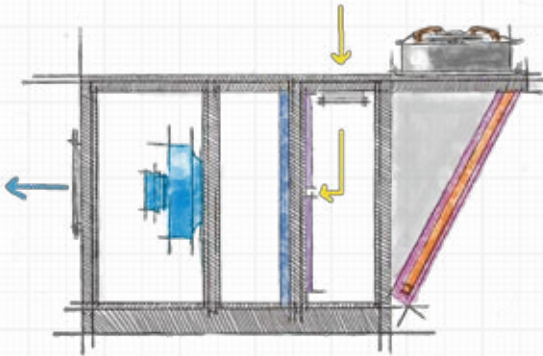
MAIN SPECIFICATIONS

MODEL HSE...		402	452	464	502	544	602	604	704	804	904	1004	
Cooling													
Cooling capacity	kW	136,0	151,9	157,2	177,0	180,4	219,0	206,4	238,2	272,0	303,8	354,0	
Compressor power	kW	32,6	36,3	37,6	42,1	43,1	52,0	49,4	56,9	65,1	72,6	84,2	
EER		2,8	2,8	2,8	2,9	2,8	2,7	2,7	2,8	2,9	3,0	3,0	
Heating-Heat Pump													
Heating capacity	kW	135,6	150,8	157,0	175,4	180,1	217,2	206,4	236,8	271,1	301,5	350,8	
Compressor power	kW	28,2	31,3	32,2	36,1	37,3	44,6	42,8	49,0	56,3	62,5	72,2	
COP		3,1	3,2	3,3	3,3	3,2	3,1	3,1	3,1	3,4	3,4	3,5	
Compressor													
Refrigerant		R-410a											
Number of compressor	pcs	2	2	4	2	4	2	4	4	4	4	4	
Compressor type		Scroll											
Compressor connection type		Asymmetric	Asymmetric	Asymmetric	Asymmetric	Asymmetric	Standard	Standard	Asymmetric	Asymmetric	Asymmetric	Asymmetric	
Cooling circuit	pcs	1	1	2	1	2	1	2	2	2	2	2	
Capacity control	step	3	3	6	3	6	2	4	6	6	6	6	
Vantilator													
MIN.	Fan type		Radial										
	Air flow rate	m³ / h	17960	19950	20500	23500	24200	28000	27000	31500	36000	40000	46500
	Static pressure	Pa	350	350	350	350	350	350	350	350	400	400	400
	Number of fan	pcs	1	1	1	1	1	2	2	2	2	2	2
STND.	Fan motor power	kW	7,5	7,5	11	11	11	7,5	5,5	7,5	11	11	11
	Air flow rate	m³ / h	22600	25000	25750	29250	30500	35000	34000	40000	45000	50000	58500
	Static pressure	Pa	350	350	350	350	350	350	350	350	400	400	400
	Number of fan	pcs	1	1	1	1	1	2	2	2	2	2	2
MAX.	Fan motor power	kW	11	11	11	15	15	7,5	7,5	11	11	11	15
	Air flow rate	m³ / h	25500	28200	29000	33000	34200	40000	38200	44500	50800	56500	65650
	Static pressure	Pa	350	350	350	350	350	350	350	350	400	400	400
	Number of fan	pcs	1	1	1	1	1	2	2	2	2	2	2
	Fan motor power	kW	11	11	15	15	15	11	11	11	11	15	18,5
Aspirator													
MIN.	Fan type		Radial										
	Air flow rate	m³ / h	17960	19950	20500	23500	24200	28000	27000	31500	36000	40000	46500
	Static pressure	Pa	300	300	300	300	300	300	300	300	350	350	350
	Number of fan	pcs	1	1	1	1	1	2	2	2	2	2	2
STND.	Fan motor power	kW	5,5	7,5	7,5	11	11	5,5	4	5,5	7,5	7,5	11
	Air flow rate	m³ / h	22600	25000	25750	29250	30500	35000	34000	40000	45000	50000	58500
	Static pressure	Pa	300	300	300	300	300	300	300	300	350	350	350
	Number of fan	pcs	1	1	1	1	1	2	2	2	2	2	2
MAX.	Fan motor power	kW	7,5	7,5	7,5	11	11	5,5	5,5	7,5	11	7,5	11
	Air flow rate	m³ / h	25500	28200	29000	33000	34200	40000	38200	44500	50800	56500	65650
	Static pressure	Pa	300	300	300	300	300	300	300	300	350	350	350
	Number of fan	pcs	1	1	1	1	1	2	2	2	2	2	2
	Fan motor power	kW	7,5	11	11	11	15	7,5	7,5	7,5	11	11	15
*Heating-Gas Burner													
Capacity	kW	121	141	141	172	172	200	200	214	242	298	344	
Gas flow rate	Nm³ / h	12,61	14,69	14,69	17,92	17,92	20,84	20,84	22,3	25,22	31,06	35,84	
Burner pressure (Min/Max)	m/bar	17/55											
Power input	w	1650	2200	2200	2200	2200	2200	2200	3300	3300	4400	4400	
*Heating- Electric Resistance													
Capacity (ΔT=15 C)	kW	116	128	132	149	156	179	174	204	230	255	298	
Capacity (ΔT=30 C)	kW	238	263	271	308	321	369	358	421	474	526	616	
*Heating- Hot Water													
Capacity	kW	332	354,1	360,7	390,5	400,6	549,5	539,4	597,5	717,8	767,2	845	
Hot water fluctuation	°C	80/60											
*Heating-Steam													
Capacity	kW	391,6	413,8	420,3	450,0	460,0	642,9	633,7	686,5	820,3	863,4	929,3	
Steam pressure	bar	3											
Condenser													
Fan type		Axial											
Number of fan	pcs	4	4	4	4	4	6	6	6	6	6	6	
Air flow rate (Cooling)	m³ / h	68400	67600	67200	66400	66000	94800	96000	93600	112800	111000	102000	
Fan motor power (Cooling)	kW	9,44	9,56	9,56	9,6	9,64	14,7	14,64	14,76	10,08	10,2	10,5	
Sound Pressure Level													
Sound Pressure Level/ 1mt distance	dB(A)	89,0	97,0	97,0	97,0	96,0	96,0	98,0	98,0	93,0	93,0	93,0	
Sound Pressure Level/ 10mt distance	dB(A)	71,0	79,0	79,0	79,0	77,0	77,0	79,0	79,0	75,0	75,0	75,0	
Dimensions													
Width	mm	2410	2410	2410	2410	2410	2410	2410	2410	2410	2410	2410	
Length	mm	4910	4910	4910	4910	4910	7900	7900	7900	7900	8500	8500	
Height	mm	2600	2600	2600	2600	2600	2680	2680	2680	2680	2680	2680	

Cooling Conditions rated at indoor Temperature: 27°C DB - indoor RH: %50, Outside Temperature: 35°C DB - Fresh Air Ratio: %30. Heat Pump Heating Conditions Rated at Indoor Temperature: 20°C DB, Outside Temperature: +7°C DB - Fresh Air Ratio: %30. Please contact Imbat for units at different capacities, on different operation conditions and for more information.

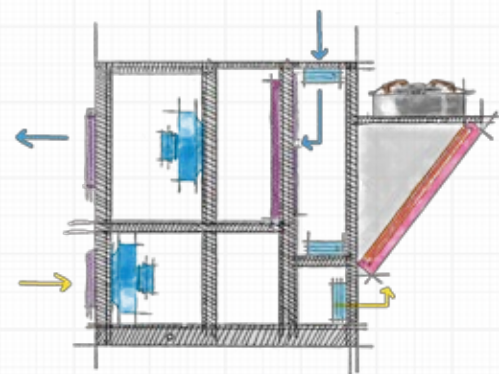
* Optional.

Single fan



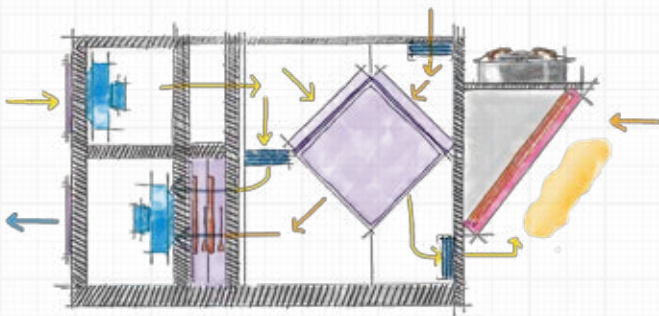
In single fan rooftop air conditioners, the air absorbed from the inside or outside air is first filtered to eliminate dust and particulates. Then this air is passed through the cooler/heater direct expansion cell core for climatization, and blown inside the area by a highly efficient fan.

Dual fan/Free cooling



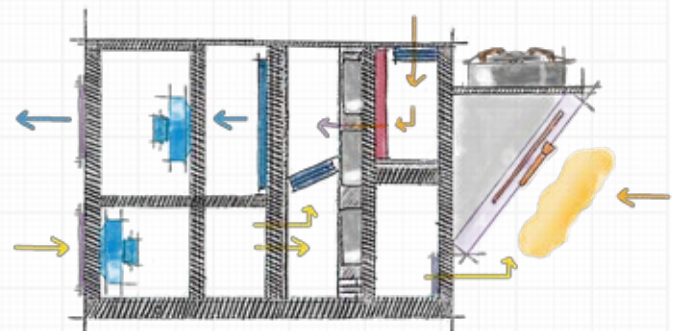
Enthalpic or thermal free cooling (economizer) is standard in all our dual fan models. If the outside temperature is low enough, our units make climatization by using %100 fresh air without cooling, saving energy.

Plate type heat recovery



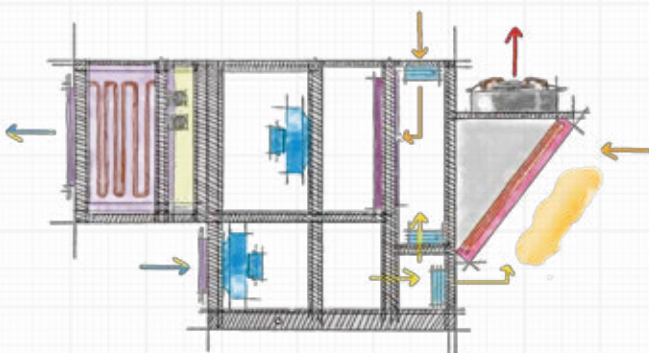
The heat of exhaust air is transferred to fresh air by the high efficiency plate heat recovery exchanger and energy recovery is obtained as a result.

Rotary type heat recovery



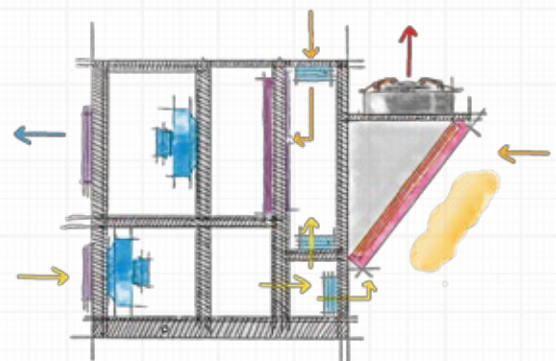
The heat of exhaust air is transferred to fresh air by the high efficiency rotary heat recovery exchanger and energy recovery is obtained as a result.

Gas fired heating



With the rooftop air conditioners with gas burner, independent heating is possible without the necessity of any connection to a central system, even at the lowest climates. Maximum efficiency is obtained with the burner capable of working at 17-55 mbar range and aluminated steel pipe heat exchanger.

Thermodynamic heat recovery



On our units with mixed air, heat recovery is provided by transmitting all the exhaust air over the condenser. Since there is a lower temperature air flow then the actual air temperature passed through the condenser, the condensation occurs at lower temperatures, which leads to efficiency on compressors and energy saving up to %30.

AIR COOLED WATER CHILLERS, HEATPUMPS— SCROLL

STANDARD



OPTIONAL

- Low flow rate protection on evaporator and condenser water side
- Remote control via PC or building automation system
- Copper/copper condenser coil
- Copper/aluminium condenser coil with epoxy coated
- Protection mesh for air-cooled condenser
- Control of evaporator and condenser circulation pumps with hydronic module and microprocessor
- Models for low sound level and low vibration
- Air cooled models with radial fan designed for indoor conditions
- Heat recovery and free cooling models
- Chiller with sea water condenser
- Chiller with remote condenser
- Models with digital and DC inverter scroll compressor
- Models with radial, AC or EC condenser fans
- Custom designs for special projects and flexible production
- Models designed for low water temperatures up to -15°C
- Models designed for high outside temperatures up to + 55°C



WHAT MAKES **IMBAT** DIFFERENT

RELIABILITY, LONG LIFE and EASE OF OPERATING

imbat water chiller group has single or multiple gas circuits, single water inlet and outlet. Plate type evaporators are reliable and protected against partial freezing; water chamber is detachable and the pipes can be cleaned mechanically. Compressors are engaged in automated order and ages equally.

HIGH EFFICIENCY

imbat water chiller group developed for providing maximum energy efficiency with 26 years of engineering repertoire and experience. Electronic expansion valve, improved microprocessor control, high efficient compressors, enlarged heat transfer surfaces on evaporator and condenser, over-cooling and over-heating circuits are applied as standard for high efficiency.

ASYMMETRIC COOLING

It is the technology of using multiple compressors with different capacities as tandem type. In asymmetric compressor application, the efficiency of the unit working under partial load is increased. With the operation of compressors at different capacity one by one, the number of engagement for each compressor is reduced, which in turn leads to longer life span. With the capacity control steps exceeding the number of capacitors, the most suitable and effective operation type is guaranted under variable loads.



AIR-COOLED WITH SCROLL COMPRESSOR

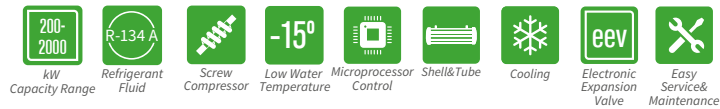
MODEL H.N.G.		46	56	72	78	90	100	110
Cooling capacity	kW	112,9	142,0	173,4	199,7	230,3	261,4	291,2
Total power input	kW	41,4	52,2	69,4	72,9	84,6	100,2	107,7
EER		2,7	2,7	2,5	2,8	2,7	2,6	2,7
Heating capacity	kW	116,2	146,0	178,5	205,6	237,2	269,0	299,9
Total power input	kW	38,5	49,2	64,9	68,4	80,2	95,2	101,6
COP		3,0	3,0	2,8	3,0	3,0	2,8	3,0
Refrigerant		R-410a						
Compressor type		Scroll						
Compressor quantity	pcs	4	4	6	6	6	4	4
Capacity step	step	6	6	6	6	6	6	6
Compressor connection type		Asymmetric	Asymmetric	Standard	Asymmetric	Asymmetric	Standard	Asymmetric
Evaporator type		Plate						
Evaporator quantity	pcs	1	1	1	1	1	1	1
Min. water flow	kg/s	3,76	4,45	6,17	6,52	7,13	8,17	9,07
Max. water flow	kg/s	7,27	9,35	11,00	12,98	15,41	16,82	18,78
Nominal water flow	kg/s	5,6	7,1	8,7	9,9	11,6	13,0	14,6
Nominal pressure drop	Pa	26,1	28,6	19,3	34,0	34,4	24,9	31,5
Condenser type		Copper tube aluminium fins						
Nominal air flow (Cooling/Heating)	m ³ /h	54200/17000	52000/21600	50800/22400	80400/31800	77400/35400	77400/40200	106800/46000
Fan type		Axial						
Fan diameter	mm	910	910	910	910	910	910	910
Fan quantity		2	2	2	3	3	3	4
Fan power input (Cooling/Heating)	kW	4,46/1,058	4,58/1,632	4,66/1,828	6,75/2,127	6,99/2,826	6,93/3,36	9/3,292
Water inlet / outlet	mm	48	48	52	52	52	52	52
Width	mm	1651	1651	1651	1651	1651	1651	1651
Length	mm	2943	2943	2943	4044	4044	4044	5138
Height	mm	2477	2477	2477	2477	2477	2477	2477
Unit weight	kg	1177	1288	1455	1688	1827	1951	1951
Unit operating weight	kg	1183	1295	1464	1698	1838	1964	2185
Sound pressure level (1 m.)	dBA	76	76	76	77	77	83	85
Sound pressure level (10 m.)	dBA	58	58	58	59	59	65	66

MODEL H.N.G.		120	140	155	170	180	210	210'	240
Cooling capacity	kW	317,3	348,6	399,8	430,4	478,1	526,3	543,8	598,5
Total power input	kW	117,4	136,6	147,6	166,3	172,4	201,3	197,2	224,6
EER		2,7	2,6	2,7	2,6	2,8	2,6	2,8	2,7
Heating capacity	kW	326,5	358,2	411,1	442,6	491,9	541,4	559,7	616,1
Total power input	kW	111,0	130,1	140,0	158,2	162,7	191,5	186,2	212,8
COP		3,0	2,8	2,9	2,8	3,0	2,8	3,0	2,9
Refrigerant		R-410a							
Compressor type		Scroll							
Compressor quantity	pcs	4	4	4	6	6	6	6	6
Capacity step	step	4	6	4	15	6	6	15	6
Compressor connection type		Standard	Standard	Asymmetric	Asymmetric	Asymmetric	Asymmetric	Asymmetric	Asymmetric
Evaporator type		Plate							
Evaporator quantity	pcs	1	1	2	2	2	2	2	2
Min. water flow	kg/s	9,89	11,06	12,56	13,60	14,87	16,77	17,05	18,80
Max. water flow	kg/s	20,43	22,32	25,70	27,43	30,23	33,35	34,36	37,91
Nominal water flow	kg/s	15,9	17,4	20,0	21,4	23,7	26,1	27,0	29,7
Nominal pressure drop	Pa	32,8	42,7	29,9	35,0	42,7	42,7	42,0	40,8
Condenser type		Copper tube aluminium fins							
Nominal air flow (Cooling/Heating)	m ³ /h	103600/46000	103600/46000	129500/54500	129000/59000	159200/72800	159200/79200	203000/84800	203000/85600
Fan type		Axial							
Fan diameter	mm	910	910	910	910	800	800	800	800
Fan quantity		4	4	5	5	8	8	10	10
Fan power input (Cooling/Heating)	kW	9,2/3,66	9,2/3,66	11,5/4,235	11,55/4,775	13,36/5,256	13,36/5,92	16,3/5,65	16,3/5,7
Water inlet / outlet	mm	52	52	52	52	52	52	52	52
Width	mm	1651	1651	1651	1651	2493	2493	2493	2493
Length	mm	5138	5138	6247	6247	4593	4593	5600	5600
Height	mm	2477	2477	2477	2477	2663	2663	2663	2663
Unit weight	kg	2514	2541	2843	3007	3922	4002	4288	4362
Unit operating weight	kg	2530	2558	2863	3028	3946	4028	4315	4391
Sound pressure level (1 m.)	dBA	85	85	86	86	86	85	88	88
Sound pressure level(10 m.)	dBA	66	66	68	68	67	67	70	70

Capacities are for 7/12°C water out/in temperature and 35°C ambient air temperature conditions.

AIR COOLED WATER CHILLERS – SCREW

STANDARD



OPTIONAL

- Low flow rate protection on evaporator and condenser water side
- Remote control via PC or building automation system
- Copper/copper condenser coil
- Copper/aluminium condenser coil with epoxy coated
- Protection mesh for air-cooled condenser
- Control of evaporator and condenser circulation pumps with hydronic module and microprocessor
- Models for low sound level and low vibration
- Air cooled models with radial fan designed for indoor conditions
- Heat recovery and free cooling models
- Chiller with sea water condenser
- Chiller with remote condenser
- Custom designs for special projects and flexible production
- Models designed for low water temperatures up to -15°C
- Models designed for high outside temperatures up to + 55°C



WHAT MAKES **IMBAT** DIFFERENT

RELIABILITY, LONG LIFE and EASE OF OPERATING

imbat water chiller group has single or multiple gas circuits, single water inlet and outlet. Shell&Tube type evaporators are reliable and protected against partial freezing; water chamber is detachable and the pipes can be cleaned mechanically. Compressors are engaged in automated order and ages equally.

HIGH EFFICIENCY

It is the technology of using multiple compressors with different capacities as tandem type. In asymmetric compressor application, the efficiency of the unit working under partial load is increased. With the operation of compressors at different capacity one by one, the number of engagement for each compressor is reduced, which in turn leads to longer life span. With the capacity control steps exceeding the number of capacitors, the most suitable and effective operation type is guaranted under variable loads.

The semi-closed compact, helisodial double screw cooling compressors proportionally control the cooling capacity. Three-phase bipolar motor is sunction gas cooled and no-load at start-up mechanism. The unit has at least two compressors and an independent cooling circuit for each compressor.



AIR-COOLED WITH SCREW COMPRESSOR

MODEL H.N.I.6.....V.B		00802	01002	01202	01402	01602	01802	02002	02102	02202	02402
Cooling capacity	kW	198,9	249,0	281,1	334,9	377,8	408,9	445,2	491,3	554,2	592,5
Compressor power input	kW	60,50	77,0	86,6	104,4	117,4	125,8	137,4	155,1	174,6	180,1
Refrigerant		R-134a									
Compressor type		Screw									
Number of compressor	pcs	2	2	2	2	2	2	2	2	2	2
Cooling circuit	pcs	2	2	2	2	2	2	2	2	2	2
Capacity control	step	%12,5...%100									
Sound pressure level	dB(A)	58	58,0	60,0	60,0	61,0	61,0	61,0	61,0	62,0	62,0
Length	mm	2.860	2.860	4.030	4.030	5.210	5.210	5.210	5.210	5.210	6.390
Width	mm	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400
Height	mm	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400

MODEL H.N.I.6.....V.B		02802	03202	03602	04202	04402	04802	05402	06002	07203
Cooling capacity	kW	680,5	806,0	904,3	925,5	1.012,0	1.108,3	1.241,1	1.414,2	1662,4
Compressor power input	kW	213,4	256,9	285,4	294,9	320,6	354,3	391,4	446,7	533,1
Refrigerant		R-134a								
Compressor type		Screw								
Number of compressor	pcs	2	2	2	2	2	2	2	2	3
Cooling circuit	pcs	2	2	2	2	2	2	2	2	3
Capacity control	step	%12,5...%100								
Sound pressure level	dB(A)	63,0	64,0	64,0	64,0	64,0	65,0	65,0	60,0	73,0
Length	mm	6.390	7.570	9.925	8.750	8.750	9.925	11.100	12.280	14.640
Width	mm	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400
Height	mm	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400

MODEL H.N.I.6.....V.A		00802	01002	01202	01402	01602	01802	02002	02202	02402
Cooling capacity	kW	210,2	257,5	286,7	348,8	387,3	442,4	460,5	558,4	631,1
Compressor power input	kW	59,1	73,5	82,9	99,5	112,9	129,4	132,5	163,1	185,3
Refrigerant		R-134a								
Compressor type		Screw								
Number of compressor	pcs	2	2	2	2	2	2	2	2	2
Cooling circuit	pcs	2	2	2	2	2	2	2	2	2
Capacity control	step	%12,5...%100								
Sound pressure level	dB(A)	60,0	60,0	61,0	61,0	62,0	62,0	62,0	62,0	63,0
Length	mm	4.030	4.030	4.030	5.210	5.210	6.390	6.390	6.390	6.390
Width	mm	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400
Height	mm	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400

MODEL H.N.I.6.....V.A		02802	03202	03602	04202	04402	04802	05402	06002	07203
Cooling capacity	kW	702,6	854,8	930,4	978,8	1.038,10	1.170,8	1.307,2	1.447,2	1.756,3
Compressor power input	kW	203,5	250,4	271,0	288,3	307,4	349,3	386,1	432,1	525,8
Refrigerant		R-134a								
Compressor type		Screw								
Number of compressor	pcs	2	2	2	2	2	2	2	2	3
Cooling circuit	pcs	2	2	2	2	2	2	2	2	3
Capacity control	step	%12,5...%100								
Sound pressure level	dB(A)	64,0	64,0	64,0	64,0	65,0	65,0	66,0	65,0	76,2
Length	mm	7.570	8.750	9.925	9.925	9.925	11.160	12.280	13.460	16.990
Width	mm	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400
Height	mm	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400

Rated at; Water Fluctuation: 7/12°C, Outside Temperature: 35°C

Water Chillers with Screw Compressors (R-134a)

Cold water operation temperature range: +5/+20°C

Outside temperature: Up to +55°C

WATER-COOLED WITH SCREW COMPRESSOR

MODEL S.N.I.6.....V.B		00802	01002	01202	01402	01602	01802	02002	02102	02402
Cooling capacity	kW	224,1	272,6	324,4	383,7	433,4	481,3	511,2	625,3	695,5
Compressor power input	kW	48,2	58,6	69,5	82,2	93,2	101,5	108,3	132,6	144,4
Refrigerant		R-134a								
Number of compressor	pcs	2	2	2	2	2	2	2	2	2
Compressor type		Screw								
Cooling circuit	pcs	2	2	2	2	2	2	2	2	2
Capacity control	step	%12,5...%100								
Sound pressure level	dB(A)	62,0	62,0	62,0	64,9	65,4	65,4	65,4	65,9	69,0
Length	mm	2.210	2.010	2.210	1.810	1.910	2.210	3.210	2.610	2.910
Width	mm	610	670	670	720	720	720	670	720	720
Height	mm	1.030	2.010	1.150	1.230	1.190	1.190	1.110	1.230	1.310

MODEL S.N.I.6.....V.B		02802	03202	03602	04202	04402	04802	05402	06002	07203
Cooling capacity	kW	792,9	936,7	1.046,7	1.110,2	1.129,8	1.307,5	1.458,4	1.609,1	1.961,3
Compressor power input	kW	162,6	196,0	216,0	226,6	232,5	269,2	296,6	333,2	403,8
Refrigerant		R-134a								
Number of compressor	pcs	2	2	2	2	2	2	2	2	3
Compressor type		Screw								
Cooling circuit	pcs	2	2	2	2	2	2	2	2	3
Capacity control	step	%12,5...%100								
Sound pressure level	dB(A)	69,0	71,0	71,0	72,0	73,0	74,0	75,0	76,0	77,0
Length	mm	3.210	3.510	3.510	3.510	3.510	3.510	3.510	3.510	3.510
Width	mm	720	720	720	720	720	720	720	720	720
Height	mm	1.310	1.310	1.310	1.310	1.310	1.310	1.310	1.310	1.310

MODEL S.N.I.6.....V.A		00802	01002	01202	01402	01602	01802	02002	02202	02402
Cooling capacity	kW	235,3	286,3	340,6	402,9	455,0	505,4	536,8	656,6	730,3
Compressor power input	kW	46,6	56,7	67,3	79,5	89,7	99,5	105,5	130,0	144,3
Refrigerant		R-134a								
Number of compressor	pcs	2	2	2	2	2	2	2	2	2
Compressor type		Screw								
Cooling circuit	pcs	2	2	2	2	2	2	2	2	2
Capacity control	step	%12,5... %100								
Sound pressure level	dB(A)	62,0	62,0	62,0	64,9	65,4	65,4	65,4	65,9	69,0
Length	mm	2.210	2.010	2.210	2.010	2.060	2.310	3.210	2.610	3.210
Width	mm	610	670	670	720	720	720	670	720	720
Height	mm	1.030	1.110	1.150	1.230	1.190	1.190	1.110	1.230	1.310

MODEL S.N.I.6.....V.A		02802	03202	03602	04202	04402	04802	05402	06002	07203
Cooling capacity	kW	832,5	983,5	1.099,0	1.165,7	1.196,1	1.372,9	1.531,3	1.689,5	2.059,4
Compressor power input	kW	162,6	194,8	216,0	226,6	236,2	269,2	296,6	333,2	403,8
Refrigerant		R-134a								
Number of compressor	pcs	2	2	2	2	2	2	2	2	3
Compressor type		Screw								
Cooling circuit	pcs	2	2	2	2	2	2	2	2	3
Capacity control	step	%12,5... %100								
Sound pressure level	dB(A)	69,0	71,0	71,0	72,0	73,0	74,0	75,0	76,0	77,0
Length	mm	3.210	3.510	3.510	3.510	3.510	3.510	3.510	3.510	3.510
Width	mm	720	720	720	720	720	720	720	720	720
Height	mm	1.310	1.310	1.310	1.310	1.310	1.310	1.310	1.310	1.310

Rated at; Water Fluctuation: 7/12°C, Outside Temperature: 35°C

Water Chillers with Screw Compressors (R-134a)

Cold water outlet temperature range: -5/+20°C

Condenser water outlet temperature range: +20/+50°C

AIR-COOLED WITH PISTON COMPRESSOR

MODEL H.N.K.5.....Y		00202	00302	00402	00502	00602	00642	00702	00802	01002	01202	01402	01502	01602
Cooling capacity	kW	60,7	76,9	85,5	102,7	128,9	136,3	147,2	177,9	216,2	273,3	302,3	336,9	356,1
Power input	kW	21,3	26,5	29,5	35,9	44,8	49,0	56,7	65,3	81,7	97,2	108,3	119,0	127,3
Refrigerant		R-407c												
Compressor type		Piston												
Number of compressor	pcs	2	2	2	2	2	2	2	2	2	2	2	2	2
Cooling circuit	pcs	2	2	2	2	2	2	2	2	2	2	2	2	2
Sound pressure level	dB(A)	64,0	64,0	64,0	64,0	66,0	66,0	66,0	66,0	66,0	68,0	68,0	69,0	70,0
Length	mm	1840	1840	3080	3080	3080	3080	3080	4320	4320	5560	5560	5560	6800
Width	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
Height	mm	2230	2230	2230	2230	2230	2230	2230	2230	2230	2230	2230	2230	2230

MODEL H.D.E.5.....Y		0202	0302	0402	0502	0602	0642	0702	0802	1002	1202	1402	1502	1602
Cooling capacity	kW	43,9	54,1	61,4	73,8	91,7	100,4	113,1	134,9	154,1	195,4	210,8	230,1	239,5
Power input	kW	18,8	24,4	26,9	33,2	39,5	42	48,3	56,1	71,9	84,1	94	102,6	107,8
Refrigerant		R-404a												
Compressor type		Piston												
Number of compressor	pcs	2	2	2	2	2	2	2	2	2	2	2	2	2
Cooling circuit	pcs	2	2	2	2	2	2	2	2	2	2	2	2	2
Sound pressure level	dB(A)	64,0	64,0	66,0	66,0	66,0	66,0	66,0	68,0	68,0	69,0	69,0	69,0	70,0
Length	mm	1840	1840	1840	1840	3080	3080	3080	3080	4320	4320	5560	5560	5560
Width	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
Height	mm	2230	2230	2230	2230	2230	2230	2230	2230	2230	2230	2230	2230	2230

WATER-COOLED WITH PISTON COMPRESSOR

MODEL S.N.K.5.....Y		00202	00302	00402	00502	00602	00642	00702	00802	01002	01202	01402	01502	01602
Cooling capacity	kW	70,7	89,5	101,7	126,5	150,6	164,6	185,3	219,9	268,1	334,3	366,8	393,8	428,2
Power input	kW	17,6	22,1	24,1	29,7	35,3	38,9	43,2	51,2	65,5	75,7	86,8	93,7	100,1
Refrigerant		R-407c												
Compressor type		Piston												
Number of compressor	pcs	2	2	2	2	2	2	2	2	2	2	2	2	2
Cooling circuit	pcs	2	2	2	2	2	2	2	2	2	2	2	2	2
Sound pressure level (10m)	dB(A)	64,0	64,0	64,0	64,0	66,0	66,0	66,0	66,0	66,0	68,0	68,0	69,0	70,0
Length	mm	1410	1410	1410	1710	1710	1710	1910	1910	1910	2210	2210	2210	720
Width	mm	610	610	610	610	610	610	610	670	670	670	720	720	2210
Height	mm	1070	1070	1070	1070	1070	1070	1150	1150	1150	1150	1230	1230	1230

MODEL S.D.E.5.....Y		0202	0302	0402	0502	0602	0642	0702	0802	1002	1202	1402	1502	1602
Cooling capacity	kW	33,8	43,3	49,9	58,4	71,0	75,1	89,7	104,3	127,9	158,4	174,4	186,3	193,7
Power input	kW	17,0	21,6	23,8	29,6	35,4	37,6	42,7	50,1	62,6	74,2	82,2	90,1	94,4
Refrigerant		R-404a												
Compressor type		Piston												
Number of compressor	pcs	2	2	2	2	2	2	2	2	2	2	2	2	2
Cooling circuit	pcs	2	2	2	2	2	2	2	2	2	2	2	2	2
Sound pressure level	dB(A)	64,0	64,0	66,0	66,0	66,0	66,0	66,0	68,0	68,0	69,0	69,0	69,0	70,0
Length	mm	1410	1410	1410	1710	1710	1910	1910	1910	2210	2010	2210	2210	2210
Width	mm	610	610	610	610	610	610	610	610	670	670	720	720	720
Height	mm	1070	1070	1070	1070	1070	1070	1150	1150	1150	1150	1230	1230	1230

Rated at; Water Fluctuation: -10/-5°C, Outside Temperature: 35/40°C

Water Chillers with Piston Compressors (R-407c, R-404a)

Capacity Range: 20-550 kW

Cold water outlet temperature range: -25/+15°C

Condenser water outlet temperature range: +20/+50°C

Water Chillers with Piston Compressors (R-407c, R-404a)

Capacity Range: 20-450 kW

Cold water operation temperature range: -25/+15°C

Outside temperature: Up to +55°C

Having a wide usage range, the waterchiller group with piston offers high performans especially at low water temperatures.

CLOSE CONTROL

STANDARD



kW Capacity Range



Refrigerant Fluid



Refrigerant Fluid



Chilled Water



Scroll Compressor



Full Automatic



Asymmetric Cooling



Wired Remote Controller



Heating



Cooling



Humidity Control



Fresh Air

OPTIONAL

- Free cooling with %100 fresh air
- Temperature, humidity and indoor air quality control
- Variable air flow and low energy consumption with AC plug or EC fan
- Electronic expansion valve
- Advanced electronic control panel providing daily/weekly programming and full automatic operation
- Ability to connect to building automation system with remote controller
- Two steps filtration (G4+F7)
- Water-cooled models
- Precise control of temperature and humidity (+/- 1°C DB, +/- %2 RH)
- Chilled water models
- Units to be work at low outside temperatures (down to -45°C)
- Custom designs for special projects and flexible production

High Sensible Heat Rate

System rooms, museums, laboratories, switchboard rooms, electric&electronic equipment rooms, computer and telecommunication rooms have different design parameters than of areas designed for comfort. İmbat close control air conditioners are designed with tight tolerance parameters to eliminate the problems such as overheating, data loss, oxidization, short service periods, early damage, physical damage on backup units at areas like equipment rooms, test rooms and telecommunication systems.

Automatic Humidification and Dehumidification

High humidity rate results in sweating over electronic equipment while the low humidity rate results in static electric charge on them. If the humidity rate is not under control, it results in oxidization on magnetic surfaces, thus leads to damage of the equipment, data loss or data failure. With İmbat close control air conditioners, the ambient temperature is always at the demanded rate with +/-1°C tolerance and the ambient relative humidity is at the demanded rate with +/-%2 RH tolerance.

WHAT MAKES İMBAT DIFFERENT

FREE COOLING

Minimum energy consumption is provided by using fresh air at a rate between %0-100 on direct free cooling applications, and by using water cooled by outside air on indirect free cooling applications.

HIGH EFFICIENCY

Our products are developed with the aim of providing the maximum level of energy efficiency. Wide heat transfer area on the condenser and the evaporator is standard.



AIR CONDITIONER

AIR-COOLED

MODEL HSLE...		021	031	041	051	061	071	081	091	101	121	131	151	201	251	301
Cooling, R-410a																
Total cooling capacity	kW	7,0	8,9	12,1	15,4	20,3	23,5	25,7	29,6	35,4	39,9	44,7	52,4	67,3	84,2	109,5
Sensible cooling capacity	kW	6,3	7,9	10,9	13,8	18,2	21,0	23,0	24,9	30,2	35,0	38,6	45,5	58,5	69,1	89,3
Compressor power	kW	1,50	2,03	4,60	3,29	4,54	5,17	5,65	6,34	7,29	8,26	9,29	11,25	14,4	18,15	23,30
Cooling, R-407c																
Total cooling capacity	kW	6,0	9,2	13,2	16,5	19,25	21,9	26,8	30,0	35,1	40,3	44,5	51,4	68,1	85,6	107
Sensible cooling capacity	kW	5,4	8,3	11,8	14,8	17,3	19,6	23,8	25,9	31,4	35,9	39,0	45,2	60,2	76,0	95,2
Compressor power	kW	1,34	2,02	2,87	3,56	4,15	4,71	5,55	6,16	7,20	8,14	9,26	11,05	14,6	18,20	21,70
Cold water coil, 7/12°C																
Total cooling capacity	kW	8,0	9,0	13,0	16,5	20,0	24,0	28,0	30,0	35,5	40,6	46,0	52	68,1	86,0	110,0
Sensible cooling capacity	kW	7,1	8,0	11,5	14,6	17,6	21,6	25,1	26,8	31,4	35,8	40,5	45,1	60,9	76,3	97,2
Water flow	m ³ / h	1,60	1,80	2,60	3,30	4,00	4,80	5,60	6,00	7,00	8,00	9,00	10,00	13,60	17,20	22,00
Heating-Electric Resistance																
Standard capacity	kW	3	3	3	5	5	7,5	7,5	7,5	10	10	10	15	15	20	20
Maximum capacity	kW	5	5	5	7,5	7,5	10	10	10	15	15	15	20	20	30	30
Ventilator																
Air flow rate	m ³ / h	1600	2000	2700	3500	4600	5250	5800	6600	8000	9200	10000	11600	14800	18000	23000
Static pressure	Pa	150	150	200	200	250	250	250	250	300	300	300	300	350	350	350
Fan motor power	kW	0,55	0,55	0,55	0,75	1,1	1,1	1,5	1,5	1,5	2,2	2,2	3,0	3,0	4,0	5,5
Humidifier capacity	kg/h	3	5	5	5	8	8	9	9	10	10	10	15	15	15	15
Power input	kW	2,25	3,75	3,75	3,75	6,0	6,0	6,75	6,75	7,5	7,5	7,5	11,25	11,25	11,25	11,25
Compressor type		Scroll														
Number of compressor	pcs	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Condenser capacity	kW	10,0	12,0	18,0	22,0	26,0	30,0	32,0	38,0	44,0	50,0	56,0	70,0	88,0	110,0	140,0
Condenser air flow rate	m ³ / h	3000	3600	5300	6500	7700	8800	9400	11200	13000	14800	16500	20800	26000	32600	41500
Fan type		Axial														
Number of fan	pcs	1	1	1	1	1	1	1	2	2	2	2	2	4	4	4
Fan motor power	kW	0,25	0,25	0,25	0,25	0,77	0,77	0,77	1,54	1,54	1,54	1,54	1,54	3,08	3,08	3,08

MODEL HSLE...		082	102	122	142	162	182	202	242	262	302	402	502	602
Cooling, R-410a														
Total cooling capacity	kW	24,2	30,8	40,6	47,0	50,2	59,2	70,8	79,8	89,4	104,8	134,6	168,4	219
Sensible cooling capacity	kW	21,7	27,6	36,4	42,2	45,1	53,2	63,5	71,1	79,9	93,7	119,6	149,2	192,3
Compressor power	kW	9,20	6,58	8,74	10,34	11,30	12,68	14,58	16,50	18,58	22,50	28,80	36,3	29,4
Cooling, R-407c														
Total cooling capacity	kW	26,4	31,0	38,5	43,8	59,6	60	70,2	80,6	89,0	102,8	136,2	171,2	214
Sensible cooling capacity	kW	21,8	29,2	34,6	39,2	47,6	51,8	62,8	71,8	78,0	90,4	120,4	152,0	190,4
Compressor power	kW	9,20	7,12	8,30	9,42	11,10	12,32	14,40	16,30	18,50	22,1	29,2	36,40	43,40
Cold water coil, 7/12°C														
Total cooling capacity	kW	26,0	33,0	40,0	48,0	56,0	60,0	71,0	81,2	92,0	104,0	136,2	172	220,0
Sensible cooling capacity	kW	23,0	29,2	35,2	43,2	50,2	53,6	62,8	71,6	81,0	90,2	121,8	152,6	194,4
Water flow	m ³ / h	5,20	6,60	8,00	9,60	11,20	12,00	14,00	16,00	18,00	20,00	27,20	34,40	44,00
Heating-Electric Resistance														
Standard capacity	kW	7,5	7,5	7,5	10	10	10	15	15	15	20	20	20	30
Maximum capacity	kW	10	10	10	15	15	15	20	20	20	30	30	30	40
Ventilator														
Air flow rate	m ³ / h	5400	7000	9200	10500	11600	13200	16000	18400	20000	23200	29600	36000	46000
Static pressure	Pa	250	250	250	300	300	300	300	300	300	350	350	350	350
Fan motor power	kW	1,1	1,5	2,2	2,2	3,0	3,0	4,0	4,0	5,5	5,5	7,5	11,0	11,0
Humidifier capacity	kg/h	9	9	9	10	10	10	10	15	15	15	18	18	25
Power input	kW	6,75	6,75	6,75	7,5	7,5	7,5	7,5	11,25	11,25	11,25	13,5	13,5	18,75
Compressor type		Scroll												
Number of compressor	pcs	2	2	2	2	2	2	2	2	2	2	2	2	2
Condenser capacity	kW	36,0	40,0	44,0	60,0	66,0	76,0	90,0	100,0	120,0	136,0	170,0	210,0	260,0
Condenser air flow rate	m ³ / h	10600	11800	13040	17800	19500	22500	26600	29600	35500	40300	50400	62000	77000
Fan type		Axial												
Number of fan	pcs	2	2	2	2	2	2	4	4	4	6	6	8	10
Fan motor power	kW	1,54	1,54	1,54	1,54	1,54	1,54	3,08	3,08	3,08	4,62	4,62	6,16	7,7

Indoor Temperature: 24°C DB
 Outside Temperature: 35°C DB
 For units at different capacities,
 on different operation conditions
 and for more information,
 please apply to İmbat.

WATER-COOLED

MODEL SSLE...		021	031	041	051	061	071	081	091	101	121	131	151	201	251	301
Cooling, R-410a																
Total cooling capacity	kW	7,3	9,3	12,8	16,4	21,4	24,8	27,1	31,3	37,3	42,2	47,3	55,3	71,3	89,0	115,5
Sensible cooling capacity	kW	6,6	8,4	11,5	14,8	19,3	22,3	24,4	28,2	33,5	38,0	42,6	49,6	64,5	80,9	104
Compressor power	kW	1,34	1,80	2,30	2,90	4,10	4,60	5,10	5,70	6,50	7,40	8,40	10,1	13,1	16,50	21,10
Cooling, R-407c																
Total cooling capacity	kW	6,3	9,6	13,9	17,3	20,4	23,1	28,1	31,6	36,9	42,3	47,2	54,0	71,6	90,9	113,0
Sensible cooling capacity	kW	5,8	8,5	11,9	14,9	18,4	20,9	25,3	28,5	33,3	38,2	42,5	48,5	61,8	78,2	102,1
Compressor power	kW	1,20	1,80	2,54	3,14	3,70	4,20	4,95	5,55	6,46	7,30	8,30	10,00	13,00	16,45	19,55
Cold water coil, 7/12°C																
Total cooling capacity	kW	8,0	9,0	13,0	16,5	20,0	24,0	28,0	30,0	35,5	40,6	46,0	52	68,1	86,0	110,0
Sensible cooling capacity	kW	7,1	8,0	11,5	14,6	17,6	21,6	25,1	26,8	31,4	35,8	40,5	45,1	60,9	76,3	97,2
Water flow	m³ / h	1,60	1,80	2,60	3,30	4,00	4,80	5,60	6,00	7,00	8,00	9,00	10,00	13,60	17,20	22,00
Heating-Electric Resistance																
Standard capacity	kW	3	3	3	5	5	7,5	7,5	7,5	10	10	10	15	15	20	20
Maximum capacity	kW	5	5	5	7,5	7,5	10	10	10	15	15	15	20	20	30	30
Ventilator																
Air flow rate	m³ / h	1600	2000	2700	3500	4600	5250	5800	6600	8000	9200	10000	11600	14800	18000	23000
Static pressure	Pa	150	150	200	200	250	250	250	250	300	300	300	300	350	350	350
Fan motor power	kW	0,55	0,55	0,55	0,75	1,1	1,1	1,5	1,5	1,5	2,2	2,2	3,0	3,0	4,0	5,5
Humidifier capacity	kg/h	3	5	5	5	8	8	9	9	10	10	10	15	15	15	15
Power input	kW	2,25	3,75	3,75	3,75	6,0	6,0	6,75	6,75	7,5	7,5	7,5	11,25	11,25	11,25	11,25
Compressor type		Hermetic Scroll														
Number of compressor	pcs	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Condenser capacity	kW	12,0	15,0	18,0	22,0	26,0	32,0	36,0	40,0	48,0	56,0	60,0	74,0	92,0	120,0	160,0
Condenser air flow rate	m³ / h	2,4	3,0	3,6	4,4	5,2	6,4	7,2	8,0	9,6	11,2	12,0	14,8	18,4	24,0	32,0
Sound pressure level																
1mt distance	dB(A)	61,0	62,0	68,0	65,0	65,0	65,0	67,0	69,0	68,0	68,0	71,0	73,0	76,0	76,0	78,0
10mt distance	dB(A)	43,0	44,0	50,0	47,0	47,0	47,0	49,0	50,0	50,0	50,0	51,0	55,0	58,0	58,0	59,0

MODEL SSLE...		082	102	122	142	162	182	202	242	262	302	402	502	602
Cooling, R-410a														
Total cooling capacity	kW	25,6	32,8	42,8	49,6	54,2	62,6	74,6	84,4	94,6	110,6	142,6	178,0	231,0
Sensible cooling capacity	kW	23,0	29,6	38,6	44,6	48,8	56,4	67,0	76,0	85,2	99,2	129,0	161,8	208,0
Compressor power	kW	4,60	5,80	8,20	9,20	10,20	11,40	13,00	14,80	16,80	20,20	26,20	33,00	42,20
Cooling, R-407c														
Total cooling capacity	kW	26,0	33,0	40,0	48,0	56,0	60,0	71,0	81,2	92,0	104,0	136,2	172,0	220,0
Sensible cooling capacity	kW	23,8	29,8	36,8	41,8	50,6	57	66,6	76,4	85	97	123,6	156,4	204,2
Compressor power	kW	5,08	6,28	7,40	8,40	9,90	11,10	12,92	14,60	16,60	20,00	26,00	32,90	39,10
Cold water coil, 7/12°C														
Total cooling capacity	kW	0,88	0,88	0,88	0,90	0,90	0,89	0,88	0,88	0,88	0,87	0,89	0,89	0,88
Sensible cooling capacity	kW	26,0	33,0	40,0	48,0	56,0	60,0	71,0	81,2	92,0	104,0	136,2	172	220,0
Water flow	m³ / h	5,20	6,60	8,00	9,60	11,20	12,00	14,00	16,00	18,00	20,00	27,20	34,40	44,00
Heating-Electric Resistance														
Standard capacity	kW	7,5	7,5	7,5	10	10	10	15	15	15	20	20	20	30
Maximum capacity	kW	10	10	10	15	15	15	20	20	20	30	30	30	40
Ventilator														
Air flow rate	m³ / h	5400	7000	9200	10500	11600	13200	16000	18400	20000	23200	29600	36000	46000
Static pressure	Pa	250	250	250	300	300	300	300	300	300	350	350	350	350
Fan motor power	kW	1,1	1,5	2,2	2,2	3,0	3,0	4,0	4,0	5,5	5,5	7,5	11,0	11,0
Humidifier capacity	kg/h	9	9	9	10	10	10	10	15	15	15	18	18	25
Power input	kW	6,75	6,75	6,75	7,5	7,5	7,5	7,5	11,25	11,25	11,25	13,5	13,5	18,75
Compressor type		Hermetic Scroll												
Number of compressor	pcs	2	2	2	2	2	2	2	2	2	2	2	2	2
Condenser capacity	kW	32,0	42,0	50,0	60,0	70,0	76,0	90,0	100,0	118,0	130,0	180,0	220,0	280,0
Condenser air flow rate	m³ / h	6,4	8,4	10,0	12,0	14,0	15,2	18,0	20,0	23,6	26,0	36,0	44,0	56,0
Sound pressure level														
1mt distance	dB(A)	75,0	75,0	73,0	73,0	75,0	75,0	75,0	73,0	74,0	74,0	79,0	80,0	80,0
10mt distance	dB(A)	56,0	56,0	55,0	55,0	56,0	56,0	56,0	55,0	56,0	56,0	60,0	61,0	62,0

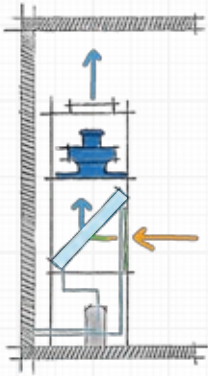
Indoor Temperature: 24°C DB
Outside Temperature: 35°C DB
For units at different capacities,
on different operation conditions
and for more information,
please apply to Imbat.

Application Areas

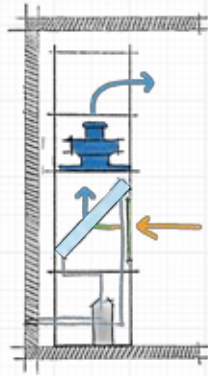
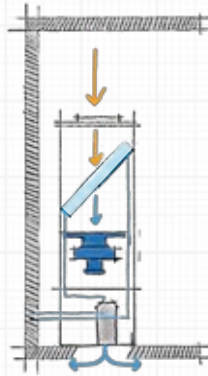
The units have the functionality of cooling; heating, humidification and dehumidification and are designed to operate day&night, four seasons non-stop, with the sensible heat rate of 0.9-1.0.

To obtain higher level of sensible heat rate, to absorb the load of high temperatures and to protect the temperature and humidity levels, the air flow rate on Imbat close control air conditioners are higher than comfort air conditioners.

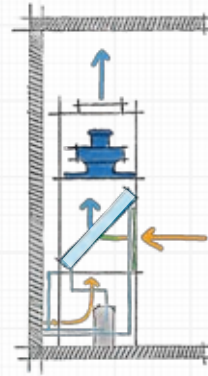
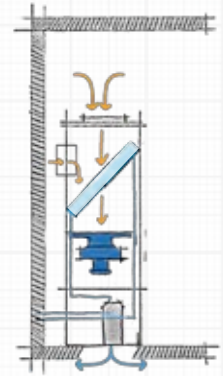
Air flow types



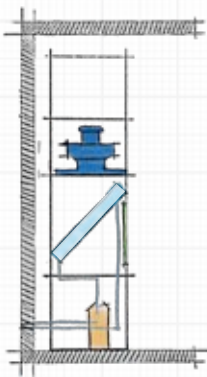
Upflow

Upflow
Plenum box

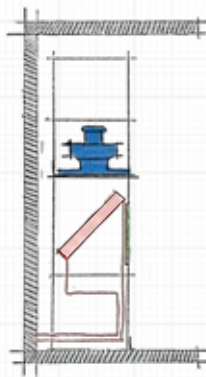
Downflow

Free cooling
UpflowFree cooling
Downflow

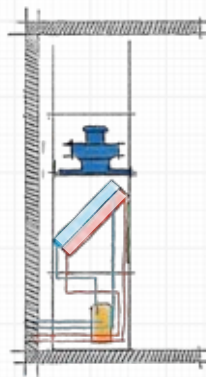
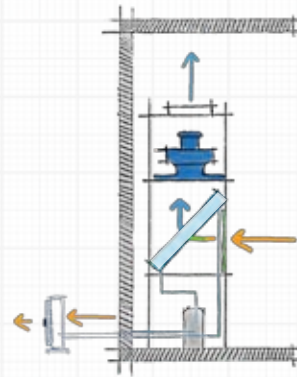
Cooling types



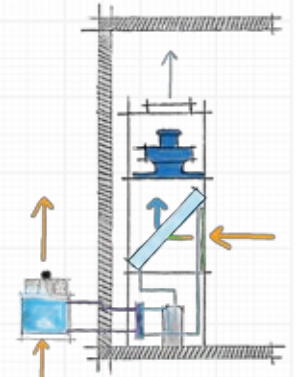
Direct expansion



Water coil

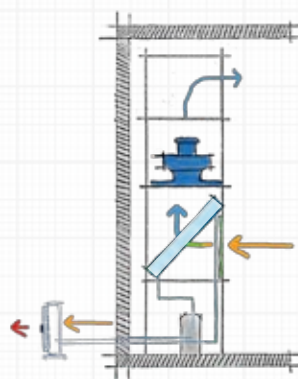
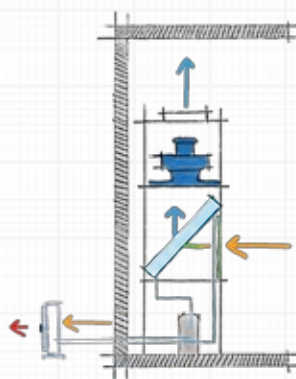
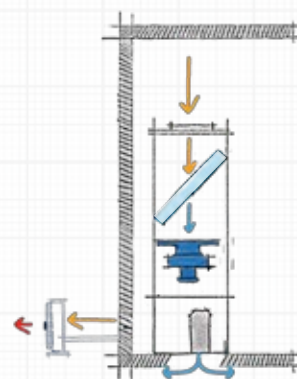
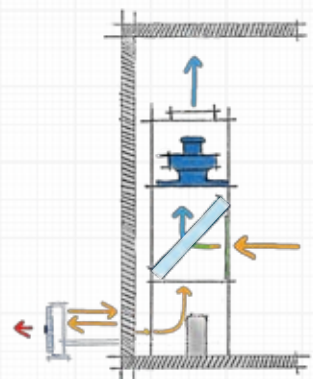
Dual refrigerant
Direct expansion
Water coil

Air cooled



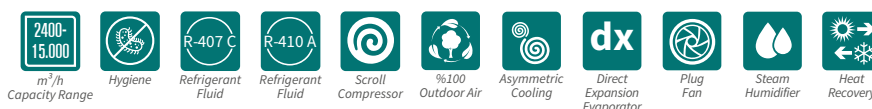
Water cooled

Condenser types

DX air cooled
Plenum boxDX air cooled
UpflowDX air cooled
DownflowDX air cooled
Free cooling

PACKAGE HYGIENIC

STANDARD



OPTIONAL

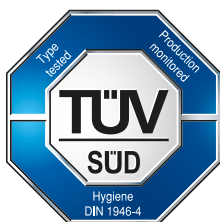
- Run around coil type heat recovery
- H13 or H14 hepa filter
- Condenser fan speed control
- Hot water coil automation
- Electronic expansion valve
- Advanced electronic control panel providing daily/weekly programming and full automatic operation
- Ability to connect to building automation system with remote controller
- Water-cooled models
- Silenced models
- Units to be work at low outside temperatures (down to -45°C)
- Custom designs for special projects and flexible production

Application areas

Clean rooms, Intensive care and operating rooms which are required in health sector, and industries such as medicine, laboratory, nutrition, defence, chemistry, space and aviation.

Advantages

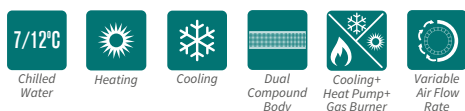
High efficiency
 Temperature, humidity and variable flow control.
 The body structures are fully cleanable and avoid formation of bacteria.
 Sterile air circulation.
 Positive/negative pressure.
 Maximum efficiency by choosing the right unit for the specific parameters.
 Compact design.
 Ease service and operation.
 EPDM based gaskets are used to prevent leakage. Illumination, observation frame, damper motors, condensation pan made of AISI 304 stainless plate, drainage swale.



CERTIFICATE OF HYGIENE

İmbat package hygienic air handling units are produced according to DIN EN 1946/4, EN 1886, EN 13053 standards and hygiene certificated.





MAIN SPECIFICATIONS

MODEL IKSH...		024	036	048	060	072	084	096	108	120	150
Cooling											
Cooling capacity	kW	26,34	41,5	55,7	68,22	87,87	101,35	116,44	123,9	137,44	183,36
Compressor power input	kW	6,05	9,37	12,28	14,81	18,77	22,08	25,54	26,94	29,62	40,89
Heating-Heat Pump											
Heating capacity	kW	26,8	40,76	54,09	70,94	87,11	100,81	116,94	125,96	138,14	184,07
Compressor power input	kW	5,29	8,1	10,32	12,71	16,74	19,39	22,6	23,37	25,37	35,72
Heat recovery type		Plate									
Heat recovery efficiency	%	53	50	50	50	55	55	50	50	50	51
Cooling-Chilled Water											
Cooling capacity- 7/12°C	kW	30	45	60	74	90	106	119	136	148	186
Heating-Hot Water											
*Heating capacity- 80/60 °C	kW	46	70	92	117	138	162	183	204	233	290
Coil pressure loss	Kpa	45,06	48,71	21,02	44,65	29,21	34,83	27,88	33,86	30,54	41,63
Heating-Electrical Resistance											
*Heating capacity	kW	45	65	90	110	130	150	170	195	215	270
Steps	pcs	2	2	2	2	2	2	3	3	3	3
Humidifier											
Humidifier capacity	kg/h	15	30	30	45	45	53	60	75	75	90
Humidifier power input	kW	11,3	22,5	22,5	33,8	33,8	39,8	45,1	56,3	56,3	67,6
Filter											
1.Step		G4+F7									
2.Steps		F9									
Vantilator											
Air flow rate	m³/h	2400	3600	4800	6000	7200	8400	9600	10800	12000	15000
Static pressure	Pa	550	550	550	550	550	550	550	550	550	550
Power input	kW	1,5	3	4	4	5.5	7.5	5.5	7.5	11	11
Aspirator											
Air flow rate	m³/h	2400	3600	4800	6000	7200	8400	9600	10800	12000	15000
Static pressure	Pa	350	350	350	350	350	350	350	350	350	350
Power input	kW	0,55	1,1	1,1	1.5	2.2	2.2	3	3	4	5.5
Condenser											
Air flow rate	m³/h	15200	14400	31600	30200	30200	45300	43200	43200	28920	58400
Number of fans	pcs	2	2	4	4	4	6	6	6	4	8
Power input	kW	1,28	1,322	2,504	2,58	2,58	3,87	3,954	3,954	2,632	5,248
Dimensions											
Width	mm	992	992	992	1285	1285	1285	1685	1685	1685	1685
Length	mm	3749	3749	3749	4209	4209	4209	4558	4558	4558	4558
Height	mm	2105	2105	2105	2331	2331	2331	2810	2810	2810	2810

Refrigerant: R-407c or R-410a

Hot water and electrical heating capacities are for -15°C inlet air temperature.

Summer season indoor temperature: 20°C DB, %50 RH, outside temperature: 35°C DB, 24°C WB

Winter season indoor temperature: 20°C DB, %50 RH, outside temperature: 7°C DB

WHAT MAKES İMBAT DIFFERENT

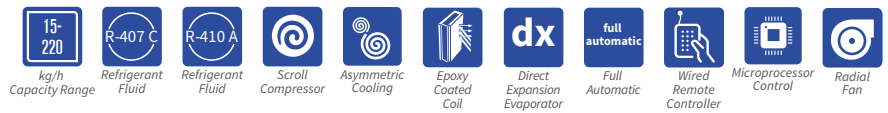
RELIABILITY

İmbat package hygienic air handling units provide all the comfort and hygiene parameters of sterilized areas itself, occupy small places and provide the ease of management, installation, service and maintenance. The unit eliminates the particles, bacteria and virüs that spoils the sterilization of ambiance, and convey the fresh outdoor air to the ambiance with the demanded temperature, humidity and hygiene parameters. The central, cooling and software are designed and produced completely by İmbat.



POOL DEHUMIDIFICATION

STANDARD



OPTIONAL

- %100 fresh air or mixed air
- Temperature, humidity and inside air quality control
- Variable air flow and low energy consumption with AC, plug or EC fan
- Electronic expansion valve
- Ability to connect to building automation system with remote controller
- Two steps filtration (G4+F7)
- Silencer
- Plate or rotary heat recovery
- Units to be work at low outside temperatures (down to -45°C)
- Custom designs for special projects and flexible production

Imbat pool dehumidification units are specifically designed for dehumidification and air conditioning of indoor swimming pools, drying processes and ambients that need to be dehumidified. They convey the air to the ambience in appropriate temperature, humidity and hygiene conditions.

The units are in full automation with its temperature, freezing, dirty filter sensors and damper servo motors, in package type with full equipments, and are designed in horizontal or vertical type on demand. The interior is easily cleanable and can be serviced with ease.

The unit is designed as a package with fans, filters, heat recovery exchanger (heat pipe, plate or rotary), direct expansion evaporator, heat pump condenser coil, mixed/supply/exhaust air dampers, optional silencers, drain pan, droplet holder, internal or external power and controller board, independent heat pump circuits, high efficient scroll compressors, hot water coil on additional 3-ways valve, and electrical heater.





MAIN SPECIFICATIONS

MODEL IHNAS...		25	46	75	100	125	150	200	300	400
Dehumidification capacity	kg/h	15	31	45	60	75	90	120	160	220
Pool surface	m ²	50	90	130	200	200	325	400	600	800
Ventilator flow rate	m ³ /h	2500	4600	7500	10000	12500	15000	20000	30000	40000
Ventilator pressure	pa	300	350	400	500	500	500	600	600	600
Ventilator motor power	kW	1,5	3	3	4	5,5	7,5	11	15	22
Aspirator flow rate	m ³ /h	2500	4600	7500	10000	12500	15000	20000	30000	40000
Aspirator pressure	pa	300	350	400	500	500	500	600	600	600
Aspirator motor power	kW	1,5	3	3	4	5,5	7,5	11	15	22
Heat recovery capacity	kW	9	17	25	33	40	45	55	75	100
Heating capacity*	kW	30	60	90	120	150	180	240	360	480
Total power input	kW	7,7	15,1	21,8	29,2	32,5	39,3	51,2	77,5	101
Width	mm	1000	1000	1000	1630	1400	1700	1800	2200	2200
Height	mm	1600	1600	2200	2800	2800	2800	3500	4000	4500
Length	mm	3000	3800	4000	4500	4500	4500	6000	7000	7000

* 80/60°C hot water serpentine

Rated at 30°C-%55 RH indoor and +5°C outside air temperature.

WHAT MAKES İMBAT DIFFERENT

HEAT RECOVERY

With heat pipe type heat recovery exchangers, while the pre-condensing of the saturated humid and warm air absorbed from the ambience by evaporation and condensation; the heat is transferred to the fresh air that is absorbed outside and thus heat is recovered.

HIGH EFFICIENCY

With heat recovery and direct expansion heat pump cooling circuit, dehumidification and air conditioning are executed non-stop. Dehumidification of the ambience is executed with minimum energy consumption via heat recovery.

ASYMMETRIC COOLING

It is the technology of using multiple compressors with different capacities as tandem type. In asymmetric compressor application, the efficiency of the unit working under partial load is increased. With the operation of compressors at different capacity one by one, the number of engagement for each compressor is reduced, which in turn leads to longer life span. With the capacity control steps exceeding the number of capacitors, the most suitable and effective operation type is guaranted under variable loads.



AIR HANDLING UNIT

STANDARD



m³/h Capacity Range



Modular Structure



Heat Recovery



Radial Fan



Humidity Control



Custom Production



Heating



Cooling



Ventilation



Dual Compound Isolated Body



Fresh Air

OPTIONAL

- Custom production up to 250.000 W m³/h
- Epoxy or hydrophil coated heating-cooling coils
- Switchboard and automation
- Direct expansion cooling or heating
- Plug, AC or EC type fans
- Panel isolation thickness: 60 mm
- Heating with gas burner
- Silencer
- Custom designs for special projects and flexible production
- Ventilator or aspirator cells

The most appropriate and accurate unit according to the project conditions is chosen with the professional air handling unit software which is specially designed for İmbat. İmbat air handling units provide high efficiency and makes lower internal pressure loss and high pressure applications possible with its fully leakproof modular structure. It is constructed as independent and detachable modular cores with aluminium profiles and corner joints which has rounded edges, all tied up with leakproof bolts&nuts. Doors are fired rated class, low heat transfer coefficient and dual compound isolated with 40 mm thick 70kg/m³ density rockwool.





CONVENIENCE TO EUROPE STANDARDS

İmbat air handling units are tested by TÜV NORD in accordance to EN 1886:2007 European standards and achieved high class rates.

Technical specifications in accordance to EN 1886:2007	İMBAT	QUALITY					
		-					+
Mechanic Endurance	D1	D3		D2			D1
Sealing of the Body	L1	L3		L2			L1
Filter Bypass Leak	F9	G1-4	F5	F6	F7	F8	F9
Thermal Conductivity	T3	T5	T4	T3		T2	T1
Thermal Bridging	TB3	TB5	TB4	TB3		TB2	TB1

MAIN SPECIFICATIONS

MODEL İKS.....				06X06	06X09	09X06	09X09	09X12	12X09	12X12	12X15	15X12	15X15	15X18	18X15
Air Speed	15-25 m/s	Air flow m³/h	min	1.950	2.900	2.900	4.375	5.850	5.850	7.800	9.720	9.720	12.150	14.580	14.580
			max	3.250	4.860	4.860	7.300	9.750	9.750	13.000	16.200	16.200	20.500	24.300	24.300
	25-4 m/s		min	3.250	4.860	4.860	7.300	9.750	9.750	13.000	16.200	16.200	20.500	24.300	24.300
			max	5.200	7.800	7.800	11.700	15.600	15.600	20.750	26.000	26.000	32.400	39.000	39.000
	4-5.5 m/s		min	5.200	7.800	7.800	11.700	15.600	15.600	20.750	26.000	26.000	32.400	39.000	39.000
			max	5.200	7.800	7.800	11.700	15.600	15.600	20.750	26.000	26.000	32.400	39.000	39.000
Dimensions		Width	mm	680	680	980	980	980	1.280	1.280	1.280	1.580	1.580	1.580	1.880
		Height	mm	680	980	680	980	1.280	980	1.280	1.580	1.280	1.580	1.880	1.580

MODEL İKS.....				18X18	18X21	21X18	21X21	24X18	24X21	24X24	27X21	31X21	31X24	31X27	31X31
Air Speed	15-25 m/s	Air flow m³/h	min	17.500	20.400	20.400	23.800	25.000	29.000	33.000	34.000	36.000	42.000	46.000	52.000
			max	29.500	34.100	34.100	39.700	41.600	48.300	55.000	56.600	60.000	70.000	76.700	86.600
	25-4 m/s		min	29.500	34.100	34.100	39.700	41.600	48.300	55.000	56.600	60.000	70.000	76.700	86.600
			max	46.700	54.500	54.500	63.500	66.000	77.000	88.000	90.600	96.000	112.000	122.600	139.000
	4-5.5 m/s		min	46.700	54.500	54.500	63.500	66.000	77.000	88.000	90.600	96.000	112.000	122.600	139.000
			max	46.700	54.500	54.500	63.500	83.300	96.600	110.000	115.000	120.000	140.000	153.300	173.000
Dimensions		Width	mm	1.880	1.880	2.180	2.180	2.480	2.480	2.480	2.780	3.180	3.180	3.180	3.180
		Height	mm	1.880	2.180	1.880	2.180	1.880	2.180	2.480	2.180	2.180	2.480	2.780	3.180

COOLING TOWER

STANDARD



Kcal/h Capacity Range



Radial Fan



Modular Structure



Low Water Consumption



Ease of Service and Maintenance



Wide Contact Surface of Air-Water



Process Cooling

OPTIONAL

- Variable speed fan with inverter control
- Cr-Ni sheet plate body
- Remote control with PC or building automation system
- Custom designs for special projects and flexible production

The cooling towers used in air conditioning and in industrial process cooling systems for the procurement of coolant water perform cooling by counter flow of two different fluids (air and water) and the evaporation energy of water. Hot-dipped galvanized plate panels durable against corrosion are joint together with galvanized bolts and screws and special gaskets are used for leakproofing.

The insert is made of specially formed PVC with the aim of maximizing water-air contingency and minimizing the air resistance. The PVC in use is fire-resistant, non-flammable and durable and placed inside the tower casing in an easy attachment/detachment wise. Water distribution system provides the distribution of return water by homogeneously pulverised on the insert materials. The pulverization holes on the distribution pipes are wide and are properly ordered, with low water resistance, easily cleanable and non-clog. The water conveyors on distribution pipes provides homogenous distribution of water over inserts. Statically and dynamically balanced, resistant to corrosive environment, dual emission radial fans are used in İmbat cooling towers.

The control&maintenance of İmbat cooling tower is easy. When needed, it is easily detached for maintenance to access to water distribution system.



MAIN SPECIFICATIONS

Wet bulb temperature	21 °C	24 °C	28 °C	Motor power	Tower Selection Coefficient	Weighth		Water pressure loss mSS	Dimensions, mm		
Water inlet/outlet temperature	32 / 27 °C	34 / 29 °C	38 / 33 °C			Empty	Full		Width	Length	Height
MODEL RAK.....	Capacity (kcal/h)			kW							
0020	22,500	20,500	24,000	3/4	0,13	139	243	1,7	450	1950	2000
0030	33,000	31,000	36,000	3/4	0,19	148	294	1,8	520	2020	2000
0040	43,500	41,500	47,000	1	0,25	197	382	1,9	570	2170	2000
0050	52,000	50,000	57,000	2	0,32	218	453	2	680	2680	2000
0070	80,000	75,000	85,000	2	0,45	248	483	2,5	730	2730	2000
0090	100,000	95,000	110,000	2	0,58	318	595	2,5	970	2740	2000
0120	125,000	120,000	135,000	2	0,74	505	695	3	970	2870	2000
0150	155,000	150,000	170,000	2	0,9	626	795	3	970	2970	2000
0170	175,000	170,000	190,000	3	1,07	400	860	3,4	1080	2000	2000
0220	205,000	220,000	250,000	2*2	1,40	458	978	3,6	1500	3135	2000
0280	295,000	280,000	320,000	2*3	1,92	500	1200	3,95	1760	2000	2000
0350	360,000	350,000	400,000	2*3	2,27	620	1560	3,95	1260	2000	2000
0460	480,000	460,000	525,000	2*3	2,39	750	1950	3,95	2480	2000	2000
0540	550,000	540,000	610,000	3*3	3,46	880	2300	4,2	3240	2000	2000
0650	670,000	650,000	730,000	4*3	4,17	1060	2800	4,2	3920	2000	2000
0720	750,000	725,000	820,000	4*4	4,65	1150	3100	4,2	4320	2000	2000
0830	860,000	830,000	940,000	5*3	5,35	1250	3460	5,1	5000	2000	2000
0900	940,000	900,000	1.025.000	5*4	5,84	1480	3950	5,1	5400	2000	2000
1100	1.130.000	1.100.000	1.230.000	6*4	6,96	1800	4750	5,1	6480	2000	2000

* For higher capacities, twin towers (single tower pan, dual body) or multipliers are offered.

WHAT MAKES İMBAT DIFFERENT

MODULAR STRUCTURE

The body structure of İmbat cooling towers is designed in modular system. Thus, for models with higher capacities over standards, twin body design is offered.

HIGH EFFICIENCY

İmbat cooling towers with radial fan provide efficiency with wide contact surface area of water-air that provides heat transfer at a higher rate, specially formed PVC insert, uniform water distribution system and quality radial fans.

LOW WATER CONSUMPTION

PVC droplet holders-with their special forms- minimize water loss by keeping the droplets drifted by air. By directing the air well, it also provides the fans to consume lower energy.



CRANE CAB AIR CONDITIONER

STANDARD



OPTIONAL

- Models to operate at +80°C outside temperature with refrigerant R-227
- Models to operate at +90°C outside temperature with refrigerant R-236 and R-124
- Variable air flow and low energy consumption with EC or plug fan type
- Electronic expansion valve
- Advanced electronic control panel providing daily/weekly programming and full automatic operation
- Remote control panel
- Two steps filtration (G4+F7)
- Water-cooled models
- Electric or hot water heating
- Chilled water models
- Custom designs for special projects and flexible production



WHAT MAKES **IMBAT** DIFFERENT

ENDURANCE

Imbat crane cab air conditioner is specially designed to operate at high temperatures, in over dusty and over vibrated environments.

HIGH OUTSIDE TEMPERATURE

Imbat crane cab air conditioner is designed to operate on demanded capacity at a temperature between +40°C/+90°C.

HIGH EFFICIENCY

Imbat crane cab air conditioner is designed to provide the maximum energy efficiency. Wide heat transfer surface on evaporator and condenser is standard.



Cement, paper and especially iron&steel plants are the facilities where there is excess dust and vibration with high temperatures. It is important for the operators to be able to work under appropriate conditions and for the electric-electronic control panels to operate problem free in these kind of facilities' electric panel rooms and crane cabs. But it is inappropriate to use standard air conditions in these kind of facilities.

İmbat crane cab air conditioners are as package type or split type specially designed to operate at high temperatures, under excess dust and vibration. They are designed to operate on demanded capacity at a temperature between +40°C/ +90°C. İmbat crane cab air conditioner is delivered with all equipments placed in the unit, almost ready to operate. Basic electric and air ducts connections are needed.

Although the unit can be used with air duct, it can be used in crane electric panel room and crane operator cabs where there is not enough space for installation platform or air duct is not wanted. Split type units are ready to operate after installation of evaporator unit inside the cab and compressor-condenser unit on crane platform, then necessary pipe and electric connections are bounded.



MAIN SPECIFICATIONS

MODEL HSVE...Y		21	31	41	61	71	101
Cooling capacity	kW	3	6	7	9	12	13
Input power	kW	1,8	3,1	3,8	5,51	6,4	7,3
Heating capacity	kW	2,00	3,00	5,00	6,00	7,50	10,00
Air flow rate	m ³ /h	1800	2400	3500	4800	5000	5600
Refrigerant		R-134 a					
Number of compressor	pcs	1	1	1	1	1	1
Width	mm	910	910	1.000	1.100	1.400	1.600
Heigth	mm	1.100	1.100	1.300	1.300	1.500	1.500
Depth	mm	550	670	670	670	670	800

Rated at 65°C outside temperature and 27°C, %50 RH inside temperature.

HEAT RECOVERY UNIT

STANDARD

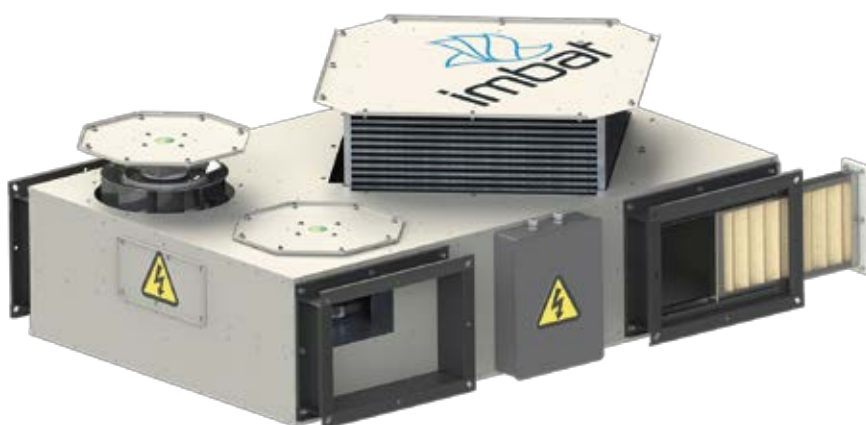


OPTIONAL

- Stepless speed control
- Intelligent automation solutions
- High static pressure
- Water or electric heater
- Custom designs for special projects and flexible production

In modern, energy saving and leakproof buildings, there is no airflow between indoor and outdoor. Comfort conditions are related inside air quality as much as temperature and humidity. For this reason, to exhaust the inside air saturated with carbondioxide and other toxic gases and absorb the fresh air needed, ventilation systems should be used. According to the researches, the health of people living in leakproof buildings are directly related to the quality of inside air and the performance of these people is increased with the increase of fresh air ratio.

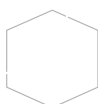
Imbat heat recovery units supply the necessary fresh air, exhaust the saturated air and transfer the energy of exhausted air to the fresh air and thus saves energy. Parallely, it decrease the first investment cost and the operational cost of the company. Low height of the unit makes it easy for suspended ceiling applications. Condensed water is omitted via consensation pan and water discharge pipe. Service doors provides easy access to fan, motor, exchanger and filter assemblies and ease interfere incase of need.



MAIN SPECIFICATIONS

MODEL IHR...		250	500	750	1000	1500	2000	2500	3000	3500	4000
Air flow 0 Pa	m³/h	500	800	1000	1500	2000	2500	3000	3750	4000	5000
Air flow 150 Pa	m³/h	250	500	750	1000	1500	2000	2500	3000	3500	4000
Fan motor power	Watt	2*190	2*300	2*410	2*525	2*650	2*650	2*650	2*1250	2*1250	2*1250
Filter		G4									
Heat recovery exchanger		Plate									
Electric heater *	kW	1	2	3	4	6	9	10	12	14	16
Electric heater step *	pcs	1	1	2	2	3	3	3	3	3	3
Connection diameter	mm	200	250	250	250	300	300	350	350	400	400
Width	mm	600	655	725	805	985	985	1230	1230	1230	1305
Length	mm	830	935	1125	1185	1435	1595	1905	1905	1905	1935
Height	mm	305	355	355	385	445	445	615	615	615	675

* Optional



STANDARD



OPTIONAL

- Stepless speed control
- Intelligent automation solutions
- High static pressure
- Water or electric heater
- Custom designs for special projects and flexible production

İmbat heat pump heat recovery unit is designed to obtain heat recovery and high quality inside air. While the exhaust air is omitted out over heat pump, fresh air is conditioned over heat pump and is transferred to indoor.

With standard heat recovery units, it is not possible to meet the fresh air temperature to inside ambience design parameters. İmbat heat pump heat recovery unit provides with its heat pump to realize vantilation air that is conditioned according to the inside ambience design parameters.

The system consisting of heat recovery exchanger, compressor, evaporator, condenser, fresh air fan, exhaust fan, filter, switchboard and cooling equipments is in a single body and compact structure. Low height of the unit makes it easy for suspended ceiling applications. Service doors provides easy access to fan, motor, exchanger and filter assemblies and ease interfere incase of need. Condensed water is omitted via drain pan and water discharge pipe.



MAIN SPECIFICATIONS

MODEL IHHR...		500	750	1000	1500	2000	3000	4000
Air flow rate	m³/h	500	750	1000	1500	2000	2500	3000
Exterior static pressure	Pa	120	180	140	210	110	140	200
Max. air flow	m³/h	650	960	1140	1830	2400	3600	4880
Heating capacity	kW	4,47	6,01	8,62	11,13	17,1	23,31	33,15
COP		5,88	6,2	6,68	8,01	7,58	7,59	7,19
Cooling capacity	kW	2,94	3,98	6	8	13,1	17,31	24,92
EER		3,88	4,1	4,65	5,76	5,81	5,64	5,41
Fan motor power	kW	0,204	0,42	0,43	1,03	0,911	1,36	2,6
Compressor motor power-max	kW	0,76	0,97	1,29	1,39	2,25	3,07	4,61
Filter		G4						
Heat recovery exchanger		Plate						
Electric heater *	kW	1,5	1,5	2	4	10	10	10
Electric heater step *	pcs	1	1	2	2	3	3	3
Connection diameter	mm	200	250	250	250	300	300	350
Weigth	kg	105	110	150	200	280	410	360
Width	mm	600	655	725	805	985	985	1230
Length	mm	830	935	1125	1185	1435	1595	1905
Height	mm	305	355	355	385	445	445	615

* Optional

Rated at 25°C DB-%50 RH indoor and 37°C DB-%40 RH outdoor conditions.

For units at different capacities, on different operation conditions and for more information, please apply to İmbat.

İmbat reserves the right to make modifications on models, capacities, dimensions and specifications without prior notice.

CONDENSING UNIT

STANDARD



kW/h Capacity Range



Refrigerant Fluid



Refrigerant Fluid



Scroll Compressor



Asymmetric Cooling



Microprocessor Control



Axial Fan



Air Conditioning Applications



Ease of Service and Maintenance



Full Automatic



Heating



Cooling



Low Sound Level

OPTIONAL

- Stable condenser pressure and high efficiency with variable speed condenser fans
- Remote control panel
- Remote control with PC or building automation system
- Copper fin-copper tube or epoxy coated condenser coil for corrosive environments
- Protection mesh for condenser surface
- Models with low noise and vibration
- Air cooled models with radial fan appropriate for indoor
- Heat pump models
- Models for refrigeration applications at low temperatures (-15°C/-45°C)
- Models to operate at +55°C outside temperature
- Custom designs for special projects and flexible production



WHAT MAKES **IMBAT** DIFFERENT

ASYMMETRIC COOLING

ibat scroll compressor condensing unit use asymmetric cooling circuit technology in which multiple compressors are used. By combining two compressors at different capacity in a single circuit, there steps capacity control is obtained and the performance under partial loads is increased.

HIGH EFFICIENCY

ibat condensing unit is designed to provide maximum energy efficiency. Wide contact surface on evaporator and condenser is applied as standard.



MAIN SPECIFICATIONS

MODEL KO.SG.....S		800401	800802	801001	801301	801501	802002	802402	802802	803204	803804	804204	804404	804804	805004	805404	805604	806004	107004
Cooling capacity	kW	10,2	20,1	27,2	37,9	43,1	55,9	67,2	82,6	88,9	106,1	118,3	119,5	130,6	143,2	153,9	161,0	176,7	185,1
Power Input	kW	3,4	6,9	7,8	11,4	13,8	17,7	20,6	24,6	29,7	33,1	38,4	37,3	43,4	42,6	48,4	50,9	53,7	59,2
EER		3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0
Refrigerant		R-410a																	
Number of compressor	pcs	1	2	1	1	1	2	2	2	4	4	4	4	4	4	4	4	4	4
Compressor type		Scroll																	
Number of fan	pcs	1	1	2	2	2	4	4	4	4	6	6	6	6	8	8	8	8	10
Fan type		Axial																	
Fan motor power	kW	0,3	0,7	1,3	1,4	1,4	2,5	2,6	2,6	2,6	3,9	3,9	4,0	4,0	5,1	5,1	5,1	5,2	6,3
Total power input	kW	3,7	7,6	9,1	12,7	15,2	20,2	23,1	27,3	32,3	37,0	42,3	41,2	47,4	47,7	53,5	56,0	58,9	65,6
Length	mm	528	650	954	954	954	1785	1785	1785	1785	1785	1785	1785	1785	1785	1785	1785	1785	1785
Width	mm	1346	1659	1860	1860	1860	1675	1675	1675	1675	2267	2267	2267	2267	2970	2970	2970	2970	3970
Height	mm	869	1150	922	922	922	1302	1302	1302	1302	1302	1302	1302	1302	1302	1302	1302	1302	1302

MODEL KO.SG.....S		107604	108004	109004	110004	111004	112004	114004	116004	907004	907604	908004	909004	910004	911004	912004	914004	916004
Cooling capacity	kW	195,6	211,3	239,0	269,1	307,7	354,4	392,0	433,6	189,8	202,8	217,2	236,6	269,6	309,4	346,8	385,4	427,9
Power Input	kW	65,7	68,0	84,2	89,7	93,7	102,6	120,8	137,3	62,5	70,5	72,2	85,0	91,8	96,7	102,5	120,2	136,5
EER		3,0	3,1	2,8	3,0	3,3	3,5	3,2	3,2	3,0	2,9	3,0	2,8	2,9	3,2	3,4	3,2	3,1
Refrigerant		R-410a																
Number of compressor	pcs	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Compressor type		Scroll																
Number of fan	pcs	10	10	10	12	8	10	10	10	10	10	10	10	12	8	10	10	10
Fan type		Axial																
Fan motor power	kW	6,3	6,5	6,5	7,8	19,4	24,4	24,4	24,3	6,3	6,3	6,5	6,5	7,8	19,4	24,4	24,4	24,3
Total power input	kW	72,0	74,4	90,6	97,5	113,1	127,0	145,2	161,6	68,9	76,8	78,7	91,4	99,6	116,2	126,9	144,6	160,8
Length	mm	1785	1785	1785	1785	1785	1990	1990	1990	1990	1785	1785	1785	1785	1990	1990	1990	1990
Width	mm	3970	3970	3970	4670	4670	5470	5470	5470	3970	3970	3970	3970	4670	4670	5470	5470	5470
Height	mm	1302	1302	1302	1302	1392	1392	1392	1392	1302	1302	1302	1302	1302	1392	1392	1392	1392

MODEL KO.SK.....S		800351	800501	800601	800801	801001	801202	801402	801602	802002	802202	802604	803004	803404	803604	804004	804404
Cooling capacity	kW	10,1	15,4	19,1	25,1	30,9	36,3	42,5	51,1	63,0	69,2	77,5	93,3	102,3	110,4	121,2	134,9
Power Input	kW	3,1	4,4	5,0	7,4	8,8	10,9	11,0	14,4	17,2	18,6	22,4	25,6	29,5	33,1	36,6	38,6
EER		3,3	3,5	3,8	3,4	3,5	3,3	3,9	3,5	3,7	3,7	3,5	3,6	3,5	3,3	3,3	3,5
Refrigerant		R-407c															
Number of compressor	pcs	1	1	1	1	1	2	2	2	2	2	4	4	4	4	4	4
Compressor type		Scroll															
Number of fan	pcs	1	1	2	2	2	2	4	4	4	4	6	6	6	6	6	8
Fan type		Axial															
Fan motor power	kW	0,3	0,6	1,3	1,3	1,3	1,4	2,5	2,5	2,6	2,6	3,8	3,9	3,9	3,9	4,0	5,1
Total power input	kW	3,4	5,1	6,3	8,7	10,2	12,3	13,5	16,9	19,8	21,3	26,2	29,5	33,4	37,0	40,6	43,7
Length	mm	528	650	954	954	954	954	1785	1785	1785	1785	1785	1785	1785	1785	1785	1785
Width	mm	1346	1659	1860	1860	1860	1860	1675	1675	1675	1675	2267	2267	2267	2267	2267	2970
Height	mm	869	1150	922	922	922	922	1302	1302	1302	1302	1302	1302	1302	1302	1302	1302

MODEL KO.SK.....S		804804	106004	107004	108004	109004	110004	111004	112004	905604	906804	908004	909004	910004	911004	912004
Cooling capacity	kW	147,6	163,6	190,2	225,0	247,3	267,3	309,2	334,3	164,1	191,3	226,9	247,5	267,5	307,5	332,8
Power Input	kW	41,4	52,3	60,9	65,6	76,0	87,1	91,7	103,6	48,3	60,1	68,2	78,3	88,8	94,1	106,3
EER		3,6	3,1	3,1	3,4	3,3	3,1	3,4	3,2	3,4	3,2	3,3	3,2	3,0	3,3	3,1
Refrigerant		R-407c														
Number of compressor	pcs	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Compressor type		Scroll														
Number of fan	pcs	8	8	10	12	12	12	8	8	8	10	12	12	12	8	8
Fan type		Axial														
Fan motor power	kW	5,2	5,2	6,3	7,8	7,8	7,8	19,4	19,4	5,2	6,3	7,8	7,8	7,8	19,4	19,4
Total power input	kW	46,6	57,6	67,3	73,4	83,7	94,9	111,1	123,0	53,6	66,5	75,9	86,0	96,5	113,5	125,7
Length	mm	1785	1785	1785	1785	1785	1785	1990	1990	1785	1785	1785	1785	1785	1990	1990
Width	mm	2970	2970	3970	4670	4670	4670	4670	4670	2970	3970	4670	4670	4670	4670	4670
Height	mm	1302	1302	1302	1302	1302	1302	1392	1392	1302	1302	1302	1302	1302	1392	1392

Rated at: +7°C
evaporation and
+35°C outside air conditions.

FANCOIL

STANDARD



Heating



Cooling



Low
Sound
Level



Plug &
Operate

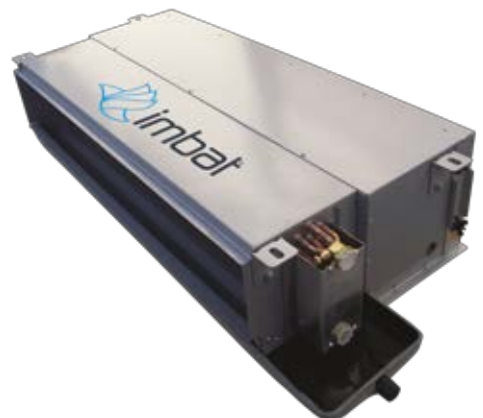


Ease of
Service and
Maintenance

- 2-pipe or 4-pipe installation flexibility
- Anti corrosive, smooth cabinet surface
- Long-life, washable filter
- Three speed centrifugal fans and EC motor
- Silent and safe operation
- Slim, compact design
- Copper tube aluminium fin coil
- Heating -Cooling coil
- Excellent air flow & air distribution
- Easy maintenance
- Esthetic design, unit ergonomic dimensions
- Pre-insulated stainless drain pan
- Low and medium pressure models
- Wide service network
- High efficiency

OPTIONAL

- Unit & wall mounted thermostats
- Additional electrical heater
- Flexible right/left connection
- Different pressure option
- Auxiliary drain pan
- Mechanical, digital room thermostat
- Decorative stands for floor type fan-coils



CONCEALED CEILING TYPE FAN COIL UNITS WITH LOW PRESSURE

		2 PIPE											
Model IMFC...		015	020	025	030	035	040	050	060	070	080	100	110
Technical Data													
Total cooling capacity *1	kW	1,44	2,20	2,80	3,36	4,29	4,67	5,14	5,90	7,11	7,64	9,33	10,34
Sensible cooling capacity *1	kW	1,23	1,58	2,06	2,67	3,12	3,42	3,67	4,20	5,14	5,51	6,82	7,56
Heating capacity *2	kW	5,49	6,97	9,14	11,28	13,52	14,89	15,85	18,04	22,21	23,86	29,66	32,44
Air flow (High)	m³/h	395	380	538	814	774	878	895	1.025	1.289	1.392	1.731	2.126
Air flow (Medium)	m³/h	326	312	414	633	615	692	707	802	1.008	1.110	1.361	1.700
Air flow (Low)	m³/h	196	190	235	444	412	458	465	465	606	649	906	1.135
Dimensions													
Height	mm	235	235	235	235	235	235	235	235	235	235	235	235
Width	mm	685	685	685	965	965	965	1.100	1.185	1.355	1.405	1.745	1.830
Length	mm	483	483	483	483	483	483	483	483	483	483	483	483
Weight	kg	13,8	14,6	14,6	20,0	21,1	21,1	24,0	25,6	31,8	32,1	40,2	42,3
Refrigerant Data													
Coil water volume	l	2,1	2,4	2,4	2,4	2,9	2,9	3,1	3,2	3,5	3,6	4,2	4,4
Water side pressure (Cooling)	kPa	3,2	10,1	15,9	20,4	15,7	18,5	24,7	34,0	25,7	30,3	20,5	26,1
Water side pressure (Heating)	kPa	2,6	8,1	12,9	15,5	12,2	14,3	19,0	26,1	19,7	23,3	16,1	20,1
Noise data*3													
Sound pressure level (High)	dBA	36	36	42	41	40	44	43	45	47	48	48	49
Sound pressure level (Medium)	dBA	32	32	37	37	36	39	38	40	42	43	42	42
Sound pressure level (Low)	dBA	21	24	28	30	29	33	31	31	32	33	32	33
Connection data													
Pipe connection inlet	inc	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Pipe connection outlet	inc	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Pipe connection drainage	inc	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Fan power (High)	W	32	30	58	60	57	75	79	91	111	137	149	189
Fan power (Medium)	W	28	27	47	54	48	57	62	83	101	126	115	171
Fan power (Low)	W	23	22	36	42	41	46	48	66	82	96	94	138

		4 PIPE											
Model IMFC...		015	020	025	030	035	040	050	060	070	080	100	110
Technical Data													
Total cooling capacity *1	kW	1,40	2,19	2,71	3,31	4,20	4,53	4,79	5,79	6,87	7,35	9,22	10,76
Sensible cooling capacity *1	kW	1,19	1,57	1,99	2,63	3,05	3,31	3,41	4,11	4,94	5,28	6,71	7,84
Heating capacity *2	kW	3,87	3,30	4,63	7,58	7,32	7,82	7,34	9,76	11,41	12,18	13,39	18,21
Air flow (High)	m³/h	385	372	513	797	751	841	861	996	1.225	1.317	1.651	2.012
Air flow (Medium)	m³/h	317	304	393	627	598	663	677	782	972	1.067	1.302	1.636
Air flow (Low)	m³/h	192	187	225	429	395	444	450	450	581	621	876	1.102
Dimensions													
Height	mm	235	235	235	235	235	235	235	235	235	235	235	235
Width	mm	685	685	685	965	965	965	1.100	1.185	1.355	1.405	1.745	1.830
Length	mm	483	483	483	483	483	483	483	483	483	483	483	483
Weight	kg	15,1	16,9	15,5	21,4	23,2	22,1	25,5	27,3	33,6	34,4	42,5	45,5
Refrigerant Data													
Coil water volume	l	2,1	2,4	2,4	2,4	2,9	2,9	3,1	3,2	3,5	3,6	4,2	4,4
Water side pressure (Cooling)	kPa	3,0	10,0	15,0	19,9	15,1	17,5	21,8	32,8	24,1	28,3	20,1	28,0
Water side pressure (Heating)	kPa	4,3	3,2	6,0	19,8	18,6	20,9	20,9	37,4	9,3	10,7	15,2	28,0
Noise data*3													
Sound pressure level (High)	dBA	36	36	42	41	40	44	43	45	47	48	48	49
Sound pressure level (Medium)	dBA	32	32	37	37	36	39	38	40	42	43	42	42
Sound pressure level (Low)	dBA	21	24	28	30	29	33	31	31	32	33	32	33
Connection data													
Pipe connection inlet	inc	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Pipe connection outlet	inc	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Pipe connection drainage	inc	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Pipe connection additional coil	inc	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Fan power (High)	W	31	30	56	59	56	71	79	89	105	130	146	179
Fan power (Medium)	W	27	26	45	54	47	55	61	81	97	121	113	165
Fan power (Low)	W	23	22	35	41	39	45	47	64	78	92	92	134

On high speed, 27°C DB, %50 RH indoor and 7/12°C water temperature conditions.

On high speed, 20°C DB indoor, 90°C water temperature conditions and flow rate same with cooling.

Sound levels are for 1 m distance from units and direction factor as Q=1.

*External static pressure is 0 Pa.

CONCEALED CEILING TYPE FAN COIL UNITS WITH MEDIUM PRESSURE

2 PIPE													
Model IMFC...		015	020	025	030	035	040	050	060	070	080	100	110
Technical Data													
Total cooling capacity *1	kW	1,45	2,18	2,59	3,12	4,28	4,62	5,23	6,39	6,90	8,11	9,45	11,28
Sensible cooling capacity *1	kW	1,23	1,57	1,89	2,48	3,11	3,38	3,74	4,56	4,97	5,88	6,91	8,26
Heating capacity *2	kW	5,55	6,95	8,40	10,30	13,71	14,92	16,17	19,49	21,52	25,48	30,14	35,92
Air flow (High)	m³/h	394	378	481	822	787	880	918	1.117	1.236	1.519	1.767	2.165
Air flow (Medium)	m³/h	320	309	381	678	655	730	759	929	1.016	1.265	1.467	1.834
Air flow (Low)	m³/h	183	177	228	408	395	498	519	525	669	719	1.001	1.006
Dimensions													
Height	mm	235	235	235	235	235	235	235	235	235	235	235	235
Width	mm	685	685	685	965	965	965	1.100	1.185	1.355	1.405	1.745	1.830
Length	mm	483	483	483	483	483	483	483	483	483	483	483	483
Weight	kg	13,9	14,7	14,8	20,1	21,2	21,3	24,3	25,7	31,8	33,0	40,3	42,4
Refrigerant Data													
Coil water volume	l	2,1	2,4	2,4	2,4	2,9	2,9	3,1	3,2	3,5	3,6	4,2	4,4
Water side pressure (Cooling)	kPa	3,3	10,0	13,8	18,0	15,8	18,2	25,5	39,3	24,4	33,9	21,1	30,7
Water side pressure (Heating)	kPa	2,7	8,1	11,2	13,1	12,5	14,4	19,6	29,7	18,7	26,1	16,5	24,1
Noise data*3													
Sound pressure level (High)	dBA	40	40	45	45	45	47	47	48	48	50	51	52
Sound pressure level (Medium)	dBA	36	36	40	40	40	41	41	43	43	45	46	47
Sound pressure level (Low)	dBA	34	28	32	29	31	35	34	35	36	39	37	39
Connection data													
Pipe connection inlet	inc	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Pipe connection outlet	inc	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Pipe connection drainage	inc	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Fan power (High)	W	42	40	55	78	71	83	88	110	112	151	168	206
Fan power (Medium)	W	36	35	48	71	66	77	80	104	101	143	153	195
Fan power (Low)	W	28	28	37	55	54	64	64	85	85	122	125	159

4 PIPE													
Model IMFC...		015	020	025	030	035	040	050	060	070	080	100	110
Technical Data													
Total cooling capacity *1	kW	1,41	2,13	2,53	3,28	4,21	4,57	5,12	6,19	6,76	7,37	9,26	10,95
Sensible cooling capacity *1	kW	1,20	1,53	1,85	2,60	3,06	3,35	3,66	4,42	4,86	5,32	6,76	7,98
Heating capacity *2	kW	3,66	3,58	4,12	7,11	6,93	7,43	8,24	9,73	10,60	11,23	15,23	17,56
Air flow (High)	m³/h	381	367	467	791	757	854	891	1.100	1.198	1.451	1.718	2.066
Air flow (Medium)	m³/h	311	299	373	657	635	708	739	922	983	1.234	1.425	1.799
Air flow (Low)	m³/h	177	172	224	396	384	480	504	510	650	693	967	968
Dimensions													
Height	mm	235	235	235	235	235	235	235	235	235	235	235	235
Width	mm	685	685	685	965	965	965	1.100	1.185	1.355	1.405	1.745	1.830
Length	mm	483	483	483	483	483	483	483	483	483	483	483	483
Weight	kg	15,2	17,0	15,7	21,5	23,3	22,3	25,8	27,4	33,6	34,5	42,6	45,6
Refrigerant Data													
Coil water volume	l	2,1	2,4	2,4	2,4	2,9	2,9	3,1	3,2	3,5	3,6	4,2	4,4
Additional coil water volume	l	1,8	1,8	1,8	2,0	2,0	2,0	2,0	2,1	2,2	2,2	2,4	24,5
Water side pressure (Cooling)	kPa	3,1	9,6	13,3	19,7	15,3	17,8	24,6	37,1	23,4	28,4	20,3	29,0
Water side pressure (Heating)	kPa	3,9	3,7	4,8	17,6	16,8	19,0	25,7	37,2	8,1	10,8	19,1	26,2
Noise data*3													
Sound pressure level (High)	dBA	40	40	45	45	45	47	47	48	48	50	51	52
Sound pressure level (Medium)	dBA	36	36	40	40	40	41	41	43	43	45	46	47
Sound pressure level (Low)	dBA	24	28	32	29	31	35	34	35	36	39	37	39
Connection data													
Pipe connection inlet	inc	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Pipe connection outlet	inc	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Pipe connection drainage	inc	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Pipe connection additional coil	inc	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Fan power (High)	W	41	40	52	75	68	79	83	107	105	144	165	196
Fan power (Medium)	W	35	35	46	69	64	73	77	103	96	139	151	192
Fan power (Low)	W	28	27	37	54	51	60	63	81	80	115	123	150

On high speed, 27°C DB, %50 RH indoor and 7/12°C water temperature conditions.

On high speed, 20°C DB indoor, 90°C water temperature conditions and flow rate same with cooling.

Sound levels are for 1 m distance from units and direction factor as Q=1.

* External static pressure is 30 Pa.

CABINET TYPE FAN COILS UNITS

2 PIPE													
Model IMFC...		015	020	025	030	035	040	050	060	070	080	100	110
Technical Data													
Total cooling capacity *1	kW	1,47	1,97	2,41	2,91	3,72	4,24	5,17	5,71	6,41	7,54	8,79	9,88
Sensible cooling capacity *1	kW	1,21	1,40	1,73	2,23	2,63	3,04	3,56	4,18	4,49	5,36	6,12	6,94
Heating capacity *2	kW	4,95	5,83	7,29	9,25	11,21	12,84	14,51	17,88	18,84	22,36	25,46	28,99
Air flow (High)	m³/h	363	356	470	686	667	828	862	1.150	1.102	1.405	1.534	1.808
Air flow (Medium)	m³/h	285	269	370	545	527	686	682	961	868	1.156	1.242	1.499
Air flow (Low)	m³/h	183	172	214	362	350	412	456	532	573	747	848	1.028
Dimensions													
Height	mm	231	231	231	231	231	231	231	231	231	231	231	231
Width	mm	850	850	850	1.110	1.110	1.110	1.370	1.370	1.630	1.630	1.890	1.890
Length	mm	545	545	545	545	545	545	545	545	545	545	545	545
Weight	kg	20,6	21,4	21,2	26,9	27,8	28,8	31,7	33,4	41,5	42,5	50,6	52,9
Refrigerant Data													
Coil water volume	l	2,5	2,9	2,9	2,9	3,4	3,4	4,0	4,0	4,5	4,5	5,1	5,1
Water side pressure (Cooling)	kPa	4,0	10,9	15,8	20,1	15,6	20,2	35,6	12,2	17,3	23,6	35,6	44,1
Water side pressure (Heating)	kPa	3,0	8,3	12,2	15,1	12,0	15,4	26,3	9,4	13,0	17,6	26,7	33,3
Noise data*3													
Sound pressure level (High)	dBA	36	36	42	40	40	46	42	44	45	47	49	48
Sound pressure level (Medium)	dBA	32	32	38	36	35	43	37	39	39	42	43	42
Sound pressure level (Low)	dBA	19	23	27	29	29	32	30	30	30	32	32	32
Connection data													
Pipe connection inlet	inc	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Pipe connection outlet	inc	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Pipe connection drainage	inc	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Fan power (High)	W	30	32	55	61	60	73	70	111	96	138	134	162
Fan power (Medium)	W	27	29	45	55	55	68	57	101	81	119	104	147
Fan power (Low)	W	23	25	34	46	46	59	45	78	64	93	80	117

4 PIPE													
Model IMFC...		015	020	025	030	035	040	050	060	070	080	100	110
Technical Data													
Total cooling capacity *1	kW	1,46	1,94	2,35	2,82	3,61	4,15	5,03	5,25	6,37	7,32	8,41	9,59
Sensible cooling capacity *1	kW	1,19	1,37	1,69	2,15	2,54	2,96	3,45	3,83	4,47	5,19	5,84	6,72
Heating capacity *2	kW	2,71	2,54	3,03	4,87	4,81	5,37	6,47	7,78	8,18	9,39	10,85	12,08
Air flow (High)	m³/h	358	347	456	654	640	789	830	1.093	1.109	1.349	1.467	1.733
Air flow (Medium)	m³/h	274	260	364	517	505	661	657	942	833	1.120	1.208	1.440
Air flow (Low)	m³/h	174	165	208	343	336	398	443	506	549	723	821	969
Dimensions													
Height	mm	231	231	231	231	231	231	231	231	231	231	231	231
Width	mm	850	850	850	1.110	1.110	1.110	1.370	1.370	1.630	1.630	1.890	1.890
Length	mm	545	545	545	545	545	545	545	545	545	545	545	545
Weight	kg	20,6	21,2	21,2	26,6	27,8	28,8	31,7	33,4	41,5	42,5	50,6	52,9
Refrigerant Data													
Coil water volume	l	2,5	2,9	2,9	2,9	3,4	3,4	4,0	4,0	4,5	4,5	5,1	5,1
Additional coil water volume	l	1,8	1,8	1,8	1,9	1,9	1,9	2,1	2,1	2,2	2,2	2,3	2,3
Water side pressure (Cooling)	kPa	4,0	10,5	15,2	19,0	14,7	19,2	33,9	10,9	17,2	22,4	33,2	41,8
Water side pressure (Heating)	kPa	2,3	2,1	2,8	9,0	8,8	10,9	19,1	26,2	5,9	7,4	11,0	13,2
Noise data*3													
Sound pressure level (High)	dBA	36	36	42	40	40	46	42	44	45	47	49	48
Sound pressure level (Medium)	dBA	32	32	38	36	35	43	37	39	39	42	43	42
Sound pressure level (Low)	dBA	19	23	27	29	29	32	30	30	30	32	32	32
Connection data													
Pipe connection inlet	inc	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Pipe connection outlet	inc	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Pipe connection drainage	inc	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Pipe connection additional coil	inc	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Fan power (High)	W	29	31	54	60	59	71	68	110	94	133	129	156
Fan power (Medium)	W	26	28	44	54	54	66	56	100	79	114	99	142
Fan power (Low)	W	22	24	33	45	45	58	44	77	62	89	76	111

On high speed, 27°C DB, %50 RH indoor and 7/12°C water temperature conditions.

On high speed, 20°C DB indoor, 90°C water temperature conditions and flow rate same with cooling.

Sound levels are for 1 m distance from units and direction factor as Q=1.

*On concealed wall type fan coil units external static pressure is 12 Pa.

COLD STORAGE

STANDARD



Watt Capacity
Range



Refrigerant
Fluid



Digital
Control
Panel



Scroll
Compressor



Piston
Compressor



Easy of
Service and
Maintenance



Wired
Remote
Control



INVERTER



Axial Fan

- Hermetic, semi hermetic piston type compressors
- Two stage piston type compressors
- Copper tube aluminium fin condenser coil
- Electrostatic painted galvanized plate body
- Durable close type case
- Compressor contactor
- Resistance contactor
- Thermic relay
- Compressor fuse
- Resistance fuse
- Evaporator fan fuse
- Digital controller fuse
- Failure lamps
- Discharge line valve
- Suction line valve
- Low pressure switch
- High pressure switch
- Liquid tank *
- Vibration absorber *
- Dryer
- Reciver
- Placing on the surface or wall
- Evaporator units
- Copper tube aluminium fin evaporator coil
- Thermostatic expansion valve
- Defrost resistance
- Drain pan resistance
- Isolated drain pan
- Axial type, high efficient fans



* Standard for freezer units.

OPTIONAL

- Liquid tank
- Liquid holder
- Phase protection relay
- Central observation module
- Condenser fan speed control
- Condenser fan pressure switch
- Service valves
- Sound isolation
- AISI 304 stainless steel plate body
- Sight glass
- Combined high-low pressure switch
- Scroll or screw type compressors
- Custom designs for special projects and flexible production

MAIN SPECIFICATIONS

- -45/+15°C evaporation temperature range
- Split type cold storage and deepfreeze units
- Condensing units with hermetic compressor
- Condensing units with semi-hermetic compressor
- Condensing units with scroll compressor
- Industrial central system condensing units
- Inverter controlled central system condensing units
- Blast freezing condensing units
- Vertical type evaporator units
- Ceiling type, twin flow evaporating units
- Blast freezing evaporator unit
- Fast cooling evaporator unit
- Units are tested at factory and delivered ready to setup
- Easy assembling and mounting



COLD STORAGE CONDENSING UNIT

Danfoss compressor

MODEL NE.....	Evaporation Temperature		40151	40201	40251	40301	40351	40401	40451	40501	40551	40601	40751	40901	41001	41201	41301
Refrigeration capacity	-10°C	kW	2,0	2,8	3,5	4,1	5,1	5,6	6,3	7,2	8,6	9,5	10,9	12,5	16,0	19,0	20,4
	-5°C		2,6	3,5	4,4	5,0	6,0	6,7	7,8	8,8	10,6	11,6	13,3	15,3	19,9	23,1	24,8
	0°C		3,2	4,2	5,2	6,0	7,2	8,1	9,6	10,5	12,7	13,9	15,9	18,5	23,6	27,6	29,6
	+5°C		3,8	5,2	6,3	7,1	8,5	9,3	11,4	12,5	15,0	16,2	18,5	22,0	28,1	32,6	34,7
Compressor power input *		kW	1,3	1,6	2,2	2,5	2,8	3,3	4,1	4,6	5,0	5,6	6,6	7,4	9,4	10,9	12,5
COP			1,9	2,1	2,0	2,0	2,1	2,0	1,9	1,9	2,1	2,1	2,0	2,1	2,1	2,1	2,0
Refrigerant		R-404a															
Compressor type		Hermetic piston															
Number of compressor		pcs	1														
Number of fan		pcs	1													2	
Fan diameter		Ø mm	350		450					500					500		
Supply voltage		V/Hz	380/3/50														
Discharge line pipe diameter		Ø mm	3/8"	3/8"	3/8"	1/2"	1/2"	1/2"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
Suction line pipe diameter		Ø mm	1/2"	1/2"	1/2"	5/8"	5/8"	5/8"	7/8"	7/8"	7/8"	7/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"
Circuit		pcs	1														
Length		mm	400	400	550	550	550	580	580	580	580	580	750	858	858	858	858
Width		mm	1036	1036	1157	1157	1157	1329	1329	1329	1329	1329	1650	1845	1845	1845	1845
Height		mm	715	715	840	840	840	870	870	870	870	870	1150	1130	1130	1130	1130

Tecumseh compressor

MODEL NE.....	Evaporation Temperature		20051	20071	20101	20151	20201	20251	20301	20401	20451	20501	20601	20701
Refrigeration capacity	-10°C	kW	0,9	1,1	1,4	2,6	2,9	3,5	4,8	5,1	5,7	6,4	8,0	8,3
	-5°C		1,1	1,4	1,8	3,2	3,6	4,4	6,0	6,3	7,2	8,1	9,9	10,5
	0°C		1,3	1,7	2,1	3,8	4,4	5,4	7,2	8,0	8,9	9,9	12,1	12,7
	+5°C		1,5	1,9	2,4	4,3	5,2	6,3	8,5	9,6	10,6	11,6	14,4	15,0
Compressor power input *		kW	0,5	0,7	0,8	1,5	1,8	2,1	2,9	2,9	3,4	3,8	4,3	4,8
COP			2,1	2,0	2,1	2,1	2,0	2,0	2,1	2,1	2,1	2,1	2,3	2,2
Refrigerant			R-404a											
Compressor type			Hermetic piston											
Number of compressor		pcs	1											
Number of fan		pcs	1			1		1				1		
Fan diameter		Ø mm	300			350		450				500		
Supply voltage		V/Hz	230/1/50			380/3/50								
Discharge line pipe diameter		Ø mm	1/4"	3/8"	3/8"	3/8"	1/2"	1/2"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"
Suction line pipe diameter		Ø mm	3/8"	1/2"	5/8"	5/8"	5/8"	7/8"	7/8"	7/8"	7/8"	1 1/8"	1 1/8"	3 1/8"
Circuit		pcs	1											
Length		mm	400	400	400	400	400	400	400	580	580	580	750	750
Width		mm	1002	1002	1002	1002	1036	1036	1036	1329	1329	1329	1650	1650
Height		mm	434	434	434	434	715	715	715	870	870	870	1150	1150

Rated at 35°C outside temperature.
* Datas for -5°C evaporation temperature.

DEEPFREEZE CONDENSING UNIT

Danfoss compressor

MODEL DE.....	Evaporation Temperature		40201	40301	40401	40501	40601	40901	41301
Refrigeration capacity	-35°C	kW	0,9	1,5	1,7	2,1	2,8	4,1	5,7
	-30°C		1,3	1,9	2,3	2,8	3,7	5,4	7,5
	-25°C		1,7	2,4	3,0	3,6	4,8	6,8	9,5
	-20°C		2,1	2,1	3,7	4,4	6,0	8,5	11,8
Compressor power input *		kW	1,4	3,0	2,5	3,0	4,0	5,9	7,9
COP			1,2	0,8	1,2	1,2	1,2	1,2	1,2
Refrigerant		R-404a							
Compressor type		Hermetic piston							
Number of compressor		pcs	1						
Number of fan		pcs	1						
Fan diameter		Ø mm	350			450		500	
Supply voltage		V/Hz	380/3/50						
Discharge line pipe diameter		Ø mm	1/2"	1/2"	3/4"	3/4"	3/4"	3/4"	3/4"
Suction line pipe diameter		Ø mm	5/8"	5/8"	7/8"	7/8"	1 1/8"	1 1/8"	1 1/8"
Circuit		pcs	1						
Length		mm	400	400	400	550	750	750	750
Width		mm	1036	1036	1036	1157	1650	1650	1650
Height		mm	715	715	715	840	1150	1150	1150

Tecumseh compressor

MODEL DE.....	Evaporation Temperature		20101	20151	20201	20251	20301	20401	20501	20601	20701
Refrigeration capacity	-35°C	kW	0,49	0,64	0,89	0,99	1,09	1,33	1,79	2,09	2,61
	-30°C		0,65	0,85	1,23	1,41	1,53	1,82	2,31	2,73	3,32
	-25°C		0,85	1,10	1,61	1,83	2,05	2,42	3,01	3,62	4,30
	-20°C		1,07	1,38	2,05	2,34	2,64	3,00	3,84	4,46	5,42
Compressor power input *		kW	0,84	1,01	1,58	1,78	2,02	2,44	2,82	3,16	3,45
COP			1,01	1,08	1,02	1,03	1,01	0,99	1,07	1,15	1,25
Refrigerant		R-404a									
Compressor type		Hermetic piston									
Number of compressor		pcs	1								
Number of fan		pcs	1			1		1			
Fan diameter		Ø mm	300			350		450			
Supply voltage		V/Hz	380/3/50								
Discharge line pipe diameter		Ø mm	3/8"	3/8"	1/2"	1/2"	1/2"	1/2"	5/8"	5/8"	5/8"
Suction line pipe diameter		Ø mm	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	7/8"	7/8"	1 1/8"
Circuit		pcs	1								
Length		mm	400	400	400	400	400	400	550	550	550
Width		mm	1002	1002	1036	1036	1036	1036	1157	1157	1157
Height		mm	434	434	715	715	715	715	840	840	840

Rated at 35°C outside temperature.

* Datas for -5°C evaporation temperature.

COLD STORAGE CONDENSING UNIT

Copeland compressor

MODEL NE.....	Evaporation Temperature		50301	50501	50701	51001	51501	52001	52501	53001	54001
Refrigeration capacity	-10°C	kW	6,5	11,5	16,9	20,2	26,6	29,7	35,7	41,6	61,7
	-5°C		7,8	13,6	19,8	23,6	31,0	35,0	42,6	49,6	73,5
	0°C		9,3	15,8	23,1	27,6	36,4	40,7	50,2	58,2	86,1
	+5°C		10,7		26,9	31,9	42,3	47,2	58,7	67,5	99,2
Compressor power input *		kW	3,5	5,2	8,5	9,9	12,6	14,1	17,4	20,7	29,6
Refrigerant			R-404a								
COP			2,2	2,6	2,3	2,4	2,5	2,5	2,5	2,4	2,5
Compressor type			Semi-hermetic piston								
Number of compressor		pcs	1								
Number of fan		pcs	2	2	2	2	4	6	6	6	6
Fan diameter		Ø mm	500	500	500	500	500	500	500	500	500
Discharge line pipe diameter		Ø mm	1 1/8 "	1 1/8 "	1 1/8 "	1 1/8 "	1 1/8 "	1 3/8 "	1 3/8 "	1 3/8 "	1 5/8 "
Suction line pipe diameter		Ø mm	5/8 "	3/4 "	1 3/8 "	1 3/8 "	1 5/8 "	1 5/8 "	2 1/8 "	2 1/8 "	2 5/8 "
Circuit		pcs	1								
Sound pressure level		dB(A)	72	76	75	78	78	78	79	76	78
Length		mm	954	954	954	1791	1791	1791	1791	1791	1791
Width		mm	1860	1860	1860	1782	1782	1782	1782	1782	1782
Height		mm	1131	1131	1131	1431	1431	1431	1431	1431	1431

Frascold compressor

MODEL NE.....	Evaporation Temperature		10301	10501	10651	10751	11001	11501	12001	12501	13001	14001
Refrigeration capacity	-10°C	kW	6,8	9,9	13,3	15,9	19,3	26,5	28,0	35,6	42,1	61,9
	-5°C		8,4	11,9	16,0	19,3	23,2	31,9	33,9	43,2	50,3	73,6
	0°C		10,0	14,4	19,1	23,1	27,6	38,0	40,5	51,5	59,5	86,7
	+5°C		0,0	17,0	22,5	27,4	32,4	44,8	48,1	60,7	69,2	101,3
Compressor power input *		kW	3,6	4,2	6,6	7,3	8,9	12,4	12,7	16,5	19,6	29,3
Refrigerant			R-404a									
COP			2,3	2,8	2,4	2,7	2,6	2,6	2,7	2,6	2,6	2,5
Compressor type			Semi-hermetic piston									
Number of compressor		pcs	1									
Number of fan		pcs	2	2	2	2	4	6	6	6	6	6
Fan diameter		Ø mm	500	500	500	500	500	500	500	500	500	500
Discharge line pipe diameter		Ø mm	1 1/8 "	1 1/8 "	1 1/8 "	1 1/8 "	1 1/8 "	1 3/8 "	1 3/8 "	1 3/8 "	1 5/8 "	1 5/8 "
Suction line pipe diameter		Ø mm	5/8 "	3/4 "	1 3/8 "	1 3/8 "	1 5/8 "	1 5/8 "	2 1/8 "	2 1/8 "	2 5/8 "	2 5/8 "
Circuit		pcs	1									
Sound pressure level		dB(A)	73	75	76	78	79	78	79	77	79	79
Length		mm	954	954	954	954	1791	1791	1791	1791	1791	1791
Width		mm	1860	1860	1860	1860	1782	1782	1782	1782	1782	1782
Height		mm	1131	1131	1131	1131	1431	1431	1431	1431	1431	1431

Rated at 35°C outside temperature.

* Datas for -5°C evaporation temperature.

DEEPFREEZE CONDENSING UNIT

Copeland compressor

MODEL DE.....	Evaporation Temperature		10301	10401	10551	10651	10751	11001	11501	12001	12501	13001	14001
Refrigeration capacity	-35°C	kW	1,8	2,9	3,3	4,1	4,6	7,2	10,1	12,2	14,9	16,8	22,6
	-30°C		2,5	4,0	4,5	5,8	6,1	9,7	13,4	16,0	19,8	22,4	29,6
	-25°C		3,3	5,3	5,8	7,7	8,2	12,4	17,0	20,2	25,5	28,9	37,1
	-20°C		4,2	6,7	7,4	9,6	10,3	15,6	20,9	25,0	31,5	36,2	45,5
Compressor power input *		kW	2,5	3,6	4,4	5,5	6,1	9,6	12,2	14,3	18,1	21,9	26,2
Refrigerant			R-404a										
COP			1,3	1,5	1,3	1,4	1,4	1,3	1,4	1,4	1,4	1,3	1,4
Compressor type			Semi-hermetic piston										
Number of compressor		pcs	1										
Number of fan		pcs	1	1	1	1	1	2	2	2	4	4	4
Fan diameter		Ø mm	450	450	500	500	500	500	500	500	500	500	500
Discharge line pipe diameter		Ø mm	5/8"	5/8"	7/8"	7/8"	1 1/8"	1 1/8"	1 1/8"	1 3/8"	1 3/8"	1 3/8"	1 5/8"
Suction line pipe diameter		Ø mm	7/8"	1 1/8"	1 1/8"	1 1/8"	1 5/8"	1 5/8"	1 5/8"	2 1/8"	2 1/8"	2 1/8"	2 5/8"
Circuit		pcs	1										
Sound pressure level		dB(A)	72	76	75	78	78	78	79	76	78	79	79
Length		mm	400	400	580	750	750	858	858	858	1673	1673	1673
Width		mm	1036	1036	1329	1650	1650	1845	1845	1845	1783	1783	1783
Height		mm	715	715	870	1150	1150	1130	1130	1130	1430	1430	1430

Frascold compressor

MODEL DE.....	Evaporation Temperature		50301	50401	50501	50701	51001	51501	52001	52501	53001	54001
Refrigeration capacity	-35°C	kW	2,7	3,2	5,0	6,0	7,7	10,2	11,6	14,3	16,6	20,7
	-30°C		3,4	4,2	6,7	7,7	9,8	13,4	15,0	16,3	21,7	28,0
	-25°C		4,1	5,5	8,2	9,3	12,2	16,6	18,8	21,4	27,6	36,2
	-20°C		5,0	6,7	10,1	11,4	14,9	20,2	23,0	27,3	34,2	45,8
Compressor power input *		kW	3,5	4,1	6,1	7,0	8,9	12,2	13,7	16,8	20,0	26,2
Refrigerant			R-404a									
COP			1,0	1,0	1,1	1,1	1,1	1,1	1,1	1,0	1,1	1,1
Compressor type			Semi-hermetic piston									
Number of compressor		pcs	1									
Number of fan		pcs	1	1	1	1	2	2	2	4	4	4
Fan diameter		Ø mm	450	450	450	500	500	500	500	500	500	500
Discharge line pipe diameter		Ø mm	5/8"	5/8"	7/8"	7/8"	1 1/8"	1 1/8"	1 3/8"	1 3/8"	1 3/8"	1 5/8"
Suction line pipe diameter		Ø mm	7/8"	1 1/8"	1 1/8"	1 1/8"	1 5/8"	1 5/8"	2 1/8"	2 1/8"	2 1/8"	2 5/8"
Circuit		pcs	1									
Sound pressure level		dB(A)	73	75	76	78	79	78	79	77	77	79
Length		mm	580	580	580	750	858	858	1673	1673	1673	1673
Width		mm	1329	1329	1329	1650	1845	1845	1783	1783	1783	1783
Height		mm	870	870	870	1150	1130	1130	1430	1430	1430	1430

Rated at 35°C outside temperature.

* Datas for -25°C evaporation temperature.

CENTRAL SYSTEM, COLD STORAGE COMPRESSOR GROUP

2 Copeland compressors

MODEL NE.....	Evaporation Temperature		10062	10102	10112	10132	10152	10202	10302	10402	10502	10602	10802	11002	11202
Refrigeration capacity	-10°C	kW	14,6	19,8	22,8	27,2	31,8	38,8	53,0	56,2	71,8	87,6	128,4	167,2	185,0
	-5°C		18,4	24,8	28,4	33,8	40,0	48,2	65,6	70,4	89,6	108,4	159,2	206,0	230,0
	0°C		22,8	30,8	34,6	41,4	49,4	59,2	80,2	87,0	110,4	132,2	195,0	252,0	282,0
	+5°C		27,8	38,0	42,0	50,4	60,4	71,8	97,2	106,0	134,6	159,6	237,0	304,0	343,0
Compressor power input *		kW	7,6	8,8	11,8	14,2	15,8	19,0	26,8	27,6	35,8	42,0	63,4	74,0	88,6
COP			2,4	2,8	2,4	2,4	2,5	2,5	2,4	2,6	2,5	2,6	2,5	2,8	2,6
Refrigerant			R-404a												
Compressor type			Semi-hermetic piston												
Number of compressor		pcs	2												
Circuit		pcs	1												
Sound pressure level		dB(A)	72	75	77	76	77	78	76	78	78	78	78	79	79
Length		mm	1990	1990	1990	1990	1990	1990	1990	1990	1990	1990	1990	1990	1990
Width		mm	1100	1100	1100	1100	1100	1100	1300	1300	1300	1300	1500	1500	1500
Height		mm	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150

3 Copeland compressors

MODEL NE.....	Evaporation Temperature		10093	10153	10163	10193	10223	10303	10453	10603	10753	10903	11203	11503	11803
Refrigeration capacity	-10°C	kW	21,9	29,7	34,2	40,8	47,7	58,2	79,5	84,3	107,7	131,4	192,6	250,8	277,5
	-5°C		27,6	37,2	42,6	50,7	60,0	72,3	98,4	105,6	134,4	162,6	238,8	309,0	345,0
	0°C		34,2	46,2	51,9	62,1	74,1	88,8	120,3	130,5	165,6	198,3	292,5	378,0	423,0
	+5°C		41,7	57,0	63,0	75,6	90,6	107,7	145,8	159,0	201,9	239,4	355,5	456,0	514,5
Compressor power input *		kW	11,4	13,2	17,7	21,3	23,7	28,5	40,2	41,4	53,7	63,0	95,1	111,0	132,9
COP			2,4	2,8	2,4	2,4	2,5	2,5	2,4	2,6	2,5	2,6	2,5	2,8	2,6
Refrigerant			R-404a												
Compressor type			Semi-hermetic piston												
Number of compressor		pcs	3												
Circuit		pcs	2	4			6			8		8		10	
Sound pressure level		dB(A)	73	76	76	76	78	79	78	77	76	78	78	78	79
Length		mm	2490	2490	2490	2490	2490	2490	2490	2490	2490	2990	2990	2990	2990
Width		mm	1100	1100	1100	1100	1100	1100	1100	1100	1300	1300	1500	1500	1500
Height		mm	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150

4 Copeland compressors

MODEL NE.....	Evaporation Temperature		10124	10204	10224	10264	10304	10404	10604	10804	11004	11204	11604	12004	12404
Refrigeration capacity	-10°C	kW	29,2	39,6	45,6	54,4	63,6	77,6	106,0	112,4	143,6	175,2	256,8	334,4	370,0
	-5°C		36,8	49,6	56,8	67,6	80,0	96,4	131,2	140,8	179,2	216,8	318,4	412,0	460,0
	0°C		45,6	61,6	69,2	82,8	98,8	118,4	160,4	174,0	220,8	264,4	390,0	504,0	564,0
	+5°C		55,6	76,0	84,0	100,8	120,8	143,6	194,4	212,0	269,2	319,2	474,0	608,0	686,0
Compressor power input *		kW	15,2	17,6	23,6	28,4	31,6	38,0	53,6	55,2	71,6	84,0	126,8	148,0	177,2
Refrigerant			R-404a												
COP			2,4	2,8	2,4	2,4	2,5	2,5	2,4	2,6	2,5	2,6	2,5	2,8	2,6
Compressor type			Semi-hermetic piston												
Number of compressor		pcs	4												
Circuit		pcs	1												
Sound pressure level		dB(A)	77	76	76	78	77	78	79	78	78	76	76	78	79
Length		mm	2990	2990	2990	2990	2990	2990	2990	2990	2880	2880	3976	3976	3976
Width		mm	1100	1100	1100	1100	1100	1100	1100	1100	1300	1300	1500	1500	1500
Height		mm	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150

Rated at 45°C condensation temperature.

* Datas for -5°C evaporation temperature.

CENTRAL SYSTEM, COLD STORAGE COMPRESSOR GROUP

2 Frascold compressors

MODEL NE.....	Evaporation Temperature		50062	50102	50142	50202	50302	50402	50502	50602	50802	51002	51202
Refrigeration capacity	-10°C	kW	13,2	19,6	24,1	40,1	51,5	59,3	70,6	85,5	126,2	154,5	191,1
	-5°C		16,4	24,4	30,3	49,2	63,4	72,9	88,3	106,6	158,2	193,1	239,5
	0°C		20,2	35,5	50,7	59,9	93,9	88,9	109,3	131,4	195,7	238,0	296,5
	+5°C		24,6	43,3	61,6	72,5	77,5	107,7	133,7	160,1	238,6	327,0	362,6
Compressor power input *		kW	6,8	9,9	12,2	19,7	25,2	28,1	34,7	41,3	59,1	74,6	87,2
COP			2,4	2,5	2,5	2,5	2,5	2,6	2,5	2,6	2,7	2,6	2,7
Refrigerant			R-404a										
Compressor type			Semi-hermetic piston										
Number of compressor		pcs	2										
Circuit		pcs	1										
Sound pressure level		dB(A)	71	74	75	75	77	77	76	79	78	77	78
Length		mm	1990	1990	1990	1990	1990	1990	1990	1990	1990	1990	1990
Width		mm	1100	1100	1100	1100	1100	1100	1300	1300	1500	1500	1500
Height		mm	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150

3 Frascold compressors

MODEL NE.....	Evaporation Temperature		50093	50153	50213	50303	50453	50603	50753	50903	51203	51503	51803
Refrigeration capacity	-10°C	kW	19,7	29,5	36,1	60,2	77,2	89,0	105,8	128,3	189,3	231,7	286,7
	-5°C		24,6	36,5	45,4	73,8	95,1	109,4	132,5	160,0	237,3	289,7	359,2
	0°C		30,3	53,3	76,0	89,9	116,2	133,4	163,9	197,1	293,5	403,0	444,7
	+5°C		36,9	64,9	92,3	108,7	140,9	161,5	200,5	240,2	357,9	490,5	543,9
Compressor power input *		kW	10,2	14,9	18,3	29,6	37,8	42,2	52,1	62,0	88,7	112,0	130,7
COP			2,4	2,5	2,5	2,5	2,5	2,6	2,5	2,6	2,7	2,6	2,7
Refrigerant			R-404a										
Compressor type			Semi-hermetic piston										
Number of compressor		pcs	3										
Circuit		pcs	1										
Sound pressure level		dB(A)	72	76	75	77	78	77	78	76	76	78	79
Length		mm	2490	2490	2490	2490	2490	2490	2490	2490	2990	2990	2990
Width		mm	1100	1100	1100	1100	1100	1100	1300	1300	1500	1500	1500
Height		mm	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150

4 Frascold compressors

MODEL NE.....	Evaporation Temperature		50124	50204	50284	50404	50604	50804	51004	51204	51604	52004	52404
Refrigeration capacity	-10°C	kW	26,3	39,3	48,1	80,2	103,0	118,6	141,1	171,1	252,4	308,9	382,2
	-5°C		32,8	48,7	60,5	98,4	126,9	145,9	176,7	213,3	316,5	386,2	478,9
	0°C		40,4	71,1	101,4	119,8	154,9	177,9	218,5	262,8	391,3	537,3	593,0
	+5°C		49,2	86,6	123,1	145,0	187,9	215,4	267,4	320,2	477,2	654,0	725,2
Compressor power input *		kW	13,6	19,9	24,4	39,5	50,4	56,2	69,5	82,7	118,2	149,3	174,3
COP			2,41	2,45	2,48	2,49	2,52	2,60	2,54	2,58	2,68	2,59	2,75
Refrigerant			R-404a										
Compressor type			Semi-hermetic piston										
Number of compressor		pcs	4										
Circuit		pcs	1										
Sound pressure level		dB(A)	75	76	75	78	78	78	79	76	78	79	79
Length		mm	2990	2990	2990	2990	2990	2990	2880	2880	3976	3976	3976
Width		mm	1100	1100	1100	1100	1100	1100	1300	1300	1500	1500	1500
Height		mm	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150

Rated at 45°C condensation temperature.

* Datas for -5°C evaporation temperature.

CENTRAL SYSTEM, DEEPFREEZE COMPRESSOR GROUP

2 Frascold compressors

MODEL DE.....	Evaporation Temperature		50062	50102	50142	50202	50302	50402	50502	50602	50802	51002	51202
Refrigeration capacity	-35°C	kW	2,8	5,7	7,8	10,2	12,2	14,3	16,9	21,5	31,9	40,0	43,4
	-30°C		4,5	8,0	12,1	15,1	18,7	21,8	24,0	30,0	43,8	61,1	66,4
	-25°C		6,1	10,8	16,4	20,1	25,3	29,3	32,6	40,3	58,6	82,3	89,4
	-20°C		8,1	14,2	21,2	25,8	32,7	37,8	43,0	52,7	76,8	53,4	117,1
Compressor power input *		kW	4,6	7,5	11,2	13,4	16,8	18,4	22,7	27,5	38,4	53,8	57,2
COP			1,32	1,45	1,45	1,50	1,50	1,59	1,44	1,47	1,52	1,53	1,56
Refrigerant			R-404a										
Compressor type			Semi-hermetic piston										
Number of compressor		pcs	2										
Circuit		pcs	1										
Sound pressure level		dB(A)	71	74	75	75	77	77	76	76	78	77	76
Length		mm	1990	1990	1990	1990	1990	1990	1990	1990	1990	1990	1990
Width		mm	1100	1100	1100	1100	1100	1100	1300	1300	1500	1500	1500
Height		mm	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150

Rated at 45°C condensation temperature.

* Datas for -25°C evaporation temperature.

CENTRAL SYSTEM, DEEPFREEZE COMPRESSOR GROUP

2 Copeland compressors

MODEL DE.....	Evaporation Temperature		10062	10102	10112	10124	10132	10152	10202	10302	10402	10502	10602	10802	11002	11202
Refrigeration capacity	-35°C	kW	3,0	4,0	0,0	6,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	41,4	0,0
	-30°C		4,6	6,2	7,6	9,2	9,0	9,8	13,0	19,0	18,0	23,8	28,6	42,8	60,0	63,6
	-25°C		6,6	8,8	10,6	13,2	12,6	14,0	18,0	25,6	25,2	32,8	40,4	59,8	81,2	87,0
	-20°C		8,8	11,8	14,0	17,6	16,8	19,0	23,8	33,2	34,0	43,8	54,0	79,4	105,6	114,6
Compressor power input *		kW	5,0	6,0	7,8	10,0	9,6	9,8	12,4	17,8	17,8	23,2	26,8	39,6	51,6	57,4
COP			1,3	1,5	1,4	1,3	1,3	1,4	1,5	1,4	1,4	1,4	1,5	1,5	1,6	1,5
Refrigerant		R-404a														
Compressor type		Semi-hermetic piston														
Number of compressor		pcs	2													
Circuit		pcs	1													
Sound pressure level		dB(A)	74	75	75	77	76	75	75	77	77	76	76	77	77	78
Length		mm	1990	1990	1990	1990	1990	1990	1990	1990	1990	1990	1990	1990	1990	1990
Width		mm	1100	1100	1100	1100	1100	1100	1100	1100	1100	1300	1300	1500	1500	1500
Height		mm	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150

3 Copeland compressors

MODEL DE.....	Evaporation Temperature		10093	10153	10163	10193	10223	10303	10453	10603	10753	10903	11203	11503	11803	
Refrigeration capacity	-35°C	kW	4,5	6,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	62,1	0,0	
	-30°C		6,9	9,3	11,4	13,5	14,7	19,5	28,5	27,0	35,7	42,9	64,2	90,0	95,4	
	-25°C		9,9	13,2	15,9	18,9	21,0	27,0	38,4	37,8	49,2	60,6	89,7	121,8	130,5	
	-20°C		13,2	17,7	21,0	25,2	28,5	35,7	49,8	51,0	65,7	81,0	119,1	158,4	171,9	
Compressor power input *		kW	7,5	9,0	11,7	14,4	14,7	18,6	26,7	26,7	34,8	40,2	59,4	77,4	86,1	
COP			1,3	1,5	1,4	1,3	1,4	1,5	1,4	1,4	1,4	1,5	1,5	1,6	1,5	
Refrigerant		R-404a														
Compressor type		Semi-hermetic piston														
Number of compressor		pcs	3													
Circuit		pcs	1													
Sound pressure level		dB(A)	74	75	75	77	76	76	75	77	78	76	77	78	77	
Length		mm	2490	2490	2490	2490	2490	2490	2490	2490	2490	2490	2990	2990	2990	
Width		mm	1100	1100	1100	1100	1100	1100	1100	1100	1300	1300	1500	1500	1500	
Height		mm	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	

4 Copeland compressors

MODEL DE.....	Evaporation Temperature		10204	10224	10264	10304	10404	10604	10804	11004	11204	11604	12004	12404
Refrigeration capacity	-35°C	kW	8,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	82,8	0,0
	-30°C		12,4	15,2	18,0	19,6	26,0	38,0	36,0	47,6	57,2	85,6	120,0	127,2
	-25°C		17,6	21,2	25,2	28,0	36,0	51,2	50,4	65,6	80,8	119,6	162,4	174,0
	-20°C		23,6	28,0	33,6	38,0	47,6	66,4	68,0	87,6	108,0	158,8	211,2	229,2
Compressor power input *		kW	12,0	15,6	19,2	19,6	24,8	35,6	35,6	46,4	53,6	79,2	103,2	114,8
COP			1,5	1,4	1,3	1,4	1,5	1,4	1,4	1,4	1,5	1,5	1,6	1,5
Refrigerant			R-404a											
Compressor type			Semi-hermetic piston											
Number of compressor		pcs	4											
Circuit		pcs	1											
Sound pressure level		dB(A)	75	77	75	77	78	78	77	79	78	77	77	78
Length		mm	2990	2990	2990	2990	2990	2990	2990	2880	2880	3976	3976	3976
Width		mm	1100	1100	1100	1100	1100	1100	1100	1300	1300	1500	1500	1500
Height		mm	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150

2 Frascold compressors

MODEL DE.....	Evaporation Temperature		50062	50102	50142	50202	50302	50402	50502	50602	50802	51002	51202	
Refrigeration capacity	-35°C	kW	2,8	5,7	7,8	10,2	12,2	14,3	16,9	21,5	31,9	40,0	43,4	
	-30°C		4,5	8,0	12,1	15,1	18,7	21,8	24,0	30,0	43,8	61,1	66,4	
	-25°C		6,1	10,8	16,4	20,1	25,3	29,3	32,6	40,3	58,6	82,3	89,4	
	-20°C		8,1	14,2	21,2	25,8	32,7	37,8	43,0	52,7	76,8	103,4	117,1	
Compressor power input *		kW	4,6	7,5	11,2	13,4	16,8	18,4	22,7	27,5	38,4	53,8	57,2	
COP			1,32	1,45	1,45	1,50	1,50	1,59	1,44	1,47	1,52	1,53	1,56	
Refrigerant		R-404a												
Compressor type		Semi-hermetic piston												
Number of compressor		pcs	2											
Circuit		pcs	1											
Sound pressure level		dB(A)	71	74	75	75	77	77	76	76	78	77	76	
Length		mm	1990	1990	1990	1990	1990	1990	1990	1990	1990	1990	1990	
Width		mm	1100	1100	1100	1100	1100	1100	1300	1300	1500	1500	1500	
Height		mm	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	

Rated at 45°C condensation temperature.
* Datas for -25°C evaporation temperature.

CENTRAL SYSTEM, DEEPFREEZE COMPRESSOR GROUP

3 Frascold compressors

MODEL DE.....	Evaporation Temperature		50093	50153	50213	50303	50453	50603	50753	50903	51203	51503	51803
Refrigeration capacity	-35°C	kW	4,2	7,8	11,7	15,2	18,3	21,4	25,3	32,3	47,8	60,0	65,2
	-30°C		6,7	12,0	18,1	22,7	28,1	32,7	36,0	45,0	65,6	91,7	99,6
	-25°C		9,2	16,3	24,5	30,2	37,9	43,9	48,9	60,4	87,8	123,4	134,1
	-20°C		12,1	21,4	31,9	38,7	49,1	56,7	64,6	79,1	115,3	161,5	175,6
Compressor power input *		kW	7,0	11,2	16,9	20,1	25,2	27,6	34,1	41,2	57,7	80,1	85,8
COP			1,32	1,45	1,45	1,50	1,50	1,59	1,44	1,47	1,52	1,54	1,56
Refrigerant	R-404a												
Compressor type	Semi-hermetic piston												
Number of compressor	pcs		3										
Circuit	pcs		1										
Sound pressure level	dB(A)		74	76	75	77	76	77	75	76	76	77	77
Length	mm		2490	2490	2490	2490	2490	2490	2490	2490	2990	2990	2990
Width	mm		1100	1100	1100	1100	1100	1100	1100	1300	1300	1500	1500
Height	mm		2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150

4 Frascold compressors

MODEL DE.....	Evaporation Temperature		50124	50204	50284	50404	50604	20804	51004	51204	51604	52004	52404
Refrigeration capacity	-35°C	kW	5,6	11,3	15,6	20,3	24,4	28,6	33,8	43,1	63,7	80,0	86,9
	-30°C		8,9	16,0	24,2	30,3	37,4	43,6	48,0	60,0	87,5	122,3	132,8
	-25°C		12,2	21,7	32,7	40,3	50,5	58,6	65,3	105,4	117,1	164,6	178,7
	-20°C		16,2	28,5	42,5	51,6	65,4	75,6	86,1	80,5	153,7	215,3	234,2
Compressor power input *		kW	9,3	15,0	22,5	26,8	33,6	36,8	45,4	54,9	76,9	106,8	114,4
COP			1,32	1,45	1,45	1,50	1,50	1,59	1,44	1,92	1,52	1,54	1,56
Refrigerant	R-404a												
Compressor type	Semi-hermetic piston												
Number of compressor	pcs		4										
Circuit	pcs		1										
Sound pressure level	dB(A)		75	76	75	78	78	78	79	76	78	79	79
Length	mm		2990	2990	2990	2990	2990	2990	2990	2880	3976	3976	3976
Width	mm		1100	1100	1100	1100	1100	1100	1100	1300	1500	1500	1500
Height	mm		2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150

Rated at 45°C condensation temperature.

* Datas for or -25°C evaporation temperature.

V TYPE CONDENSERS

MODEL K.NE.....CV	(Δt)		00702	00703	00802	00803	00903	00904	01003	01004	01104	01204	01303	01304	01404	01504
Capacity	10°C	kW	38,6	49,8	60,2	79,4	99,0	117,8	142,0	164,1	191,7	219,4	237,6	277,8	294,1	345,6
	11°C		43,5	56,1	67,3	88,7	108,2	131,6	158,7	183,3	213,5	239,9	267,6	312,5	330,0	387,4
	12°C		48,4	62,5	74,3	98,0	120,0	146,2	175,4	202,5	235,3	266,0	297,7	347,4	366,3	429,2
	13°C		53,4	68,9	81,4	107,3	132,9	161,0	192,2	221,9	257,2	293,6	327,9	382,4	402,6	471,3
	14°C		58,4	75,3	88,4	116,6	145,9	175,8	209,0	241,3	279,1	321,5	358,3	417,9	439,2	513,6
	15°C		63,4	81,7	95,5	125,9	158,9	190,7	225,9	260,8	301,0	349,5	388,9	453,3	475,9	556,0
Power input (Max.)		kW	2,64	2,64	3,97	3,97	5,29	5,29	6,62	6,62	7,94	14,40	18,00	18,00	18,00	21,60
Refrigerant	R-404a															
Fan type	Axial															
Number of fan	pcs		4	4	6	6	8	8	10	10	12	8	10	10	10	12
Fan diameter	Ø mm		500	500	500	500	500	500	500	500	500	630	630	630	630	630
Air flow rate	m³/h		34.800	33.500	49.500	49.500	67.000	64.000	85.000	83.000	93.000	122.000	162.000	158.000	160.000	190.000
Sound pressure level	dB(A)		82	82	82	82	83	83	83	84	84	79	79	79	79	79
Length	mm		1791	1791	1791	1791	1791	1791	1791	1791	1791	1976	1976	1976	1976	1988
Width	mm		1670	1670	2270	2270	2970	3970	3970	4670	4670	4672	5472	5472	5972	6450
Height	mm		1431	1431	1431	1431	1431	1431	1431	1431	1431	1619	1619	1619	1619	1619

(Δt): Condenser air inlet-outlet temperature difference

Rated at 45°C condensation temperature.

EVAPORATOR UNITS

Cold Storage (Evaporation -8°C)

MODEL NE....		0011	0012	0021	0022	0031	0032	0041	0042	0051	0052	0061	0062
Refrigeration capacity	kW	0,8	1,2	1,9	2,2	2,4	2,9	5,8	7,3	10,9	13,6	15,4	16,2
Power input (fans)	kW	0,1	0,1	0,1	0,1	0,1	0,1	0,7	0,7	1,1	1,1	1,1	1,1
Resistance powers	kW	2*0,3	2*0,3	3*0,4	3*0,4	3*0,4	3*0,4	4*0,4	4*0,4	4*0,8	4*0,8	6*0,6	6*0,6
Refrigerant	R-404a												
Fan type	Axial												
Number of fan	pcs	1		2				2		3			
Fan diameter	Ø mm	300						450					
Supply voltage	V/Hz	380/3/50											
Discharge line pipe diameter	Ø mm	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	1/2"	1/2"	5/8"	5/8"
Suction line pipe diameter	Ø mm	1/2"	3/8"	5/8"	5/8"	5/8"	5/8"	3/4"	3/4"	1 1/8"	1 1/8"	1 3/8"	1 3/8"
Circuit	pcs	1											
Sound pressure level	dB(A)	72	88	72	88	72	88	68	72	65	66	68	72
Length	mm	655	655	630	630	680	680	602	602	602	602	602	602
Width	mm	675	675	1015	1015	1325	1325	1330	1330	2060	2060	2060	2060
Heighth	mm	265	265	290	290	344	344	736	736	825	825	825	825

Cold Storage (Evaporation -8°C)

MODEL NE....		5041	5042	5043	5044	5061	5062	5063	5064	5081	5082	5083	5084
Refrigeration capacity	kW	6,78	14,40	21,46	29,18	7,81	19,23	28,17	33,39	9,33	19,88	32,25	38,42
Power input (fans)	kW	0,66	1,32	1,98	2,65	0,66	1,32	1,98	2,65	0,66	1,32	1,98	2,65
Resistance powers	kW	4*0,8	4*0,8	4*1,2	4*2	4*0,8	4*0,8	4*1,2	4*2	6*0,8	6*0,8	6*1,2	6*2
Refrigerant		R-404a											
Fan type		Axial											
Number of fan	pcs	1	2	3	4	1	2	3	4	1	2	3	4
Fan diameter	Ø mm	500											
Supply voltage	V/Hz	380/3/50											
Discharge line pipe diameter	Ø mm	3/8"	3/8"	1/2"	5/8"	3/8"	1/2"	1/2"	5/8"	3/8"	1/2"	5/8"	5/8"
Suction line pipe diameter	Ø mm	1 1/8"	1 5/8"	2 1/8"	2 1/8"	1 1/8"	1 5/8"	2 1/8"	2 5/8"	1 3/8"	2 1/8"	2 1/8"	2 5/8"
Circuit	pcs	1											
Sound pressure level	dB(A)	78	80,5	81,6	82,4	78	80,5	81,6	82,4	78	80,5	81,6	82,4
Length	mm	837	837	837	837	837	837	837	837	837	837	837	837
Width	mm	1103	1853	2603	3353	1103	1853	2603	3353	1103	1853	2603	3353
Height	mm	955	955	955	955	955	955	955	955	955	955	955	955

Cold Storage (Evaporation -8°C)

MODEL NE....		6341	6342	6343	6344	6361	6362	6363	6364	6381	6382	6383	6384
Refrigeration capacity	kW	15,81	32,50	49,18	64,48	20,53	41,45	62,86	86,98	22,83	46,40	73,88	98,58
Power input (fans)	kW	1,80	3,60	5,40	7,20	1,80	3,60	5,40	7,20	1,80	3,60	5,40	7,20
Resistance powers	kW	6*1	6*1,5	6*2	6*3	6*1	6*1,5	6*2	6*3	9*1	9*1,5	9*2	9*3
Refrigerant		R-404a											
Fan type		Axial											
Number of fan	pcs	1	2	3	4	1	2	3	4	1	2	3	4
Fan diameter	Ø mm	630											
Supply voltage	V/Hz	380/3/50											
Discharge line pipe diameter	Ø mm	1/2"	5/8"	7/8"	7/8"	1/2"	5/8"	7/8"	7/8"	5/8"	7/8"	7/8"	7/8"
Suction line pipe diameter	Ø mm	1 3/8"	2 1/8"	2 5/8"	3 1/8"	1 5/8"	2 1/8"	3 1/8"	3 1/8"	1 5/8"	2 5/8"	3 1/8"	4 1/8"
Circuit	pcs	1											
Sound pressure level	dB(A)	75	76,8	77,8	78,1	78	76,8	77,8	82,4	78	75	76,8	78,1
Length	mm	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048
Width	mm	1643	2843	4044	5245	1643	2843	4044	5245	1643	2843	4044	5245
Height	mm	1151	1151	1151	1151	1151	1151	1151	1151	1151	1151	1151	1151

Rated at (EN 328 standard, SC-2 conditions ΔT=8°C), 0°C room, -8°C evaporation temperature.

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EVAPORATOR UNITS

Deepfreeze (Evaporation -26°C)

MODEL DE....		0011	0012	0021	0022	0031	0032	0041	0042	0051	0052	0061	0062
Refrigeration capacity	kW	0,8	0,89	1,42	1,57	2,18	2,74	5,49	6,71				
Power input (fans)	kW	0,07	0,07	0,14	0,14	0,14	0,14	0,70	0,70	1,05	1,05	1,05	1,05
Resistance powers	kW	3*0,3	3*0,3	4*0,4	4*0,4	4*0,4	4*0,4	5*0,4	5*0,4	5*0,8	5*0,8	7*0,6	7*0,6
Refrigerant	R-404a												
Fan type	Axial												
Number of fan	pcs	1		2				2		3			
Fan diameter	Ø mm	300						450					
Supply voltage	V/Hz	380/3/50											
Discharge line pipe diameter	Ø mm	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	1/2"	1/2"	5/8"	5/8"
Suction line pipe diameter	Ø mm	1/2"	3/8"	5/8"	5/8"	5/8"	5/8"	3/4"	3/4"	1 1/8"	1 1/8"	1 3/8"	1 3/8"
Circuit	pcs	1											
Sound pressure level	dB(A)	72	88	72	88	72	88	68	72	65	66	68	72
Length	mm	655	655	630	630	680	680	602	602	602	602	602	602
Width	mm	675	675	1015	1015	1325	1325	1330	1330	2060	2060	2060	2060
Height	mm	265	265	290	290	344	344	736	736	825	825	825	825

Rated at (EN 328 standard, SC-3 conditions $\Delta T=8^{\circ}\text{C}$), -18°C room, -26°C evaporation temperature.

Deepfreeze (Evaporation -26°C)

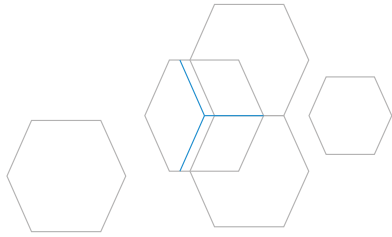
MODEL DE....		5041	5042	5043	5044	5061	5062	5063	5064	5081	5082	5083	5084
Refrigeration capacity	kW	6,58	13,54	20,00	27,24	8,66	17,50	26,20	35,30	9,93	20,04	30,37	38,97
Power input (fans)	kW	0,66	1,32	1,98	2,65	0,66	1,32	1,98	2,65	0,66	1,32	1,98	2,65
Resistance powers	kW	4*0,8	4*0,8	4*1,2	4*2	4*0,8	4*0,8	4*1,2	4*2	6*0,8	6*0,8	6*1,2	6*2
Refrigerant		R-404a											
Fan type		Axial											
Number of fan	pcs	1	2	3	4	1	2	3	4	1	2	3	4
Fan diameter	Ø mm	500											
Supply voltage	V/Hz	380/3/50											
Discharge line pipe diameter	Ø mm	3/8"	1/2"	1/2"	5/8"	3/8"	1/2"	5/8"	5/8"	3/8"	1/2"	5/8"	5/8"
Suction line pipe diameter	Ø mm	1 1/8"	1 5/8"	2 1/8"	2 1/8"	1 1/8"	1 5/8"	2 1/8"	2 5/8"	1 3/8"	2 1/8"	2 1/8"	2 5/8"
Circuit	pcs	1											
Sound pressure level	dB(A)	78	80,5	81,6	82,4	78	80,5	81,6	82,4	78	80,5	81,6	82,4
Length	mm	837	837	837	837	837	837	837	837	837	837	837	837
Width	mm	1103	1853	2603	3353	1103	1853	2603	3353	1103	1853	2603	3353
Height	mm	955	955	955	955	955	955	955	955	955	955	955	955

Deepfreeze (Evaporation -26°C)

MODEL DE....		6341	6342	6343	6344	6361	6362	6363	6364	6381	6382	6383	6384
Refrigeration capacity	kW	14,59	28,65	41,02	58,87	19,20	38,49	58,04	77,38	22,10	44,56	65,65	89,49
Power input (fans)	kW	1,80	3,60	5,40	7,20	1,80	3,60	5,40	7,20	1,80	3,60	5,40	7,20
Resistance powers	kW	6*1	6*1,5	6*2	6*3	6*1	6*1,5	6*2	6*3	9*1	9*1,5	9*2	9*3
Refrigerant		R-404a											
Fan type		Axial											
Number of fan	pcs	1	2	3	4	1	2	3	4	1	2	3	4
Fan diameter	Ø mm	630											
Supply voltage	V/Hz	380/3/50											
Discharge line pipe diameter	Ø mm	1/2"	5/8"	5/8"	7/8"	1/2"	5/8"	7/8"	7/8"	1/2"	7/8"	7/8"	1 1/8"
Suction line pipe diameter	Ø mm	1 3/8"	2 1/8"	2 5/8"	3 1/8"	1 5/8"	2 1/8"	3 1/8"	3 1/8"	1 5/8"	2 5/8"	3 1/8"	4 1/8"
Circuit	pcs	1											
Sound pressure level	dB(A)	75	76,8	77,8	78,1	78	76,8	77,8	82,4	78	75	76,8	78,1
Length	mm	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048	1048
Width	mm	1643	2843	4044	5245	1643	2843	4044	5245	1643	2843	4044	5245
Height	mm	1151	1151	1151	1151	1151	1151	1151	1151	1151	1151	1151	1151

Rated at (EN 328 standard, SC-3 conditions $\Delta T=8^{\circ}\text{C}$), -18°C room, -26°C evaporation temperature.

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