



intarPACK

split

intarPACK split refrigeration units are designed for the refrigeration of large cold rooms.

intarPACK split series cover compressor power range from 4 to 60 HP, featuring long range cubic-type evaporating units and air-cooled *intarPACK* condensing units in two different constructions:

intarPACK centrifugal

intarPACK centrifugal condensing units have been designed for indoor installation in an engine room. Medium pressure centrifugal motor-fan is incorporated for a ducted outlet of condenser's hot air.

intarPACK low-noise axial

intarPACK axial condensing units have been developed for outdoor installation. Each model has been designed to run under extreme ambient conditions, featuring acoustic insulated components for lower noise levels.

- ✦ High power in small area.
- ✦ Tropicalised design for high ambient temperature.
- ✦ Rack of hermetic compressors with noise insulation.
- ✦ Minimum maintenance needs, with simple access through removable panels.



intarPACK



Description

Split units for positive and negative temperature applications, built in a galvanised steel shell with polyester coating, featuring one or two industrial cubic-type evaporating units and an air-cooled condensing unit designed for outdoor installation.

Features

- 400V-III-50Hz power supply.
- R-404A refrigerant.

CONDENSING UNIT

- Hermetic reciprocating or scroll compressors, with noise insulation, discharge muffler (for reciprocating compressor models), mounted on shock absorbers, with internal klixon and crankcase heater. Oil separator for negative temperature units with 2 or 4 scroll compressors.
- U-shaped large area condensing coil made in copper pipes and aluminium fins, tropicalised for ambient temperature up to 45 °C.
- Low-speed axial motor-fans, mounted on nozzles, dynamically balanced blades and external protection grille.
- Refrigeration circuit with single or double suction line, made in copper pipes, equipped with HP and LP switches, service valves, safety valves, liquid receiver, dehydratant filter and sight glass.
- Full control and power panel, with thermal protection and MCB switch for motors and defrosting heaters, and circuit breaker for each refrigeration circuit (series 5).
- Electronic regulation through power stages, proportional control of condensing temperature and remote control keyboard.

EVAPORATING UNIT(S)

- High performance evaporating coil, in copper pipes and aluminium fins, with 5 mm fin spacing. Stainless steel drain tray.
- Inbuilt thermostatic expansion valve and solenoid valve in the evaporating unit.
- Defrosting by electrical heaters imbricated in coil.
- Long-range axial motor-fans mounted on nozzles, dynamically balanced blades and external protection grille.

As an option

- Oil separator (already included for negative temperature units with 2 or 4 scroll compressors).
- Anticorrosion coil coating.
- Two evaporating units (series 1 to 4).
- Module for external communication through ModBus protocol and RS485 connection.
- Bi-temperature operation system (for BSE-SF units).

High reliability compressors

Danfoss-Maneurop hermetic reciprocating and scroll compressors are known for their sturdy construction and high reliability operation, and, by being cooled by the refrigerant, they allow a very efficient noise insulation.



Copeland negative temperature scroll compressors with vapour injection EVI system, provide a higher performance of up to 25% related to standard compressors.

Régulation électronique

intarPACK axial units feature as standard, at the power panel, an advanced electronic controller XM670K and a remote keyboard.



- Inbuilt electronic board in condensing unit to control: compressor/s, condensing fan/s, liquid solenoid valve, evaporating fans, defrosting and alarm signal.
- Cold room and defrosting temperature probes.
- Control of condensing temperature.
- Multifunctional electronic keyboard to remote control.
- ModBus communication protocol through RS485 connection (as an option).

MSE / BSE series

Versions

MSE - High and medium temperature (-5 °C... + 10 °C)

Low-noise axial split refrigeration systems for positive temperature cold rooms.

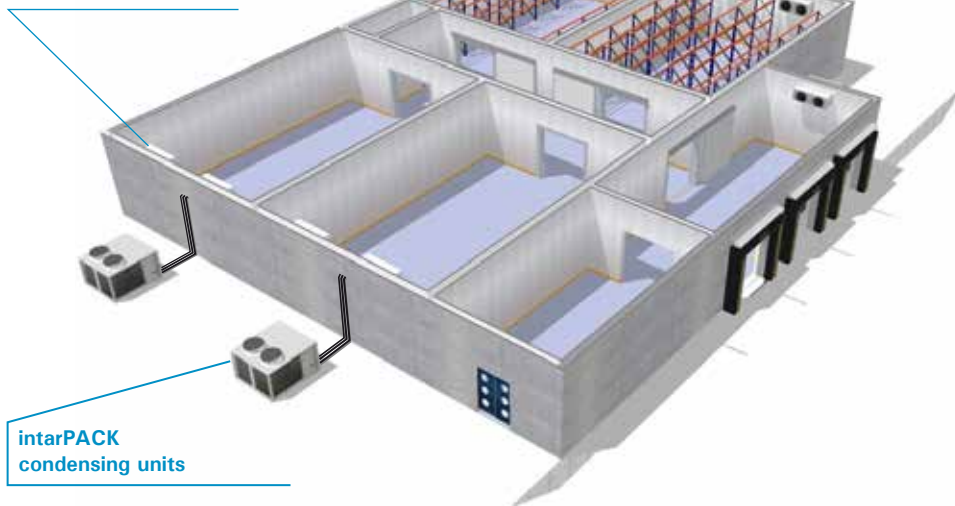
BSE - NEGATIVE TEMPERATURE (-25 °C ...-15 °C)

Low-noise axial split refrigeration systems for negative temperature preservation in cold rooms.

Applications

intarPACK are specifically designed systems for large cold room applications at positive and negative temperature.

Evaporating units



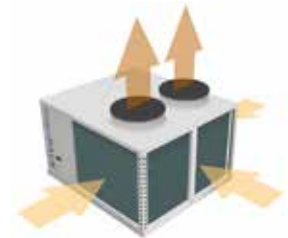
Efficient, proportional and low-noise condensation

Low-noise condensing motor-fans operating at 900 rpm, with variable speed function, preserve condensation pressure under low ambient temperature while they reduce sound pressure level.



U-shaped tropicalised condensing coil

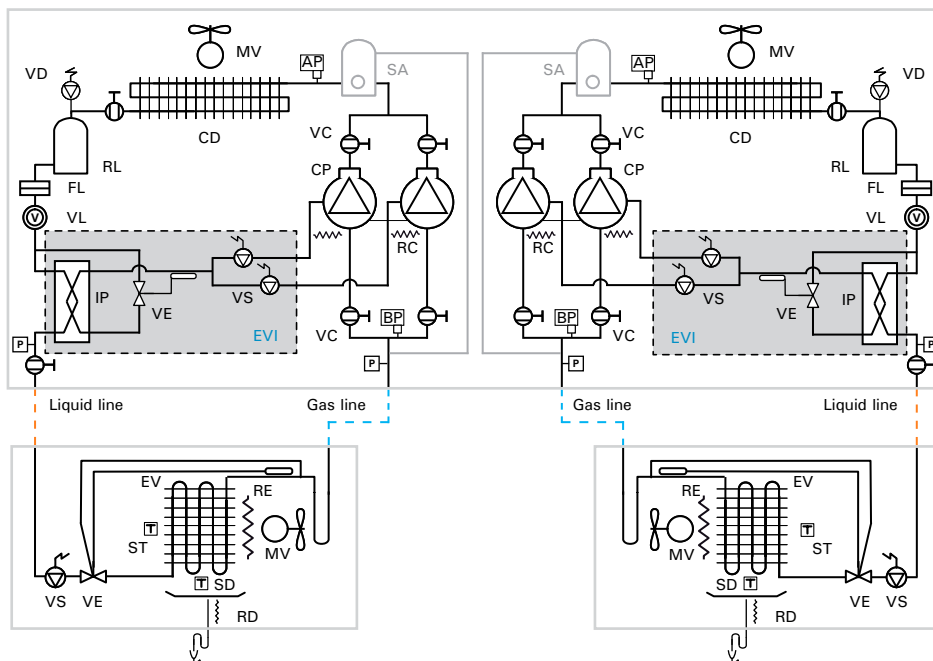
intarPACK axial split systems feature a condensing unit with an U-shaped large area condensing coil to guarantee the proper operation under high ambient temperature.



Inbuilt regulation valves

The evaporating units included for **intarPACK** split systems feature inbuilt thermostatic expansion and solenoid valves, adjusted from factory for an optimum operation.

**Refrigeration scheme
BSE-SF 5 series**



- CP: COMPRESSOR
- MV: MOTOR-FAN
- VC: SERVICE VALVE
- CD: CONDENSER
- RC: CRANKCASE HEATER
- VD: SAFETY VALVE
- RL: LIQUID RECEIVER
- FL: DEHYDRATANT FILTER
- VL: SIGHT GLASS
- IP: BRAZZED PLATES HEAT EXCHANGER
- VE: THERMOSTATIC EXPANSION VALVE
- VS: SOLENOID VALVE
- AP: HP SWITCH
- BP: LP SWITCH
- P: PRESSURE TRANSDUCER
- SA: OIL SEPARATOR
- RE: DEFROSTING HEATER
- ST: COLD ROOM TEMPERATURE PROBE
- SD: DEFROSTING PROBE
- MV: MOTOR-FAN
- EV: EVAPORATOR
- RD: DRAINING PIPE HEATER

Description

High and medium temperature refrigeration split systems, built in a galvanised steel shell with polyester coating, composed of one or two evaporating units and an air-cooled hermetic compressor condensing unit.



Technical features

400V-III-50 Hz, R-404A

Series / Model	Compressor			Ambient temp.	Cooling capacity (W)				Nominal power consump. (kW) *	Max absorb. current (A)	COP*	Condenser			Évaporateur				Liq-Gas cooling connection	SPL dB(A) *	
	HP	Type *	Model		Cold room temperature							Fan Ø mm	Air flow (m³/h)	Weight (kg)	Fan Ø mm	Air flow (m³/h)	Defrosting heater power (kW)	Weight (kg)			
					+10 °C	+5 °C	0 °C	-5 °C													
1 compressor / 1 refrigeration circuit	MSE-NF-10160	8	H	MTZ100	35 °C 45 °C	20.100 17.200	17.100 14.400	14.400 12.000	11.900 9.800	7,9	26,6	2,12	Ø630	10.000	250	2x Ø450	7.600	7,2	130	5/8"-1 1/8"	42
	MSE-SF-10160	8	Sc	SZ100	35 °C 45 °C	19.600 17.000	16.700 14.400	14.200 12.100	11.900 -	7,5	23,6	2,21	Ø630	10.000	255	2x Ø450	7.600	7,2	130	5/8"-1 1/8"	37
	MSE-NF-10215	10	H	MTZ125	35 °C 45 °C	26.000 21.900	22.000 18.400	18.600 15.300	15.400 12.400	11,1	33,5	2,07	Ø630	10.000	255	2x Ø560	15.000	9,6	150	5/8"-1 3/8"	42
	MSE-SF-10215	10	Sc	SZ120	35 °C 45 °C	25.300 21.600	21.600 18.300	18.400 15.400	15.300 -	11,1	35,5	2,06	Ø630	10.000	265	2x Ø560	15.000	9,6	150	5/8"-1 3/8"	37
	MSE-NF-20271	13	H	MTZ160	35 °C 45 °C	33.000 28.000	27.900 23.500	23.500 19.600	19.400 15.900	13,9	43,7	2,05	Ø800	22.000	310	2x Ø560	15.000	12,0	150	5/8"-1 3/8"	44
	MSE-SF-20271	13	Sc	SZ160	35 °C 45 °C	32.700 28.100	27.900 23.800	23.700 20.100	19.800 -	13,6	36,7	2,13	Ø800	22.000	335	2x Ø560	15.000	12,0	150	5/8"-1 3/8"	42
	MSE-SF-20312	15	Sc	SZ185	35 °C 45 °C	35.800 30.900	30.700 26.200	26.100 22.200	21.900 -	15,4	42,7	2,01	Ø800	22.000	345	2x Ø560	15.000	12,0	150	7/8"-1 5/8"	42
2 compressors / 1 refrigeration circuit	MSE-NF-40320	16	H	2x MTZ100	35 °C 45 °C	40.700 34.800	34.400 29.200	28.900 24.300	23.900 19.700	15,9	51,7	2,10	Ø800	23.000	420	4x Ø450	15.200	14,4	260	7/8"-1 5/8"	48
	MSE-SF-40320	16	Sc	2x SZ100	35 °C 45 °C	39.500 34.200	33.700 29.000	28.600 24.500	23.900 -	15,1	45,7	2,25	Ø800	23.000	430	4x Ø450	15.200	14,4	260	7/8"-1 5/8"	44
	MSE-NF-40430	20	H	2x MTZ125	35 °C 45 °C	52.700 44.500	44.600 37.300	37.500 31.000	30.900 25.000	22,3	65,5	2,11	Ø800	23.000	425	4x Ø560	30.000	19,2	290	7/8"-1 5/8"	47
	MSE-SF-40430	20	Sc	2x SZ120	35 °C 45 °C	51.300 43.800	43.700 37.100	37.100 31.200	31.000 -	22,1	69,5	2,10	Ø800	23.000	445	4x Ø560	30.000	19,2	290	7/8"-1 5/8"	44
	MSE-NF-40542	26	H	2x MTZ160	35 °C 45 °C	64.000 54.400	54.400 45.900	46.000 38.400	38.200 31.300	27,5	83,5	1,98	Ø800	22.000	465	4x Ø560	30.000	24,0	290	7/8"-2 1/8"	47
	MSE-SF-40542	26	Sc	2x SZ160	35 °C 45 °C	63.600 54.700	54.400 46.600	46.500 39.500	39.000 -	27,2	69,5	2,03	Ø800	22.000	505	4x Ø560	30.000	24,0	290	7/8"-2 1/8"	45
	MSE-SF-40624	30	Sc	2x SZ185	35 °C 45 °C	69.500 59.800	59.700 51.100	51.000 43.400	43.000 -	31,1	81,5	1,92	Ø800	22.000	525	4x Ø560	30.000	24,0	290	1 1/8"-2 1/8"	45
4 compressors / 2 refrigeration circuits	MSE-NF-50640	32	H	2x 2x MTZ100	35 °C 45 °C	81.400 69.500	68.800 58.300	57.900 48.500	47.800 39.300	31,8	103,4	2,10	2x Ø800	46.000	945	2x 4x Ø450	2x 15.200	2x 14,4	2x 260	2x 7/8"-1 5/8"	51
	MSE-SF-50640	32	Sc	2x 2x SZ100	35 °C 45 °C	79.100 68.500	67.400 58.000	57.200 48.900	47.900 40.500	30,1	91,4	2,25	2x Ø800	46.000	965	2x 4x Ø450	2x 15.200	2x 14,4	2x 260	2x 7/8"-1 5/8"	47
	MSE-NF-50860	40	H	2x 2x MTZ125	35 °C 45 °C	105.000 88.900	89.200 74.600	75.100 61.900	61.800 50.000	44,5	131,0	2,11	2x Ø800	46.000	965	2x 4x Ø560	2x 30.000	2x 19,2	2x 290	2x 7/8"-1 5/8"	50
	MSE-SF-50860	40	Sc	2x 2x SZ120	35 °C 45 °C	103.000 87.600	87.400 74.300	74.200 62.500	61.900 51.500	44,3	139,0	2,10	2x Ø800	46.000	1.000	2x 4x Ø560	2x 30.000	2x 19,2	2x 290	2x 7/8"-1 5/8"	47
	MSE-NF-51084	52	H	2x 2x MTZ160	35 °C 45 °C	128.000 109.000	109.000 91.700	92.000 76.700	76.400 62.700	55,1	167,0	1,98	2x Ø800	44.000	980	2x 4x Ø560	2x 30.000	2x 24,0	2x 290	2x 7/8"-2 1/8"	50
	MSE-SF-51084	52	Sc	2x 2x SZ160	35 °C 45 °C	127.000 109.000	109.000 93.100	92.900 78.900	78.100 -	54,4	139,0	2,03	2x Ø800	44.000	1.065	2x 4x Ø560	2x 30.000	2x 24,0	2x 290	2x 7/8"-2 1/8"	48
	MSE-SF-51248	60	Sc	2x 2x SZ185	35 °C 45 °C	139.000 120.000	119.000 102.000	102.000 86.800	86.000 -	62,2	163,0	1,92	2x Ø800	44.000	1.105	2x 4x Ø560	2x 30.000	2x 24,0	2x 290	2x 1 1/8"-2 1/8"	48

As an option

- Oil separator.
- Anti-corrosion coil coating.
- Two evaporating units (series from 1 to 4).
- Module As an option pour la communication externe avec protocole Modbus and connexion RS485.

* Nominal technical features are related to operation at cold room temperature of 0 °C under ambient temperature of 35 °C. C.O.P. at nominal conditions.

* SPL: Sound pressure level shown in dB(A) at 10 metres distance from the source in free field.

Compressor type according to the following nomenclature:
H = Hermetic reciprocating compressor
Sc = Scroll compressor

Description

Low temperature refrigeration split systems, built in a galvanised steel shell with polyester coating, composed of one or two evaporating units and an air-cooled hermetic compressor condensing unit.



Technical features

400V-III-50 Hz, R-404A

Series / Model	Compressor			Cooling capacity (W)			Nominal power consump. (kW) *	Max absorb. current (A)	COP*	Condenser			Evaporator				Liq-Gas cooling connection	SPL dB(A) *		
	HP	Type *	Model	Ambient temp.	Cold room temperature					Fan Ø mm	Air flow (m³/h)	Weight (kg)	Fan Ø mm	Air flow (m³/h)	Defrosting heater power (kW)	Weight (kg)				
					-15 °C	-20 °C													-25 °C	
1 compressor / 1 refrigeration circuit	BSE-NF-10215	7 1/2	H	NTZ215	35 °C 45 °C	9.700 7.800	7.700 5.900	5.800 4.000	6,7	27,3	1,36	Ø630	10.000	250	Ø560	7.500	6,3	95	5/8"-1 3/8"	39
	BSE-SF-10181	6	Sc EVI	ZF18KVE	35 °C 45 °C	8.810 8.440	7.720 7.420	6.710 6.500	6,0	17,5	1,77	Ø630	10.000	235	Ø560	7.500	6,3	95	1/2"-1 1/8"	37
	BSE-NF-10271	10	H	NTZ271	35 °C 45 °C	11.400 9.300	9.200 7.400	7.200 5.400	8,2	32,0	1,32	Ø630	10.000	255	Ø560	7.500	6,3	95	5/8"-1 3/8"	39
	BSE-SF-10241	7 1/2	Sc EVI	ZF24KVE	35 °C 45 °C	11.800 11.050	10.300 9.670	8.920 8.420	7,2	20,5	1,81	Ø630	10.000	235	2x Ø450	7.600	9,6	130	1/2"-1 3/8"	37
	BSE-SF-10331	10	Sc EVI	ZF33KVE	35 °C 45 °C	15.900 14.900	13.850 13.000	12.000 11.250	10,2	27,8	1,85	Ø630	10.000	255	2x Ø560	15.000	12,0	150	1/2"-1 3/8"	37
	BSE-SF-10401	13	Sc EVI	ZF40KVE	35 °C 45 °C	18.500 17.300	16.200 15.000	14.100 12.500	12,3	33,4	1,68	Ø630	10.000	255	2x Ø560	15.000	12,0	150	1/2"-1 3/8"	38
	BSE-SF-10481	15	Sc EVI	ZF48KVE	35 °C 42 °C*	21.000 20.000	18.500 17.700	16.150 15.450	14,9	37,0	1,52	Ø630	10.000	255	2x Ø560	15.000	12,0	150	1/2"-1 5/8"	42
2 compressors / 1 ref. circuit	BSE-NF-30430	15	H	2x NTZ215	35 °C 45 °C	18.900 15.100	15.000 11.400	11.300 7.900	13,4	52,8	1,31	Ø800	22.000	390	2x Ø560	15.000	12,0	150	5/8"-1 5/8"	46
	BSE-NF-30542	20	H	2x NTZ271	35 °C 45 °C	22.600 18.300	18.200 14.300	14.200 10.400	16,7	62,2	1,26	Ø800	22.000	395	2x Ø560	15.000	12,0	150	5/8"-2 1/8"	46
	BSE-SF-30662	20	Sc EVI	2x ZF33KVE	35 °C 45 °C	31.300 29.200	27.400 25.800	23.700 22.300	22,1	54,3	1,74	Ø800	22.000	400	4x Ø560	30.000	24,0	290	5/8"-2 1/8"	42
	BSE-SF-40802	26	Sc EVI	2x ZF40KVE	35 °C 45 °C	37.200 34.900	32.600 30.100	28.300 26.700	25,1	65,5	1,72	Ø800	23.000	460	4x Ø560	30.000	24,0	290	5/8"-2 1/8"	45
	BSE-SF-40962	30	Sc EVI	2x ZF48KVE	35 °C 45 °C	42.800 40.400	37.600 35.400	32.700 30.900	29,0	72,7	1,66	Ø800	22.000	460	4x Ø560	30.000	24,0	290	5/8"-2 1/8"	45
4 compressors / 2 ref. circuits	BSE-NF-50860	30	H	2x NTZ215	35 °C 45 °C	38.600 30.900	30.500 23.200	23.000 15.800	27,3	105,5	1,41	2x Ø800	46.000	905	2x 2x Ø560	2x 15.000	2x 12,0	2x 150	2x 5/8"-1 5/8"	49
	BSE-NF-51084	40	H	2x NTZ271	35 °C 45 °C	46.200 37.600	37.200 29.300	29.000 21.300	33,8	124,3	1,34	2x Ø800	46.000	910	2x 2x Ø560	2x 15.000	2x 12,0	2x 150	2x 5/8"-2 1/8"	49
	BSE-SF-51324	40	Sc EVI	2x ZF33KVE	35 °C 45 °C	63.800 60.200	55.800 52.400	48.200 45.400	41,9	108,6	1,89	2x Ø800	46.000	915	4x 2x Ø560	2x 30.000	2x 24,0	2x 290	2x 5/8"-2 1/8"	47
	BSE-SF-51604	52	Sc EVI	2x ZF40KVE	35 °C 45 °C	74.400 69.800	65.200 60.200	56.600 53.400	50,1	131,0	1,72	2x Ø800	46.000	915	4x 2x Ø560	2x 30.000	2x 24,0	2x 290	2x 5/8"-2 1/8"	48
	BSE-SF-51924	60	Sc EVI	2x ZF48KVE	35 °C 42 °C*	84.400 80.800	74.400 71.400	64.800 62.200	59,9	145,4	1,56	2x Ø800	44.000	915	4x 2x Ø560	2x 30.000	2x 24,0	2x 290	2x 5/8"-2 1/8"	48

As an option

- Oil separator (already included for negative temperature units featuring two or four scroll compressors).
- Anti-corrosion coil coating.
- Two evaporating units (series from 1 to 4).
- Module As an option pour la communication externe avec protocole Modbus and connexion RS485.
- Bi-temperature operation system (for BSE-SF units)

* Nominal technical features are related to operation at cold room temperature of -20 °C under ambient temperature of 35 °C. C.O.P. at nominal conditions.

* SPL: Sound pressure level shown in dB(A) at 10 metres distance from the source in free field.

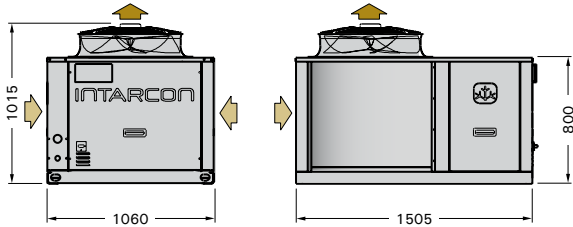
Compressor type according to the following nomenclature:
H = Hermetic reciprocating compressor
Sc-EVI = Scroll compressor with vapour injection EVI system

* Model limited to 42 °C ambient temperature.

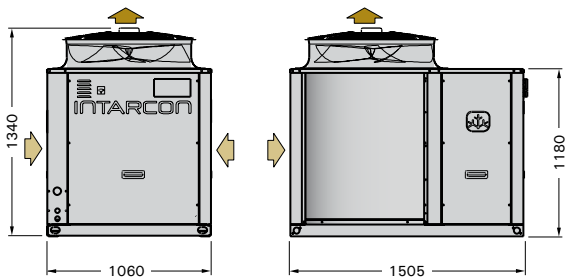
intarPACK

MSE / BSE series

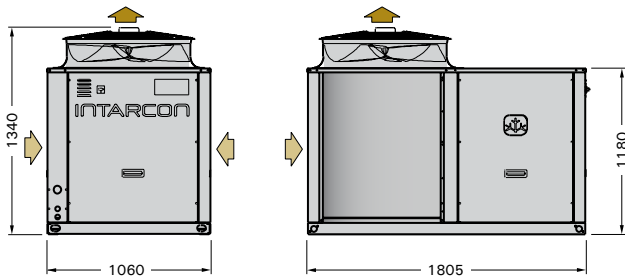
Dimensions
Condensing unit
series 1



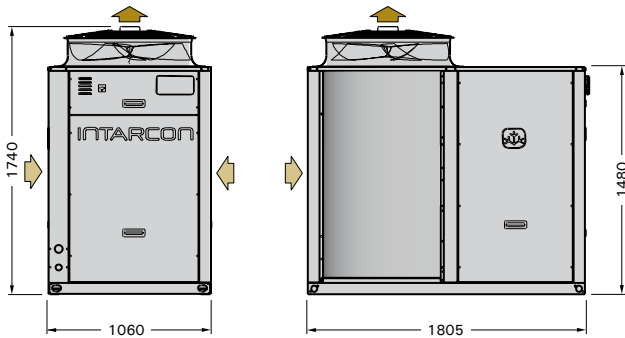
series 2



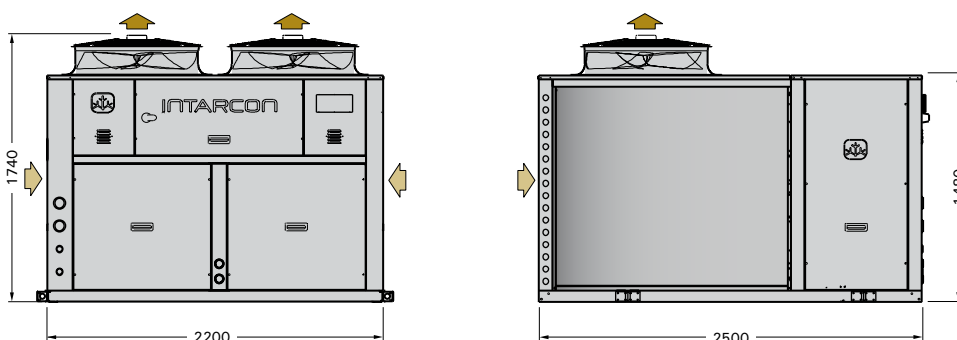
series 3



series 4

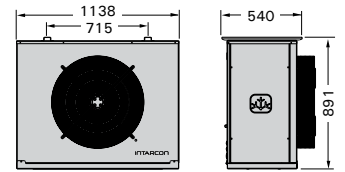


series 5

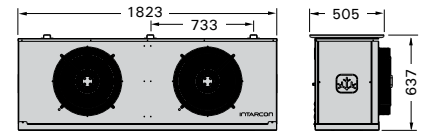


Evaporating unit

models
BSE-10215
BSE-10181
BSE-10271



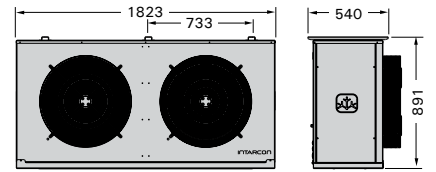
models
MSE-10160
BSE-10241



models
MSE-10215
MSE-20271
MSE-20312

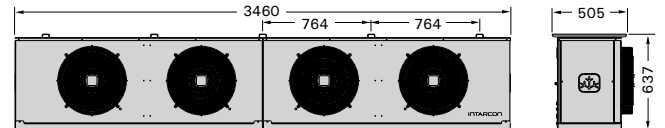
BSE-10331
BSE-10401
BSE-10481
BSE-30430
BSE-30542

BSE-50860
BSE-51084 } 2 x



models
MSE-40320

MSE-50640 } 2 x



models
MSE-40430
MSE-40542
MSE-40624
BSE-30662
BSE-40802
BSE-40962

MSE-50860
MSE-51084
MSE-51248
BSE-51324
BSE-51604
BSE-51924

} 2 x

