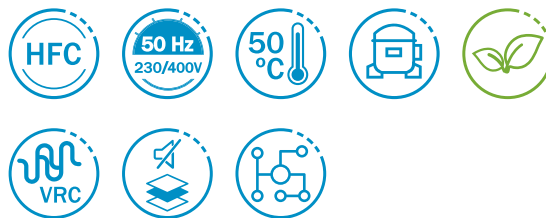
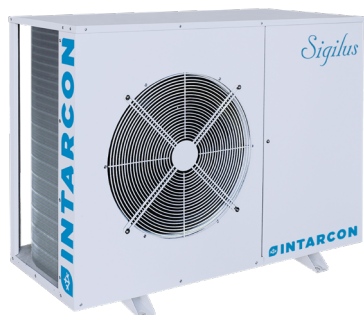


Sigilus



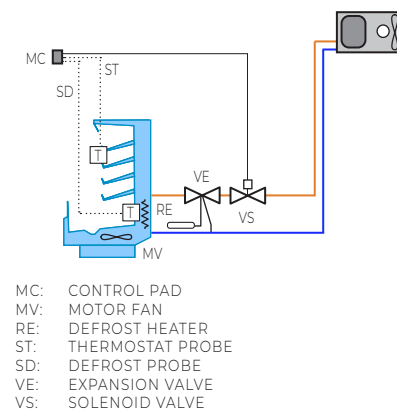
Low noise condensing units for positive and negative refrigeration with hermetic alternative compressor with noise insulation and low speed axial motor fan.

FEATURES

Reciprocating hermetic compressor, mounted on shock absorbers, with discharge muffler, crankcase heater and internal klixon.	■
Large-surface condensing coil made of copper tubes and aluminium fins, with tropicalised dimensioning for ambient temperatures up to 50 °C.	■
Low speed axial motor fan.	■
Refrigeration circuit equipped with high and low pressure switches, ceramic filter, liquid receiver and sight gauge.	■
Digital control of condensation pressure with the optional electrical board, and all-nothing condensation control in condensers without electrical panel.	■
Proportional control of condensing pressure through fan speed variation (included in three-phase models).	■
Full control and power board with compressor and motor fan protection.	■
Liquid injection system for negative temperature models with R-449A.	■
Change to 400V 3N 50Hz power supply.	□
Built-in oil separator (already included in -V version).	□
Built-in solenoid valve with body and coil (except -V version).	□
Anti-corrosion coil coating.	□
Coil protection grille.	□
Proportional condensation control by fan speed variator (single-phase 1 series).	□
Control and power panel with electronic control unit for management of condenser and evaporator (except BDF-NG-0 018 model). Larger sized multifunction electronic control.	□
Multi-service version with VRC system (included oil separator). Table models with ^(M) .	□

■ As standard □ Optional

Installation without electrical board (-N version)



Triple noise insulation

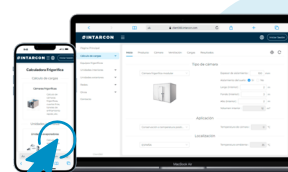
Sigilus condensing units incorporate triple noise insulation as standard:

- ▶ Insulated compressor compartment separated from air flow.
- ▶ Acoustic compressor jacket (three-phase models) and discharge muffler (hermetic models).
- ▶ Low-noise and low-speed fans, mounted on shock absorbers.

Proportional condensation control

Sigilus condensing units incorporate proportional condensation control by speed variation for prolonged running times at low ambient temperature.

CLIENT360
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REFRIGERATION CALCULATION SOFTWARE



230V I+N ~ 50Hz / 400V 3N ~ 50Hz | Positive temperature | Hermetic compressor | R-134a / R-449A

Refrigerant	Series / Model	Power supply	Compressor (HP)	Cooling capacity EN13215 (W) ⁽¹⁾ -10 °C	Cooling capacity (W) ⁽²⁾ Average evaporating temperature				Input power (W)	(COP) SEPR ⁽³⁾	Max. current (A)	Fan Ø (mm)	Conden. air flow (m³/h)	Liq-Gas cooling connection	Weight (kg)	SPL dB(A) ⁽⁴⁾	Price without electronic control (€)
					-15 °C	-10 °C	-5 °C	0 °C									
R-134a	MDF-NY-0010A	230V I+N ~ 50Hz	3/8	570	430	560	710	880	330	(1.75)	4	Ø 200	350	1/4"-3/8"	50	28	
	MDF-NY-0015A	230V I+N ~ 50Hz	1/2	795	595	775	975	1200	460	(1.73)	5	Ø 200	350	1/4"-3/8"	52	29	
	MDF-NY-1015A	230V I+N ~ 50Hz	1/2	875	650	865	1110	1395	490	(1.78)	5	Ø 360	1700	1/4"-1/2"	66	31	
	MDF-NY-1026A	230V I+N ~ 50Hz	3/4	1340	980	1315	1710	2160	710	(1.89)	9	Ø 360	1700	1/4"-1/2"	74	31	
	MDF-NY-1033A	230V I+N ~ 50Hz	1	1730	1280	1685	2160	2700	820	(2.11)	9	Ø 360	1700	1/4"-5/8"	76	31	
	MDF-NY-1053A	230V I+N ~ 50Hz*	1 1/2	2 425	1710	2 360	3 115	3 975	1 040	(2.33)	12	Ø 360	1700	1/4"-3/4"	88	32	
	MDF-NY-1074A	230V I+N ~ 50Hz*	2	3150	2 210	3 045	4 005	5 080	1 370	(2.29)	16	Ø 360	1700	1/4"-3/4"	90	36	
	MDF-NY-2086A ^(M)	400V 3N ~ 50Hz	4	4 230	3 090	4 130	5 360	6 800	1 840	(2.32)	13	Ø 450	3 600	3/8"-7/8"	98	38	
	MDF-NY-2108A ^(M)	400V 3N ~ 50Hz	5	5 175	3 765	5 035	6 535	8 280	2 230	3.23	16	Ø 450	3 600	3/8"-7/8"	100	35	
R-449A	MDF-NY-2136A ^(M)	400V 3N ~ 50Hz	6 1/2	6 575	4 835	6 385	8 200	10 140	2 990	2.87	19	Ø 450	3 600	3/8"-1 1/8"	103	34	
	MDF-NG-0008A	230V I+N ~ 50Hz	1/3	570	490	635	790	965	360	(1.71)	4	Ø 200	350	1/4"-3/8"	51	28	
	MDF-NG-0010A	230V I+N ~ 50Hz	3/8	735	635	805	1 000	1 210	460	(1.72)	5	Ø 200	350	1/4"-3/8"	51	29	
	MDF-NG-0012A	230V I+N ~ 50Hz	1/2	870	755	945	1 160	1 395	540	(1.74)	6	Ø 200	350	1/4"-3/8"	51	29	
	MDF-NG-1014A	230V I+N ~ 50Hz	1/2	1 075	930	1 200	1 515	1 870	660	(1.71)	6	Ø 360	1700	1/4"-1/2"	66	32	
	MDF-NG-1016A	230V I+N ~ 50Hz	5/8	1 220	1 040	1 385	1 770	2 200	740	(1.77)	7	Ø 360	1700	1/4"-1/2"	76	32	
	MDF-NG-1018A	230V I+N ~ 50Hz	3/4	1 525	1 310	1 710	2 140	2 630	880	(1.85)	8	Ø 360	1700	1/4"-1/2"	76	32	
	MDF-NG-1024A	230V I+N ~ 50Hz	1	1 940	1 650	2 195	2 815	3 485	1 010	(2.04)	12	Ø 360	1700	3/8"-5/8"	78	32	
	MDF-NG-1026A	230V I+N ~ 50Hz*	1 1/4	2 185	1 870	2 455	3 085	3 790	1 130	(2.05)	13	Ø 360	1700	3/8"-5/8"	78	32	
	MDF-NG-1034A	230V I+N ~ 50Hz*	1 1/2	2 820	2 420	3 125	3 895	4 765	1 600	(1.91)	16	Ø 360	1700	3/8"-5/8"	78	32	
	MDF-NG-1038A ^(M)	400V 3N ~ 50Hz	1 3/4	3 105	2 650	3 440	4 320	5 315	1 530	(2.11)	7	Ø 450	3 200	3/8"-5/8"	81	29	
	MDF-NG-2048A ^(M)	400V 3N ~ 50Hz	2	3 985	3 410	4 410	5 525	6 805	1 890	(2.25)	8	Ø 450	3 600	3/8"-3/4"	85	26	
	MDF-NG-2054A ^(M)	400V 3N ~ 50Hz	2 1/2	4 595	3 950	5 020	6 250	7 660	2 090	(2.35)	9	Ø 450	3 600	3/8"-3/4"	86	26	
	MDF-NG-2060A ^(M)	400V 3N ~ 50Hz	3	5 300	4 575	5 750	7 105	8 655	2 480	3.26	10	Ø 450	3 600	3/8"-3/4"	87	26	
	MDF-NG-2068A ^(M)	400V 3N ~ 50Hz	3 1/2	5 975	5 160	6 460	7 955	9 635	2 850	3.14	10	Ø 450	3 600	1/2"-3/4"	88	25	

230V I+N ~ 50Hz / 400V 3N ~ 50Hz | Negative temperature | Hermetic compressor | R-449A / R-452A

Refrigerant	Series / Model	Power supply	Compressor (HP)	Cooling capacity EN13215 (W) ⁽¹⁾ Evap. temp. -35 °C	Cooling capacity (W) ⁽²⁾ Average evaporating temperature			Input power (W)	(COP) SEPR ⁽³⁾	Max. current (A)	Fan Ø (mm)	Conden. air flow (m³/h)	Liq-Gas cooling connection	Weight (kg)	SPL dB(A) ⁽⁴⁾	Price without electronic control (€)
					-35 °C	-30 °C	-25 °C									
R-449A	BDF-NG-0018A	230V I+N ~ 50Hz	5/8	335	415	600	795	430	(0.96)	6	Ø 200	350	1/4"-1/2"	58	28	
	BDF-NG-1026A	230V I+N ~ 50Hz	3/4	545	655	945	1 285	670	(0.97)	9	Ø 360	1700	1/4"-1/2"	76	31	
	BDF-NG-1034A	230V I+N ~ 50Hz	1 1/4	720	865	1 245	1 690	900	(0.95)	10	Ø 360	1700	3/8"-5/8"	79	32	
	BDF-NG-1055A	230V I+N ~ 50Hz*	1 3/4	920	1 160	1 745	2 425	1 170	(0.99)	16	Ø 360	1700	3/8"-5/8"	85	34	
	BDF-NG-1075A	230V I+N ~ 50Hz*	2 1/2	1 360	1 645	2 375	3 125	1 560	(1.06)	24	Ø 360	1700	3/8"-5/8"	90	36	
R-452A	BDF-NB-2096A	400V 3N ~ 50Hz	3 1/2	1 555	1 755	2 772	3 933	1 740	(1.22)	11	Ø 450	3 600	3/8"-3/4"	98	39	
	BDF-NB-2108A	400V 3N ~ 50Hz	4	1 945	2 171	3 296	4 529	2 070	1.61	13	Ø 450	3 600	3/8"-7/8"	98	37	
	BDF-NB-2136A	400V 3N ~ 50Hz	5	2 560	2 844	4 120	5 533	2 740	1.60	15	Ø 450	3 600	3/8"-7/8"	98	32	
	BDF-NB-3215A	400V 3N ~ 50Hz	7 1/2	3 902	4 351	6 361	8 565	4 070	1.60	24	2x Ø 450	6 500	1/2"-1 1/8"	149	39	
	BDF-NB-3271A	400V 3N ~ 50Hz	10	5 444	5 923	8 178	10 664	5 900	1.60	28	2x Ø 450	6 500	1/2"-1 1/8"	149	39	

⁽¹⁾ Conditions based on UNE-EN 13215: ambient temp. 32 °C, , average evap. temp -10 °C (PT) and -35 °C (NT), of suction temperature 20 °C.

⁽²⁾ Cooling capacity in nominal conditions: average evaporating temp -35 °C (NT), ambient temperature of 32 °C, overheating 10 K, refrigerant R-449A.

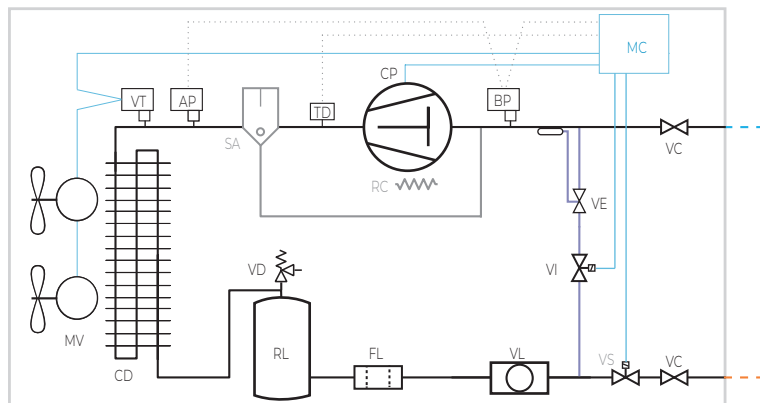
⁽³⁾ COP/SEPR: Coefficient of Performance (COP) and Seasonal Energy Performance Ratio (SEPR) according to Directive ErP 2015/1095/UE.

h _g	Cooling capacity	Ecodesign standard
	0,2 < P ≤ 1 kW	COP ≥ 1,40
h _z	1 < P ≤ 5 kW	COP ≥ 1,60
	5 < P ≤ 20 kW	SEPR ≥ 2,55
	P ≤ 2 kW	COP ≥ 0,95
	2 < P ≤ 8 kW	SEPR ≥ 1,60

⁽⁴⁾ Sound pressure level, with directivity 1, measured at 10 m from the unit (non-binding value calculated from sound power).

^(M) Model that allow VRC system.

* Units available in 400V 3N 50Hz.

REFRIGERATION SCHEME

AS STANDARD

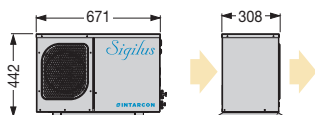
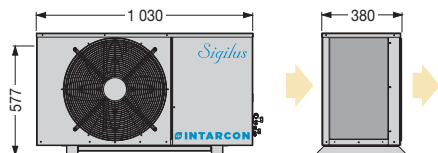
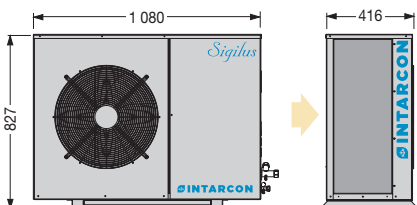
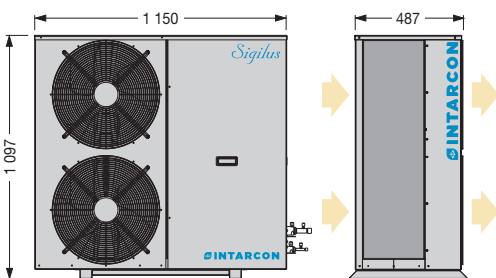
- AP: HIGH PRESSURE SWITCH
- BP: LOW PRESSURE SWITCH
- CD: CONDENSER
- CP: COMPRESSOR
- FL: FILTER
- MV: MOTOR FAN
- RL: LIQUID VESSEL
- RC: CRANKCASE HEATER
- VC: SERVICE VALVE
- VD: SECURITY VALVE (UP TO 1 HP)
- VL: SIGHT GAUGE
- VT: VOLTAGE REGULATOR

OPTIONAL

- SA: OIL SEPARATOR
- VS: SOLENOID VALVE
- LIQUID INJECTION SYSTEM (ONLY BDF-G)
- TD: DISCHARGE THERMOSTAT
- VE: THERMOSTATIC EXPANSION VALVE
- VI: LIQUID SOLENOID VALVE

OPTIONAL -N VERSION

- MC: ELECTRONIC MICRO-CONTROLLER

DIMENSIONS
0 series

1 series

2 series

3 series


Dimensions in mm.

MDF-N and BDF-N version N (with optional electronic control)

Sigilus condensing units with optional electronic control incorporate an advanced electronic controller XM670K for the management of the condensing unit and the evaporator, being able to optionally integrate the solenoid valve.



- ▶ Multifunction remote digital control.
- ▶ Electronic board integrated in the condensing unit for 6 control relays for: compressor, condensing fan, evaporator fan, defrost, light and alarm.
- ▶ Possibility of interconnection and synchronization of up to 8 devices by LAN, managed from a single control.

Liquid injection system

Negative temperature condensing units incorporate a safety cooling system for the motor by liquid injection into the compressor suction.

R-449A refrigerant has high gas discharge temperature under conditions of high compression ratio and high suction gas superheat.

To protect the motor windings and preserve oil stability, compressor cooling is necessary in certain situations.

Oil separator (optional)

Sigilus condensing units connected to a single evaporator usually not require an oil separator. This is recommended for long pipe lengths (> 30 m) being necessary for a suitable circuit design to ensure oil return.