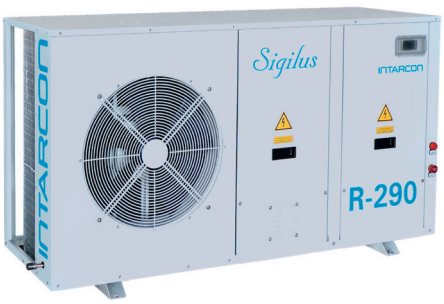
R-290 *Sigilus* | Chillers

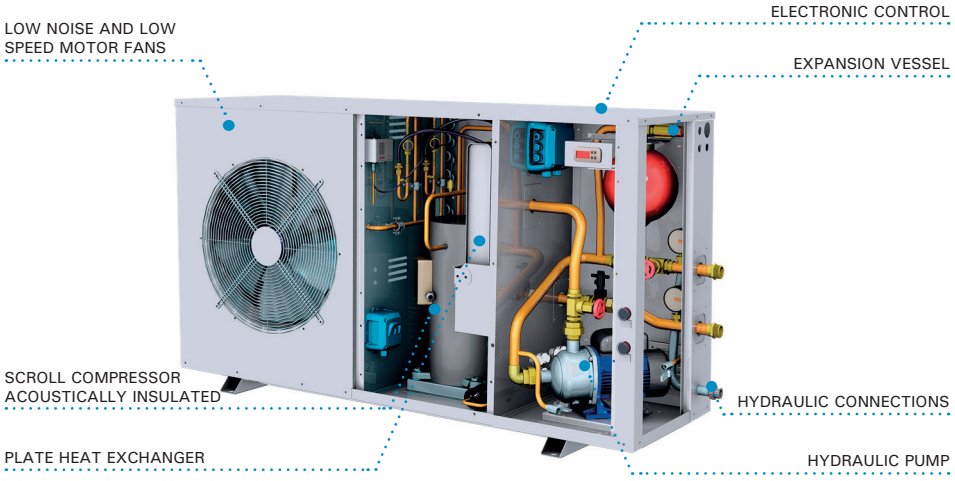


- ❄ Tropicalised design for ambient temperature of 45 ºC.
- ❄ 100 % factory tested equipment.
- ❄ Acoustically insulated scroll compressor.
- ❄ Built-in hydraulic unit (optional).

R-290 *Sigilus* is the range of chiller in silent air-condensed construction for commercial refrigeration applications, using a low propane charge as the primary refrigerant contained in the chiller, and water or glycol as the secondary refrigerant for cold transport.

Features

- ▶ 400V 3N 50Hz power supply. Available in 60 Hz. Others voltages by request.
- ▶ R-290 refrigerant.
- ▶ Hermetic scroll compressor mounted on dampers and acoustically insulated, with internal clixon and crankcase heater.
- ▶ Large surface condensing coil, made of copper tubes and aluminium fins, with tropicalised sizing for ambient temperature of 50 ºC.
- ▶ Motor fan with proportional condensing pressure control by means of speed variation.
- ▶ Refrigeration circuit made of annealed copper tube equipped with ATEX high and low pressure switches, safety valves and filter.
- ▶ Hydraulic circuit made of copper pipe, with threaded connections, fill/drain valve, air vent, flow switch, thermometers and inlet/outlet pressure gauges.
- ▶ Electric power and control panel, with general differential protection, motor fan circuit breaker and compressor circuit breaker and thermistor.
- ▶ Electronic control with digital control interface.
- ▶ Acoustic and light alarm.
- ▶ Leak detector in the compressor compartment.



Propane

Propane, or R-290, is a hydrocarbon used as a refrigerant in compact commercial and industrial refrigeration equipment. It has a low environmental impact and excellent thermodynamic properties.

- Global Warming Potential: GWP = 0.02 according to IPCC AR6
- Boiling point at 1.013 bar (ºC): -42.10
- Temperature slide (ºC): 0
- Safety classification: A3. Non-toxic but extremely flammable.

Scroll compressor

Hermetic scroll compressors are characterised by their great robustness and reliability of operation, and as they are cooled exclusively by the refrigerant gas, they provide effective soundproofing.

400V 3N 50Hz | High temperature | Scroll compressor | R-290

Refrigerant	Compressor	Series / Model	Compressor HP	Compressor Model	Cooling capacity (kW) [1] I/O water temperature 12/7 °C	Input power (kW)	Ecodesign SEPR [3]	Max. input current (A)	Condenser Fan Ø (mm)	Condenser Air flow (m³/h)	Refrigerant charge (kg)	Water flow (m³/h)	Hydraulic connection	Weight (kg)	SPL dB(A) [3]
R-290	1x Scroll	**AWF-SD-6 017**	2 1/2	ZB17KCU	**7.0**	2.0	5.2	7.2	1x Ø 450	4 250	< 0.7	1.2	1"	140	23
		AWF-SD-6 025	4	ZB25KCU	**9.8**	2.8	5.6	9.2	1x Ø 450	4 250	< 0.7	1.7	1 1/4"	160	27
		AWF-SD-7 037	6	ZB37KCU	**13.7**	4.2	5.9	11.8	1x Ø 450	4 500	< 0.7	2.4	1 1/4"	190	29
		AWF-SD-7 049	8	ZB49KCU	**17.0**	5.3	5.5	19.8	2x Ø 450	7 000	< 0.7	2.9	1 1/2"	200	33

400V 3N 50Hz | Positive temperature | Scroll compressor | R-290

Refrigerant	Compressor	Series / Model	Compressor HP	Compressor Model	Cooling capacity (kW) [2] I/O 35 % propylene glycol temperature -2/-8 °C	Potencia abs. nominal (kW)	Ecodesign SEPR [3]	Max. input current (A)	Condenser Fan Ø (mm)	Condenser Air flow (m³/h)	Refrigerant charge (kg)	Glycol flow (m³/h)	Hydraulic connection	Weight (kg)	SPL dB(A) [3]
R-290	1x Scroll	**MWF-SD-6 017**	2 1/2	ZB17KCU	**4.1**	1.8	3.5	7.2	1x Ø 450	4 250	< 0.7	0.6	1"	140	23
		MWF-SD-6 025	4	ZB25KCU	**5.8**	2.5	3.8	9.2	1x Ø 450	4 250	< 0.7	0.9	1"	160	27
		MWF-SD-7 037	6	ZB37KCU	**8.3**	3.6	4.1	11.8	1x Ø 450	4 500	< 0.7	1.3	1 1/4"	190	29
		MWF-SD-7 049	8	ZB49KCU	**10.4**	4.6	4.0	19.8	2x Ø 450	7 000	< 0.7	1.6	1 1/4"	200	33

Options

- Built-in hydraulic module.
- Protective grille for external coil.
- Polyurethane coating on the condensing coil.
- Low voltage and phase change protection.

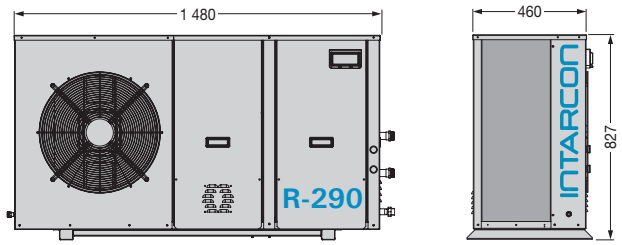
[1] Nominal performance high temperature: 35 °C ambient temperature with water inlet/outlet at 12/7 °C.

[2] Nominal performance positive temperature: 35 °C ambient temperature with glycol inlet/outlet at -2/-8 °C, with a propylene glycol concentration of 35 %.

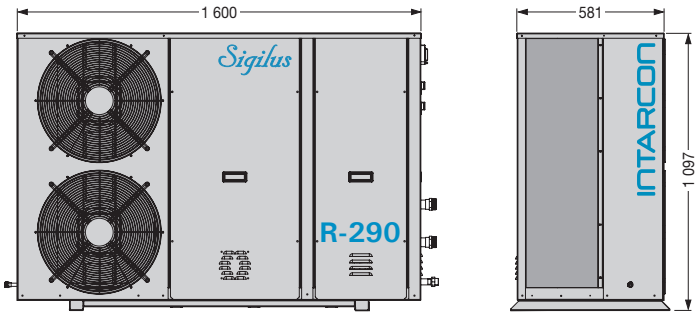
[3] Sound pressure level of the condenser referred to dB(A) sound pressure level, measured in the open field at 10 m distance.

Dimensions

6 series



7 series



Dimensions in mm.