

# R-290 *Sigilus* | Chillers



**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 °C.
- ▶ 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.

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

## 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 (°C): -42.10
- Temperature slide (°C): 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		Cooling capacity (kW) <sup>(1)</sup>	Input power (kW)	Ecodesign SEPR <sup>(3)</sup>	Max. input current (A)	Condenser		Refrigerant charge (kg)	Water flow (m <sup>3</sup> /h)	Hydraulic connection	Weight (kg)	SPL dB(A) <sup>(3)</sup>
		HP	Model	I/O water temperature 12/7 °C	Fan Ø (mm)					Air flow (m <sup>3</sup> /h)						
R-290	1x Scroll	AWF-SD-6 017	ZB17KCU	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	ZB25KCU	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	ZB37KCU	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	ZB49KCU	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		Cooling capacity (kW) <sup>(2)</sup>	Potencia abs. nominal (kW)	Ecodesign SEPR <sup>(3)</sup>	Max. input current (A)	Condenser		Refrigerant charge (kg)	Glycol flow (m <sup>3</sup> /h)	Hydraulic connection	Weight (kg)	SPL dB(A) <sup>(3)</sup>
		HP	Model	I/O 35 % propylene glycol temperature -2/-8 °C	Fan Ø (mm)					Air flow (m <sup>3</sup> /h)						
R-290	1x Scroll	MWF-SD-6 017	ZB17KCU	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	ZB25KCU	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	ZB37KCU	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	ZB49KCU	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.

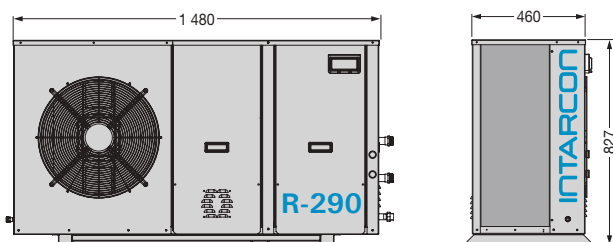
<sup>(1)</sup> Nominal performance high temperature: 35 °C ambient temperature with water inlet/outlet at 12/7 °C.

<sup>(2)</sup> Nominal performance positive temperature: 35 °C ambient temperature with glycol inlet/outlet at -2/-8 °C, with a propylene glycol concentration of 35 %.

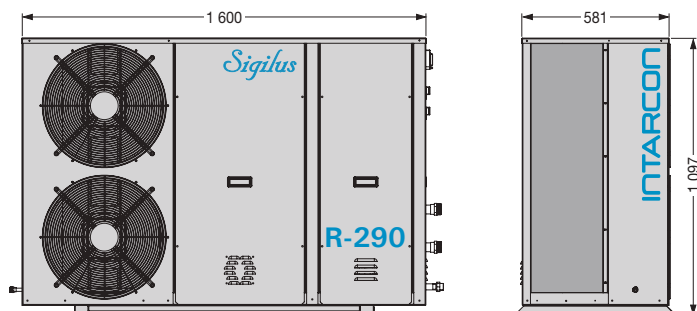
<sup>(3)</sup> Sound pressure level of the condenser referred to dB(A) sound pressure level, measured in the open field at 10 m distance.

## Dimensions

## 6 series



## 7 series



Dimensions in mm.