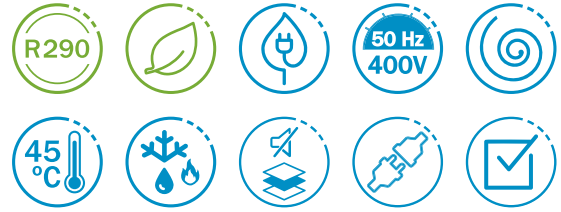


# Sigilus | R-290 chillers



Chillers 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

Minimal R-290 refrigerant charge.	<input checked="" type="checkbox"/>
Scroll hermetic compressor mounted on shock absorbers and acoustically insulated, with internal Klixon and crankcase heater.	<input checked="" type="checkbox"/>
Large area condensing coil, in copper pipes and aluminium fins, tropicalised for ambient temperature up to 45 °C.	<input checked="" type="checkbox"/>
Motor fan with proportional condensing pressure control by speed variation.	<input checked="" type="checkbox"/>
Refrigeration circuit made of annealed copper tube equipped with ATEX high and low pressure switches, safety valves and filter.	<input checked="" type="checkbox"/>
Hydraulic circuit made of copper pipe, with threaded connections, fill/drain valve, air vent, flow switch, thermometers and inlet/outlet pressure gauges.	<input checked="" type="checkbox"/>
Electric power and control panel, with general differential protection, motor fan circuit breaker and compressor circuit breaker and thermistor.	<input checked="" type="checkbox"/>
Regulación electrónica con interfaz de control digital.	<input checked="" type="checkbox"/>
Acoustic and light alarm.	<input checked="" type="checkbox"/>
Built-in hydraulic group.	<input type="checkbox"/>
Protective grille for external coil.	<input type="checkbox"/>
Polyurethane coating on the condensing coil.	<input type="checkbox"/>
Scroll protection system for voltage drops and phase failures.	<input type="checkbox"/>
Very low temperature condensation control.	<input type="checkbox"/>

As standard  Optional

## COOLING DETAIL



### Installation example



### Propane

Propane or R-290 is a hydrocarbon used as a refrigerant in small commercial refrigeration units. 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 slip (°C): 0
- ▶ Safety classification: A3. Not toxic but extremely flammable.

### Compressors

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.



### Triple noise insulation

Sigilus units incorporate triple noise insulation as standard:

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

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

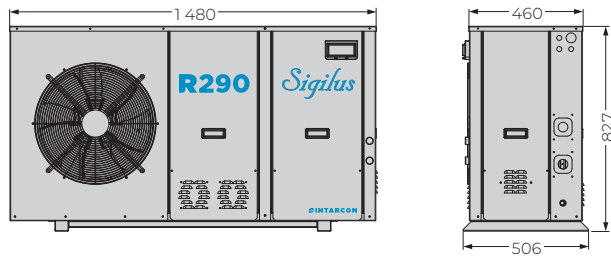
Refrigerant	Series / Model	Compressor		Cooling capacity (W) <sup>(1)</sup>	Input power (W)	Ecodesign SERP <sup>(3)</sup>	Max. current (A)	Condenser		Refrig. charge (kg)	Water flow (m³/h)	Hydraulic connection	Weight (kg)	SPL dB(A) <sup>(4)</sup>	Price (€)
		HP	Model					Fan Ø (mm)	Air flow (m³/h)						
R-290	AWF-SD-6017A	2 1/2	ZB17KCU	7 000	2 000	5.2	7.2	1x Ø 450	4 250	< 0.7	1.2	1"	140	23	By demand
	AWF-SD-6025A	4	ZB25KCU	9 800	2 800	5.6	9.2	1x Ø 450	4 250	< 0.7	1.7	1 1/4"	160	27	By demand
	AWF-SD-7037A	6	ZB37KCU	13 700	4 200	5.9	11.8	1x Ø 450	4 500	< 0.7	2.4	1 1/4"	190	29	By demand
	AWF-SD-7049A	8	ZB49KCU	17 000	5 300	5.5	19.8	2x Ø 450	7 000	< 0.7	2.9	1 1/4"	200	33	By demand

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

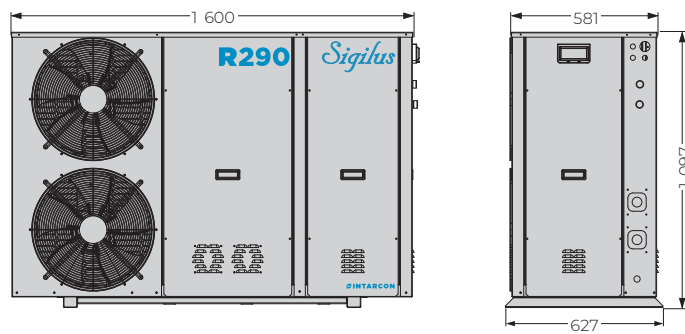
Refrigerant	Series / Model	Compressor		Cooling capacity (W) <sup>(2)</sup>	Input power (W)	Ecodesign SERP <sup>(3)</sup>	Max. current (A)	Condenser		Refrig. charge (kg)	Water flow (m³/h)	Hydraulic connection	Weight (kg)	SPL dB(A) <sup>(4)</sup>	Price (€)
		HP	Model					Fan Ø (mm)	Air flow (m³/h)						
R-290	MWF-SD-6017A	2 1/2	ZB17KCU	4 100	1 800	3.5	7.2	1x Ø 450	4 250	< 0.7	0.6	1"	140	23	By demand
	MWF-SD-6025A	4	ZB25KCU	5 800	2 500	3.8	9.2	1x Ø 450	4 250	< 0.7	0.9	1"	160	27	By demand
	MWF-SD-7037A	6	ZB37KCU	8 300	3 600	4.1	11.8	1x Ø 450	4 500	< 0.7	1.3	1 1/4"	190	29	By demand
	MWF-SD-7049A	8	ZB49KCU	10 400	4 600	4.0	19.8	2x Ø 450	7 000	< 0.7	1.6	1 1/4"	200	33	By demand

DIMENSIONS

6 series



7 series



Dimensions in mm.

<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> Seasonal Energy Performance Ratio (SEPR) according to (UE) 2015/1095 and (UE) 2016/2281.

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

**CLIENT360**  
client360.intarcon.com  
REFRIGERATION CALCULATION SOFTWARE

