



Water or glycol footprint chiller, in compact body construction and galvanised steel structure in polyester paint for installation outdoors or in a machine room.

Features

- ▶ 400V 3N 50Hz power supply. Available in 60Hz. Others voltages by request.
- ▶ Rack of hermetic reciprocating or scroll compressors mounted on dampers, acoustically insulated, with rotalock service valves, internal clixon, crankcase resistor, and check valves and discharge silencer (on models with hermetic reciprocating compressor).
- ▶ Condensing coil with large exchange surface, in copper tubes and aluminium fins, with tropicalised dimensioning for ambient temperatures of 45 °C.
- ▶ Low consumption axial and centrifugal motor fans with variable speed, with internal electronic protection, mounted on nozzle, dynamically balanced propellers and external protection grilles.
- ▶ Modulating condensing pressure control.
- ▶ Copper brazed stainless steel plate heat exchanger with frost protection.
- ▶ Cooling circuit in annealed copper tube equipped with high and low pressure switches, pressure transducers, service valves, thermostatic expansion valve, sight glass 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 and magneto-thermal protection for compressors, fans and hydraulic pump.
- ▶ Electronic control with control of power stages, high and low pressure transducers, anti-frost control and digital control interface.

ELECTRONIC CONTROL OF THE LATEST GENERATION

AXIAL MOTOR FANS

PLATE HEAT EXCHANGER

TROPICALISED CONDENSING COIL WITH AIR FLOW SEPARATION

COOLING CONNECTIONS ON THE LEFT-HAND SIDE

SCROLL COMPRESSOR

VERY COMPACT DESIGN WITH MAXIMUM WIDTH OF 850 MM



- ❄ Low refrigerant charge.
- ❄ No need for machine room.
- ❄ Plug & Play system.
- ❄ Optimised compact system with minimum maintenance.

Highly reliable compressors

Hermetic reciprocating scroll compressors are robust and reliable in operation and, as they are cooled exclusively by the refrigerant gas, they provide effective soundproofing.



Copeland's low-temperature scroll compressors feature the EVI system for vapour injection, which enables an efficiency improvement of up to 25 % over conventional compressors.

Efficient, quiet and modulating condensing units

Motor fans with variable speed, maintain condensing pressure at low ambient temperatures with reduced noise level.



Brazed plate heat exchanger

The chiller incorporate a copper brazed stainless steel plate heat exchanger.



400V 3N-50Hz | Positive temperature | Scroll compressor | R-449A

Refrigerant	Compressor	Series / Model	Compressor		Cooling capacity (kW) ⁽¹⁾	Input power (kW)	Ecodesign	Max. input current (A)	Condenser		Water flow (m³/h)	Hydraulic connection	Weight (kg)	SPL dB(A) ⁽³⁾
			HP	Model	Water outlet temperature (°C) % propylene glycol by volume -8 °C 35 %		SEPR ⁽²⁾		Fan Ø (mm)	Air flow (m³/h)				
R-449A	2x Scroll	MWV-SG-6 0582	8	2x ZB29	12.6	6.6	3.1	23	2x Ø 450	2x 3 600	1.9	1 1/2"	247	31
		MWV-SG-6 0762	10	2x ZB38	16.2	8.3	3.2	29	2x Ø 450	2x 3 600	2.5	1 1/2"	265	31
		MWV-SG-6 0902	12	2x ZB45	19.0	9.9	3.1	31	2x Ø 450	2x 4 750	2.9	1 1/2"	269	31
		MWV-SG-6 1142	16	2x ZB57	24.2	12.2	3.3	37	2x Ø 450	2x 4 750	3.7	1 1/2"	269	35
	3x Scroll	MWV-SG-7 1353	18	3x ZB45	28.4	14.7	3.3	46	3x Ø 450	3x 4 750	4.4	2"	404	33
		MWV-SG-7 1713	24	3x ZB57	36.5	18.1	3.1	55	3x Ø 450	3x 4 750	5.6	2"	404	37
		MWV-SG-8 1713	24	3x ZB57	37.4	18.8	3.1	52	2x Ø 630	2x 10 000	5.7	2"	453	37
		MWV-SG-8 2283	30	3x ZB76	48.5	26.0	3.3	66	2x Ø 630	2x 10 000	7.4	2 1/2"	518	36

Options

- ▶ Machine room version with EC radial fans for exhaust air ducting.
- ▶ Integrated hydraulic unit with glycol circulating pump, shut-off valves, expansion vessel, safety valve, mesh filter, air vent and drain valve.
- ▶ Anti-corrosion coated coil.
- ▶ Electromechanical emergency control by means of adjustable thermostat, with manual or automatic activation in case of failure of the electronic controller.
- ▶ Heat recovery (20 or 80 % condenser heat) for hot water generation.

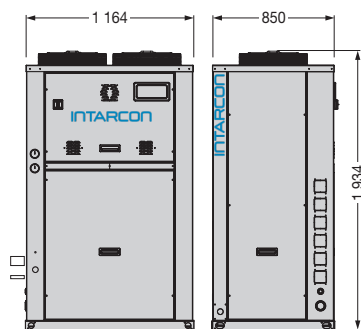
⁽¹⁾ Nominal performance refer to positive temperature operation at I/O temperature of -2/-8 °C of propylene glycol at 35 % concentration, for an ambient temperature of 35 °C.

⁽²⁾ Seasonal performance factor (SEPR) according to ErP directive 2015/1095/EU.

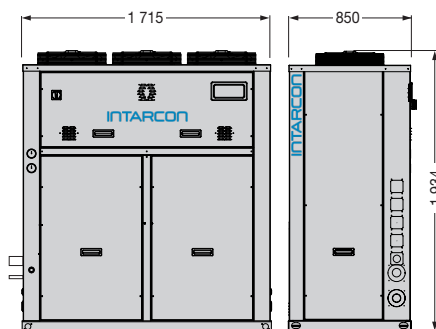
⁽³⁾ Sound pressure level, with directivity 1, measured at 10 m from the unit (non-binding value calculated from sound power).

Dimensions

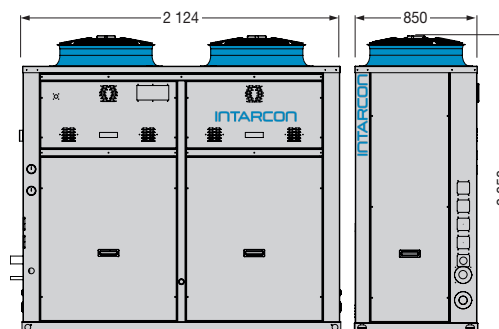
6 series - axial



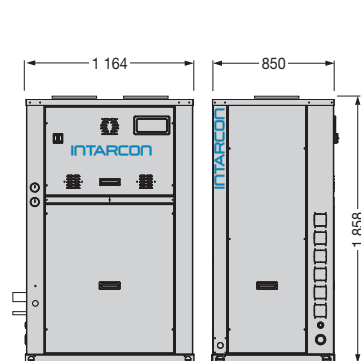
7 series - axial



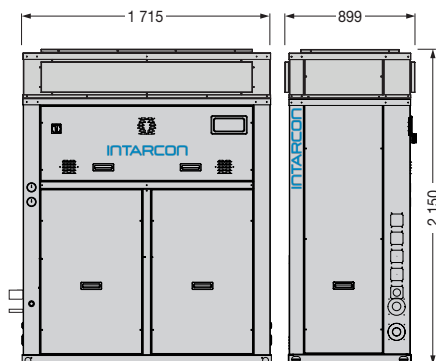
8 series - axial



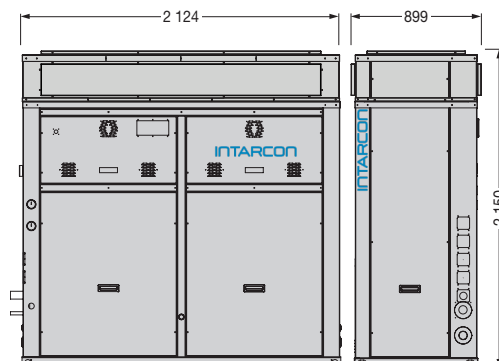
6 series - radial



7 series - radial



8 series - radial



Dimensions in mm.

Pump sets for WV series

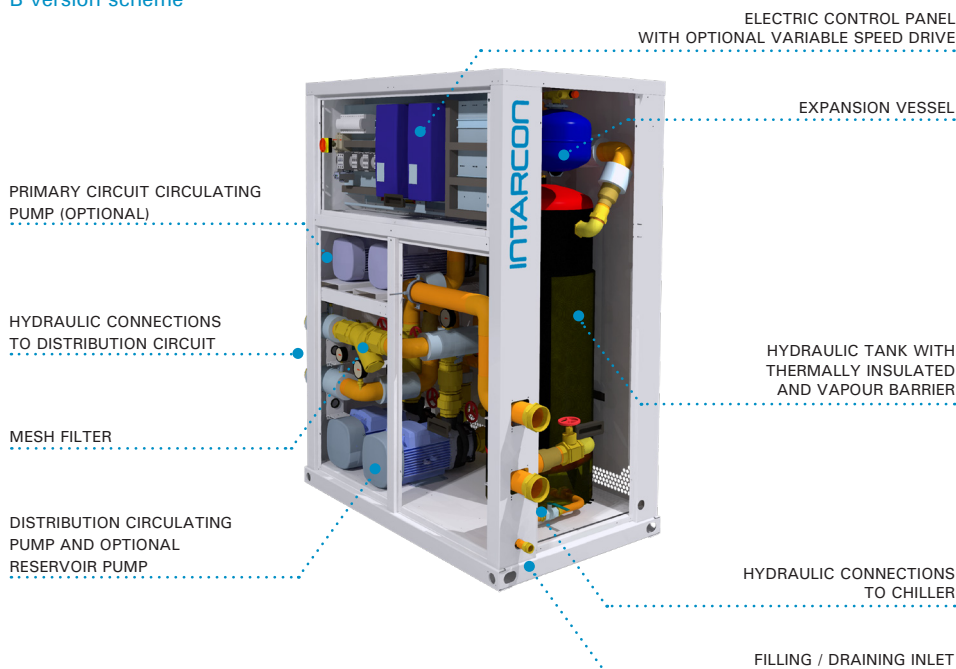


Closed-circuit pump sets glycol, assembled in galvanised sheet steel bodywork and structure with polyester paint for outdoor installation.

Features

- ▶ 400V 3N 50Hz power supply. Available in 60Hz. Others voltages by request.
- ▶ Glycol circulating pump with stainless steel impeller and optional back-up pump.
- ▶ Buffer tank with high density polyurethane foam insulation and vapour barrier (AH-2 and B series).
- ▶ Closed membrane expansion tank and safety valve calibrated to 4 bar.
- ▶ Mesh filter.
- ▶ Glycerine thermometers and pressure gauges.
- ▶ Air vent.
- ▶ Drain connection.
- ▶ Threaded hydraulic connections.
- ▶ Electrical control and power panel with magneto-thermal protection and independent differential for each pump, and electronic control unit for the management and rotation of secondary circuit pumps.

B version scheme



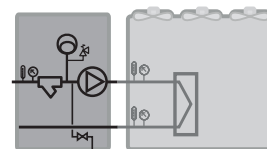
- ❄ Easily integrated modular construction.
- ❄ Optimised water and glycol assemblies.
- ❄ Reduced footprint.

Versions

▶ A version

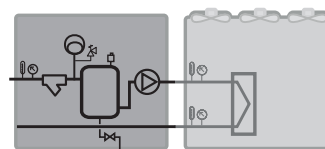
GV-AH-1: Primary pump set

Simple hydraulic unit with circulating pump, mesh filter and expansion vessel.



GV-AH-2: Primary pump set unit with buffer tank

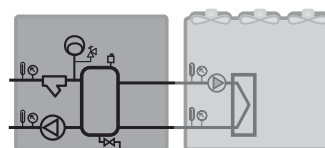
Pump set with medium or high pressure circulating pump at constant flow rate, for connection to one or more chillers.



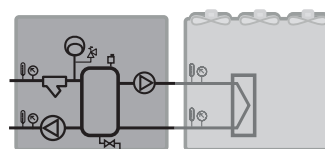
▶ B version

GV-BH-2: Secondary circuit pump set

Secondary circuit hydraulic unit, with buffer tank and medium or high pressure circulating pump at constant or variable flow rate (optional), for connection to one or more chiller equipped with primary circuit pump.



Optional: low-pressure primary pump in hydraulic unit, for connection to a chillers.



400V 3N 50Hz | High temperature | Water

Series / Model		Water flow (m³/h) 7 °C ⁽¹⁾	Main pump (kW)	Available pressure (kPa) ⁽³⁾	Inertia tank except 1 series (litres)	Expansion vessel (litres)	Hydraulic connection	Auxiliary primary pump B version (kW)	Service weight (kg)
WATER	AGV-AH-2 006 AGV-BH-2 006	3 to 6	1.1	300 to 200	100	5	2"	0.65	655
	AGV-AH-2 009 AGV-BH-2 009	6 to 9	1.5	250 to 200	100	5	2"	0.65	670
	AGV-AH-2 012 AGV-BH-2 012	9 to 12	1.5	230 to 160	100	5	2 1/2"	0.65	680
	AGV-AH-2 015 AGV-BH-2 015	12 to 15	2.2	280 to 230	200	8	2 1/2"	0.65	800
	AGV-AH-2 020 AGV-BH-2 020	15 to 20	2.2	270 to 180	200	8	3"	1.10	805
	AGV-AH-2 025 AGV-BH-2 025	20 to 25	4.0	240 to 170	200	15	3"	2.20	860

400V 3N 50Hz | Positive temperature | Glycol

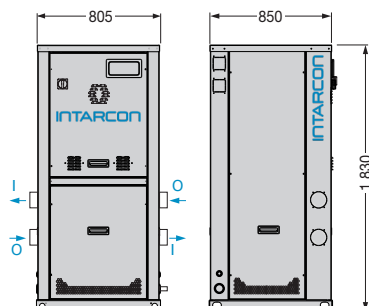
Series / Model		Flow MPG 35 % (m³/h) -8 °C ⁽²⁾	Main pump (kW)	Available pressure (kPa) ⁽³⁾	Inertia tank except 1 series (litres)	Expansion vessel (litres)	Hydraulic connection	Auxiliary primary pump B version (kW)	Service weight (kg)
GLYCOL	MGV-AH-2 003 MGV-BH-2 003	2 to 4	0.65	220 to 150	100	5	1 1/2"	0.46	600
	MGV-AH-2 004 MGV-BH-2 004	2 to 4	1.1	320 to 230	100	5	1 1/2"	0.46	615
	MGV-AH-2 005 MGV-BH-2 005	4 to 6	1.1	270 to 150	100	5	2"	0.65	650
	MGV-AH-2 006 MGV-BH-2 006	4 to 6	1.5	290 to 230	100	5	2"	0.65	675
	MGV-AH-2 008 MGV-BH-2 008	6 to 9	1.5	240 to 150	100	8	2"	0.65	680
	MGV-AH-2 009 MGV-BH-2 009	6 to 9	2.2	290 to 220	100	8	2"	0.65	690
	MGV-AH-2 012 MGV-BH-2 012	9 to 12	2.2	270 to 200	200	15	2 1/2"	1.10	800
	MGV-AH-2 015 MGV-BH-2 015	12 to 15	4.0	230 to 200	200	15	2 1/2"	1.10	840

Options

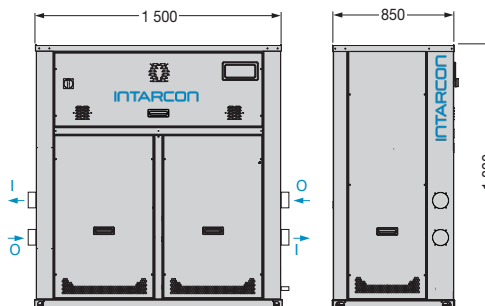
- ▶ Back-up main pump.
- ▶ Variable speed drive on main pump.
- ▶ Auxiliary back-up pump.
- ▶ Electronic control for heat recovery.

Dimensions

1 series



2 series



Dimensions in mm.

⁽¹⁾ Performance calculated for pumping water at 7 °C.⁽²⁾ Performance calculated for pumping 35 % propylene glycol concentration at -8 °C.⁽³⁾ Hydraulic pressure available for the distribution circuit and the chiller.

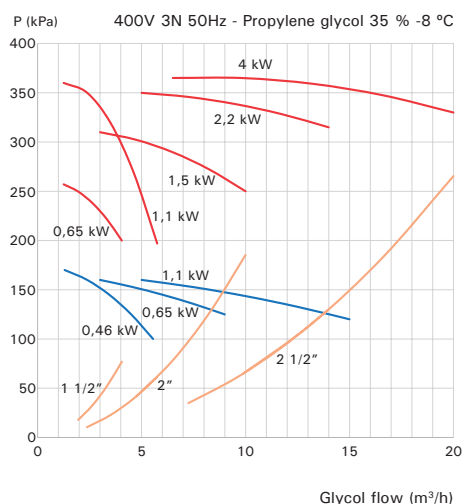
Primary circuit auxiliary pump

Auxiliary pump in the primary circuit is a low-pressure pump sized with an available pressure of about 100 kPa, enough to overcome the pressure drop of the exchanger of the chiller and a small section of piping.

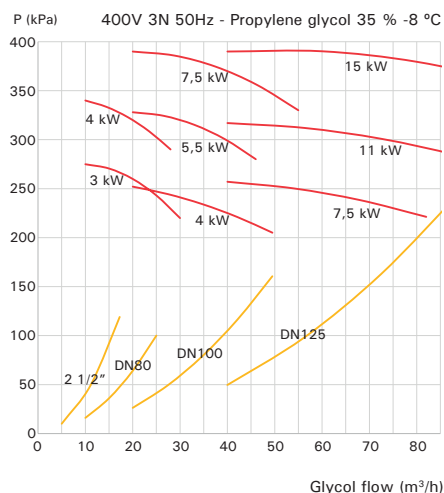
Pump sets

Characteristic curves

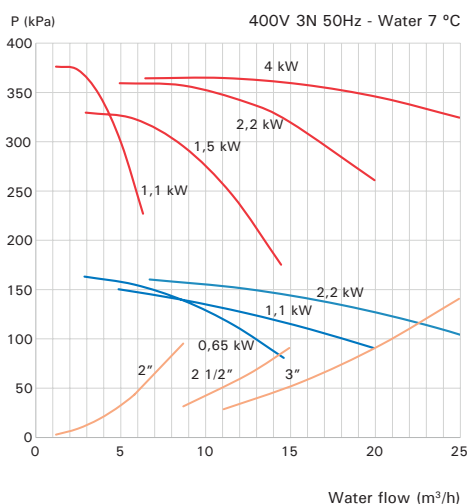
MWV series



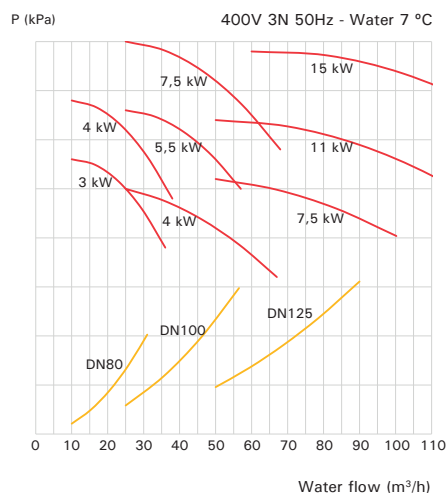
MWW series



Serie AWW



AWW series



- Main pump.
- Primary circuit booster pump.
- Pressure drop characteristic of the hydraulic unit.

The attached curves allow the operating point of the system to be checked on the basis of the pump characteristic curve and taking into account the internal pressure drop curve of the hydraulic unit.

In pump set with primary and secondary circuit (GV-BH and GW-BH versions), the hydraulic resistor of the chiller is compensated by the primary circuit pump.

For units with a single pumping unit (GV-AH and GW-AH version), the heater of the chiller must be taken into account and added to the available pressure required for the distribution circuit. The following values are recommended:

- WV series: 30-40 kPa.
- WW series: 40-50 kPa.

Example of selection

It is intended to select a pump set to be combined with the 35 % propylene glycol chiller, model MWW-FD-3 1503, with a cooling capacity of 260 kW at a temperature range of -2/-8 °C, it a glycol flow rate of 47.5 m³/h and an available pressure for the distribution circuit of 200 kPa.

For the required flow rate we are looking for the pump that results in a water column of 20 m between the characteristic curves of the pump and the DN100 pipe pump set, which corresponds to the hydraulic connections of the chiller. The 7.5 kW pump and DN100 connections characterise the pump set model MGW-BH-1 050.

Optionally, this hydraulic unit can be equipped with a primary circuit pump.