

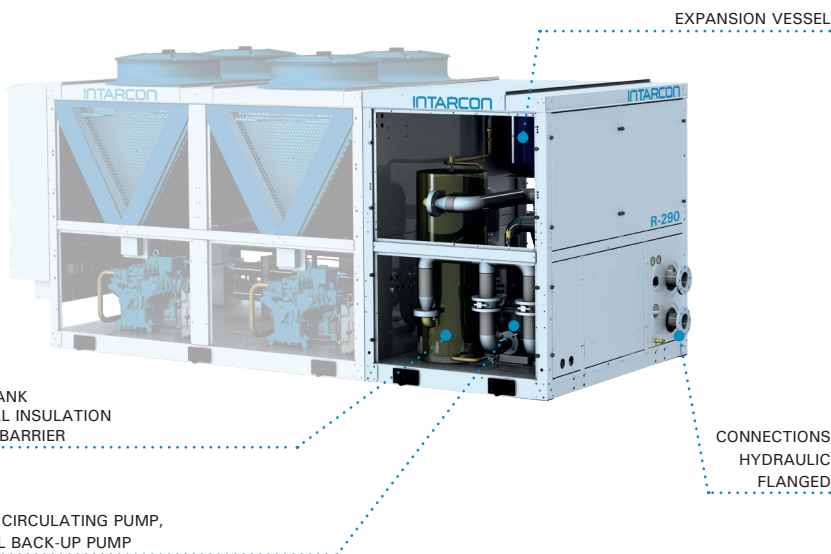
Pump sets for WW series



Pump sets for water or glycol in closed circuit, assembled in galvanised sheet steel bodywork and structure with polyester paint for outdoor installation and coupled to the chillers.

Features

- ▶ 400V 3N 50Hz power supply. Available in 60Hz. Others voltages by request.
- ▶ Glycol circulating pumps with stainless steel impeller and optional reserve pump.
- ▶ Buffer tank with high density polyurethane foam insulation and vapour barrier (depending on version).
- ▶ Closed membrane expansion vessel.
- ▶ Mesh filter.
- ▶ Glycerine thermometers and pressure gauges.
- ▶ Air vent.
- ▶ Drain inlet.
- ▶ Flanged hydraulic connections.
- ▶ Electrical control and power panel with magneto-thermal protection and independent differential for each pump, and electronic control unit for pump management and rotation.



HYDRAULIC TANK WITH THERMAL INSULATION AND VAPOUR BARRIER

DISTRIBUTION CIRCULATING PUMP, AND OPTIONAL BACK-UP PUMP

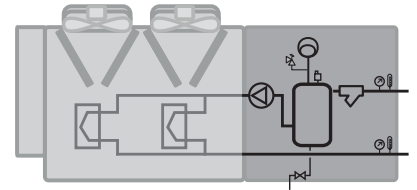
- ❄ **Integrated modular construction.**
- ❄ **Optimised assemblies for water and glycol.**
- ❄ **Reduced footprint.**

Versions

▶ A versions

GW-AH: Primary pump set with tank

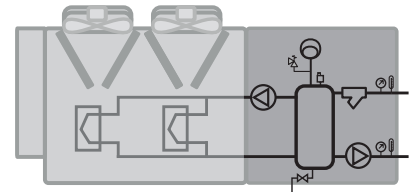
Pump set with medium or high pressure circulating pump at constant flow rate, assembled together with the chiller.



▶ B versions

GW-BH: Secondary pump set

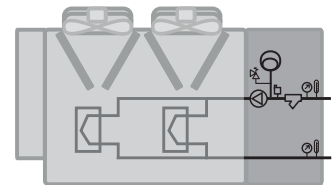
Pump set with secondary circuit, buffer tank and medium or high pressure circulating pump at constant or variable flow rate (optional), with primary circuit pumps, assembled together with the chiller.



▶ N versions

GW-NH: Pumping group

Hydraulic unit with constant flow circulating pump.



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 N version (litres)	Expansion vessel (litres)	Hydraulic connection	Auxiliary primary pump B version (kW)
AGW-AH-0 025 AGW-BH-1 025	10 to 30	3.0	250 to 150	200	8	DN80	1.1
AGW-AH-0 030 AGW-BH-1 030	20 to 30	4.0	300 to 200	200	8	DN80	1.1
AGW-AH-1 040 AGW-BH-1 040	25 to 40	4.0	200 to 150	200	15	DN100	1.5
AGW-AH-1 050 AGW-BH-1 050	30 to 50	5.5	300 to 150	200	15	DN100	1.5
AGW-AH-1 055 AGW-BH-1 055	40 to 55	7.5	300 to 200	200	24	DN100	2.2
AGW-AH-1 070 AGW-BH-2 070	50 to 75	7.5	200 to 150	200	24	DN125	4.0
AGW-AH-1 090 AGW-BH-2 090	60 to 90	11	250 to 150	500	35	DN125	4.0

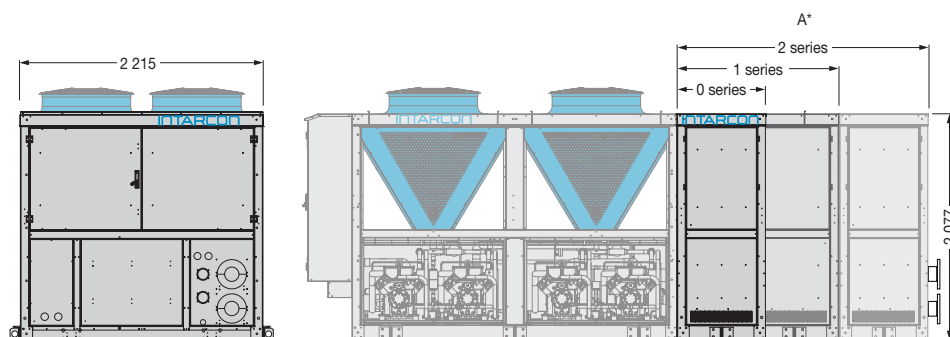
400V 3N 50Hz | Positive temperature | Glycol

Series / Model	Flow MPG 35 % (m³/h) -8 °C ⁽²⁾	Main pump (kW)	Available pressure (kPa) ⁽³⁾	Inertia tank except N version (litres)	Expansion vessel (litres)	Hydraulic connection	Auxiliary primary pump B version (kW)
MGW-AH-0 015 MGW-BH-1 015	10 to 15	4.0	300 to 200	200	24	2 1/2"	0.75
MGW-AH-0 025 MGW-BH-1 025	10 to 25	3.0	250 to 150	200	24	DN80	1.1
MGW-AH-1 030 MGW-BH-1 030	20 to 30	4.0	250 to 150	200	35	DN100	1.1
MGW-AH-1 035 MGW-BH-1 035	25 to 35	4.0	200 to 150	200	35	DN100	1.5
MGW-AH-1 045 MGW-BH-1 045	30 to 45	5.5	250 to 150	200	50	DN100	1.5
MGW-AH-1 050 MGW-BH-1 050	35 to 50	7.5	300 to 200	200	50	DN100	2.2
MGW-AH-1 060 MGW-BH-2 060	40 to 60	7.5	200 to 150	200	50	DN125	3.0
MGW-AH-1 070 MGW-BH-2 070	50 to 70	11	250 to 150	500	50	DN125	3.0
MGW-AH-1 085 MGW-BH-2 085	65 to 85	15	250 to 150	500	50	DN125	3.0

Options

- ▶ Back-up main pump.
- ▶ Variable speed drive on main pump.
- ▶ Auxiliary back-up pump.

Dimensions



Dimensions (mm)	A
0 series	806
1 series	1 480
2 series	2 286

* Pump set according to configuration.

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.

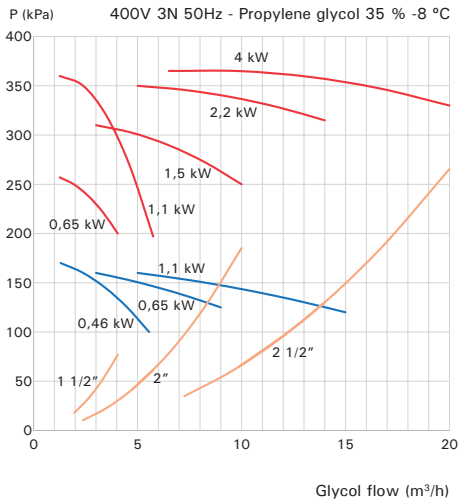
Auxiliary pump in the primary circuit

The auxiliary pump in the primary circuit is a low-pressure pump sized with an available pressure of about 50 to 100 kPa, enough to overcome the pressure drop of the exchanger of the chiller and a small section of piping.

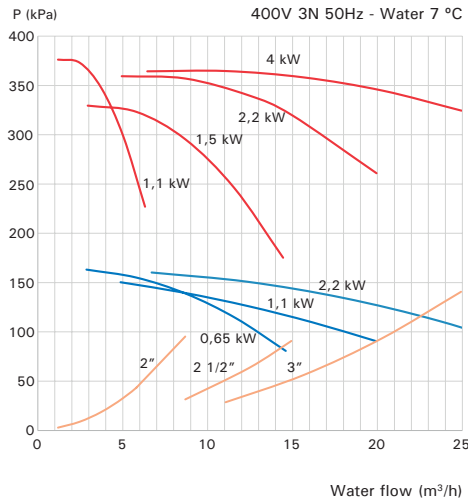
Pump sets

Characteristic curves

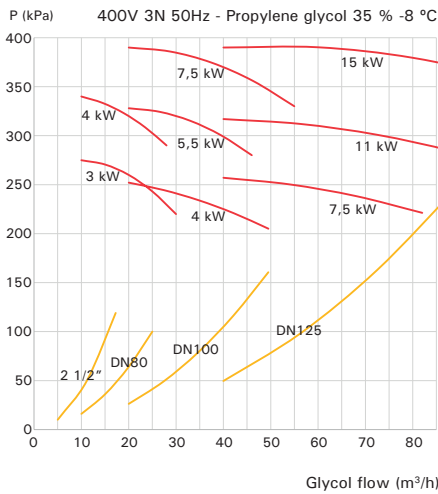
MWV series



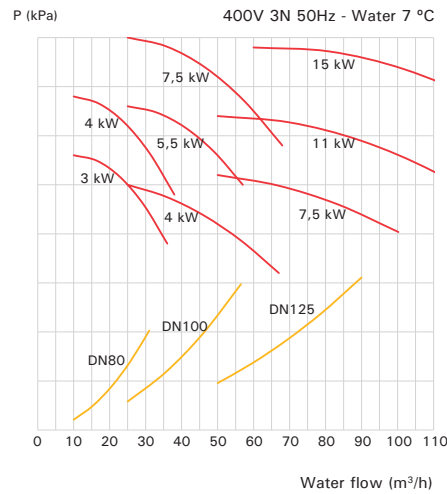
Serie AWW



MWW series



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.