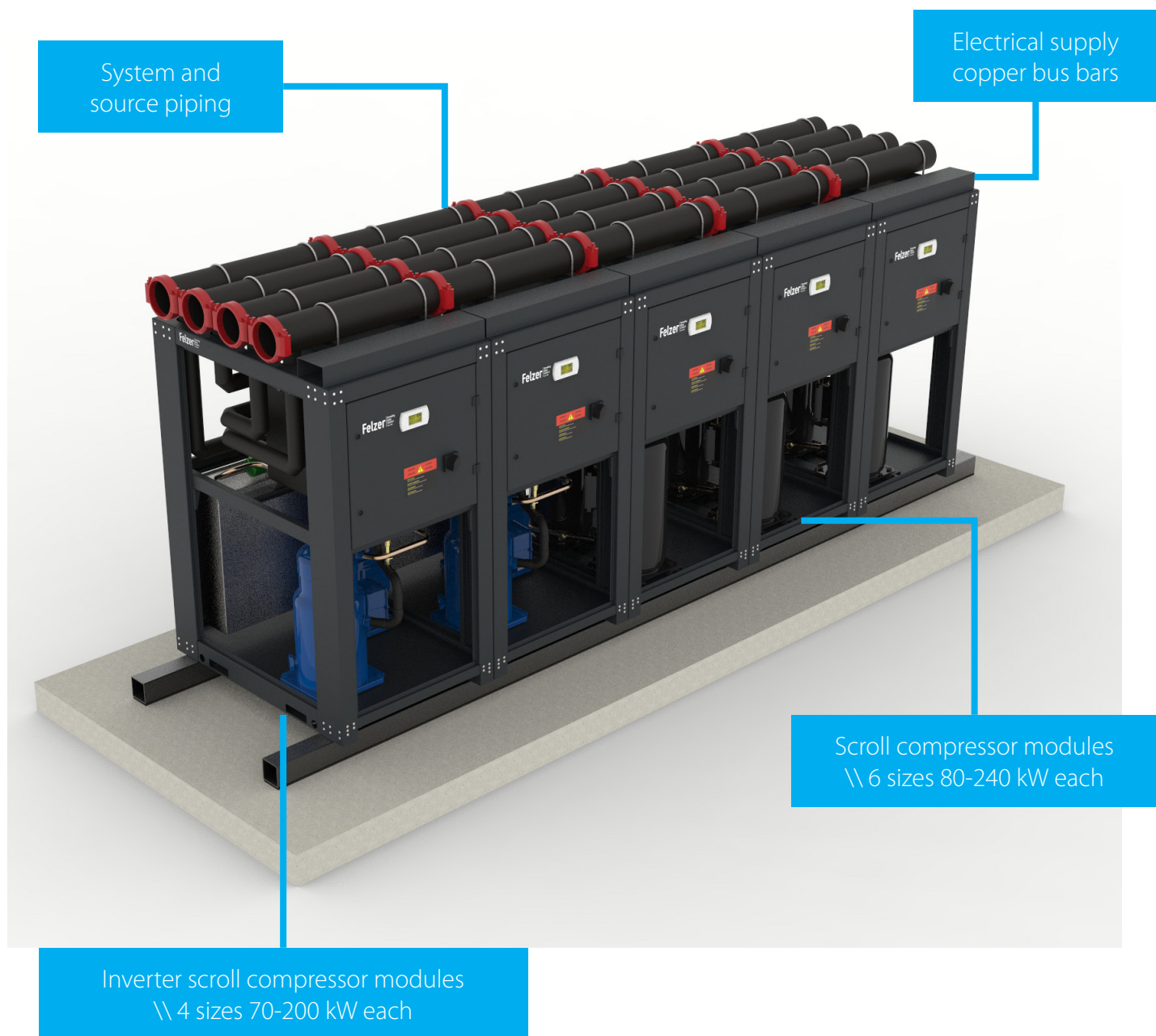




# MULTIWAT system 2017

# Modular water-to-water concept



Chillers // Heat pumps

Upto 60 circuits

## // Why modular?

Easy to install // Compact sizes

Move through doors, corridors etc.

Easy to upgrade // Buy more when you need

Add additional modules when you need

Easy to repair // Just change the module

All parts are easily accessible // Replace the unit with the pipe or another unit if serious repair is required

Stable // More circuits and steps

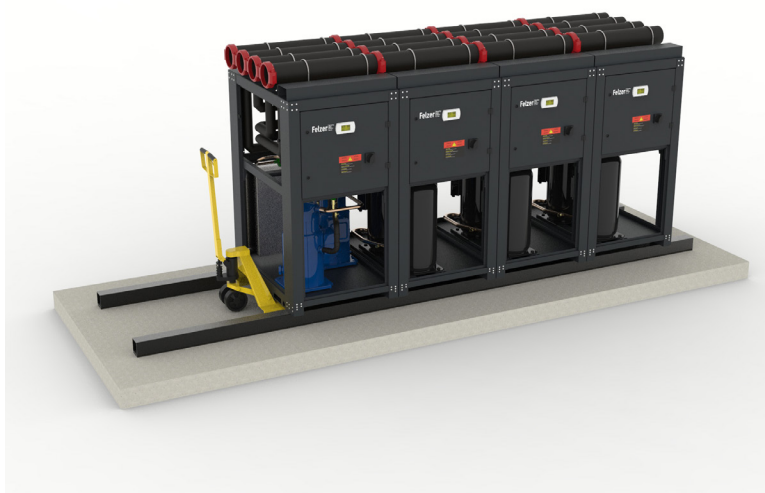
If some problem happens you still have the most of the cooling capacity

Flexible // Choose the module best fit you project

Whether you need inverter units or more steps you can choose the right solution

Factory supplied hydronic solutions: freecooling, pumping stations, etc.

Choose one of factory supplied solutions and buy complete water station from Felzer



Step 1. Move the modules to the installations site.

Step 2. Install the modules on the rails. Connect them with the bolts. Connect the pipes with Victaulic-type couplings.

Step 3. Install electrical bus bar in the bus bar tray on the top of the units. Connect power to the units using connector clamps.



Step 4. Connect control wiring between the moduls.

The modular chiller / heatpump plant is ready for operation. Connect to the system. Fill in water and start chilling / heating.

# Inverter scrolls

// Modular installation 140-12000 kW

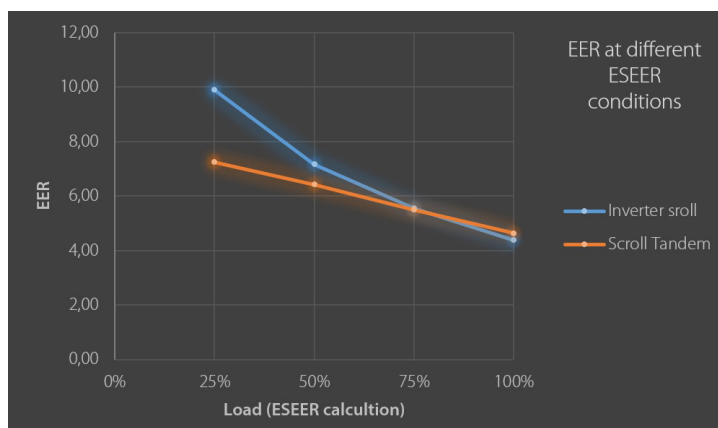
// Single installation 70-210 kW



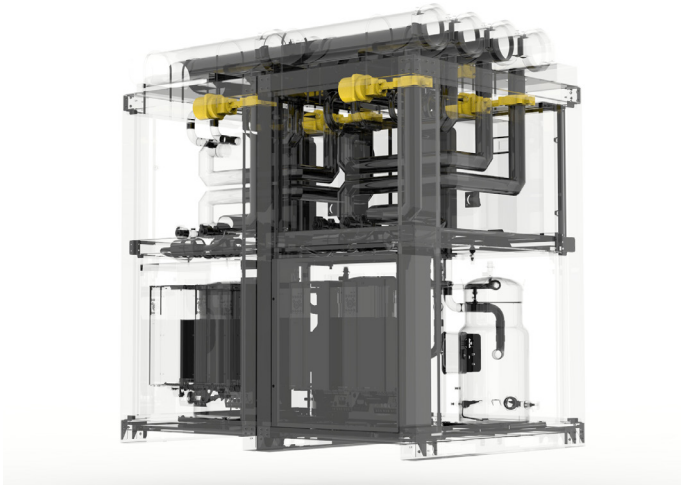
Infinite capacity control 30-100% in each circuit

- \\ Higher part load energy efficiency
  - // Operation without additional pressure fluctuation
  - // Steady suction pressure and superheat
  - // Smaller temperature difference at heat exchanger (higher suction and lower discharge pressure)

- \\ Soft start function
  - // Reduced starting current with full motor torque
  - // Reduced mechanical load
  - // Minimised danger of liquid slugging during start-up

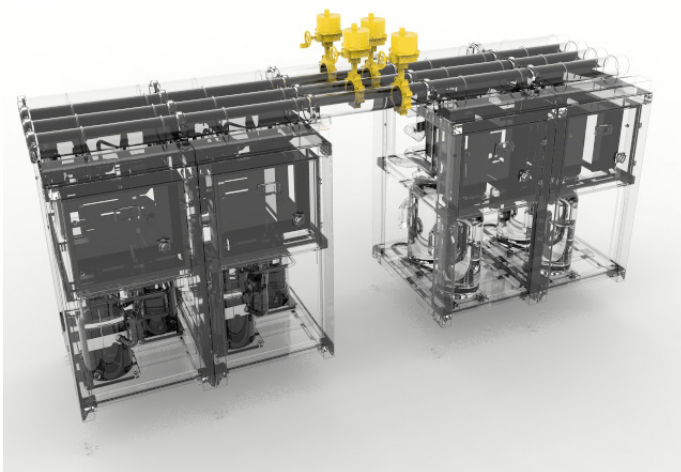


## // Optional integrated actuated valves for inverter pump operation



Each unit can be supplied with actuated shut off valves. They will be closed when the unit compressors are off. It allows to use inverter pumps with differential control pressure on evaporator and condenser. The pump will decrease the speed and energy consumption when system load is less than 30-50% of the maximal load.

## // Advanced heat recovery solutions by module arrangement



You can place actuated valves between modules. Valves can be controlled from the units plant controller. This allows to automatically split modular arrangement to two sides. Heat can be recovered with one temperature from one side and sent to drycooler with another temperature from the second side. For this and other application schemes please contact Felzer representatives.

# Features and options

// Features of the basic version



// Panels for installation set



// Electronic expansion valve & battery



// RS 485 modbus

## // Options

// Touchscreen monitor (TS) for more userfriendly operation.

// Soft starters for compressors (SS) will reduce starting current.

// High and low pressure gauges (GM) to see the pressure values on refrigerant manometers.

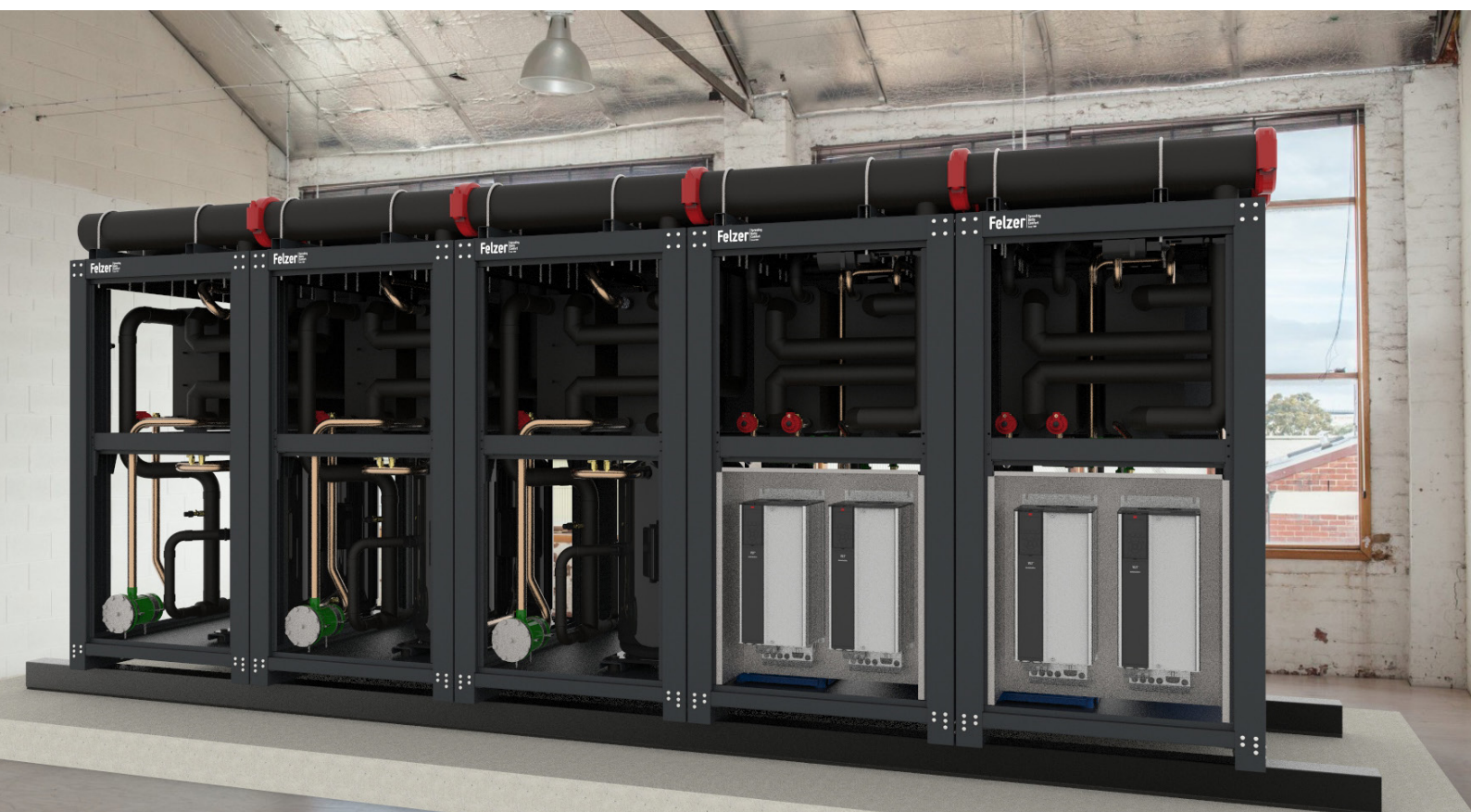
// Ball valves for compressors (BV) and solenoid valve on liquid line (SV) for easy service and more stable operation.

// Phase control relay (FR) // BACnet (BN) // LONworks (LW) // Remote display (RD).



	Inverter scroll compressors				Scroll compressors					
MULTIWAT	18iN.1	26iN.1	36iN.2	52iN.2	26.2	30.2	40.2	50.2	60.2	80.2
<b>Watercooled chillers capacities. User water 12/7°C, condenser water 30/35°C</b>										
Cooling capacity, kW *	67,4	100,2	134,8	200,4	78,4	92,0	119,8	150,0	194,8	248,0
Power input, kW	14,5	20,8	29,1	41,6	16,7	19,8	25,6	32,3	41,3	53,0
EER	4,63	4,81	4,63	4,81	4,69	4,66	4,68	4,64	4,72	4,68
<b>Water-to-water heatpump. User water 40/45°C, source brine 5/0°C</b>										
Heating capacity, kW *	64,6	94,4	129,2	188,7	74,0	87,1	111,4	141,0	182,0	232,6
Power input, kW	17,9	25,3	35,8	50,5	20,2	23,7	30,6	38,8	49,6	62,2
COP	3,61	3,74	3,61	3,74	3,66	3,67	3,64	3,63	3,67	3,74
<b>Product data</b>										
Number of compressors	1	1	2	2	2	2	2	2	2	2
Number of circuits	1	1	2	2	1	1	1	1	1	1
Sound power, dBA	80	80	82	82	80	80	81	81	83	85
Sound pressure, dBA	49	49	51	51	49	49	50	50	52	54
Length, m	1,25									
Width, m	0,88									
Hight, m	1,65 single installation // 1,85 with multipipes									

\* - Inverter compressor units capacities, EER, COP are given on 6000 rpm (maximum rounds).



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