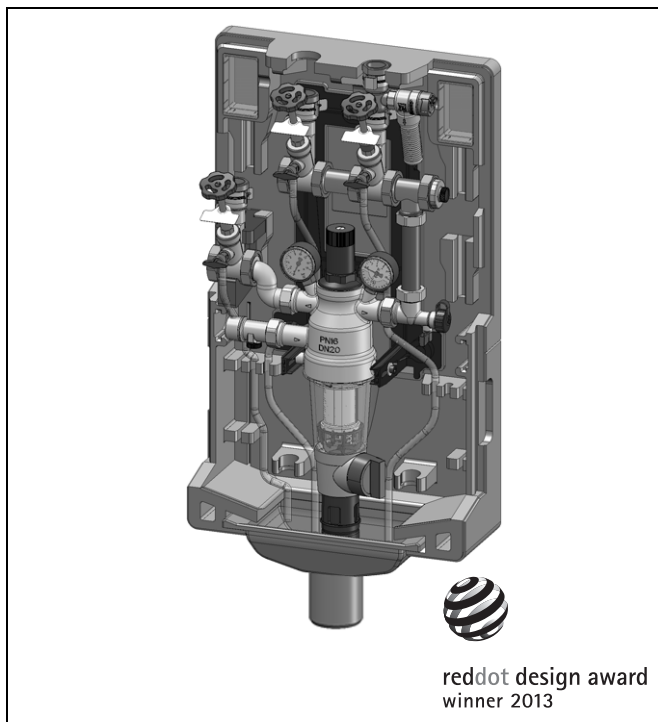


PrimusCenter DWC7000

Domestic Water Centre

Product specification sheet



reddot design award
winner 2013

Construction

The domestic water centre consists of:

- R1 filter connection fitting with backflow preventer
- FK7000 filter combination with pressure reducing valve and 2 pressure gauges on the input and output sides
- 3 supply discharge lines with emptying and drain out functions
 - o 1x filtered and not reduced with check valve
 - o 1x filtered and pressure reduced
 - o 1x filtered and pressure-reduced with check valve and 6 bar safety valve for the closed drinking water heater
- Insulation shell with integrated 3-point installation system, drain funnel, clear window and adapter in the shell
- Installation wrench for filter bowl
- Accessories for wall fastening
- Drilling template
- Installation instructions, operating manual
- G1 sealing cap incl. flat seal
- Inscription labels for segments
- Replacement seals including mounting grease

Application

PrimusCenter is a compact product solution that brings together the complete spectrum of domestic water installation technology: Backflow preventer, backwashable filter, pressure-reducing valve, drinking water distribution for storage tank and domestic water installation, and tank safety group.

Special Features

- All components are DVGW certified
- Modular construction
- Ready for connecting a water-softening unit
- Ready for connecting a heating fill or refill unit
- Expandable with additional cold water connections
- Two water pressure strengths: The filtered water is available unreduced for the garden and garage water connection, or reduced for comfortable water usage in the house.
- User-friendly - users only need to open the view window to carry out reverse rinsing
- Elegant - domestic water installation is brought together in one insulated housing
- Connection to the drinking water heater consists of a shut-off valve, a testable backflow preventer, and a safety valve
- Reverse rinsing actuator can be easily and quickly retrofit with bayonet connection
- Both pressure gauges of the filter combination and the dripping water of the safety valve are easy to inspect because of the transparent view window
- Red indicator on the view window for setting the next reverse rinsing
- 3-point installation system so that unevenness and sloping walls can be offset
- Supply line connection can be changed from left to right connection if required
- Connection option for sampling valve available
- Front and back pressure gauges are end point resilient

Range of Application

This product is solely suitable for distributing drinking water according to DIN EN806/DIN1988 in single and multi-family houses of up to 4 parties.

It must not be used to distribute process water or liquids other than drinking water.

Medium	Drinking water
Inlet pressure	max. 16 bar
Outlet filtered, not pressure reduced	max. 16 bar

Technical Data

Flow rate k_{vs} ($\Delta p = 1$ bar)	max. 4.2 m ³ /h
Operating temperature	5 °C to 30 °C
Operating pressure	min 1.5 bar max 16 bar

Check valve EA Type up to liquid category 2

Opening pressure	approx. 0.01 bar
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Filter

Filter mesh size	100 µm
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Pressure reducing valve

Required nominal load Q_n acc. to DIN EN 1567	2.3 m ³ /h with $\Delta p = 1.1$ bar
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k_{vs} -value outlet filtered, not pressure reduced 5.8 m³/h

Inlet pressure	1.5 bar – 16 bar
Outlet pressure	1.5 bar – 6 bar

Safety valve

Capacity of hot water tank	up to 200 l
Maximum heat input	75 kW
Connection size-inlet	Rp 1/2"
Connection size-outlet	Rp 3/4"

Materials

- Insulation shell made of expandable polypropylene

Check valve

- Dezincification resistant brass housing

Filter

- Stainless steel fine filter
- Shock-resistant, transparent synthetic material filter bowl

Pressure reducing valve

- Dezincification resistant brass housing
- Synthetic material spring bonnet, guide piece, valve insert, filter mesh carrier, adjustment knob and reverse rinsing handle
- Fibre-reinforced NBR diaphragm
- EPDM sealing washers

Safety valve

- Brass housing
- EPDM diaphragm
- PA6 cap

Piping

- T-piece, spacer, eccentric, segments with drain valves, threaded nipple, and angle with brass drain valve
- Dezincification resistant brass pipe

Shutoff valves

- Brass housing
- EPDM sealing washers

Method of Operation

The domestic water centre combines in one appliance, backflow preventer, backwashable filter, pressure-reducing valve, drinking water distribution for storage tank and domestic water installation, and tank safety group.

Check valve

The check valve is a mechanical securing system and only allows flow-through in one direction. It opens automatically if the pressure on the supply side is greater than the pressure on the filter combination. If there is greater pressure on the filter combination than on the supply line, then the check valve automatically closes because of the action force. In this way, no water can flow back out of the building if the public water supply lacks line pressure

Filter combination

The filter combination combines reverse rinsing filter and pressure reducing valve in one appliance.

The fine filter set consists of an upper part and a lower part. In the "Filtering" operating status, the small top filter is closed so that the water can only flush the main filter from outside to inside. When the ball valve is opened for "backwashing", the filter is pushed downwards until the water supply to the outside of the main filter is interrupted. The water flow through the top filter is simultaneously opened. During backwashing, the top screen is flushed from the outside to the inside; the rotating impeller and the main filter are flushed from the inside to the outside. This guarantees effective filter cleaning with full prepressure along the entire screen area. When the ball valve is closed, the filter switches automatically back to operating position.

The integrated pressure-reducing valve functions according to the force comparison principle. This means, in the pressure-free state, the spring pushes downwards and the valve opens. If pressure builds up in the pressure-reducing valve of the downstream line, this acts on the membrane in a way that closes against the spring force. Pressure fluctuations on the front side do not influence the back pressure.

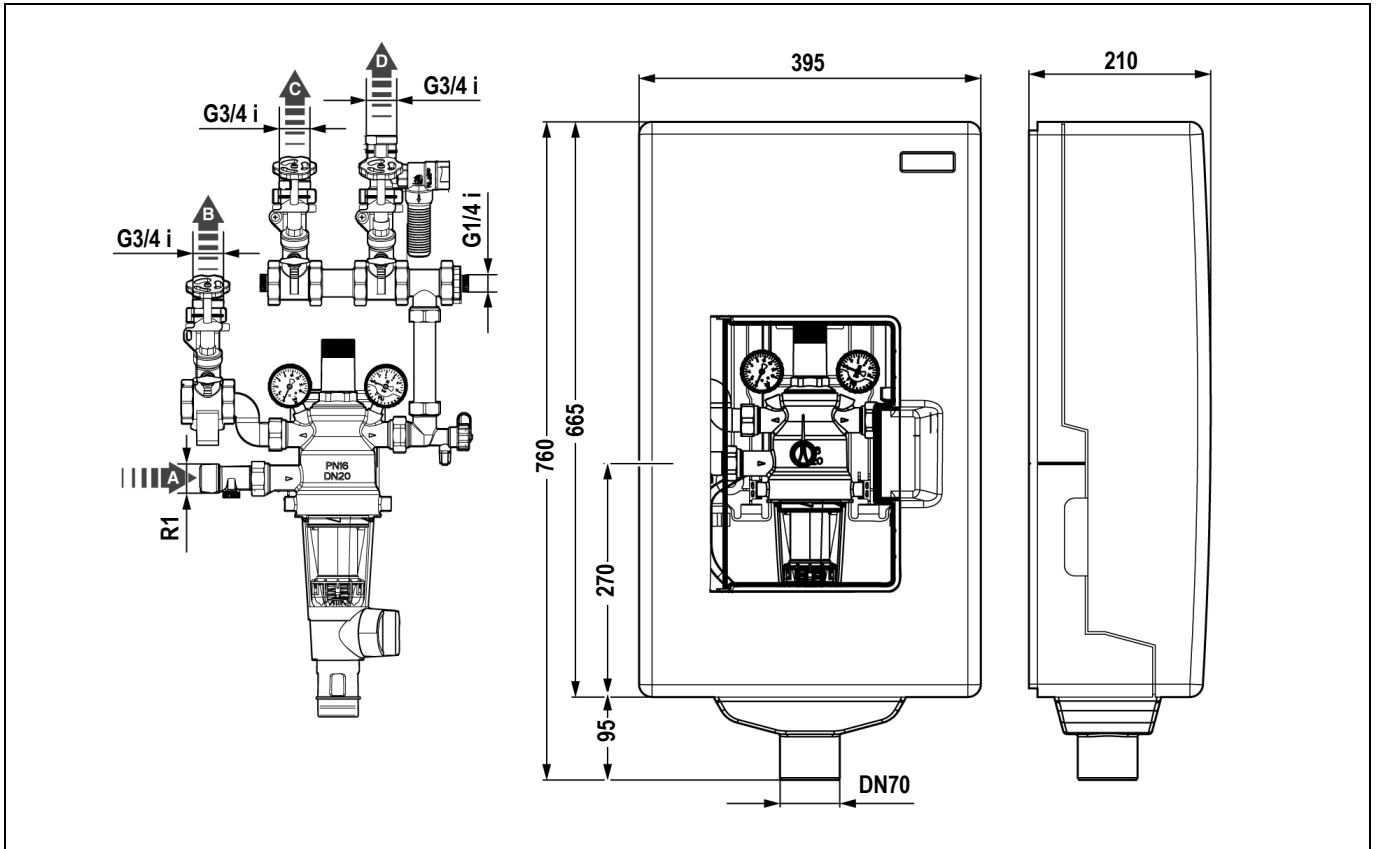
Safety valve

At heating water in the service water tank, the heated liquid expands and the pressure rises in the system. If the maximum permitted system pressure is exceeded, spring and membrane inside the integrated safety valve are pushed backwards. Liquid is drained until the pressure in the system has sunk back under the maximum permitted pressure.

Options

DWC7000-1AA = Domestic water centre for single or multi-family houses of up to 4 parties

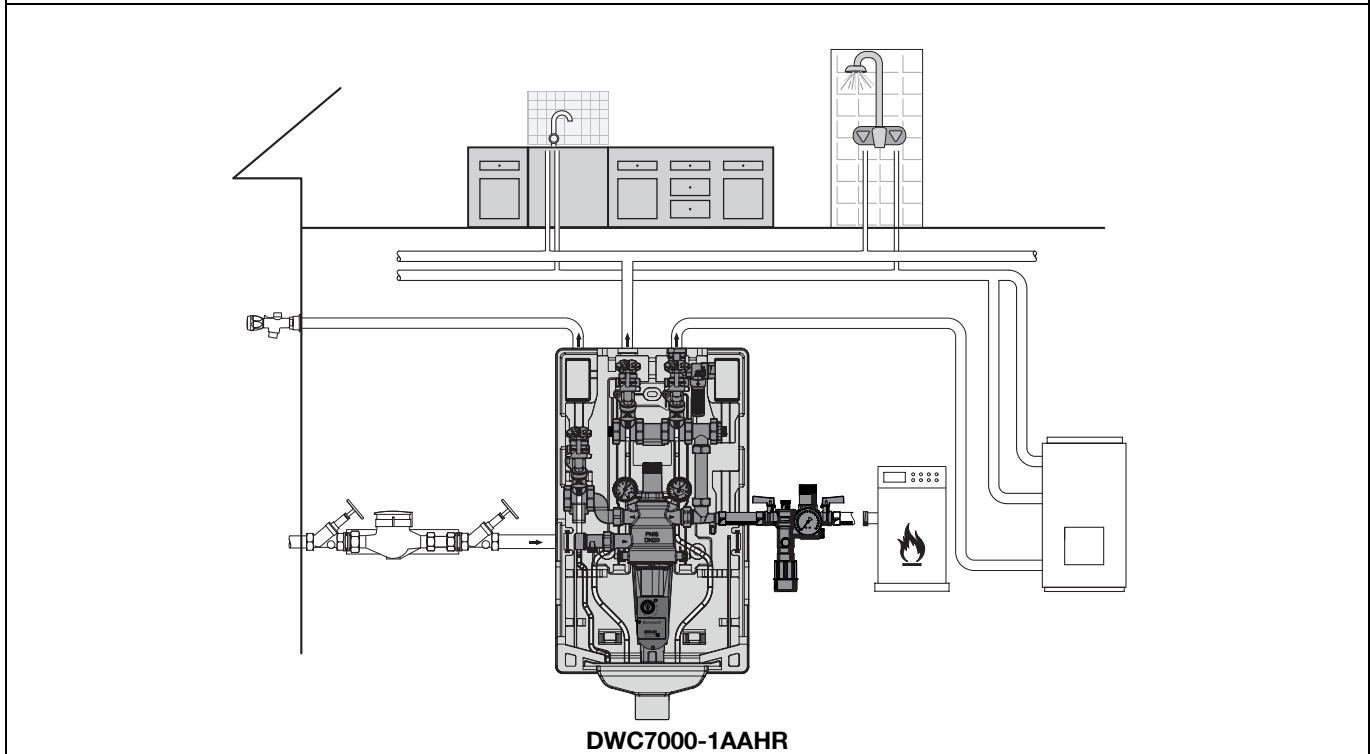
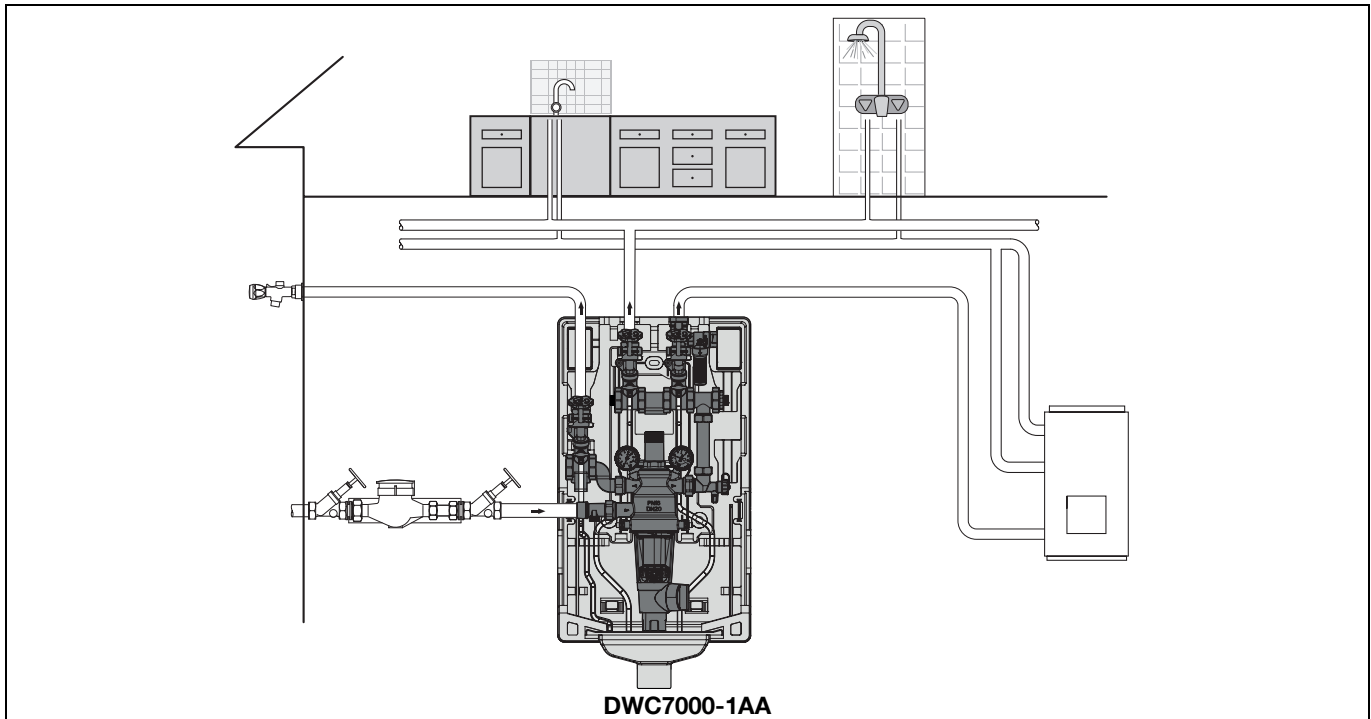
DWC7000-1AAHR = Domestic water centre for single or multi-family houses of up to 4 parties incl. NK300 refilling combination with matching connection set and Z74S-AN reverse rinsing actuator



Dimensions

Nominal size diameter	Inlet	DN25
Nominal size diameter	Outlet	DN20
Weight	approx. kg	11.0
Dimensions	mm	
	W	395
	H	760
	D	210
Adjustment range for wall distance of filter combination		65 – 115
k _{vs} -value		4.2

Installation Examples



Installation Guidelines

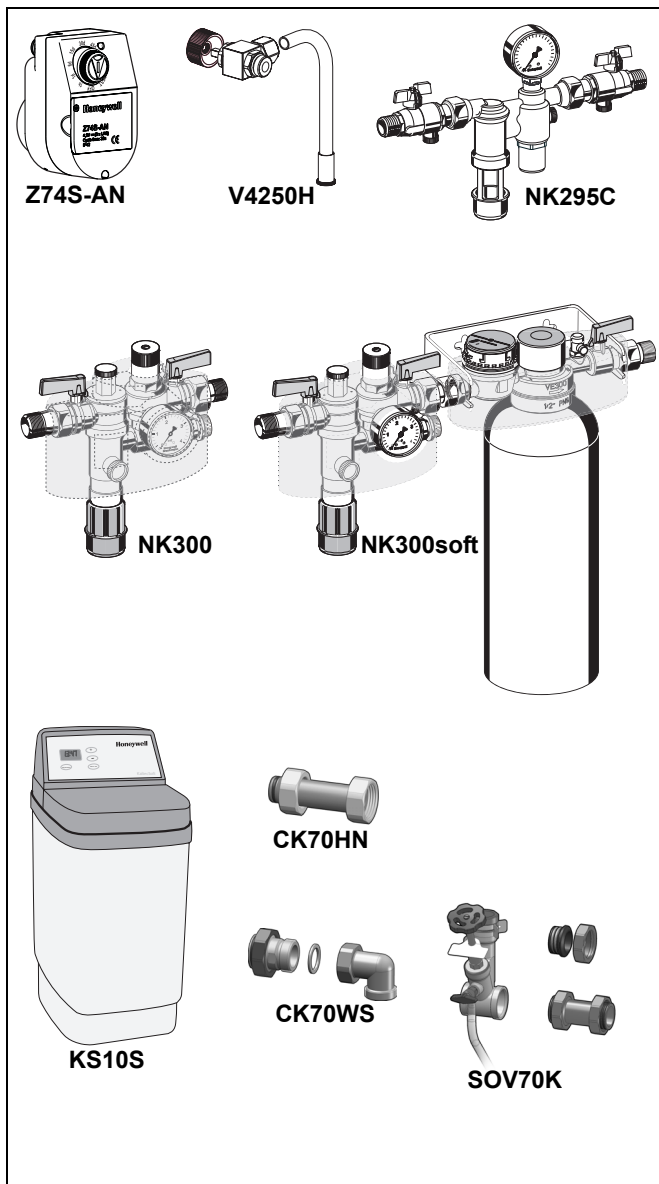
- Install in horizontal pipework with discharge directed downwards
 - o This position ensures optimum filter efficiency
- Ensure good access
- The installation location should be protected against frost
- Fit immediately after water meter

Typical Applications

The DWC7000 domestic water centre can be used anywhere a complete domestic water installation that complies with standards should be implemented for new installations or renovations.

Install domestic water centres of this type:

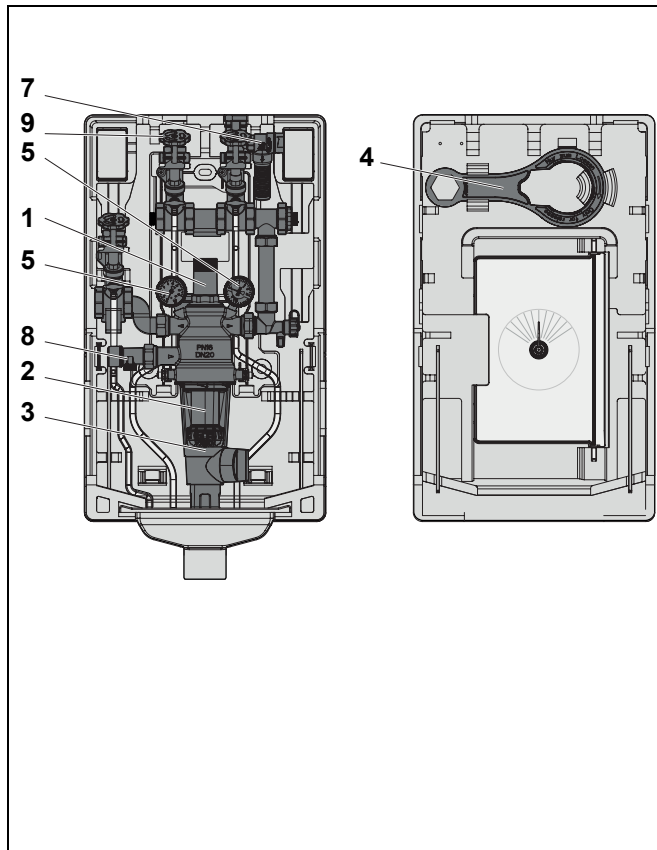
- To meet standards despite limited space
- To replace an existing domestic water installation composed of single components when renovating
- When an open installation composed of single components contradicts room usage and design, e.g., wash-room, hobby room, utility, etc.



Accessories

- Z74S-AN*** **Automatic reverse rinsing actuator**
For automatic filter cleaning at presettable intervals
- CK70HN-3/4A*** **Connection set for refilling combination**
For direct connection of refilling combinations
- NK300*** **Refilling combination**
Refilling combination for filling and refilling of closed heating systems according to DIN EN 12828:2003. For liquids up to liquid category 3
- NK300soft** **Refilling combination with softening unit**
Refilling combination for filling and refilling of closed heating systems according to DIN EN 12828:2003. For liquids up to liquid category 4
- NK295C** **Refilling combination compact construction**
Refilling combination for filling and refilling of closed heating systems according to DIN EN 12828:2003. For liquids up to liquid category 3
- CK70WS-3/4A** **Connection set for softening unit**
Installation components for additional connection of softening units
- KS10S** **Softening device KaltecSoft**
KS10S-30 for 1-3 family dwelling
KS10S-60 for 3-8 family dwelling
- SOV70-3/4K** **Extension set for additional potable water connection**
Retrofit closing valve set for cold water: valve and connection piece
- V4250H** **Sampling valve**
For correct collection of water samples from potable water installations

* Included in option DWC7000-1AAHR



Spare Parts

PrimusCenter DWC7000 from 2012 onwards

No.	Description	Part No.
1	Valve insert complete (without filter)	D06FA-1B
2	Filter insert complete	
	Filter mesh size 100 µm	AF74-1A
	Filter mesh size 50 µm	AF74-1C
	Filter mesh size 200 µm	AF74-1D
3	Clear filter bowl	KF74CS-1A
4	Double ring wrench for removing the filter bowl and spring bonnet	ZR70K-1
5	Pressure gauge (0-10 bar)	M70AF-A10MR
	Pressure gauge (0-16 bar)	M70AF-A16
6	Sealing set	DS70-3/4A
7	Safety valve	
	Opening pressure 6 bar	SM150-1/2A
	Opening pressure 8 bar	SM150-1/2B
	Opening pressure 10 bar	SM150-1/2C
8	Check valve R1xG1	RV7000-1A
9	Shutoff valve cold water	SOV70-3/4K

Automation and Control Solutions

Honeywell GmbH
 Hardhofweg
 74821 MOSBACH
 GERMANY
 Phone: (49) 6261 810
 Fax: (49) 6261 81309
<http://ecc.emea.honeywell.com>

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 Environmental and Combustion Controls Division
 of Honeywell Technologies Sàrl, Z.A. La Pièce 16,
 1180 Rolle, Switzerland by its Authorised Representative Honeywell GmbH

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