



## Braukmann HS10S

### Combination water supply unit

#### APPLICATION

HS10S combination water supply units integrate a check valve with test point, reverse rinsing fine filter, pressure reducing valve and shut-off valve in one appliance. They ensure a continuous supply of filtered water. The fine filter prevents the ingress of foreign bodies, for example rust particles, strands of hemp and grains of sand and thus reduces the probability of corrosion. The check valve protects the mains water system against back pressure, backflow and back syphonage of health threatening liquids. The pressure reducing valve prevents over-pressure damage and reduces water consumption.

All individual units correspond to the requirements of current DIN/DVGW specifications. Technical features of each unit also apply to the combination assembly.

#### APPROVALS

- DVGW
- SVGW

approval for all filters with 100 µm mesh sizes

#### SPECIAL FEATURES

- Double Spin Technology for connection sizes 1/2" to 1 1/4"
  - Cartridge with external rotor enabling simultaneous cleaning in lower and upper filter areas
  - Visual function check possible
- Especially compact because pressure reducing valve, fine filter, check valve and shut-off valve are combined in one unit
- Filtered water supplied even during reverse rinsing
- Patented reverse rinsing system - fast and thorough cleaning of the filter with small amount of water
- Automatic reverse rinsing actuator with bayonet connector can be retrofitted
- Shock resistant clear synthetic material filter bowl enables easy checking of filter contamination
- Inlet pressure balancing – no influence on outlet pressure by fluctuating inlet pressure
- Filter and complete filter bowl are replaceable
- The valve insert is of high-quality synthetic material and can be fully exchanged
- ACS certified
- All materials are KTW approved
- Approved by TÜV LGA for low noise, Group 1 without limitations

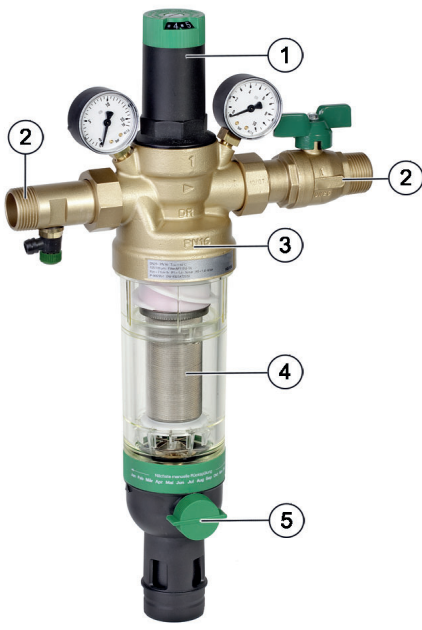


#### TECHNICAL DATA

<b>Media</b>	
Medium:	Drinking water
<b>Connections/Sizes</b>	
Connection sizes:	1/2" - 2"
<b>Pressure values</b>	
Operating (dynamic) pressure:	1.5 bar
Max. inlet pressure with clear filter bowl:	16 bar
Max. inlet pressure with red bronze filter bowl:	25 bar
Outlet pressure:	1.5 - 6 bar
<b>Operating temperatures</b>	
Max. operating temperature medium accord. to EN 1567:	30 °C
Max. operating temperature medium (10 bar/brass filter bowl):	70 °C
<b>Specifications</b>	
Installation position:	Horizontal with filter bowl downwards

Note: The filter is constructed for drinking water installations. In case of a process water application the filter has to be proven individually.

## CONSTRUCTION

Overview	Components	Materials
	<b>1</b> Spring bonnet with adjustment knob and setting scale	High-quality synthetic material
	<b>2</b> Threaded male connections (Options AA and AAM)	Brass
	<b>3</b> Housing with inlet and outlet pressure gauges	Dezincification-resistant brass
	<b>4</b> Fine filter in clear filter bowl	Stainless steel fine filter, red bronze or shock-resistant, clear transparent synthetic material filter bowl
	<b>5</b> Ball valve with drain connection	Brass (Ball Valve body), Stainless steel (ball), Plastic durethan (drain adapter)
<b>Not depicted components:</b>		
	Shut-off valve	Brass
	Check valve on inlet	High-grade synthetic material
	Test point for check valve	High-grade synthetic material
	Valve insert complete with diaphragm and valve seat	High-quality synthetic material, fibre-reinforced NBR diaphragm
	Seals	NBR
	Double wring wrench	Plastic

## METHOD OF OPERATION

The combination water supply unit combines check valve, reverse rinsing fine filter, pressure reducing valve and shut-off valve in one appliance.

Water flows first through the check valve. This causes the valve stem to push against the spring force and open the valve.

The downstream reverse rinsing fine filter holds back any dirt particles in the water. These particles are then completely flushed out by reverse rinsing.

Filters with Double Spin Technology have turbine blades which circulate the water and thereby set the rotor on the upper filter into a rotational motion. The internal impeller rinses off particles that have adhered to the upper filter at the intersecting points with the rotor.

The integral pressure reducing valve functions on a balanced force principle whereby the force exerted by a diaphragm is balanced against the force of an adjustment spring. The inlet pressure has no influence on opening or closing of the valve. Inlet pressure fluctuation does not therefore affect the outlet pressure.

## TRANSPORTATION AND STORAGE

Keep parts in their original packaging and unpack them shortly before use.

The following parameters apply during transportation and storage:

Parameter	Value
Environment:	clean, dry and dust free
Min. ambient temperature:	5 °C
Max. ambient temperature:	55 °C
Min. ambient relative humidity:	25 % *
Max. ambient relative humidity:	85 % *

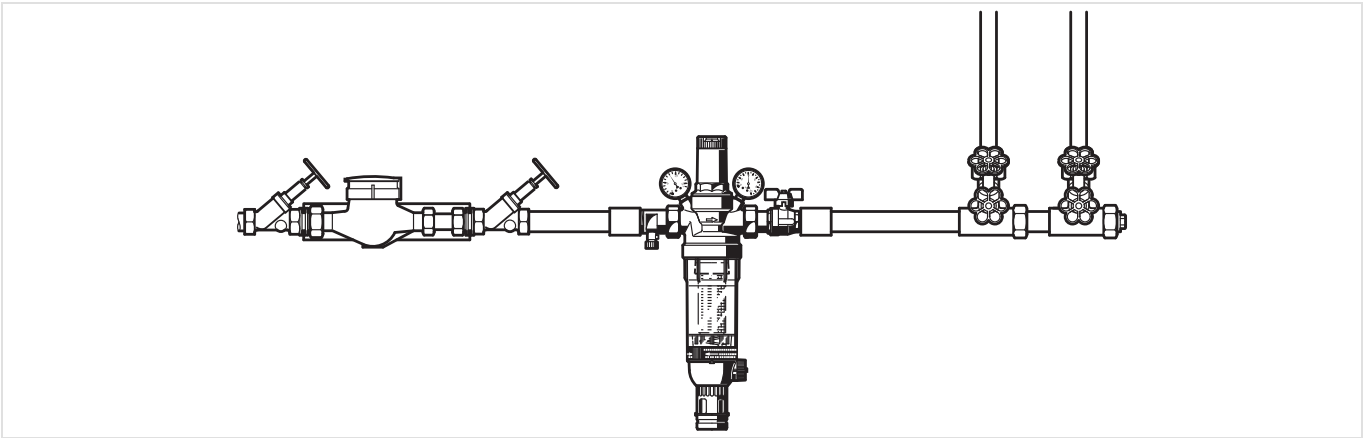
\*non condensing

## INSTALLATION GUIDELINES

### Setup requirements

- Install in horizontal pipework with filter bowl downwards
  - This position ensures optimum filter efficiency
- Install shut-off valve at the inlet
- These filters are armatures which need to be maintained regularly
- Ensure good access
  - Pressure gauge can be read off easily
  - Degree of contamination can be easily seen with clear filter bowl
  - Simplifies maintenance and inspection
- Related to the EN 806-2 it is recommended to install the filter immediately after the water meter
- In order to avoid flooding, it is recommended to arrange a permanent, professionally dimensioned wastewater connection

### Installation Example

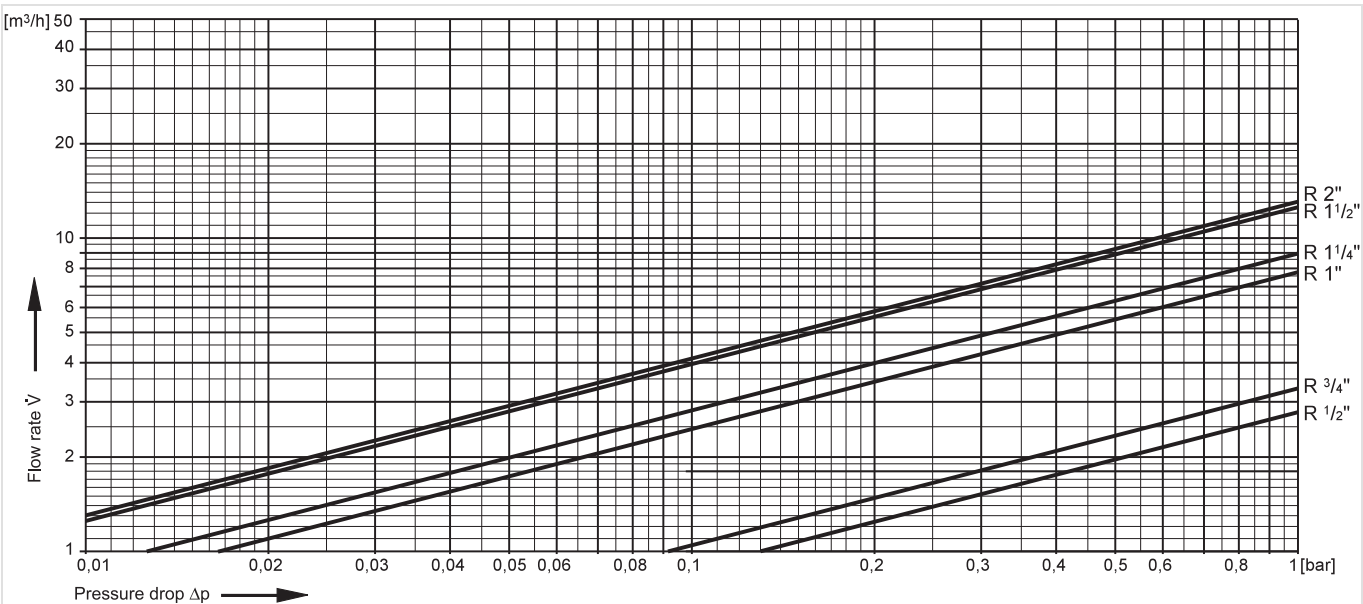


## TECHNICAL CHARACTERISTICS

### kvs-Values

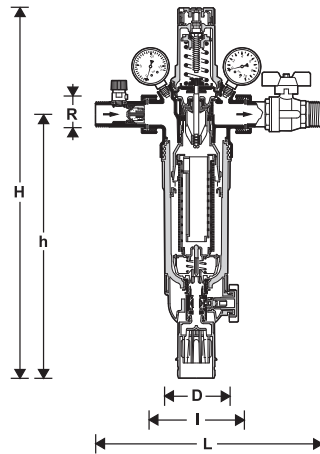
Connection sizes:	15	20	25	32	40	50
k <sub>VS</sub> -value (m <sup>3</sup> /h):	2.7	3.2	7.6	8.9	12.6	13.0

### Pressure drop characteristics



## DIMENSIONS

### Overview



Parameter		Values					
Connection sizes:	R	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Nominal size diameter:	DN	15	20	25	32	40	50
Dimensions:	L	255	268	305	327	370	408
	I	110	110	130	130	150	150
	H	439	439	493	493	590	590
	h	350	350	353	353	417	417
	D	97	97	97	97	120	120
Weight:	kg	4.0	4.1	5.7	6.3	8.1	10
DVGW registration number:	DW-9321 AT 2318						
Double Spin Technology:	Yes	Yes	Yes	Yes	No	No	

Note: All dimensions in mm unless stated otherwise.

## ORDERING INFORMATION




The following tables contain all the information you need to make an order of an item of your choice. When ordering, please always state the type, the ordering or the part number.

### Options

Connection size	Filter mesh size*)	Temperature	Filter bowl	OS.-No.
1/2"	100 µm	30 °C	Transparent	HS10S-1/2AA
1/2"	100 µm	70 °C	Red brass	HS10S-1/2AAM
1/2"	20 µm	30 °C	Transparent	HS10S-1/2AB
1/2"	50 µm	30 °C	Transparent	HS10S-1/2AC
1/2"	50 µm	70 °C	Red brass	HS10S-1/2ACM
1/2"	200 µm	30 °C	Transparent	HS10S-1/2AD
1/2" no ball valve	100 µm	30 °C	Transparent	HS10S-1/2ZS
3/4"	100 µm	30 °C	Transparent	HS10S-3/4AA
3/4"	100 µm	70 °C	Red brass	HS10S-3/4AAM
3/4"	20 µm	30 °C	Transparent	HS10S-3/4AB
3/4"	50 µm	30 °C	Transparent	HS10S-3/4AC
3/4"	50 µm	70 °C	Red brass	HS10S-3/4ACM
3/4"	200 µm	30 °C	Transparent	HS10S-3/4AD
3/4" no ball valve	100 µm	30 °C	Transparent	HS10S-3/4ZS
1"	100 µm	30 °C	Transparent	HS10S-1AA
1"	100 µm	70 °C	Red brass	HS10S-1AAM
1"	20 µm	30 °C	Transparent	HS10S-1AB
1"	50 µm	30 °C	Transparent	HS10S-1AC
1"	50 µm	70 °C	Red brass	HS10S-1ACM
1"	200 µm	30 °C	Transparent	HS10S-1AD
1" no ball valve	100 µm	30 °C	Transparent	HS10S-1ZS
1 1/4"	100 µm	30 °C	Transparent	HS10S-11/4AA
1 1/4"	100 µm	70 °C	Red brass	HS10S-11/4AAM
1 1/4"	20 µm	30 °C	Transparent	HS10S-11/4AB
1 1/4"	50 µm	30 °C	Transparent	HS10S-11/4AC
1 1/4"	50 µm	70 °C	Red brass	HS10S-11/4ACM
1 1/4"	200 µm	30 °C	Transparent	HS10S-11/4AD
1 1/4"	500 µm	30 °C	Transparent	HS10S-11/4AF
1 1/4" no ball valve	100 µm	30 °C	Transparent	HS10S-11/4ZS
1 1/2"	100 µm	30 °C	Transparent	HS10S-11/2AA
1 1/2"	100 µm	70 °C	Red brass	HS10S-11/2AAM
1 1/2"	20 µm	30 °C	Transparent	HS10S-11/2AB
1 1/2"	50 µm	30 °C	Transparent	HS10S-11/2AC
1 1/2"	50 µm	70 °C	Red brass	HS10S-11/2ACM
1 1/2"	200 µm	30 °C	Transparent	HS10S-11/2AD
1 1/2" no ball valve	100 µm	30 °C	Transparent	HS10S-11/2ZS
2"	100 µm	30 °C	Transparent	HS10S-2AA
2"	100 µm	70 °C	Red brass	HS10S-2AAM
2"	20 µm	30 °C	Transparent	HS10S-2AB
2"	50 µm	30 °C	Transparent	HS10S-2AC
2"	50 µm	70 °C	Red brass	HS10S-2ACM
2"	200 µm	30 °C	Transparent	HS10S-2AD
2"	500 µm	30 °C	Transparent	HS10S-2AF
2" no ball valve	100 µm	30 °C	Transparent	HS10S-2ZS

\*) approvals for all filters with 100 µm mesh sizes

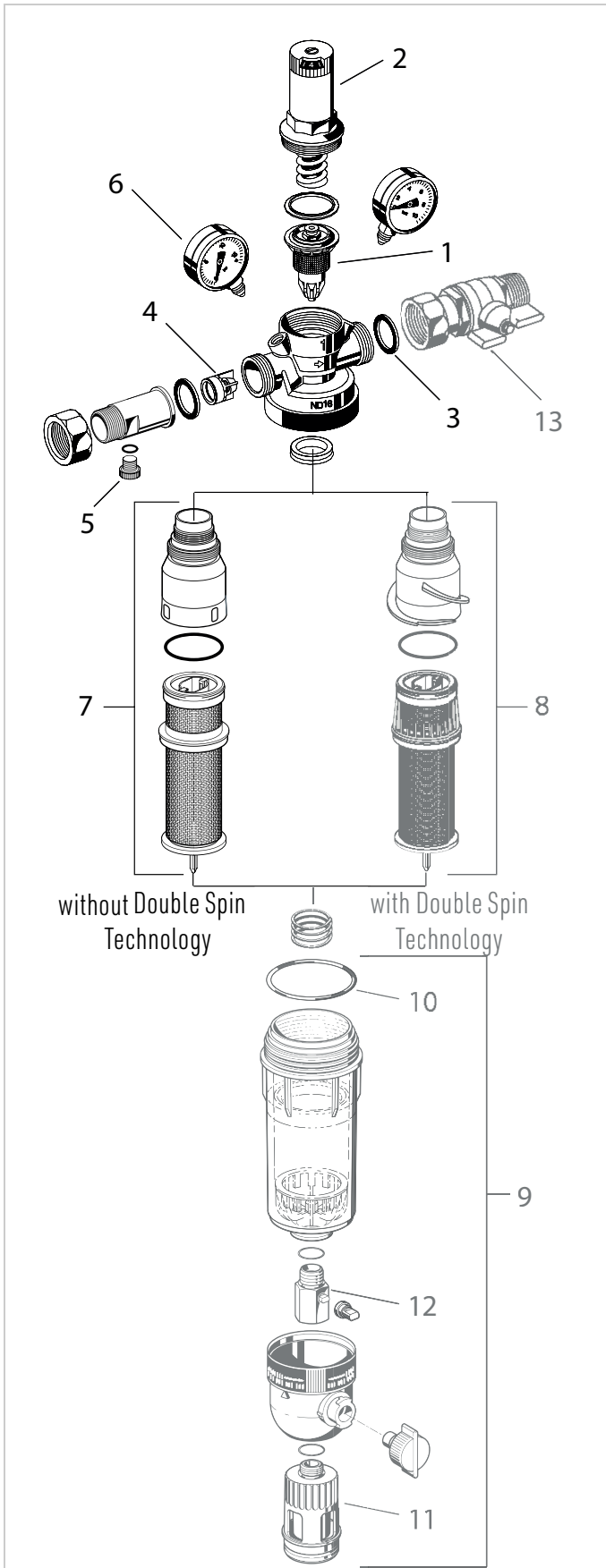
**Accessories**

	Description	Dimension	Part No.
	<b>Z11S Automatic reverse rinsing actuator</b> For automatic filter cleaning at presettable intervals		
	230 V, 50/60 Hz, 10 with moulded Schuko electrical plug		Z11S-A
	24 V, 50/60 Hz, 10 without electrical plug		Z11S-B
	230 V, 50/60 Hz, 10 with moulded Type 12 electrical plug for Switzerland		Z11S-Z
	<b>VST06B Connection set</b> Solder connections		
		1/2"	VST06-1/2B
		3/4"	VST06-3/4B
		1"	VST06-1B
		1 1/4"	VST06-11/4B
		1 1/2"	VST06-11/2B
		2"	VST06-2B
	<b>ZR10K Double ring wrench for removing the filter bowl</b>		
		1/2" + 3/4"	ZR10K-3/4
		1" + 1 1/4"	ZR10K-1
		1 1/2" + 2"	ZR10K-11/2

**Spare Parts**

HS10S Filter Combinations from 2007 onwards

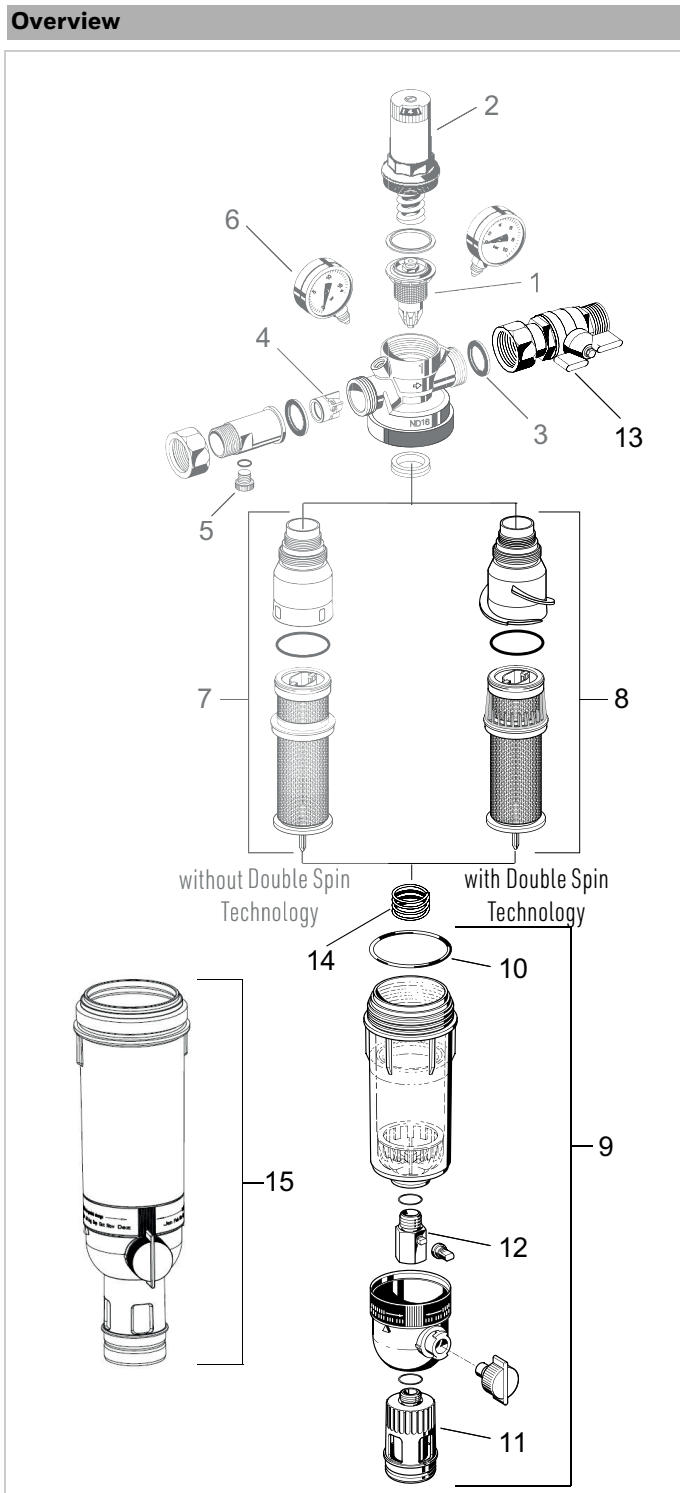
**Overview**



Description	Dimension	Part No.
<b>1 Valve insert complete (without filter)</b>		
	1/2" + 3/4"	DO6FA-1/2
	1" + 1/4"	DO6FA-1A
	1 1/2" + 2"	DO6FA-11/2
<b>2 Spring bonnet complete with setting scale</b>		
	1/2" + 3/4"	0901515
	1" + 1 1/4"	0901517
	1 1/2" + 2"	0901518
<b>3 Union seal washer (10 pcs.)</b>		
	1/2" + 3/4"	0901444
	1"	0901445
	1 1/4"	0901446
	1 1/2"	0901447
	2"	0901448
<b>4 Check valve cartridge</b>		
	1/2"	2166200
	3/4"	2110200
	1"	2164400
	1 1/4"	2164500
	1 1/2"	2164600
	2"	2164700
<b>5 Test valve</b>		
	1/2" - 2"	2421100
<b>6 Pressure gauge</b>		
	0 - 10 bar	M38K-A10
	0 - 16 bar	M38K-A16
	0 - 25 bar	M38K-A25
<b>7 Filter insert complete*</b>		
Filter mesh size: 100 µm	1/2" - 3/4"	AF11S-1/2A
Filter mesh size: 20 µm	1/2" - 3/4"	AF11S-1/2B
Filter mesh size: 50 µm	1/2" - 3/4"	AF11S-1/2C
Filter mesh size: 200 µm	1/2" - 3/4"	AF11S-1/2D
Filter mesh size: 300 µm	1/2" - 3/4"	AF11S-1/2E
Filter mesh size: 500 µm	1/2" - 3/4"	AF11S-1/2F
Filter mesh size: 100 µm	1" - 1 1/4"	AF11S-1A
Filter mesh size: 20 µm	1" - 1 1/4"	AF11S-1B
Filter mesh size: 50 µm	1" - 1 1/4"	AF11S-1C
Filter mesh size: 200 µm	1" - 1 1/4"	AF11S-1D
Filter mesh size: 300 µm	1" - 1 1/4"	AF11S-1E
Filter mesh size: 500 µm	1" - 1 1/4"	AF11S-1F
Filter mesh size: 100 µm	1 1/2" - 2"	AF11S-11/2A
Filter mesh size: 20 µm	1 1/2" - 2"	AF11S-11/2B
Filter mesh size: 50 µm	1 1/2" - 2"	AF11S-11/2C
Filter mesh size: 200 µm	1 1/2" - 2"	AF11S-11/2D
Filter mesh size: 300 µm	1 1/2" - 2"	AF11S-11/2E
Filter mesh size: 500 µm	1 1/2" - 2"	AF11S-11/2F

\*The filter guide (either with double spin or without double spin feature) is included in the packaging of the replacement filter inserts (AF11DS and AF11S) only for the sizes 1/2" up to 1 1/4"!

Note: 8 - 15 see on page 8



Description	Dimension	Part No.
<b>8 Filter insert complete*, for filters with Double Spin Technology</b>		
Filter mesh size: 100 µm	1/2" - 3/4"	AF11DS-1/2A
Filter mesh size: 20 µm	1/2" - 3/4"	AF11DS-1/2B
Filter mesh size: 50 µm	1/2" - 3/4"	AF11DS-1/2C
Filter mesh size: 200 µm	1/2" - 3/4"	AF11DS-1/2D
Filter mesh size: 300 µm	1/2" - 3/4"	AF11DS-1/2E
Filter mesh size: 500 µm	1/2" - 3/4"	AF11DS-1/2F
Filter mesh size: 100 µm	1" - 1 1/4"	AF11DS-1A
Filter mesh size: 20 µm	1" - 1 1/4"	AF11DS-1B
Filter mesh size: 50 µm	1" - 1 1/4"	AF11DS-1C
Filter mesh size: 200 µm	1" - 1 1/4"	AF11DS-1D
Filter mesh size: 300 µm	1" - 1 1/4"	AF11DS-1E
Filter mesh size: 500 µm	1" - 1 1/4"	AF11DS-1F
<b>9 Clear filter bowl</b>		
	1/2" - 1 1/4"	KF11S-1A
	1 1/2" - 2"	KF11S-11/2A
<b>10 O-ring set (10 pcs.)</b>		
	1/2" + 1 1/4"	0900747
	1 1/2" + 2"	0900748
<b>11 Drain connector</b>		
	1/2" - 2"	AA76-1/2A
<b>12 Ball valve complete</b>		
lead-free	1/2" - 2"	KH11S-1LFA
<b>13 Shut-off valve (not included in HS10S-ZS)</b>		
	1/2"	2192900
	3/4"	2193100
	1"	2193200
	1 1/4"	2193300
	1 1/2"	2193400
	2"	2193500
<b>14 Spring</b>		
	1/2" - 1 1/4"	2074900
	1 1/2" - 2"	2159400
<b>15 Red bronze filter bowl</b>		
	1/2" - 1 1/4"	FT09RS-1A
	1 1/2" - 2"	FT09RS-11/2A

\*The filter guide (either with double spin or without double spin feature) is included in the packaging of the replacement filter inserts (AF11DS and AF11S) only for the sizes 1/2" up to 1 1/4"!

Note: 1 - 7 see on page 7



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