



# Price List





## 04/2023

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This price list replaces all other previous versions. Technical alterations are subject to change without notice.

General Terms of Sale and Delivery of FST GmbH apply, which are available in printed form at the end of this price list. Alternatively, they can be downloaded in electronic format from our web site : → [www.fstweb.de](http://www.fstweb.de) → „General Terms of Sale and Delivery“

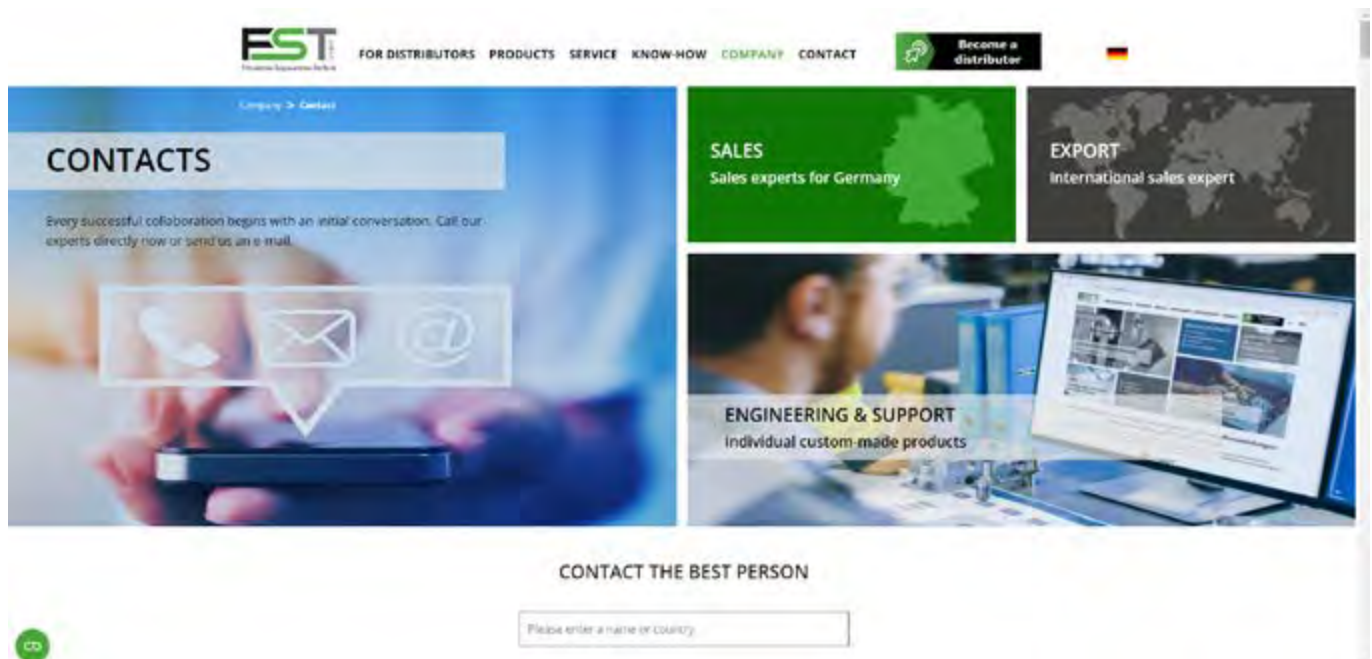


Information about FST GmbH as well as brochures, product data sheets, manuals and lots of other useful information about the products shown in this price list, are available on our web site: → [www.fstweb.de](http://www.fstweb.de)












We distribute high-quality components for compressed air applications and the treatment of technical gases.

Contact information for your specific request can be found on our website: → [www.fstweb.de](http://www.fstweb.de) → „Contact“



## Quick-Finder







### Filtration

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### Breathing air systems



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## Filtration

### Water separator up to 16 bar – FCA..WS.., FWS..W.. series



#### Scope of supply

Ready-to-use water separator including selected options (already installed or, in order to avoid transport damages, pre-installed / separately enclosed); single cardboard packing (FCA) or protection foil (FWS); transport packing is not included in the scope of supply and is charged separately.

Operating manuals including the manufacturer's declaration and/or declaration of conformity are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

Operating manuals are available in English and German language. Additional pressure vessel documents are provided for welded pressure vessels (FWS). These vessel documents are created individually for each of these products and will be sent separately.

#### Standard version

Filter housing including water separator insert; plug screws; automatic condensate drain; flow direction from outside to inside (FCA) or inside to outside (FWS)

				Nominal volume flow <sup>1</sup>	Maximum operating pressure	Connection	Element(s)	Quantity	Price	Prod.-grp.
FCA	30	W S F		50 m <sup>3</sup> /h	16 bar	G 3/8	EFST 30 W	1	266 €	01
FCA	50	W S F		70 m <sup>3</sup> /h	16 bar	G 1/2	EFST 30 W	1	286 €	01
FCA	70	W S F		100 m <sup>3</sup> /h	16 bar	G 1/2	EFST 30 W	1	286 €	01
FCA	90	W S F		160 m <sup>3</sup> /h	16 bar	G 3/4	EFST 90 W	1	432 €	01
FCA	95	W S F		160 m <sup>3</sup> /h	16 bar	G 1	EFST 90 W	1	440 €	01
FCA	110	W S F		330 m <sup>3</sup> /h	16 bar	G 1	EFST 90 W	1	440 €	01
FCA	115	W S F		330 m <sup>3</sup> /h	16 bar	G 1 ½	EFST 90 W	1	519 €	01
FCA	120	W S F		500 m <sup>3</sup> /h	16 bar	G 1 ½	EFST 120 W	1	655 €	01
FCA	130	W S F		800 m <sup>3</sup> /h	16 bar	G 1 ½	EFST 120 W	1	655 €	01
FCA	140	W S F		1.000 m <sup>3</sup> /h	16 bar	G 2	EFST 140 W	1	1.221 €	01
FCA	170	W S F		1.500 m <sup>3</sup> /h	16 bar	G 2	EFST 140 W	1	1.221 €	01
FCA	180	W S F		2.000 m <sup>3</sup> /h	16 bar	G 2 ½	EFST 180 W	1	2.157 €	01
FCA	185	W S F		2.000 m <sup>3</sup> /h	16 bar	G 3	EFST 180 W	1	2.207 €	01
FCA	190	W S F		2.500 m <sup>3</sup> /h	16 bar	G 3	EFST 180 W	1	2.207 €	01
FWS	170	W F		1.500 m <sup>3</sup> /h	16 bar	DN 80	---	---	2.672 €	02
FWS	190	W F		2.500 m <sup>3</sup> /h	16 bar	DN 80	---	---	2.672 €	02
FWS	200	W F		3.000 m <sup>3</sup> /h	16 bar	DN 100	---	---	4.928 €	02
FWS	300	W F		4.500 m <sup>3</sup> /h	16 bar	DN 100	---	---	4.928 €	02
FWS	400	W F		6.000 m <sup>3</sup> /h	16 bar	DN 150	---	---	7.016 €	02
FWS	600	W F		9.000 m <sup>3</sup> /h	16 bar	DN 150	---	---	9.633 €	02
FWS	800	W F		12.000 m <sup>3</sup> /h	16 bar	DN 200	---	---	11.061 €	02
FWS	1000	W F		15.000 m <sup>3</sup> /h	16 bar	DN 200	---	---	13.682 €	02
FWS	1200	W F		18.000 m <sup>3</sup> /h	16 bar	DN 250	---	---	15.123 €	02
FWS	1600	W F		24.000 m <sup>3</sup> /h	16 bar	DN 250	---	---	19.567 €	02
FWS	2000	W F		30.000 m <sup>3</sup> /h	16 bar	DN 300	---	---	22.411 €	02

\*1 – refers to 1 bar(a) and 20°C at 7 bar operating pressure



Water separators for higher volume flows or bigger connection sizes are available on request.

#### Volume flow correction factors for operating conditions deviating from reference conditions

2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	9 bar	10 bar	11 bar	12 bar	13 bar	14 bar	15 bar	16 bar
0,38	0,50	0,63	0,75	0,88	1,00	1,13	1,25	1,38	1,50	1,63	1,75	1,88	2,00	2,13

For conversion the lowest appearing operating pressure must be considered.

For a comprehensive description of how to use the correction factor, additional correction factors and latest technical figures and information please refer to the relevant product data sheets, which are available in electronic format on our web site:

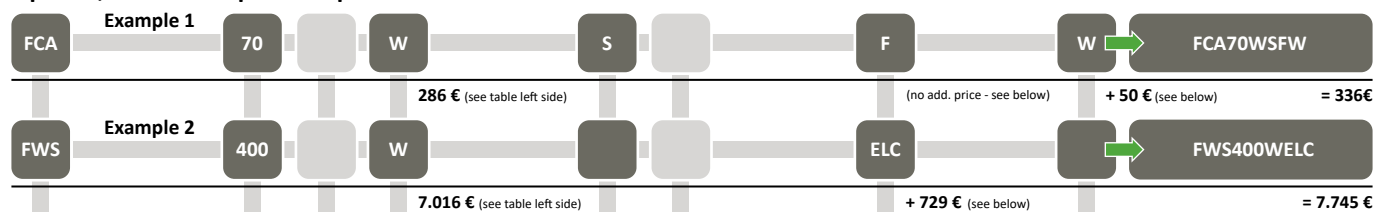
→ [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“












## Filtration

Water separator up to 16 bar – FCA..W., FWS.. series

### Options, order examples and price calculations



Housing type	Size	Pressure	Filtration grade	Flow	Differential pressure indication	Condensate discharge	Mounting
<b>FCA</b> Threaded filter (aluminium)  <b>FWS</b> Flanged filter (steel) 	Size (see table left side)		<b>W</b> Water separator insert  FCA series  FWS series	<b>S</b> FCA series Outside → Inside <b>W</b> FWS Series Inside → Outside	Plug screws (no indication) 	<b>F</b> Automatic condensate drain  <b>ELC</b> Elec. drain sized for aftercooler  FCA30-95 174 € FCA110-115 241 € FCA120 322 € FCA130-140 370 € FCA170-190 482 € FWS170-190 FWS200-600 729 € FWS800-2000 2.199 € Prod.-grp. 53	<b>Pipe mounting</b>  <b>W</b> Wall mounting  FCA30-70 50 € FCA90-130 69 € Prod.-grp. 08

### Sizes and weights ( housings only)

	Height [A]	Width [B]	Depth [C]	Weight		Height [A]	Width [B]	Depth [C]	Weight
FCA 30	183 mm	87 mm	80 mm	1,0 kg	FWS 170	1115 mm	440 mm	285 mm	46 kg
FCA 50	183 mm	87 mm	80 mm	1,0 kg	FWS 190	1115 mm	440 mm	285 mm	46 kg
FCA 70	253 mm	87 mm	80 mm	1,1 kg	FWS 200	1298 mm	550 mm	405 mm	105 kg
FCA 90	289 mm	130 mm	122 mm	3,9 kg	FWS 300	1298 mm	550 mm	405 mm	105 kg
FCA 95	289 mm	130 mm	122 mm	3,8 kg	FWS 400	1503 mm	640 mm	460 mm	136 kg
FCA 110	387 mm	130 mm	122 mm	4,3 kg	FWS 600	1531 mm	800 mm	580 mm	205 kg
FCA 115	387 mm	130 mm	122 mm	4,1 kg	FWS 800	1531 mm	800 mm	580 mm	208 kg
FCA 120	487 mm	130 mm	122 mm	4,7 kg	FWS 1000	1590 mm	840 mm	715 mm	342 kg
FCA 130	689 mm	130 mm	122 mm	5,7 kg	FWS 1200	1695 mm	940 mm	715 mm	450 kg
FCA 140	670 mm	164 mm	146 mm	7,8 kg	FWS 1600	1740 mm	940 mm	840 mm	537 kg
FCA 170	923 mm	164 mm	146 mm	9,5 kg	FWS 2000	1790 mm	940 mm	840 mm	558 kg
FCA 180	897 mm	250 mm	225 mm	22,9 kg					
FCA 185	897 mm	250 mm	225 mm	22,4 kg					
FCA 190	1049 mm	250 mm	225 mm	24,5 kg					

## Filtration

### Compressed air filter up to 16 bar – Coalescing filter FCA..., FWS... series



#### Scope of supply

Ready-to-use filter including selected options (already installed or, in order to avoid transport damages, pre-installed / separately enclosed); single cardboard packing (FCA) or protection foil (FWS); transport packing is not included in the scope of supply and is charged separately.

Operating manuals including the manufacturer's declaration and/or declaration of conformity are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

Operating manuals are available in English and German language. Additional pressure vessel documents are provided for welded pressure vessels (FWS). These vessel documents are created individually for each of these products and will be sent separately.

#### Standard version

Filter housing including filter element(s); plug screws; automatic condensate drain; flow direction from inside to outside

				Nominal volume flow <sup>*1</sup>	Maximum operating pressure	Connection	Element(s)	Quantity	Price	Prod.-grp.
FCA 20	■	F		30 m³/h	16 bar	G 1/4	EFST 25	1	210 €	01
FCA 25	■	F		35 m³/h	16 bar	G 3/8	EFST 25	1	215 €	01
FCA 30	■	F		50 m³/h	16 bar	G 3/8	EFST 30	1	258 €	01
FCA 50	■	F		70 m³/h	16 bar	G 1/2	EFST 50	1	289 €	01
FCA 70	■	F		100 m³/h	16 bar	G 1/2	EFST 70	1	350 €	01
FCA 90	■	F		160 m³/h	16 bar	G 3/4	EFST 90	1	535 €	01
FCA 95	■	F		160 m³/h	16 bar	G 1	EFST 90	1	542 €	01
FCA 110	■	F		330 m³/h	16 bar	G 1	EFST 110	1	665 €	01
FCA 115	■	F		330 m³/h	16 bar	G 1 ½	EFST 110	1	671 €	01
FCA 120	■	F		500 m³/h	16 bar	G 1 ½	EFST 120	1	789 €	01
FCA 130	■	F		800 m³/h	16 bar	G 1 ½	EFST 130	1	1.009 €	01
FCA 140	■	F		1.000 m³/h	16 bar	G 2	EFST 140	1	1.414 €	01
FCA 170	■	F		1.500 m³/h	16 bar	G 2	EFST 170	1	1.782 €	01
FCA 180	■	F		2.000 m³/h	16 bar	G 2 ½	EFST 180	1	2.461 €	01
FCA 185	■	F		2.000 m³/h	16 bar	G 3	EFST 180	1	2.522 €	01
FCA 190	■	F		2.500 m³/h	16 bar	G 3	EFST 190	1	2.831 €	01
FWS 170	■	F		1.500 m³/h	16 bar	DN 80	EFST 170	1	3.131 €	02
FWS 190	■	F		2.500 m³/h	16 bar	DN 80	EFST 190	1	3.934 €	02
FWS 200	■	F		3.000 m³/h	16 bar	DN 100	EFST 170	2	5.880 €	02
FWS 300	■	F		4.500 m³/h	16 bar	DN 100	EFST 170	3	7.085 €	02
FWS 400	■	F		6.000 m³/h	16 bar	DN 150	EFST 170	4	8.959 €	02
FWS 600	■	F		9.000 m³/h	16 bar	DN 150	EFST 170	6	12.575 €	02
FWS 800	■	F		12.000 m³/h	16 bar	DN 200	EFST 170	8	14.984 €	02
FWS 1000	■	F		15.000 m³/h	16 bar	DN 200	EFST 170	10	18.599 €	02
FWS 1200	■	F		18.000 m³/h	16 bar	DN 250	EFST 170	12	21.008 €	02
FWS 1600	■	F		24.000 m³/h	16 bar	DN 250	EFST 170	16	27.434 €	02
FWS 2000	■	F		30.000 m³/h	16 bar	DN 300	EFST 170	20	32.254 €	02



\*1 – refers to 1 bar(a) and 20°C at 7 bar operating pressure



Coalescing filters for higher volume flows or bigger connection sizes are available on request.

#### Volume flow correction factors for operating conditions deviating from reference conditions

2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	9 bar	10 bar	11 bar	12 bar	13 bar	14 bar	15 bar	16 bar
0,38	0,50	0,63	0,75	0,88	1,00	1,13	1,25	1,38	1,50	1,63	1,75	1,88	2,00	2,13

For conversion the lowest appearing operating pressure must be considered.

For a comprehensive description of how to use the correction factor, additional correction factors and latest technical figures and information please refer to the relevant product data sheets, which are available in electronic format on our web site:

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## Filtration

Compressed air filter up to 16 bar – Coalescing filter FCA..., FWS... series

### Options, order examples and price calculations

**Example 1**  
 FCA 70 ZN F W → **FCA70ZNFW**  
 350 € (see table left side) (no add. price - see below) + 50 € (see below) = **400 €**

**Example 2**  
 FWS 400 XN D ELC W → **FWS400XNDELWC**  
 8.959€ (see table left side) + 216 € (see below) + 729 € (see below) = **9.904 €**

Housing type	Size	Pressure	Filtration grade	Flow	Differential pressure indication	Condensate discharge	Mounting
<b>FCA</b> Threaded filter (aluminium) 	Size (see table left side)		<b>V</b> Coarse filter 99,99% (3µ) 	Inside → Outside	<b>F</b> Plug screws (no indication) 	<b>F</b> Automatic condensate drain 	<b>Pipe mounting</b> 
<b>FWS</b> Flanged filter (steel) 			<b>ZN</b> General purpose 99,9999% (1µ) 0,5 mg/m³ 		<b>D</b> Differential pressure gauge  FCA30-190 118 € FWS170-2000 216 € Prod.-grp. 08	<b>ELC</b> Elec. drain sized for aftercooler  FCA30-95 174 € FCA110-115 241 € FCA120 322 € FCA130-140 370 € FCA170-190 482 € FWS170-190 729 € FWS200-600 2.199 € Prod.-grp. 53	
			<b>XN</b> Fine filter 99,9999% (0,01µ) 0,01mg/m³ 		<b>DC</b> Differential pressure gauge with alarm contact  FCA30-190 193 € FWS170-2000 291 € Prod.-grp. 08	<b>ELF</b> Elec. drain sized for filter  FCA20-190 174 € FWS170-190 241 € FWS200 322 € FWS300 370 € FWS400-600 482 € FWS800-2000 53	
			<b>XXN</b> Super fine filter 99,99999% (0,01µ) 0,001mg/m³ 				

### Sizes and weights ( housings only)

	Height [A]	Width [B]	Depth [C]	Weight		Height [A]	Width [B]	Depth [C]	Weight
FCA 20	136 mm	61 mm	60 mm	0,5 kg	FWS 170	1115 mm	440 mm	285 mm	46 kg
FCA 25	136 mm	61 mm	60 mm	0,5 kg	FWS 190	1115 mm	440 mm	285 mm	46 kg
FCA 30	183 mm	87 mm	80 mm	1,0 kg	FWS 200	1298 mm	550 mm	405 mm	105 kg
FCA 50	183 mm	87 mm	80 mm	1,0 kg	FWS 300	1298 mm	550 mm	405 mm	105 kg
FCA 70	253 mm	87 mm	80 mm	1,1 kg	FWS 400	1503 mm	640 mm	460 mm	136 kg
FCA 90	289 mm	130 mm	122 mm	3,9 kg	FWS 600	1531 mm	800 mm	580 mm	205 kg
FCA 95	289 mm	130 mm	122 mm	3,8 kg	FWS 800	1531 mm	800 mm	580 mm	208 kg
FCA 110	387 mm	130 mm	122 mm	4,3 kg	FWS 1000	1590 mm	840 mm	715 mm	342 kg
FCA 115	387 mm	130 mm	122 mm	4,1 kg	FWS 1200	1779 mm	760 mm	715 mm	398 kg
FCA 120	487 mm	130 mm	122 mm	4,7 kg	FWS 1600	1740 mm	940 mm	840 mm	537 kg
FCA 130	689 mm	130 mm	122 mm	5,7 kg	FWS 2000	1790 mm	940 mm	840 mm	558 kg
FCA 140	670 mm	164 mm	146 mm	7,8 kg					
FCA 170	923 mm	164 mm	146 mm	9,5 kg					
FCA 180	897 mm	250 mm	225 mm	22,9 kg					
FCA 185	897 mm	250 mm	225 mm	22,4 kg					
FCA 190	1049 mm	250 mm	225 mm	24,5 kg					

## Filtration

Compressed air filter up to 16 bar – Activated carbon filter – FCA..A., FWS..A.. series



### Scope of supply

Ready-to-use filter including selected options (already installed or, in order to avoid transport damages, pre-installed / separately enclosed); single cardboard packing (FCA) or protection foil (FWS); transport packing is not included in the scope of supply and is charged separately.

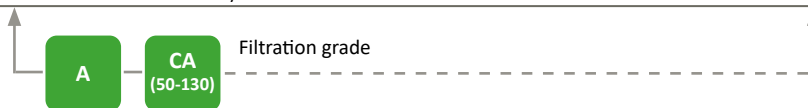
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Operating manuals are available in English and German language. Additional pressure vessel documents are provided for welded pressure vessels (FWS). These vessel documents are created individually for each of these products and will be sent separately.

### Standard version

Filter housing including filter element(s) or cartridge; plug screws; manual drain; flow direction for elements from inside to outside or cartridges from top to bottom

				Nominal volume flow <sup>*1</sup>	Maximum operating pressure	Connection	Element(s)	Quantity	Price A	Price CA	Prod.-grp.
FCA 20	■	M		30 m <sup>3</sup> /h	16 bar	G 1/4	EFST 25	1	156 €		01
FCA 25	■	M		35 m <sup>3</sup> /h	16 bar	G 3/8	EFST 25	1	161 €		01
FCA 30	■	M		50 m <sup>3</sup> /h	16 bar	G 3/8	EFST 30	1	204 €		01
FCA 50	■	M		70 m <sup>3</sup> /h	16 bar	G 1/2	EFST 50	1	235 €	289 €	01
FCA 70	■	M		100 m <sup>3</sup> /h	16 bar	G 1/2	EFST 70	1	296 €	369 €	01
FCA 90	■	M		160 m <sup>3</sup> /h	16 bar	G 3/4	EFST 90	1	481 €	574 €	01
FCA 95	■	M		160 m <sup>3</sup> /h	16 bar	G 1	EFST 90	1	488 €	581 €	01
FCA 110	■	M		330 m <sup>3</sup> /h	16 bar	G 1	EFST 110	1	611 €	726 €	01
FCA 115	■	M		330 m <sup>3</sup> /h	16 bar	G 1 ½	EFST 110	1	617 €	732 €	01
FCA 120	■	M		500 m <sup>3</sup> /h	16 bar	G 1 ½	EFST 120	1	735 €	869 €	01
FCA 130	■	M		800 m <sup>3</sup> /h	16 bar	G 1 ½	EFST 130	1	955 €	1.122 €	01
FCA 140	■	M		1.000 m <sup>3</sup> /h	16 bar	G 2	EFST 140	1	1.291 €		01
FCA 170	■	M		1.500 m <sup>3</sup> /h	16 bar	G 2	EFST 170	1	1.659 €		01
FCA 180	■	M		2.000 m <sup>3</sup> /h	16 bar	G 2 ½	EFST 180	1	2.338 €		01
FCA 185	■	M		2.000 m <sup>3</sup> /h	16 bar	G 3	EFST 180	1	2.399 €		01
FCA 190	■	M		2.500 m <sup>3</sup> /h	16 bar	G 3	EFST 190	1	2.708 €		01
<hr/>											
FWS 170	■	M		1.500 m <sup>3</sup> /h	16 bar	DN 80	EFST 170	1	3.008 €		02
FWS 190	■	M		2.500 m <sup>3</sup> /h	16 bar	DN 80	EFST 190	1	3.811 €		02
FWS 200	■	M		3.000 m <sup>3</sup> /h	16 bar	DN 100	EFST 170	2	5.774 €		02
FWS 300	■	M		4.500 m <sup>3</sup> /h	16 bar	DN 100	EFST 170	3	6.979 €		02
FWS 400	■	M		6.000 m <sup>3</sup> /h	16 bar	DN 150	EFST 170	4	8.853 €		02
FWS 600	■	M		9.000 m <sup>3</sup> /h	16 bar	DN 150	EFST 170	6	12.469 €		02
FWS 800	■	M		12.000 m <sup>3</sup> /h	16 bar	DN 200	EFST 170	8	14.878 €		02
FWS 1000	■	M		15.000 m <sup>3</sup> /h	16 bar	DN 200	EFST 170	10	18.493 €		02
FWS 1200	■	M		18.000 m <sup>3</sup> /h	16 bar	DN 250	EFST 170	12	20.902 €		02
FWS 1600	■	M		24.000 m <sup>3</sup> /h	16 bar	DN 250	EFST 170	16	27.328 €		02
FWS 2000	■	M		30.000 m <sup>3</sup> /h	16 bar	DN 300	EFST 170	20	32.148 €		02



\*1 – refers to 1 bar(a) and 20°C at 7 bar operating pressure



Activated carbon filters for higher volume flows or bigger connection sizes are available on request (see also oil vapour adsorber).

### Volume flow correction factors for operating conditions deviating from reference conditions

0 bar	1 bar	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	9 bar	10 bar	11 bar	12 bar	13 bar	14 bar	15 bar	16 bar
0,125	0,25	0,38	0,50	0,63	0,75	0,88	1,00	1,13	1,25	1,38	1,50	1,63	1,75	1,88	2,00	2,13

For conversion the lowest appearing operating pressure must be considered.

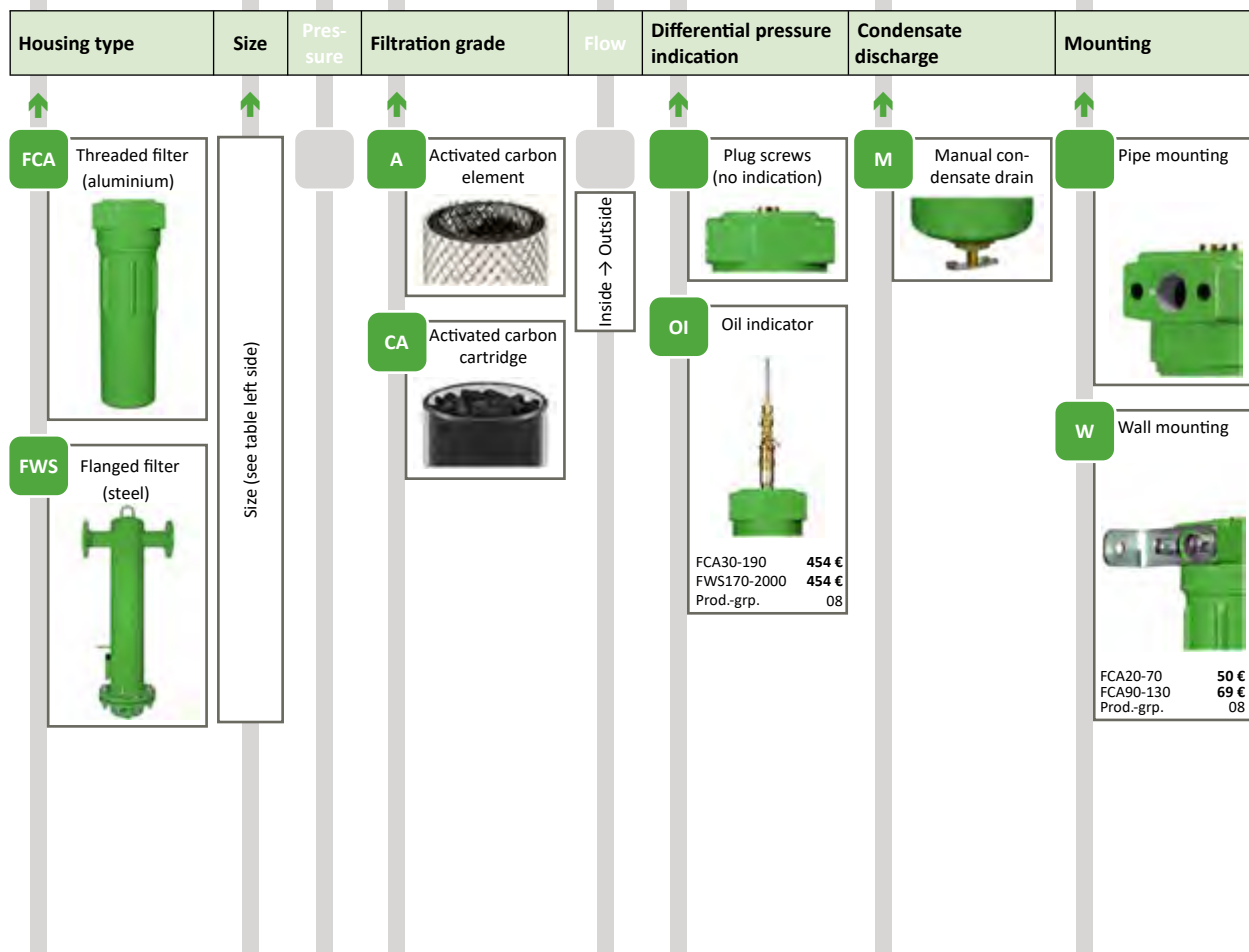
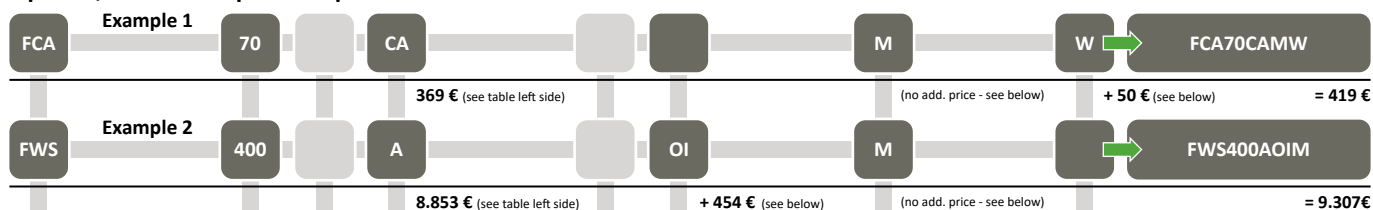
For a comprehensive description of how to use the correction factor, additional correction factors and latest technical figures and information please refer to the relevant product data sheets, which are available in electronic format on our web site:

→ [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

## Filtration

Compressed air filter up to 16 bar – Activated carbon filter – FCA..A., FWS..A.. series

### Options, order examples and price calculations



### Sizes and weights ( housings only)

	Height [A]	Width [B]	Depth [C]	Weight		Height [A]	Width [B]	Depth [C]	Weight
FCA 20	136 mm	61 mm	60 mm	0,5 kg	FWS 170	1115 mm	440 mm	285 mm	46 kg
FCA 25	136 mm	61 mm	60 mm	0,5 kg	FWS 190	1115 mm	440 mm	285 mm	46 kg
FCA 30	183 mm	87 mm	80 mm	1,0 kg	FWS 200	1298 mm	550 mm	405 mm	105 kg
FCA 50	183 mm	87 mm	80 mm	1,0 kg	FWS 300	1298 mm	550 mm	405 mm	105 kg
FCA 70	253 mm	87 mm	80 mm	1,1 kg	FWS 400	1503 mm	640 mm	460 mm	136 kg
FCA 90	289 mm	130 mm	122 mm	3,9 kg	FWS 600	1531 mm	800 mm	580 mm	205 kg
FCA 95	289 mm	130 mm	122 mm	3,8 kg	FWS 800	1531 mm	800 mm	580 mm	208 kg
FCA 110	387 mm	130 mm	122 mm	4,3 kg	FWS 1000	1590 mm	840 mm	715 mm	342 kg
FCA 115	387 mm	130 mm	122 mm	4,1 kg	FWS 1200	1779 mm	760 mm	715 mm	398 kg
FCA 120	487 mm	130 mm	122 mm	4,7 kg	FWS 1600	1740 mm	940 mm	840 mm	537 kg
FCA 130	689 mm	130 mm	122 mm	5,7 kg	FWS 2000	1790 mm	940 mm	840 mm	558 kg
FCA 140	670 mm	164 mm	146 mm	7,8 kg					
FCA 170	923 mm	164 mm	146 mm	9,5 kg					
FCA 180	897 mm	250 mm	225 mm	22,9 kg					
FCA 185	897 mm	250 mm	225 mm	22,4 kg					
FCA 190	1049 mm	250 mm	225 mm	24,5 kg					

## Filtration

Compressed air filter up to 16 bar – Dust filter – FCA..S., FWS..S.. series



### Scope of supply

Ready-to-use filter including selected options (already installed or, in order to avoid transport damages, pre-installed / separately enclosed); single cardboard packing (FCA) or protection foil (FWS); transport packing is not included in the scope of supply and is charged separately.

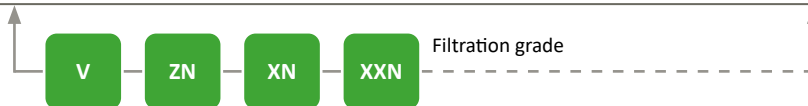
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Operating manuals are available in English and German language. Additional pressure vessel documents are provided for welded pressure vessels (FWS). These vessel documents are created individually for each of these products and will be sent separately.

### Standard version

Filter housing including filter element(s); plug screws; manual drain; flow direction from outside to inside, alternatively inside to outside

				Nominal volume flow <sup>1</sup>	Maximum operating pressure	Connection	Element(s)	Quantity	Price	Prod.-grp.
FCA 20	■	S M		30 m <sup>3</sup> /h	16 bar	G 1/4	EFST 25	1	156 €	01
FCA 25	■	S M		35 m <sup>3</sup> /h	16 bar	G 3/8	EFST 25	1	161 €	01
FCA 30	■	S M		50 m <sup>3</sup> /h	16 bar	G 3/8	EFST 30	1	204 €	01
FCA 50	■	S M		70 m <sup>3</sup> /h	16 bar	G 1/2	EFST 50	1	235 €	01
FCA 70	■	S M		100 m <sup>3</sup> /h	16 bar	G 1/2	EFST 70	1	296 €	01
FCA 90	■	S M		160 m <sup>3</sup> /h	16 bar	G 3/4	EFST 90	1	481 €	01
FCA 95	■	S M		160 m <sup>3</sup> /h	16 bar	G 1	EFST 90	1	488 €	01
FCA 110	■	S M		330 m <sup>3</sup> /h	16 bar	G 1	EFST 110	1	611 €	01
FCA 115	■	S M		330 m <sup>3</sup> /h	16 bar	G 1 ½	EFST 110	1	617 €	01
FCA 120	■	S M		500 m <sup>3</sup> /h	16 bar	G 1 ½	EFST 120	1	735 €	01
FCA 130	■	S M		800 m <sup>3</sup> /h	16 bar	G 1 ½	EFST 130	1	955 €	01
FCA 140	■	S M		1.000 m <sup>3</sup> /h	16 bar	G 2	EFST 140	1	1.291 €	01
FCA 170	■	S M		1.500 m <sup>3</sup> /h	16 bar	G 2	EFST 170	1	1.659 €	01
FCA 180	■	S M		2.000 m <sup>3</sup> /h	16 bar	G 2 ½	EFST 180	1	2.338 €	01
FCA 185	■	S M		2.000 m <sup>3</sup> /h	16 bar	G 3	EFST 180	1	2.399 €	01
FCA 190	■	S M		2.500 m <sup>3</sup> /h	16 bar	G 3	EFST 190	1	2.708 €	01
FWS 170	■	S M		1.500 m <sup>3</sup> /h	16 bar	DN 80	EFST 170	1	3.008 €	02
FWS 190	■	S M		2.500 m <sup>3</sup> /h	16 bar	DN 80	EFST 190	1	3.811 €	02
FWS 200	■	S M		3.000 m <sup>3</sup> /h	16 bar	DN 100	EFST 170	2	5.774 €	02
FWS 300	■	S M		4.500 m <sup>3</sup> /h	16 bar	DN 100	EFST 170	3	6.979 €	02
FWS 400	■	S M		6.000 m <sup>3</sup> /h	16 bar	DN 150	EFST 170	4	8.853 €	02
FWS 600	■	S M		9.000 m <sup>3</sup> /h	16 bar	DN 150	EFST 170	6	12.469 €	02
FWS 800	■	S M		12.000 m <sup>3</sup> /h	16 bar	DN 200	EFST 170	8	14.878 €	02
FWS 1000	■	S M		15.000 m <sup>3</sup> /h	16 bar	DN 200	EFST 170	10	18.493 €	02
FWS 1200	■	S M		18.000 m <sup>3</sup> /h	16 bar	DN 250	EFST 170	12	20.902 €	02
FWS 1600	■	S M		24.000 m <sup>3</sup> /h	16 bar	DN 250	EFST 170	16	27.328 €	02
FWS 2000	■	S M		30.000 m <sup>3</sup> /h	16 bar	DN 300	EFST 170	20	32.148 €	02



\*1 – refers to 1 bar(a) and 20°C at 7 bar operating pressure



Dust filters for higher volume flows or bigger connection sizes are available on request.

### Volume flow correction factors for operating conditions deviating from reference conditions

0 bar	1 bar	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	9 bar	10 bar	11 bar	12 bar	13 bar	14 bar	15 bar	16 bar
0,125	0,25	0,38	0,50	0,63	0,75	0,88	1,00	1,13	1,25	1,38	1,50	1,63	1,75	1,88	2,00	2,13

For conversion the lowest appearing operating pressure must be considered.

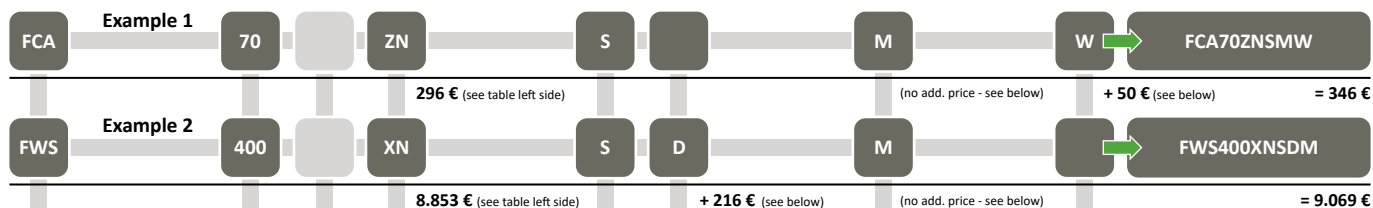
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









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## Filtration

Compressed air filter up to 16 bar – Dust filter – FCA..S., FWS..S.. series

### Options, order examples and price calculations



Housing type	Size	Pressure	Filtration grade	Flow	Differential pressure indication	Condensate discharge	Mounting
<b>FCA</b> Threaded filter (aluminium) 	Size (see table left side)		<b>V</b> Coarse filter 99,99% (3µ) 	<b>S</b> Outside → Inside 	<b>D</b> Differential pressure gauge  FCA30-190 118 € FWS170-2000 216 € Prod.-grp. 08	<b>M</b> Manual condensate drain 	<b>Pipe mounting</b> 
<b>ZN</b> General purpose 99,9999% (1µ) 0,5 mg/m³ 			<b>Inside → Outside</b> 				
<b>FWS</b> Flanged filter (steel) 				<b>XN</b> Fine filter 99,9999% (0,01µ) 0,01mg/m³ 	<b>W</b> Wall mounting  FCA20-70 50 € FCA90-130 69 € Prod.-grp. 08		
			<b>XXN</b> Super fine filter 99,99999% (0,01µ) 0,001mg/m³ 				

### Sizes and weights ( housings only)

	Height [A]	Width [B]	Depth [C]	Weight		Height [A]	Width [B]	Depth [C]	Weight
FCA 20	136 mm	61 mm	60 mm	0,5 kg	FWS 170	1115 mm	440 mm	285 mm	46 kg
FCA 25	136 mm	61 mm	60 mm	0,5 kg	FWS 190	1115 mm	440 mm	285 mm	46 kg
FCA 30	183 mm	87 mm	80 mm	1,0 kg	FWS 200	1298 mm	550 mm	405 mm	105 kg
FCA 50	183 mm	87 mm	80 mm	1,0 kg	FWS 300	1298 mm	550 mm	405 mm	105 kg
FCA 70	253 mm	87 mm	80 mm	1,1 kg	FWS 400	1503 mm	640 mm	460 mm	136 kg
FCA 90	289 mm	130 mm	122 mm	3,9 kg	FWS 600	1531 mm	800 mm	580 mm	205 kg
FCA 95	289 mm	130 mm	122 mm	3,8 kg	FWS 800	1531 mm	800 mm	580 mm	208 kg
FCA 110	387 mm	130 mm	122 mm	4,3 kg	FWS 1000	1590 mm	840 mm	715 mm	342 kg
FCA 115	387 mm	130 mm	122 mm	4,1 kg	FWS 1200	1779 mm	760 mm	715 mm	398 kg
FCA 120	487 mm	130 mm	122 mm	4,7 kg	FWS 1600	1740 mm	940 mm	840 mm	537 kg
FCA 130	689 mm	130 mm	122 mm	5,7 kg	FWS 2000	1790 mm	940 mm	840 mm	558 kg
FCA 140	670 mm	164 mm	146 mm	7,8 kg					
FCA 170	923 mm	164 mm	146 mm	9,5 kg					
FCA 180	897 mm	250 mm	225 mm	22,9 kg					
FCA 185	897 mm	250 mm	225 mm	22,4 kg					
FCA 190	1049 mm	250 mm	225 mm	24,5 kg					

## Filtration

Water separator up to 50 bar – FCA../50WS.., FWS../50W.. series



### Scope of supply

Ready-to-use water separator including selected options (already installed or, in order to avoid transport damages, pre-installed / separately enclosed); single cardboard packing (FCA) or protection foil (FWS); transport packing is not included in the scope of supply and is charged separately.

Operating manuals including the manufacturer's declaration and/or declaration of conformity are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

Operating manuals are available in English and German language. Additional pressure vessel documents are provided for welded pressure vessels (FWS). These vessel documents are created individually for each of these products and will be sent separately.

### Standard version

Filter housing including water separator insert; plug screws; manual drain; flow direction from outside to inside (FCA) or inside to outside (FWS)

				Nominal volume flow <sup>*1</sup>	Maximum operating pressure	Connection	Element(s)	Quantity	Price	Prod.-grp.
FCA	30/50	W S M		255 m <sup>3</sup> /h	50 bar	G 3/8	EFST 30 W	1	477 €	03
FCA	50/50	W S M		357 m <sup>3</sup> /h	50 bar	G 1/2	EFST 30 W	1	526 €	03
FCA	70/50	W S M		510 m <sup>3</sup> /h	50 bar	G 1/2	EFST 30 W	1	526 €	03
FCA	90/50	W S M		816 m <sup>3</sup> /h	50 bar	G 3/4	EFST 90 W	1	931 €	03
FCA	95/50	W S M		816 m <sup>3</sup> /h	50 bar	G 1	EFST 90 W	1	981 €	03
FCA	110/50	W S M		1.683 m <sup>3</sup> /h	50 bar	G 1	EFST 90 W	1	981 €	03
FCA	115/50	W S M		1.683 m <sup>3</sup> /h	50 bar	G 1 ½	EFST 90 W	1	1.038 €	03
FCA	120/50	W S M		2.550 m <sup>3</sup> /h	50 bar	G 1 ½	EFST 120 W	1	1.351 €	03
FCA	130/50	W S M		4.080 m <sup>3</sup> /h	50 bar	G 1 ½	EFST 120 W	1	1.351 €	03
FWS	140/50	W M		5.100 m <sup>3</sup> /h	50 bar	DN 50	---	---	7.821 €	04
FWS	170/50	W M		7.650 m <sup>3</sup> /h	50 bar	DN 80	---	---	7.995 €	04
FWS	190/50	W M		12.750 m <sup>3</sup> /h	50 bar	DN 80	---	---	8.758 €	04

\*1 – refers to 1 bar(a) and 20°C at 50 bar operating pressure



Water separators for higher volume flows or bigger connection sizes are available on request.

### Volume flow correction factors for operating conditions deviating from reference conditions

17 bar	18 bar	19 bar	20 bar	25 bar	30 bar	35 bar	40 bar	45 bar	50 bar
0,44	0,46	0,48	0,50	0,61	0,70	0,78	0,86	0,93	1,00

For conversion the lowest appearing operating pressure must be considered.

For a comprehensive description of how to use the correction factor, additional correction factors and latest technical figures and information please refer to the relevant product data sheets, which are available in electronic format on our web site:

→ [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“



## Filtration

Water separator up to 50 bar – FCA../50WS.., FWS../50W.. series










### Options, order examples and price calculations

**Example 1** FCA 70 /50 W S [ ] M W → **FCA70/50WSMW**

**Example 2** FWS 140 /50 W [ ] [ ] ET [ ] → **FWS140/50WET**

526 € (see table left side) (no add. price - see below) + 50 € (see below) = 576 €

7.821 € (see table left side) + 241 € (see below) = 8.062 €

Housing type	Size	Pressure	Filtration grade	Flow	Differential pressure indication	Condensate discharge	Mounting
<p><b>FCA</b> Threaded filter (aluminium)</p> 	Size (see table left side)	/50	<p><b>W</b> Water separator insert</p>  <p>FCA series</p>  <p>FWS series</p> 	<p><b>S</b></p> <p>FCA series Outside → Inside</p> <p>FWS series Inside → Outside</p>	<p>Plug screws (no indication)</p> 	<p><b>M</b> Manual condensate drain</p> 	<p><b>W</b> Wall mounting (single stage)</p> 
<p><b>FWS</b> Flanged filter (steel)</p> 						<p><b>ET</b> Electronic drain time controlled</p>  <p>50 bar Prod.-grp. 241 € 54</p>	
						<p>FCA30-70 50 € FCA90-130 69 € Prod.-grp. 08</p>	

### Sizes and weights (housing only)

	Height [A]	Width [B]	Depth [C]	Weight		Height [A]	Width [B]	Depth [C]	Weight
FCA 30/50	183 mm	87 mm	80 mm	1,0 kg	FWS 140/50	916 mm	440 mm	345 mm	83 kg
FCA 50/50	183 mm	87 mm	80 mm	1,0 kg	FWS 170/50	1166 mm	440 mm	345 mm	95 kg
FCA 70/50	253 mm	87 mm	80 mm	1,1 kg	FWS 190/50	1166 mm	440 mm	345 mm	95 kg
FCA 90/50	289 mm	130 mm	122 mm	3,9 kg					
FCA 95/50	289 mm	130 mm	122 mm	3,8 kg					
FCA 110/50	387 mm	130 mm	122 mm	4,3 kg					
FCA 115/50	387 mm	130 mm	122 mm	4,1 kg					
FCA 120/50	487 mm	130 mm	122 mm	4,7 kg					
FCA 130/50	689 mm	130 mm	122 mm	5,7 kg					

## Filtration

Compressed air filter up to 50 bar – Coalescing and activated carbon filter – FCA../50.., FWS../50.. series



### Scope of supply

Ready-to-use filter including selected options (already installed or, in order to avoid transport damages, pre-installed / separately enclosed); single cardboard packing (FCA) or protection foil (FWS; transport packing is not included in the scope of supply and is charged separately.

Operating manuals including the manufacturer's declaration and/or declaration of conformity are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

Operating manuals are available in English and German language. Additional pressure vessel documents are provided for welded pressure vessels (FWS). These vessel documents are created individually for each of these products and will be sent separately.

### Standard version

Filter housing including filter element; plug screws; manual drain;  
flow direction from inside to outside

				Nominal volume flow <sup>*1</sup>	Maximum operating pressure	Connection	Element(s)	Quantity	Price	Prod.-grp.
FCA	20/50	■	M	153 m <sup>3</sup> /h	50 bar	G 1/4	EFST 25	■ 1	377 €	03
FCA	25/50	■	M	179 m <sup>3</sup> /h	50 bar	G 3/8	EFST 25	■ 1	391 €	03
FCA	30/50	■	M	255 m <sup>3</sup> /h	50 bar	G 3/8	EFST 30	■ 1	483 €	03
FCA	50/50	■	M	357 m <sup>3</sup> /h	50 bar	G 1/2	EFST 50	■ 1	570 €	03
FCA	70/50	■	M	510 m <sup>3</sup> /h	50 bar	G 1/2	EFST 70	■ 1	717 €	03
FCA	90/50	■	M	816 m <sup>3</sup> /h	50 bar	G 3/4	EFST 90	■ 1	1.044 €	03
FCA	95/50	■	M	816 m <sup>3</sup> /h	50 bar	G 1	EFST 90	■ 1	1.093 €	03
FCA	110/50	■	M	1.683 m <sup>3</sup> /h	50 bar	G 1	EFST 110	■ 1	1.179 €	03
FCA	115/50	■	M	1.683 m <sup>3</sup> /h	50 bar	G 1 ½	EFST 110	■ 1	1.197 €	03
FCA	120/50	■	M	2.550 m <sup>3</sup> /h	50 bar	G 1 ½	EFST 120	■ 1	1.464 €	03
FCA	130/50	■	M	4.080 m <sup>3</sup> /h	50 bar	G 1 ½	EFST 130	■ 1	1.814 €	03
FWS	140/50	■	M	5.100 m <sup>3</sup> /h	50 bar	DN 50	EFST 140	■ 1	7.956 €	04
FWS	170/50	■	M	7.650 m <sup>3</sup> /h	50 bar	DN 80	EFST 170	■ 1	8.263 €	04
FWS	190/50	■	M	12.750 m <sup>3</sup> /h	50 bar	DN 80	EFST 190	■ 1	9.133 €	04



\*1 – refers to 1 bar(a) and 20°C at 50 bar operating pressure



Coalescing filters for higher volume flows or bigger connection sizes are available on request.

Activated carbon filter for higher volume flows or bigger connection sizes are available on request (see also oil vapour adsorber).

### Volume flow correction factors for operating conditions deviating from reference conditions

17 bar	18 bar	19 bar	20 bar	25 bar	30 bar	35 bar	40 bar	45 bar	50 bar
0,44	0,46	0,48	0,50	0,61	0,70	0,78	0,86	0,93	1,00

For conversion the lowest appearing operating pressure must be considered.

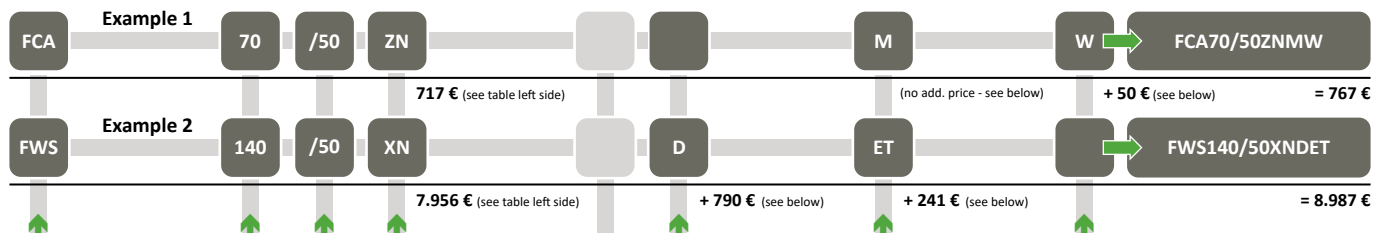
For a comprehensive description of how to use the correction factor, additional correction factors and latest technical figures and information please refer to the relevant product data sheets, which are available in electronic format on our web site:















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## Filtration

Compressed air filter up to 50 bar – Coalescing and activated carbon filter – FCA../50.., FWS../50.. series

### Options, order examples and price calculations



Housing type	Size	Pressure	Filtration grade	Flow	Differential pressure indication	Condensate discharge	Mounting
<b>FCA</b> Threaded filter (aluminium) 	Size (see table left side)	/50	<b>V</b> Coarse filter 99,99% (3µ) 	Inside → Outside	<b>Plug screws</b> (no indication) 	<b>M</b> Manual condensate drain 	<b>Pipe mounting</b> 
<b>FWS</b> Flanged filter (steel) 			<b>ZN</b> General purpose 99,9999% (1µ) 0,5 mg/m³ 		<b>D</b> Differential pressure gauge  FCA30-130 611 € FWS140-190 790 € Prod.-grp. 09	<b>ET</b> Electronic drain time controlled  50 bar 241 € Prod.-grp. 54	
			<b>XN</b> Fine filter 99,9999% (0,01µ) 0,01mg/m³ 		<b>DC</b> Differential pressure gauge with alarm contact  FCA30-130 735 € FWS140-190 914 € Prod.-grp. 09		<b>W</b> Wall mounting (single stage)  FCA20-70 50 € FCA90-130 69 € Prod.-grp. 08
			<b>XXN</b> Super fine filter 99,99999% (0,01µ) 0,001mg/m³ 				
			<b>A</b> Activated carbon element 				

### Sizes and weights ( housings only)

	Height [A]	Width [B]	Depth [C]	Weight		Height [A]	Width [B]	Depth [C]	Weight
FCA 20/50	136 mm	61 mm	60 mm	0,5 kg	FWS 140/50	916 mm	440 mm	345 mm	83 kg
FCA 25/50	136 mm	61 mm	60 mm	0,5 kg	FWS 170/50	1166 mm	440 mm	345 mm	95 kg
FCA 30/50	183 mm	87 mm	80 mm	1,0 kg	FWS 190/50	1166 mm	440 mm	345 mm	95 kg
FCA 50/50	183 mm	87 mm	80 mm	1,0 kg					
FCA 70/50	253 mm	87 mm	80 mm	1,1 kg					
FCA 90/50	289 mm	130 mm	122 mm	3,9 kg					
FCA 95/50	289 mm	130 mm	122 mm	3,8 kg					
FCA 110/50	387 mm	130 mm	122 mm	4,3 kg					
FCA 115/50	387 mm	130 mm	122 mm	4,1 kg					
FCA 120/50	487 mm	130 mm	122 mm	4,7 kg					
FCA 130/50	689 mm	130 mm	122 mm	5,7 kg					

## Filtration

Compressed air filter up to 50 bar – Dust filter – FCA../50..S., FWS../50..S.. series



### Scope of supply

Ready-to-use filter including selected options (already installed or, in order to avoid transport damages, pre-installed / separately enclosed); single cardboard packing (FCA) or protection foil (FWS; transport packing is not included in the scope of supply and is charged separately.

Operating manuals including the manufacturer's declaration and/or declaration of conformity are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

Operating manuals are available in English and German language. Additional pressure vessel documents are provided for welded pressure vessels (FWS). These vessel documents are created individually for each of these products and will be sent separately.

### Standard version

Filter housing including filter element; plug screws; manual drain;  
flow direction from outside to inside, alternatively inside to outside

				Nominal volume flow <sup>*1</sup>	Maximum operating pressure	Connection	Element(s)	Quantity	Price	Prod.-grp.
FCA	20/50	■ S M		153 m <sup>3</sup> /h	50 bar	G 1/4	EFST 25	1	377 €	03
FCA	25/50	■ S M		179 m <sup>3</sup> /h	50 bar	G 3/8	EFST 25	1	391 €	03
FCA	30/50	■ S M		255 m <sup>3</sup> /h	50 bar	G 3/8	EFST 30	1	483 €	03
FCA	50/50	■ S M		357 m <sup>3</sup> /h	50 bar	G 1/2	EFST 50	1	570 €	03
FCA	70/50	■ S M		510 m <sup>3</sup> /h	50 bar	G 1/2	EFST 70	1	717 €	03
FCA	90/50	■ S M		816 m <sup>3</sup> /h	50 bar	G 3/4	EFST 90	1	1.044 €	03
FCA	95/50	■ S M		816 m <sup>3</sup> /h	50 bar	G 1	EFST 90	1	1.093 €	03
FCA	110/50	■ S M		1.683 m <sup>3</sup> /h	50 bar	G 1	EFST 110	1	1.179 €	03
FCA	115/50	■ S M		1.683 m <sup>3</sup> /h	50 bar	G 1 ½	EFST 110	1	1.197 €	03
FCA	120/50	■ S M		2.550 m <sup>3</sup> /h	50 bar	G 1 ½	EFST 120	1	1.464 €	03
FCA	130/50	■ S M		4.080 m <sup>3</sup> /h	50 bar	G 1 ½	EFST 130	1	1.814 €	03
FWS	140/50	■ S M		5.100 m <sup>3</sup> /h	50 bar	DN 50	EFST 140	1	7.956 €	04
FWS	170/50	■ S M		7.650 m <sup>3</sup> /h	50 bar	DN 80	EFST 170	1	8.263 €	04
FWS	190/50	■ S M		12.750 m <sup>3</sup> /h	50 bar	DN 80	EFST 190	1	9.133 €	04



\*1 – refers to 1 bar(a) and 20°C at 50 bar operating pressure



Dust filters for higher volume flows or bigger connection sizes are available on request..

### Volume flow correction factors for operating conditions deviating from reference conditions

17 bar	18 bar	19 bar	20 bar	25 bar	30 bar	35 bar	40 bar	45 bar	50 bar
0,44	0,46	0,48	0,50	0,61	0,70	0,78	0,86	0,93	1,00

For conversion the lowest appearing operating pressure must be considered.

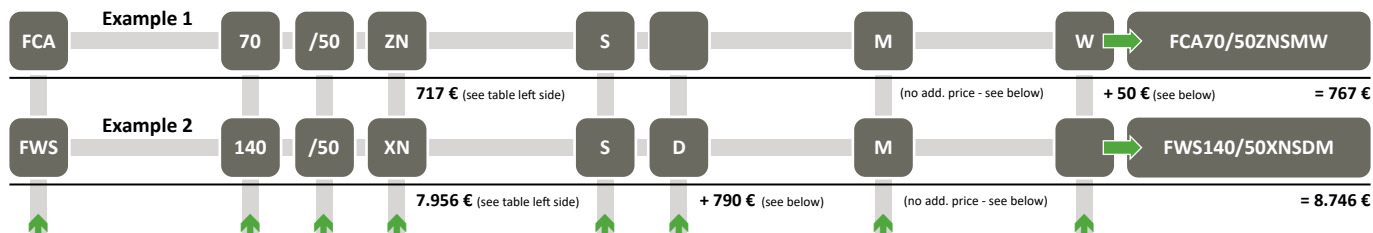
For a comprehensive description of how to use the correction factor, additional correction factors and latest technical figures and information please refer to the relevant product data sheets, which are available in electronic format on our web site:













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## Filtration

Compressed air filter up to 50 bar – Dust filter – FCA../50..S., FWS../50..S.. series

### Options, order examples and price calculations



Housing type	Size	Pressure	Filtration grade	Flow	Differential pressure indication	Condensate discharge	Mounting
<b>FCA</b> Threaded filter (aluminium) 	Size (see table left side)	/50	<b>V</b> Coarse filter 99,99% (3µ) 	S Outside → Inside	Plug screws (no indication) 	M Manual condensate drain 	Pipe mounting 
<b>ZN</b> General purpose 99,999% (1µ) 0,5 mg/m³ 			D Differential pressure gauge  FCA30-130 611 € FWS140-190 790 € Prod.-grp. 09				
<b>XN</b> Fine filter 99,9999% (0,01µ) 0,01mg/m³ 				DC Differential pressure gauge with alarm contact  FCA30-130 735 € FWS140-190 914 € Prod.-grp. 09			
<b>FWS</b> Flanged filter (steel) 			<b>XXN</b> Super fine filter 99,99999% (0,01µ) 0,001mg/m³ 		W Wall mounting (single stage)  FCA20-70 50 € FCA90-130 69 € Prod.-grp. 08		

### Sizes and weights ( housings only)

	Height [A]	Width [B]	Depth [C]	Weight		Height [A]	Width [B]	Depth [C]	Weight
FCA 20/50	137 mm	61 mm	60 mm	0,5 kg	FWS 140/50	916 mm	440 mm	345 mm	83 kg
FCA 25/50	137 mm	61 mm	60 mm	0,5 kg	FWS 170/50	1166 mm	440 mm	345 mm	95 kg
FCA 30/50	183 mm	87 mm	80 mm	1,0 kg	FWS 190/50	1166 mm	440 mm	345 mm	95 kg
FCA 50/50	183 mm	87 mm	80 mm	1,0 kg					
FCA 70/50	183 mm	87 mm	80 mm	1,1 kg					
FCA 90/50	289 mm	130 mm	122 mm	3,9 kg					
FCA 95/50	289 mm	130 mm	122 mm	3,8 kg					
FCA 110/50	289 mm	130 mm	122 mm	4,3 kg					
FCA 115/50	289 mm	130 mm	122 mm	4,1 kg					
FCA 120/50	489 mm	130 mm	122 mm	4,7 kg					
FCA 130/50	489 mm	130 mm	122 mm	5,7 kg					

## Filtration

### Water separator up to 350 bar – FMA..W., FMS..W.. series

#### Scope of supply

Ready-to-use water separator including selected options (already installed or, in order to avoid transport damages, pre-installed / separately enclosed); single cardboard packing; transport packing is not included in the scope of supply and is charged separately.

Operating manuals including the manufacturer's declaration and/or declaration of conformity are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

Operating manuals are available in English and German language.



#### Standard version

Filter housing including water separator insert; plug screws; manual drain; flow direction from inside to outside

				Nominal volume flow <sup>1</sup>	Maximum operating pressure	Connection	Element(s)	Quantity	Price	Prod.-grp.
FMA	30/100	W	M	380 m <sup>3</sup> /h	100 bar	G 3/8	EFST 50 WHP	1	963 €	05
FMA	50/100	W	M	532 m <sup>3</sup> /h	100 bar	G 1/2	EFST 50 WHP	1	1.086 €	05
FMA	70/100	W	M	760 m <sup>3</sup> /h	100 bar	G 1/2	EFST 70 WHP	1	1.377 €	05
FMS	90/100	W	M	1.216 m <sup>3</sup> /h	100 bar	G 3/4	EFST 90 WHP	1	2.159 €	06
FMS	110/100	W	M	2.508 m <sup>3</sup> /h	100 bar	G 1	EFST 110 WHP	1	2.702 €	06

\*1 – refers to 1 bar(a) and 20°C at 100 bar operating pressure

				Nominal volume flow <sup>2</sup>	Maximum operating pressure	Connection	Element(s)	Quantity	Price	Prod.-grp.
FMA	30/350	W	M	650 m <sup>3</sup> /h	350 bar	G 3/8	EFST 50 WHP	1	1.660 €	05
FMA	50/350	W	M	910 m <sup>3</sup> /h	350 bar	G 1/2	EFST 50 WHP	1	1.900 €	05
FMA	70/350	W	M	1.300 m <sup>3</sup> /h	350 bar	G 1/2	EFST 70 WHP	1	2.437 €	05
FMS	90/350	W	M	2.080 m <sup>3</sup> /h	350 bar	G 3/4	EFST 90 WHP	1	3.960 €	06
FMS	110/350	W	M	4.290 m <sup>3</sup> /h	350 bar	G 1	EFST 110 WHP	1	5.000 €	06

\*2 – refers to 1 bar(a) and 20°C at 350 bar operating pressure



High pressure water separators for higher volume flows, higher operating pressures, bigger connection sizes or stainless steel materials are available on request.

#### Volume flow correction factors for operating conditions deviating from reference conditions

##### 100 bar

55 bar	60 bar	65 bar	70 bar	75 bar	80 bar	85 bar	90 bar	95 bar	100 bar
0,71	0,75	0,79	0,83	0,86	0,89	0,92	0,95	0,98	1,00

##### 350 bar

125 bar	150 bar	175 bar	200 bar	225 bar	250 bar	275 bar	300 bar	325 bar	350 bar
0,65	0,71	0,76	0,81	0,85	0,89	0,92	0,95	0,98	1,00

For conversion the lowest appearing operating pressure must be considered.

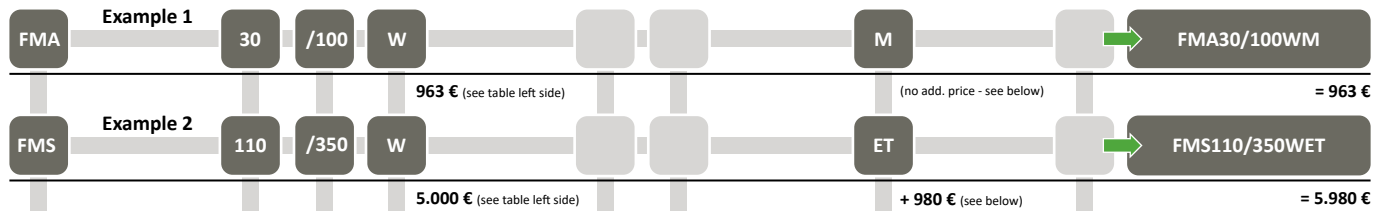
For a comprehensive description of how to use the correction factor, additional correction factors and latest technical figures and information please refer to the relevant product data sheets, which are available in electronic format on our web site:








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## Filtration

Water separator up to 350 bar – FMA..W., FMS..W.. series

### Options, order examples and price calculations



Housing type	Size	Pressure	Filtration grade	Flow	Differential pressure indication	Condensate discharge	Mounting
<b>FMA</b> Threaded filter (aluminium)  <b>FMS</b> Threaded filter (steel) 	Size (see table left side)	/100 /350	<b>W</b> Water separator insert 	Inside → Outside	Plug screws (no indication) 	<b>M</b> Manual condensate drain  <b>ET</b> Electronic drain time controlled  100 bar 464 € 350 bar 980 € Prod.-grp. 54	Pipe mounting 

### Sizes and weights ( housings only)

	Height [A]	Width [B]	Depth [C]	Weight		Height [A]	Width [B]	Depth [C]	Weight
<b>FMA 30/100</b>	225 mm	82 mm	87 mm	2,3 kg	<b>FMA 30/350</b>	225 mm	82 mm	87 mm	2,3 kg
<b>FMA 50/100</b>	225 mm	82 mm	87 mm	2,3 kg	<b>FMA 50/350</b>	225 mm	82 mm	87 mm	2,3 kg
<b>FMA 70/100</b>	290 mm	82 mm	87 mm	2,7 kg	<b>FMA 70/350</b>	290 mm	82 mm	87 mm	2,7 kg
<b>FMS 90/100</b>	325 mm	116 mm	125 mm	18,8 kg	<b>FMS 90/350</b>	325 mm	116 mm	125 mm	18,8 kg
<b>FMS 110/100</b>	410 mm	116 mm	125 mm	22,4 kg	<b>FMS 110/350</b>	410 mm	116 mm	125 mm	22,4 kg

## Filtration

Compressed air filter up to 350 bar – Coalescing and activated carbon filter – FMA., FMS.. series



### Scope of supply

Ready-to-use filter including selected options (already installed or, in order to avoid transport damages, pre-installed / separately enclosed); single cardboard packing; transport packing is not included in the scope of supply and is charged separately.

Operating manuals including the manufacturer's declaration and/or declaration of conformity are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

Operating manuals are available in English and German language

### Standard version

Filter housing including filter element; plug screws; manual drain; flow direction from inside to outside

	Nominal volume flow <sup>*1</sup>	Maximum operating pressure	Connection	Element(s)	Quantity	Price	Prod.-grp.
FMA 30/100	380 m <sup>3</sup> /h	100 bar	G 3/8	EFST 30	1	845 €	05
FMA 50/100	532 m <sup>3</sup> /h	100 bar	G 1/2	EFST 50	1	968 €	05
FMA 70/100	760 m <sup>3</sup> /h	100 bar	G 1/2	EFST 70	1	1.215 €	05
FMS 90/100	1.216 m <sup>3</sup> /h	100 bar	G 3/4	EFST 90	1	1.953 €	06
FMS 110/100	2.508 m <sup>3</sup> /h	100 bar	G 1	EFST 110	1	2.447 €	06

	Nominal volume flow <sup>*1</sup>	Maximum operating pressure	Connection	Element(s)	Quantity	Price	Prod.-grp.
FMA 30/350	650 m <sup>3</sup> /h	350 bar	G 3/8	EFST 30	1	1.542 €	05
FMA 50/350	910 m <sup>3</sup> /h	350 bar	G 1/2	EFST 50	1	1.782 €	05
FMA 70/350	1.300 m <sup>3</sup> /h	350 bar	G 1/2	EFST 70	1	2.275 €	05
FMS 90/350	2.080 m <sup>3</sup> /h	350 bar	G 3/4	EFST 90	1	3.754 €	06
FMS 110/350	4.290 m <sup>3</sup> /h	350 bar	G 1	EFST 110	1	4.745 €	06



\*1 – refers to 1 bar(a) and 20°C at 100 or 350 bar operating pressure



High pressure coalescing and activated carbon filters for higher volume flows, higher operating pressures, bigger connection sizes or stainless steel materials are available on request.

### Volume flow correction factors for operating conditions deviating from reference conditions

#### 100 bar

55 bar	60 bar	65 bar	70 bar	75 bar	80 bar	85 bar	90 bar	95 bar	100 bar
0,71	0,75	0,79	0,83	0,86	0,89	0,92	0,95	0,98	1,00

#### 350 bar

125 bar	150 bar	175 bar	200 bar	225 bar	250 bar	275 bar	300 bar	325 bar	350 bar
0,65	0,71	0,76	0,81	0,85	0,89	0,92	0,95	0,98	1,00

For conversion the lowest appearing operating pressure must be considered.

For a comprehensive description of how to use the correction factor, additional correction factors and latest technical figures and information please refer to the relevant product data sheets, which are available in electronic format on our web site:

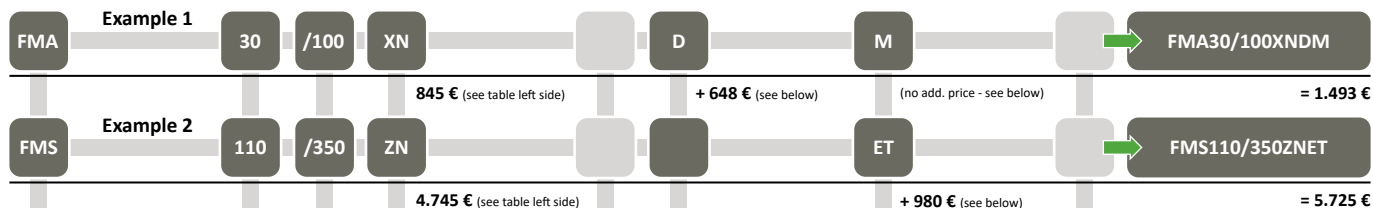
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## Filtration

Compressed air filter up to 350 bar – Coalescing and activated carbon filter – FMA., FMS.. series

### Options, order examples and price calculations



Housing type	Size	Pressure	Filtration grade	Flow	Differential pressure gauge	Condensate discharge	Mounting
<b>FMA</b> Threaded filter (aluminium)	Size (see table left side)	/100	<b>V</b> Coarse filter 99,99% (3µ)	Inside → Outside	<b>Plug screws</b> (no indication)	<b>M</b> Manual condensate drain	Pipe mounting
<b>FMS</b> Threaded filter (steel)		/350	<b>ZN</b> General purpose 99,9999% (1µ) 0,5 mg/m <sup>3</sup>		<b>D</b> Differential pressure gauge	<b>ET</b> Electronic drain time controlled	
			<b>XN</b> Fine filter 99,9999% (0,01µ) 0,01mg/m <sup>3</sup>		<b>DC</b> Differential pressure gauge with alarm contact		
			<b>XXN</b> Super fine filter 99,99999% (0,01µ) 0,001mg/m <sup>3</sup>				
			<b>A</b> Activated carbon element				

**Price List for Differential Pressure Gauges:**

FMA30-70	648 €
FMS90-110	648 €
Prod.-grp.	09

FMA30-70	771 €
FMS90-110	771 €
Prod.-grp.	09

100 bar	464 €
350 bar	980 €
Prod.-grp.	54

### Sizes and weights ( housings only)

	Height [A]	Width [B]	Depth [C]	Weight		Height [A]	Width [B]	Depth [C]	Weight
<b>FMA 30/100</b>	225 mm	82 mm	87 mm	2,3 kg	<b>FMA 30/350</b>	225 mm	82 mm	87 mm	2,3 kg
<b>FMA 50/100</b>	225 mm	82 mm	87 mm	2,3 kg	<b>FMA 50/350</b>	225 mm	82 mm	87 mm	2,3 kg
<b>FMA 70/100</b>	290 mm	82 mm	87 mm	2,7 kg	<b>FMA 70/350</b>	290 mm	82 mm	87 mm	2,7 kg
<b>FMS 90/100</b>	325 mm	116 mm	125 mm	18,8 kg	<b>FMS 90/350</b>	325 mm	116 mm	125 mm	18,8 kg
<b>FMS 110/100</b>	410 mm	116 mm	125 mm	22,4 kg	<b>FMS 110/350</b>	410 mm	116 mm	125 mm	22,4 kg

## Filtration

Compressed air filter up to 350 bar – Dust filter – FMA..S., FMS..S.. series



### Scope of supply

Ready-to-use filter including selected options (already installed or, in order to avoid transport damages, pre-installed / separately enclosed); single cardboard packing; transport packing is not included in the scope of supply and is charged separately.

Operating manuals including the manufacturer's declaration and/or declaration of conformity are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“  
Operating manuals are available in English and German language.

### Standard version

Filter housing including filter element; plug screws; manual drain;  
flow direction from outside to inside

	Nominal volume flow <sup>*1</sup>	Maximum operating pressure	Connection	Element(s)	Quantity	Price	Prod.-grp.
FMA 30/100	380 m <sup>3</sup> /h	100 bar	G 3/8	EFST 30	1	845 €	05
FMA 50/100	532 m <sup>3</sup> /h	100 bar	G 1/2	EFST 50	1	968 €	05
FMA 70/100	760 m <sup>3</sup> /h	100 bar	G 1/2	EFST 70	1	1.215 €	05
FMS 90/100	1.216 m <sup>3</sup> /h	100 bar	G 3/4	EFST 90	1	1.953 €	06
FMS 110/100	2.508 m <sup>3</sup> /h	100 bar	G 1	EFST 110	1	2.447 €	06

	Nominal volume flow <sup>*1</sup>	Maximum operating pressure	Connection	Element(s)	Quantity	Price	Prod.-grp.
FMA 30/350	650 m <sup>3</sup> /h	350 bar	G 3/8	EFST 30	1	1.542 €	05
FMA 50/350	910 m <sup>3</sup> /h	350 bar	G 1/2	EFST 50	1	1.782 €	05
FMA 70/350	1.300 m <sup>3</sup> /h	350 bar	G 1/2	EFST 70	1	2.275 €	05
FMS 90/350	2.080 m <sup>3</sup> /h	350 bar	G 3/4	EFST 90	1	3.754 €	06
FMS 110/350	4.290 m <sup>3</sup> /h	350 bar	G 1	EFST 110	1	4.745 €	06



\*1 – refers to 1 bar(a) and 20°C at 100 or 350 bar operating pressure



High pressure dust filters for higher volume flows, higher operating pressures, bigger connection sizes or stainless steel materials are available on request.

### Volume flow correction factors for operating conditions deviating from reference conditions

#### 100 bar

55 bar	60 bar	65 bar	70 bar	75 bar	80 bar	85 bar	90 bar	95 bar	100 bar
0,71	0,75	0,79	0,83	0,86	0,89	0,92	0,95	0,98	1,00

#### 350 bar

125 bar	150 bar	175 bar	200 bar	225 bar	250 bar	275 bar	300 bar	325 bar	350 bar
0,65	0,71	0,76	0,81	0,85	0,89	0,92	0,95	0,98	1,00

For conversion the lowest appearing operating pressure must be considered.

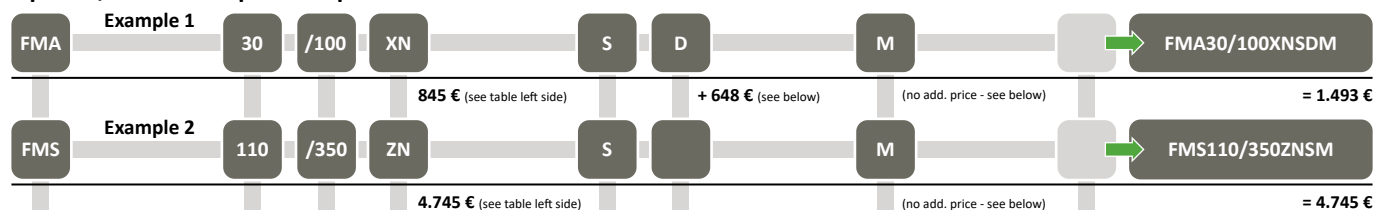
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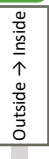





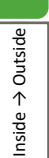



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## Filtration

Compressed air filter up to 350 bar – Dust filter – FMA..S., FMS..S. series

### Options, order examples and price calculations



Housing type	Size	Pressure	Filtration grade	Flow	Differential pressure indication	Condensate discharge	Mounting
<b>FMA</b> Threaded filter (aluminium) 	Size (see table left side)	/100	<b>V</b> Coarse filter 99,99% (3µ) 	<b>S</b> Outside → Inside 	<b>D</b> Differential pressure gauge  FMA30-70 648 € FMS90-110 648 € Prod.-grp. 09	<b>M</b> Manual condensate drain 	Pipe mounting 
<b>FMS</b> Threaded filter (steel) 		/350	<b>ZN</b> General purpose 99,9999% (1µ) 	Inside → Outside 	<b>DC</b> Differential pressure gauge with alarm contact  FMA30-70 771 € FMS90-110 771 € Prod.-grp. 09		
			<b>XN</b> Fine filter 99,9999% (0,01µ) 				
			<b>XXN</b> Super fine filter 99,999999% (0,01µ) 				

### Sizes and weights ( housings only)

	Height [A]	Width [B]	Depth [C]	Weight		Height [A]	Width [B]	Depth [C]	Weight
<b>FMA 30/100</b>	225 mm	82 mm	87 mm	2,3 kg	<b>FMA 30/350</b>	225 mm	82 mm	87 mm	2,3 kg
<b>FMA 50/100</b>	225 mm	82 mm	87 mm	2,3 kg	<b>FMA 50/350</b>	225 mm	82 mm	87 mm	2,3 kg
<b>FMA 70/100</b>	290 mm	82 mm	87 mm	2,7 kg	<b>FMA 70/350</b>	290 mm	82 mm	87 mm	2,7 kg
<b>FMS 90/100</b>	325 mm	116 mm	125 mm	18,8 kg	<b>FMS 90/350</b>	325 mm	116 mm	125 mm	18,8 kg
<b>FMS 110/100</b>	410 mm	116 mm	125 mm	22,4 kg	<b>FMS 110/350</b>	410 mm	116 mm	125 mm	22,4 kg

## Filtration

Process filter up to 16 bar – Industrial grades – FWP.. series



### Scope of supply

Ready-to-use filter including selected options (already installed or, in order to avoid transport damages, pre-installed / separately enclosed); single cardboard packing; transport packing is not included in the scope of supply and is charged separately.

Operating manuals including the manufacturer's declaration and/or declaration of conformity are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

Operating manuals are available in English and German language.

### Standard version

Stainless steel filter housing (1.4301) with element(s); plug screw (top); manual drain; flow direction from inside to outside

				Nominal volume flow <sup>*1</sup>	Maximum operating pressure	Connection	Element(s)	Quantity	Price	Prod.-grp.
FWP 20	■	M		30 m <sup>3</sup> /h	16 bar	G 1/4	EFSTP 90	1	1.234 €	07
FWP 30	■	M		50 m <sup>3</sup> /h	16 bar	G 3/8	EFSTP 90	1	1.254 €	07
FWP 70	■	M		100 m <sup>3</sup> /h	16 bar	G 1/2	EFSTP 90	1	1.346 €	07
FWP 90	■	M		160 m <sup>3</sup> /h	16 bar	G 3/4	EFSTP 90	1	1.407 €	07
FWP 110	■	M		330 m <sup>3</sup> /h	16 bar	G 1	EFSTP 120	1	1.599 €	07
FWP 120	■	M		500 m <sup>3</sup> /h	16 bar	G 1 ½	EFSTP 120	1	1.758 €	07
FWP 130	■	M		800 m <sup>3</sup> /h	16 bar	G 1 ½	EFSTP 140	1	2.228 €	07
FWP 140	■	M		1.000 m <sup>3</sup> /h	16 bar	G 2	EFSTP 140	1	2.381 €	07
FWP 170	■	M		1.500 m <sup>3</sup> /h	16 bar	G 2	EFSTP 180	1	2.800 €	07
FWP 180	■	M		2.000 m <sup>3</sup> /h	12 bar	G 2 ½	EFSTP 180	1	3.262 €	07
FWP 190	■	M		2.500 m <sup>3</sup> /h	12 bar	G 3	EFSTP 190	1	3.674 €	07
FWP 300	■	M		3.400 m <sup>3</sup> /h	8 bar	DN 100	EFSTP 180	3	14.125 €	07
FWP 500	■	M		4.500 m <sup>3</sup> /h	8 bar	DN 100	EFSTP 180	5	17.525 €	07



\*1 – refers to 1 bar(a) and 20°C at 7 bar operating pressure



Process filters with different connection types or materials are available on request.

### Volume flow correction factors for operating conditions deviating from reference conditions

0 bar	1 bar	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	9 bar	10 bar	11 bar	12 bar	13 bar	14 bar	15 bar	16 bar
0,125	0,25	0,38	0,50	0,63	0,75	0,88	1,00	1,13	1,25	1,38	1,50	1,63	1,75	1,88	2,00	2,13

For conversion the lowest appearing operating pressure must be considered.

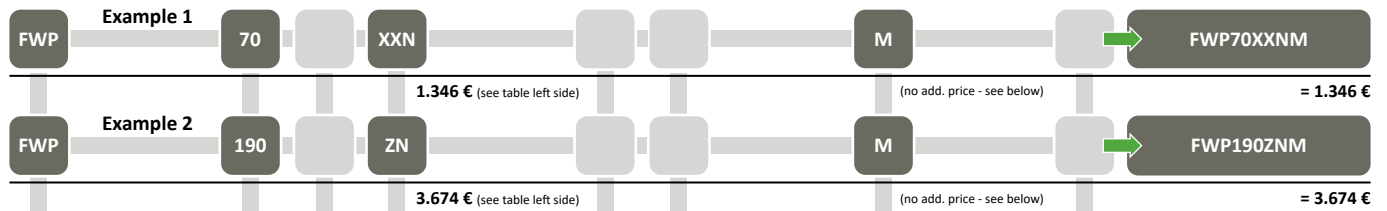
For a comprehensive description of how to use the correction factor, additional correction factors and latest technical figures and information please refer to the relevant product data sheets, which are available in electronic format on our web site:




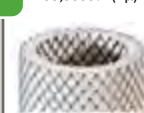
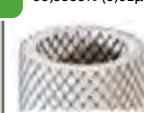




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## Filtration

Process filter up to 16 bar – Industrial grades – FWP.. series

### Options, order examples and price calculations



Housing type	Size	Pressure	Filtration grade	Flow	Differential pressure indication	Condensate discharge	Mounting
<b>FWP</b> Stainless steel process filter  FWP 20 - 190 Threaded filter  FWP 300-500 Flanged filter	Size (see table left side)		<b>V</b> Coarse filter 99,99% (3µ)  <b>ZN</b> General purpose 99,9999% (1µ)  <b>XN</b> Fine filter 99,9999% (0,01µ)  <b>XXN</b> Super fine filter 99,99999% (0,01µ)  <b>A</b> Activated carbon element 	Inside → Outside		<b>M</b> Manual condensate drain 	Pipe mounting 

### Sizes and weights (Housings only)

	Height [A]	Width [B]	Depth [C]	Weight		Height [A]	Width [B]	Depth [C]	Weight
<b>FWP 20</b>	220 mm	147 mm	108 mm	2,3 kg	<b>FWP 300</b>	870 mm	476 mm	340 mm	44 kg
<b>FWP 30</b>	220 mm	147 mm	108 mm	2,4 kg	<b>FWP 500</b>	890 mm	509 mm	405 mm	54 kg
<b>FWP 70</b>	220 mm	151 mm	108 mm	2,4 kg					
<b>FWP 90</b>	220 mm	151 mm	108 mm	2,4 kg					
<b>FWP 110</b>	312 mm	188 mm	135 mm	3,4 kg					
<b>FWP 120</b>	312 mm	198 mm	135 mm	3,5 kg					
<b>FWP 130</b>	486 mm	233 mm	170 mm	6,2 kg					
<b>FWP 140</b>	486 mm	233 mm	170 mm	6,2 kg					
<b>FWP 170</b>	792 mm	233 mm	170 mm	7,7 kg					
<b>FWP 180</b>	792 mm	275 mm	200 mm	11,7 kg					
<b>FWP 190</b>	1056 mm	289 mm	200 mm	13,1 kg					

## Filtration

Process filter up to 16 bar – Sterile filter – FWP...STPL., FWP..SMPL.. series



### Scope of supply

Filter housing and element(s); element(s), sealed in a foil bag, separately enclosed; single cardboard pack-ing (FWP 20-190) or protection foil (FWP 300-500); transport packing is not included in the scope of supply and is charged separately.

Operating manuals including the manufacturer's declaration are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

Operating manuals are available in English and German language. For size FWP130 to FWP500 a declaration of conformity and/or additional pressure vessel documents are provided. These documents are created indi-vidually for each of these products and will be sent separately.

### Standard version

Stainless steel filter housing (1.4301) with element(s) STPL (depth filter) or SMPL (membrane filter); plug screws; flow direction from outside to inside

				Nominal volume flow <sup>*1</sup>	Maximum operating pressure	Connection	Element(s)	Quantity	Price STPL	Price SMPL	Prod.-grp.
FWP 20	■	S P		30 m <sup>3</sup> /h	16 bar	G 1/4	EFSTP 90	1	906 €	1.031 €	07
FWP 30	■	S P		50 m <sup>3</sup> /h	16 bar	G 3/8	EFSTP 90	1	925 €	1.050 €	07
FWP 70	■	S P		100 m <sup>3</sup> /h	16 bar	G 1/2	EFSTP 90	1	1.012 €	1.137 €	07
FWP 90	■	S P		160 m <sup>3</sup> /h	16 bar	G 3/4	EFSTP 90	1	1.068 €	1.193 €	07
FWP 110	■	S P		330 m <sup>3</sup> /h	16 bar	G 1	EFSTP 120	1	1.265 €	1.417 €	07
FWP 120	■	S P		500 m <sup>3</sup> /h	16 bar	G 1 ½	EFSTP 120	1	1.413 €	1.565 €	07
FWP 130	■	S P		800 m <sup>3</sup> /h	16 bar	G 1 ½	EFSTP 140	1	1.787 €	2.045 €	07
FWP 140	■	S P		1.000 m <sup>3</sup> /h	16 bar	G 2	EFSTP 140	1	1.960 €	2.218 €	07
FWP 170	■	S P		1.500 m <sup>3</sup> /h	16 bar	G 2	EFSTP 180	1	2.392 €	2.782 €	07
FWP 180	■	S P		2.000 m <sup>3</sup> /h	12 bar	G 2 ½	EFSTP 180	1	2.824 €	3.214 €	07
FWP 190	■	S P		2.500 m <sup>3</sup> /h	12 bar	G 3	EFSTP 190	1	3.255 €	3.775 €	07
FWP 300	■	S P		3.400 m <sup>3</sup> /h	8 bar	DN 100	EFSTP 180	3	12.878 €	14.048 €	07
FWP 500	■	S P		4.500 m <sup>3</sup> /h	8 bar	DN 100	EFSTP 180	5	15.959 €	17.909 €	07



\*1 – refers to 1 bar(a) and 20°C at 7 bar operating pressure



Sterile filters with different connection types or materials are available on request.

### Volume flow correction factors for operating conditions deviating from reference conditions

0 bar	1 bar	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	9 bar	10 bar	11 bar	12 bar	13 bar	14 bar	15 bar	16 bar
0,125	0,25	0,38	0,50	0,63	0,75	0,88	1,00	1,13	1,25	1,38	1,50	1,63	1,75	1,88	2,00	2,13

The correction factor is based on the lowest operating pressure.

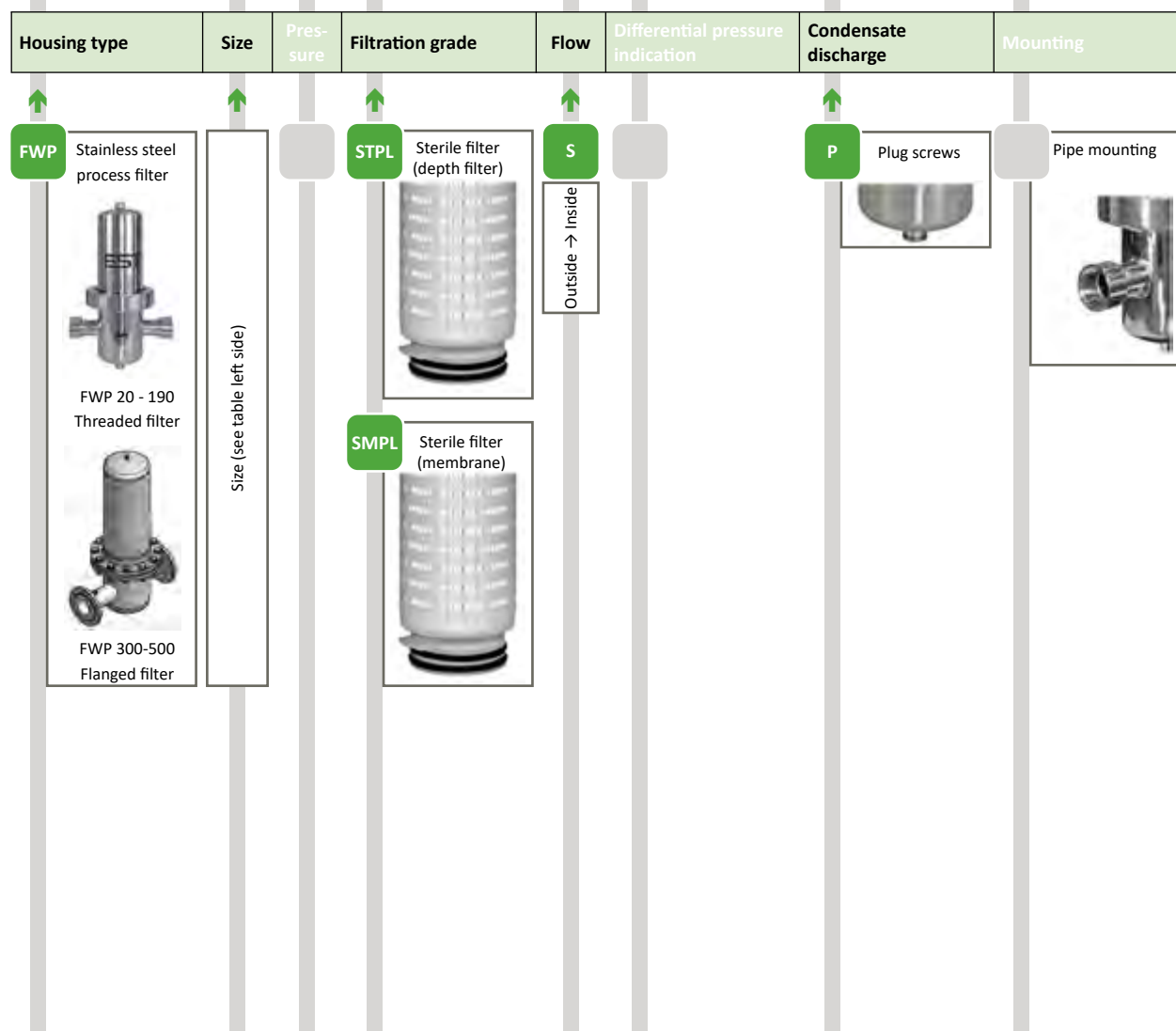
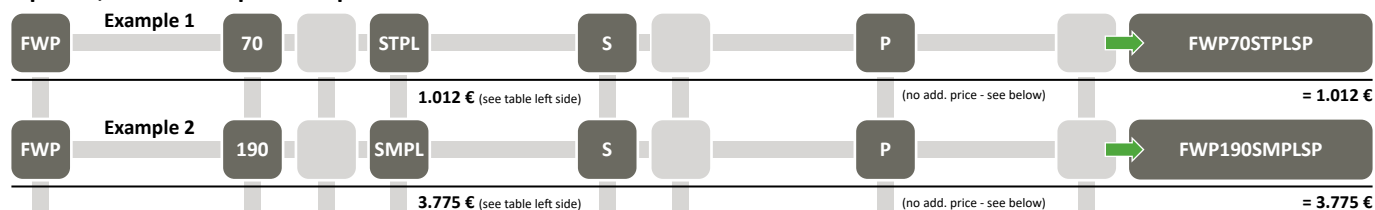
For a comprehensive description of how to use the correction factor, additional correction factors and latest technical figures and information please refer to the relevant product data sheets, which are available in electronic format on our web site:

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## Filtration

Process filter up to 16 bar – Sterile filter – FWP...STPL., FWP..SMPL.. series

### Options, order examples and price calculations



### Sizes and weights ( housings only)

	Height [A]	Width [B]	Depth [C]	Weight		Height [A]	Width [B]	Depth [C]	Weight
<b>FWP 20</b>	220 mm	147 mm	108 mm	2,3 kg	<b>FWP 300</b>	870 mm	476 mm	340 mm	44 kg
<b>FWP 30</b>	220 mm	147 mm	108 mm	2,4 kg	<b>FWP 500</b>	890 mm	509 mm	405 mm	54 kg
<b>FWP 70</b>	220 mm	151 mm	108 mm	2,4 kg					
<b>FWP 90</b>	220 mm	151 mm	108 mm	2,4 kg					
<b>FWP 110</b>	312 mm	188 mm	135 mm	3,4 kg					
<b>FWP 120</b>	312 mm	198 mm	135 mm	3,5 kg					
<b>FWP 130</b>	486 mm	233 mm	170 mm	6,2 kg					
<b>FWP 140</b>	486 mm	233 mm	170 mm	6,2 kg					
<b>FWP 170</b>	792 mm	233 mm	170 mm	7,7 kg					
<b>FWP 180</b>	792 mm	275 mm	200 mm	11,7 kg					
<b>FWP 190</b>	1056 mm	289 mm	200 mm	13,1 kg					

## Filtration

### Filter combinations



#### Order examples and price calculation

We offer the service to supply fully assembled and thus Ready-to-use filter combinations.


Even more, each single filter stage can still be configured individually.

With filter combinations, the single filters are assembled to one complete unit, considering their individual configuration / scope of supply. There is **NO** price adder for this service, which means the price for a filter combination is the same as the sum of prices of the according single filters (each one without wall brackets), while the required combination kit is **FOR FREE**.

The order code logic for filter combinations is shown below.

Wall mounting brackets for filter combinations FCA20 to FCA130 up to 16 bar are optionally available.

#### Order code for 2-stage filter combinations

































Combination			1 <sup>st</sup> Filter				2 <sup>nd</sup> Filter				Combination
Housing type	Size	Pressure	Filtration grade	Flow	Differential pressure indication	Condensate discharge	Filtration grade	Flow	Differential pressure indication	Condensate discharge	Mounting
↑ FCA	↑ 20	↑ □	↑ W	↑ □	↑ □	↑ M	↑ V	↑ □	↑ □	↑ M	↑ □
FWS	25	/50	V	S	D	F	ZN	S	D	F	W
FMA	30	/100	ZN		DC	ELC	XN		DC	ELC	<div style="border: 1px solid black; padding: 5px;"> <p>Wall mounting brackets (16 bar only)</p>  <p>FCA20-70      25 € FCA90-130    37 € Prod.-grp.    08</p> </div>
FMS	50	/350	XN		OI	ELF	XXN		OI	ELF	
	70		XXN			ET	A			ET	
	⋮		A				CA				
	⋮		CA				⋮				
	⋮		⋮				⋮				



## Filtration

### Filter combinations

#### Order example 2-stage filter combinations

				I → O			I → O							
FCA	70		XN		F	A		M						
			350 €			+ 296 €				= 646 €				
				I → O				I → O						
FCA	50		XN		D	ELF	CA		OI	M	W			
			289 €		+ 118 €	+ 174 €	+ 289 €		+ 454 €		+ 25 €	= 1.349 €		
				O → I					O → I					
FCA	110		ZN		S	D	M	XXN		S	D	M	W	
			665 €		+ 118 €			+ 665 €		+ 118 €			+ 37 €	= 1.603 €
				I → O			O → I							
FMA	30	/350	W		ET	V		S	D	M				
			1.660 €		+ 980 €	+ 1.542 €		+ 648 €				= 4.830 €		

#### Order code for 3-stage filter combinations

Same procedure as a 2-stage filter combination but with additional 3<sup>rd</sup> stage filter.

Combination			1 <sup>st</sup> Filter				2 <sup>nd</sup> Filter				3 <sup>rd</sup> Filter				Combination
Housing type	Size	Pressure	Filtration grade	Flow	Differential pressure indication	Condensate discharge	Filtration grade	Flow	Differential pressure indication	Condensate discharge	Filtration grade	Flow	Differential pressure indication	Condensate discharge	Mounting

**Filtration**

Filter accessories – FA.. series



**Differential pressure gauges**

**Scope of supply**

Differential pressure gauge including installation parts; without pipe sealing material; single cardboard packing or shrink wrap; transport packing is not included in the scope of supply and is charged separately.

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Operating manuals are available in English and German language.

**up to 16 bar**



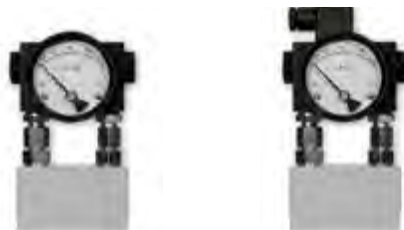
	FAD01-FCA	FAD01C-FCA	FAD01-FWS	FAD01C-FWS
Suitable for filter	FCA 30-190	FCA 30-190	FWS 170-2000	FWS 170-2000
contact / interface	--- / ---	1 / ---	--- / ---	1 / ---
Price	<b>118 €</b>	<b>193 €</b>	<b>216 €</b>	<b>291 €</b>
Prod.-grp.	08	08	08	08

**up to 50 bar**



	FAD02/50-FCA	FAD02/50C-FCA	FAD02/50-FWS	FAD02/50C-FWS
Suitable for filter	FCA 30-130	FCA 30-130	FWS 140-190	FWS 140-190
contact / interface	--- / ---	1 / ---	--- / ---	1 / ---
Price	<b>611 €</b>	<b>735 €</b>	<b>790 €</b>	<b>914 €</b>
Prod.-grp.	09	09	09	09

**up to 350 bar**



	FAD03/350-FM	FAD03/350C-FM
Suitable for filter	FMA 30-70, FMS 90-110	FMA 30-70, FMS 90-110
contact / interface	--- / ---	1 / ---
Price	<b>648 €</b>	<b>771 €</b>
Prod.-grp.	09	09

## Filtration

### Filter accessories – FA.. series



#### Indicator

##### Scope of supply

Indicator including installation parts; without pipe sealing material; single cardboard packing or shrink wrap; transport packing is not included in the scope of supply and is charged separately.

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Operating manuals are available in English and German language.

Up to 16 bar



	FAI01OI-B06	FAI02OI-B06	FAI02OI-B08	FAI01HI-B06
suitable for	FCA 30-190	DPS1-630A / DSS 1-630	FWS 170-2000	FCA 30-190
indicator for	oil	oil	oil	humidity
Price	<b>454 €</b>	<b>454 €</b>	<b>454 €</b>	<b>100 €</b>
Prod.-Grp.	08	08	08	08

## Service

SP-FAI/IOP02	Spare indicator tube for FAI..OI	see Service
SR-FAI01-OG	Spare indicator filling for FAI01HI	Price list

## Filtration

### Filter accessories – FA.. series





### Mounting kits for single filter and combinations with/without wall brackets

#### Scope of supply

Mounting kit including sealing gasket(s); single cardboard packing or shrink wrap foil; transport packing is not included in the scope of supply and is charged separately.

#### For FCA filter series

	Number of filters			
	1	2	3	
Suitable for filter		<b>FAM20-25/2-FCA</b> FCA 20-25; 16 bar	<b>FAM20-25/3-FCA</b> FCA 20-25; 16 bar	<b>Without wall brackets</b> 
<b>Price</b>		<b>29 €</b>	<b>32 €</b>	
Prod.-grp.		08	08	
Suitable for filter		<b>FAM30-70/2-FCA</b> FCA 30-70; 16 bar	<b>FAM30-70/3-FCA</b> FCA 30-70; 16 bar	<b>With wall brackets</b> 
<b>Price</b>		<b>29 €</b>	<b>32 €</b>	
Prod.-grp.		08	08	
Suitable for filter		<b>FAM90-130/2-FCA</b> FCA 90-130; 16 bar	<b>FAM90-130/3-FCA</b> FCA 90-130; 16 bar	
<b>Price</b>		<b>34 €</b>	<b>37 €</b>	
Prod.-grp.		08	08	
Suitable for filter	<b>FAW20-25/1-FCA</b> FCA 20-25; 16-50 bar	<b>FAW20-25/2-FCA</b> FCA 20-25; 16 bar	<b>FAW20-25/3-FCA</b> FCA 20-25; 16 bar	<b>With wall brackets</b>
<b>Price</b>	<b>50 €</b>	<b>54 €</b>	<b>57 €</b>	
Prod.-grp.	08	08	08	
Suitable for filter	<b>FAW30-70/1-FCA</b> FCA 30-70; 16-50 bar	<b>FAW30-70/2-FCA</b> FCA 30-70; 16 bar	<b>FAW30-70/3-FCA</b> FCA 30-70; 16 bar	
<b>Price</b>	<b>50 €</b>	<b>54 €</b>	<b>57 €</b>	
Prod.-grp.	08	08	08	
Suitable for filter	<b>FAW90-130/1-FCA</b> FCA 90-130; 16-50 bar	<b>FAW90-130/2-FCA</b> FCA 90-130; 16 bar	<b>FAW90-130/3-FCA</b> FCA 90-130; 16 bar	
<b>Price</b>	<b>69 €</b>	<b>71 €</b>	<b>74 €</b>	
Prod.-grp.	08	08	08	

## Service

**SP-SOS-...** O-ring (kits) for FCA, FMA, FMS filter housings and EFST, EFSTP filter elements

**SP-PWG-FWS...** Flange housing gaskets and flange connection gaskets FWS filter housings

**SP-SGR-FWP...** Aseptic gaskets FWP filter housings

See  
Service  
Price list

... and many more service parts

## Filtration

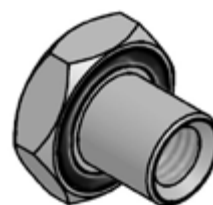
### Filter accessories – FA.. series



#### Lock nuts filter elements

##### Scope of supply

Lock nut including sealing O-ring; single cardboard packing or shrink wrap foil; transport packing is not included in the scope of supply and is charged separately



	FA-PWL-E-M8-13-MS	FA-PWL-E-M8-13-SS	FA-PWL-E-M10-13-SS
Size housing tie rod	M8	M8	M10
Size hole in bottom end cap	Ø 13,5 mm	Ø 13,5 mm	Ø 13,5 mm
Material	Brass	Stainless steel	Stainless steel
<b>Price</b>	<b>15 €</b>	<b>18 €</b>	<b>21 €</b>
Prod.-grp.	08	08	08

## Filtration

### Filter options

#### Filter housing wet cleaning

The filter housing gets additionally wet cleaned within the filters production process, removing debris as well as residuals of oil / grease.

	Suitable for filter	Price*1	Prod.-grp.
<b>Option SF</b>	FCA20-70, FMA 30-70	48 €	00
	FCA90-120, FMA 90-110	48 €	00
	FCA130-170	48 €	00
	FCA180-190	48 €	00
	FWS140-190	75 €	00
	FWS200-300	75 €	00
	FWS400-800	85 €	00
	FWS1000-1200	95 €	00
	FWS1600-2000	95 €	00

\*1 – Price pre filter housing

## Filtration

### Filter elements for FST filter housings



#### Scope of supply

Filter element, sealed in a foil bag; additional single cardboard packing; transport packing is not included in the scope of supply and is charged separately.

#### Filtration grades

V	Coarse filtration (3μ)	V5	Coarse filtration (5μ)		
ZN	General purpose filtration (1μ)				
XN	Fine filtration (0,01μ)	XXN	Super fine filtration (0,01μ)		
A	Activated carbon element	CA	Activated carbon cartridge	CMS	Desiccant cartridge
STPL	Sterile depth filtration (0,01μ)	SMPL	Sterile membrane filtration (0,01μ)	ST	Sterile depth filtration (0,01μ)
D25	Steam filtration (25μ)	D1	Steam filtration (1μ)		

### EFST - Filter elements for industrial filter FCA, FWS, FMA, FMS series

#### 1 Standard filter elements

					Price	Prod.- grp.
EFST 25 V	EFST 25 ZN	EFST 25 XN	EFST 25 XXN	EFST 25 A	87 €	11
EFST 30 V	EFST 30 ZN	EFST 30 XN	EFST 30 XXN	EFST 30 A	107 €	11
EFST 50 V	EFST 50 ZN	EFST 50 XN	EFST 50 XXN	EFST 50 A	118 €	11
EFST 70 V	EFST 70 ZN	EFST 70 XN	EFST 70 XXN	EFST 70 A	162 €	11
EFST 90 V	EFST 90 ZN	EFST 90 XN	EFST 90 XXN	EFST 90 A	206 €	11
EFST 110 V	EFST 110 ZN	EFST 110 XN	EFST 110 XXN	EFST 110 A	255 €	11
EFST 120 V	EFST 120 ZN	EFST 120 XN	EFST 120 XXN	EFST 120 A	297 €	11
EFST 130 V	EFST 130 ZN	EFST 130 XN	EFST 130 XXN	EFST 130 A	370 €	11
EFST 140 V	EFST 140 ZN	EFST 140 XN	EFST 140 XXN	EFST 140 A	445 €	11
EFST 170 V	EFST 170 ZN	EFST 170 XN	EFST 170 XXN	EFST 170 A	569 €	11
EFST 180 V	EFST 180 ZN	EFST 180 XN	EFST 180 XXN	EFST 180 A	778 €	11
EFST 190 V	EFST 190 ZN	EFST 190 XN	EFST 190 XXN	EFST 190 A	876 €	11

#### 2 High temperature filter elements

	Price	Prod.- grp.				Price	Prod.- grp.
EFST 25 V5/HT	140 €	17	EFST 25 ZN/HT	EFST 25 XN/HT	EFST 25 XXN/HT	105 €	17
EFST 30 V5/HT	172 €	17	EFST 30 ZN/HT	EFST 30 XN/HT	EFST 30 XXN/HT	129 €	17
EFST 50 V5/HT	189 €	17	EFST 50 ZN/HT	EFST 50 XN/HT	EFST 50 XXN/HT	142 €	17
EFST 70 V5/HT	260 €	17	EFST 70 ZN/HT	EFST 70 XN/HT	EFST 70 XXN/HT	195 €	17
EFST 90 V5/HT	330 €	17	EFST 90 ZN/HT	EFST 90 XN/HT	EFST 90 XXN/HT	248 €	17
EFST 110 V5/HT	408 €	17	EFST 110 ZN/HT	EFST 110 XN/HT	EFST 110 XXN/HT	306 €	17
EFST 120 V5/HT	476 €	17	EFST 120 ZN/HT	EFST 120 XN/HT	EFST 120 XXN/HT	357 €	17
EFST 130 V5/HT	592 €	17	EFST 130 ZN/HT	EFST 130 XN/HT	EFST 130 XXN/HT	444 €	17
EFST 140 V5/HT	712 €	17	EFST 140 ZN/HT	EFST 140 XN/HT	EFST 140 XXN/HT	534 €	17
EFST 170 V5/HT	911 €	17	EFST 170 ZN/HT	EFST 170 XN/HT	EFST 170 XXN/HT	683 €	17
EFST 180 V5/HT	1.245 €	17	EFST 180 ZN/HT	EFST 180 XN/HT	EFST 180 XXN/HT	934 €	17
EFST 190 V5/HT	1.402 €	17	EFST 190 ZN/HT	EFST 190 XN/HT	EFST 190 XXN/HT	1.052 €	17

#### 3 High temperature / chemical resistant filter elements

	Price	Prod.- grp.				Price	Prod.- grp.
EFST 140 V5/TC	801 €	17	EFST 140 ZN/TC	EFST 140 XN/TC	EFST 140 XXN/TC	623 €	17
EFST 170 V5/TC	1.025 €	17	EFST 170 ZN/TC	EFST 170 XN/TC	EFST 170 XXN/TC	797 €	17
EFST 180 V5/TC	1.401 €	17	EFST 180 ZN/TC	EFST 180 XN/TC	EFST 180 XXN/TC	1.090 €	17
EFST 190 V5/TC	1.577 €	17	EFST 190 ZN/TC	EFST 190 XN/TC	EFST 190 XXN/TC	1.227 €	17

#### 4 High temperature filter elements for EX applications

	Price	Prod.- grp.				Price	Prod.- grp.
EFST 140 V5/EX	846 €	17	EFST 140 ZN/EX	EFST 140 XN/EX	EFST 140 XXN/EX	668 €	17
EFST 170 V5/EX	1.082 €	17	EFST 170 ZN/EX	EFST 170 XN/EX	EFST 170 XXN/EX	854 €	17
EFST 180 V5/EX	1.479 €	17	EFST 180 ZN/EX	EFST 180 XN/EX	EFST 180 XXN/EX	1.167 €	17
EFST 190 V5/EX	1.665 €	17	EFST 190 ZN/EX	EFST 190 XN/EX	EFST 190 XXN/EX	1.314 €	17

## Filtration

### Filter elements for FST filter housings

#### EFST - Filter elements for Industrial filter FCA, FMA, FMS series

##### 5 Water separator inserts

	Price	Prod.- grp.
EFST 30 W	70 €	11
EFST 90 W	134 €	11
EFST 120 W	194 €	11
EFST 140 W	290 €	11
EFST 180 W	506 €	11

	Price	Prod.- grp.
EFST 50 WHP	236 €	11
EFST 70 WHP	324 €	11
EFST 90 WHP	412 €	11
EFST 110 WHP	510 €	11

##### 6 Activated carbon cartridges

	Price	Prod.- grp.
EFST 50 CA	172 €	11
EFST 70 CA	235 €	11
EFST 90 CA	299 €	11
EFST 110 CA	370 €	11
EFST 120 CA	431 €	11
EFST 130 CA	537 €	11

##### 7 Desiccant cartridges

	Price	Prod.- grp.
EFST 90 CMS	270 €	11
EFST 110 CMS	333 €	11
EFST 120 CMS	388 €	11
EFST 130 CMS	484 €	11

#### EFST - Filter elements for process filter FWP series

##### 8 Industrial filtration grades

					Price	Prod.- grp.
EFSTP 90 V	EFSTP 90 ZN	EFSTP 90 XN	EFSTP 90 XXN	EFSTP 90 A	235 €	18
EFSTP 120 V	EFSTP 120 ZN	EFSTP 120 XN	EFSTP 120 XXN	EFSTP 120 A	275 €	18
EFSTP 140 V	EFSTP 140 ZN	EFSTP 140 XN	EFSTP 140 XXN	EFSTP 140 A	495 €	18
EFSTP 180 V	EFSTP 180 ZN	EFSTP 180 XN	EFSTP 180 XXN	EFSTP 180 A	555 €	18
EFSTP 190 V	EFSTP 190 ZN	EFSTP 190 XN	EFSTP 190 XXN	EFSTP 190 A	658 €	18

##### 9 Sterile filter element

	Price	Prod.- grp.		Price	Prod.- grp.		Price	Prod.- grp.
EFSTP 90 STPL	156 €	18	EFSTP 90 SMPL	281 €	18	EFSTP 90 ST	282 €	18
EFSTP 120 STPL	189 €	18	EFSTP 120 SMPL	341 €	18	EFSTP 120 ST	330 €	18
EFSTP 140 STPL	322 €	18	EFSTP 140 SMPL	580 €	18	EFSTP 140 ST	594 €	18
EFSTP 180 STPL	487 €	18	EFSTP 180 SMPL	877 €	18	EFSTP 180 ST	666 €	18
EFSTP 190 STPL	649 €	18	EFSTP 190 SMPL	1.169 €	18	EFSTP 190 ST	790 €	18

##### 10 Steam filter elements

	Price	Prod.- grp.		Price	Prod.- grp.
EFSTP 90 D25	289 €	19	EFSTP 90 D1	289 €	19
EFSTP 120 D25	345 €	19	EFSTP 120 D1	345 €	19
EFSTP 140 D25	525 €	19	EFSTP 140 D1	525 €	19
EFSTP 180 D25	799 €	19	EFSTP 180 D1	799 €	19
EFSTP 190 D25	989 €	19	EFSTP 190 D1	989 €	19

## Filtration

### Filter elements for ZANDER filter housings



#### Scope of supply

Filter element, sealed in a foil bag; additional single cardboard packing; transport packing is not included in the scope of supply and is charged separately.

#### Filtration grades

V	Coarse filtration (3μ)				
ZN	General purpose filtration (1μ)				
XN	Fine filtration (0,01μ)	XXN	Super fine filtration (0,01μ)		
A	Activated carbon element	CA	Activated carbon cartridge	CMS	Desiccant cartridge
STPL	Sterile depth filtration (0,01μ)	SMPL	Sterile membrane filtration (0,01μ)	ST	Sterile depth filtration (0,01μ)
D25	Steam filtration (25μ)	D1	Steam filtration (1μ)		

### EFST - Filter elements for ZANDER filter G, F series

#### 1 Standard filter elements

FST	ZANDER	FST	ZANDER	FST	ZANDER	FST	ZANDER	FST	ZANDER	Price	Prod.-grp.
EFST 25 V	1030 V	EFST 25 ZN	1030 ZP	EFST 25 XN	1030 XP	EFST 25 XXN	1030 XP4	EFST 25 A	1030 A	87 €	11
EFST 30 V	1050 V	EFST 30 ZN	1050 ZP	EFST 30 XN	1050 XP	EFST 30 XXN	1050 XP4	EFST 30 A	1050 A	107 €	11
EFST 50 V	1070 V	EFST 50 ZN	1070 ZP	EFST 50 XN	1070 XP	EFST 50 XXN	1070 XP4	EFST 50 A	1070 A	118 €	11
EFST 70 V	1140 V	EFST 70 ZN	1140 ZP	EFST 70 XN	1140 XP	EFST 70 XXN	1140 XP4	EFST 70 A	1140 A	162 €	11
EFST 90 V	2010 V	EFST 90 ZN	2010 ZP	EFST 90 XN	2010 XP	EFST 90 XXN	2010 XP4	EFST 90 A	2010 A	206 €	11
EFST 110 V	2020 V	EFST 110 ZN	2020 ZP	EFST 110 XN	2020 XP	EFST 110 XXN	2020 XP4	EFST 110 A	2020 A	255 €	11
EFST 120 V	2030 V	EFST 120 ZN	2030 ZP	EFST 120 XN	2030 XP	EFST 120 XXN	2030 XP4	EFST 120 A	2030 A	297 €	11
EFST 130 V	2050 V	EFST 130 ZN	2050 ZP	EFST 130 XN	2050 XP	EFST 130 XXN	2050 XP4	EFST 130 A	2050 A	370 €	11
EFST 140 V	3050 V	EFST 140 ZN	3050 ZP	EFST 140 XN	3050 XP	EFST 140 XXN	3050 XP4	EFST 140 A	3050 A	445 €	11
EFST 170 V	3075 V	EFST 170 ZN	3075 ZP	EFST 170 XN	3075 XP	EFST 170 XXN	3075 XP4	EFST 170 A	3075 A	569 €	11
EFST 180 V	5060 V	EFST 180 ZN	5060 ZP	EFST 180 XN	5060 XP	EFST 180 XXN	5060 XP4	EFST 180 A	5060 A	778 €	11
EFST 190 V	5075 V	EFST 190 ZN	5075 ZP	EFST 190 XN	5075 XP	EFST 190 XXN	5075 XP4	EFST 190 A	5075 A	876 €	11

#### 2 High temperature filter elements

FST	ZANDER	FST	ZANDER	FST	ZANDER	Price	Prod.-grp.
EFST 25 ZN/HT	1030 ZHTNX	EFST 25 XN/HT	1030 XHTNX	EFST 25 XXN/HT	1030 X4HTNX	105 €	17
EFST 30 ZN/HT	1050 ZHTNX	EFST 30 XN/HT	1050 XHTNX	EFST 30 XXN/HT	1050 X4HTNX	129 €	17
EFST 50 ZN/HT	1070 ZHTNX	EFST 50 XN/HT	1070 XHTNX	EFST 50 XXN/HT	1070 X4HTNX	142 €	17
EFST 70 ZN/HT	1140 ZHTNX	EFST 70 XN/HT	1140 XHTNX	EFST 70 XXN/HT	1140 X4HTNX	195 €	17
EFST 90 ZN/HT	2010 ZHTNX	EFST 90 XN/HT	2010 XHTNX	EFST 90 XXN/HT	2010 X4HTNX	248 €	17
EFST 110 ZN/HT	2020 ZHTNX	EFST 110 XN/HT	2020 XHTNX	EFST 110 XXN/HT	2020 X4HTNX	306 €	17
EFST 120 ZN/HT	2030 ZHTNX	EFST 120 XN/HT	2030 XHTNX	EFST 120 XXN/HT	2030 X4HTNX	357 €	17
EFST 130 ZN/HT	2050 ZHTNX	EFST 130 XN/HT	2050 XHTNX	EFST 130 XXN/HT	2050 X4HTNX	444 €	17
EFST 140 ZN/HT	3050 ZHTNX	EFST 140 XN/HT	3050 XHTNX	EFST 140 XXN/HT	3050 X4HTNX	534 €	17
EFST 170 ZN/HT	3075 ZHTNX	EFST 170 XN/HT	3075 XHTNX	EFST 170 XXN/HT	3075 X4HTNX	683 €	17
EFST 180 ZN/HT	5060 ZHTNX	EFST 180 XN/HT	5060 XHTNX	EFST 180 XXN/HT	5060 X4HTNX	934 €	17
EFST 190 ZN/HT	5075 ZHTNX	EFST 190 XN/HT	5075 XHTNX	EFST 190 XXN/HT	5075 X4HTNX	1.052 €	17

#### 3 High temperature / chemical resistant filter elements

FST	ZANDER	FST	ZANDER	FST	ZANDER	Price	Prod.-grp.
EFST 140 ZN/TC	3050 ZHTCR	EFST 140 XN/TC	3050 XHTCR	EFST 140 XXN/TC	3050 X4HTCR	623 €	17
EFST 170 ZN/TC	3075 ZHTCR	EFST 170 XN/TC	3075 XHTCR	EFST 170 XXN/TC	3075 X4HTCR	797 €	17
EFST 180 ZN/TC	5060 ZHTCR	EFST 180 XN/TC	5060 XHTCR	EFST 180 XXN/TC	5060 X4HTCR	1.090 €	17
EFST 190 ZN/TC	5075 ZHTCR	EFST 190 XN/TC	5075 XHTCR	EFST 190 XXN/TC	5075 X4HTCR	1.227 €	17

#### 4 Activated carbon cartridges

FST	ZANDER	Price	Prod.-grp.
EFST 50 CA	KT 1012 A	172 €	11
EFST 70 CA	KT 1019 A	235 €	11
EFST 90 CA	KT 2016 A	299 €	11
EFST 110 CA	KT 2023 A	370 €	11
EFST 120 CA	KT 2033 A	431 €	11
EFST 130 CA	KT 2053 A	537 €	11

#### 5 Desiccant cartridges

FST	ZANDER	Price	Prod.-grp.
EFST 90 CMS	KT 2016 M	270 €	11
EFST 110 CMS	KT 2023 M	333 €	11
EFST 120 CMS	KT 2033 M	388 €	11
EFST 130 CMS	KT 2053 M	484 €	11



## Filtration

### Filter elements for ZANDER filter housings

#### EFSTP, ERZA - Filter elements for ZANDER process filter S, G..ST series

##### 6 Industrial filtration grades

FST	ZANDER	FST	ZANDER	FST	ZANDER	FST	ZANDER	FST	ZANDER	Price	Prod.-grp.
EFSTP 90 V	V 09 T	EFSTP 90 ZN	ZP 09 T	EFSTP 90 XN	XP 09 T	EFSTP 90 XXN	XP4 09 T	EFSTP 90 A	A 09 T	235 €	18
EFSTP 120 V	V 13 T	EFSTP 120 ZN	ZP 13 T	EFSTP 120 XN	XP 13 T	EFSTP 120 XXN	XP4 13 T	EFSTP 120 A	A 13 T	275 €	18
EFSTP 140 V	V 14 T	EFSTP 140 ZN	ZP 14 T	EFSTP 140 XN	XP 14 T	EFSTP 140 XXN	XP4 14 T	EFSTP 140 A	A 14 T	495 €	18
EFSTP 180 V	V 18 T	EFSTP 180 ZN	ZP 18 T	EFSTP 180 XN	XP 18 T	EFSTP 180 XXN	XP4 18 T	EFSTP 180 A	A 18 T	555 €	18
EFSTP 190 V	V 19 T	EFSTP 190 ZN	ZP 19 T	EFSTP 190 XN	XP 19 T	EFSTP 190 XXN	XP4 19 T	EFSTP 190 A	A 19 T	658 €	18

##### 7 Sterile filter elements

FST	ZANDER	Price	Prod.-grp.	FST	ZANDER	Price	Prod.-grp.	FST	ZANDER	Price	Prod.-grp.
EFSTP 90 STPL	HB 09 T	156 €	18	EFSTP 90 SMPL	HM 09 T	281 €	18	EFSTP 90 ST	ST 09 T	282 €	18
EFSTP 120 STPL	HB 13 T	189 €	18	EFSTP 120 SMPL	HM 13 T	341 €	18	EFSTP 120 ST	ST 13 T	330 €	18
EFSTP 140 STPL	HB 14 T	322 €	18	EFSTP 140 SMPL	HM 14 T	580 €	18	EFSTP 140 ST	ST 14 T	594 €	18
EFSTP 180 STPL	HB 18 T	487 €	18	EFSTP 180 SMPL	HM 18 T	877 €	18	EFSTP 180 ST	ST 18 T	666 €	18
EFSTP 190 STPL	HB 19 T	649 €	18	EFSTP 190 SMPL	HM 19 T	1.169 €	18	EFSTP 190 ST	ST 19 T	790 €	18

FST	ZANDER	Price	Prod.-grp.
ERZA 1080 PST	ST-R 1080	186 €	18
ERZA 1160 PST	ST-R 1160	223 €	18
ERZA 2016 PST	ST-R 2016	302 €	18
ERZA 2026 PST	ST-R 2026	360 €	18
ERZA 2038 PST	ST-R 2038	451 €	18
ERZA 2055 PST	ST-R 2055	574 €	18
ERZA 3055 PST	ST-R 3055	710 €	18
ERZA 3080 PST	ST-R 3080	796 €	18

##### 8 Steam filter elements

FST	ZANDER	Price	Prod.-grp.	FST	ZANDER	Price	Prod.-grp.
EFSTP 90 D25	D 09 T 25µ	289 €	19	EFSTP 90 D1	D 09 T 1µ	289 €	19
EFSTP 120 D25	D 13 T 25µ	345 €	19	EFSTP 120 D1	D 13 T 1µ	345 €	19
EFSTP 140 D25	D 14 T 25µ	525 €	19	EFSTP 140 D1	D 14 T 1µ	525 €	19
EFSTP 180 D25	D 18 T 25µ	799 €	19	EFSTP 180 D1	D 18 T 1µ	799 €	19
EFSTP 190 D25	D 19 T 25µ	989 €	19	EFSTP 190 D1	D 19 T 1µ	989 €	19

#### ERZAE - Filter elements for (Parker) ZANDER filter GL series | DOMNICK-HUNTER filter Oil-X series

##### 9 Standard filter elements

FST	(Parker) ZR	FST	(Parker) ZR dh Oil-X	FST	(Parker) ZR dh Oil-X	FST	(Parker) ZR dh Oil-X	Price	Prod.-grp.
ERZAE 1008 V	CP 1008 VL	ERZAE 1008 ZN	CP 1008 ZL(P)	ERZAE 1008 XN	CP 1008 XL(P)	ERZAE 1008 A	CP 1008 A(P)	98 €	12
ERZAE 2010 V	CP 2010 VL	ERZAE 2010 ZN	CP 2010 ZL(P)	ERZAE 2010 XN	CP 2010 XL(P)	ERZAE 2010 A	CP 2010 A(P)	138 €	12
ERZAE 2020 V	CP 2020 VL	ERZAE 2020 ZN	CP 2020 ZL(P)	ERZAE 2020 XN	CP 2020 XL(P)	ERZAE 2020 A	CP 2020 A(P)	179 €	12
ERZAE 3025 V	CP 3025 VL	ERZAE 3025 ZN	CP 3025 ZL(P)	ERZAE 3025 XN	CP 3025 XL(P)	ERZAE 3025 A	CP 3025 A(P)	222 €	12
ERZAE 3040 V	CP 3040 VL	ERZAE 3040 ZN	CP 3040 ZL(P)	ERZAE 3040 XN	CP 3040 XL(P)	ERZAE 3040 A	CP 3040 A(P)	241 €	12
ERZAE 4040 V	CP 4040 VL	ERZAE 4040 ZN	CP 4040 ZL(P), P 035 AO	ERZAE 4040 XN	CP 4040 XL(P), P 035 AA	ERZAE 4040 A	CP 4040 A(P), P 035 ACS	278 €	12
ERZAE 4050 V	CP 4050 VL	ERZAE 4050 ZN	CP 4050 ZL(P), P 040 AO	ERZAE 4050 XN	CP 4050 XL(P), P 040 AA	ERZAE 4050 A	CP 4050 A(P), P 040 ACS	336 €	12
ERZAE 4065 V	CP 4065 VL	ERZAE 4065 ZN	CP 4065 ZL(P), P 045 AO	ERZAE 4065 XN	CP 4065 XL(P), P 045 AA	ERZAE 4065 A	CP 4065 A(P), P 045 ACS	463 €	12
ERZAE 5065 V	CP 5065 VL	ERZAE 5065 ZN	CP 5065 ZL(P), P 050 AO	ERZAE 5065 XN	CP 5065 XL(P), P 050 AA	ERZAE 5065 A	CP 5065 A(P), P 050 ACS	563 €	12
ERZAE 5080 V	CP 5080 VL	ERZAE 5080 ZN	CP 5080 ZL(P), P 055 AO	ERZAE 5080 XN	CP 5080 XL(P), P 055 AA	ERZAE 5080 A	CP 5080 A(P), P 055 ACS	731 €	12

Note: Size CP 4060 and ERDHE 200 are identical!; for Oil-X sizes P 010–P 030 see „ERDHE“ on page 43

For latest technical figures and information please refer to the relevant product data sheets, which are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

## Filtration

### Filter elements for DOMNICK-HUNTER filter housings



#### Scope of supply

Filter element, sealed in a foil bag; additional single cardboard packing; transport packing is not included in the scope of supply and is charged separately.

#### Filtration grades

V	Coarse filtration (3μ)				
ZN	General purpose filtration (1μ)				
XN	Fine filtration (0,01μ)	XXN	Super fine filtration (0,01μ)		
A	Activated carbon element	CA	Activated carbon cartridge	CHL	Catalyst Cartridge
STPL	Sterile depth filtration (0,01μ)	SMPL	Sterile membrane filtration (0,01μ)		
D25	Steam filtration (25μ)	D1	Steam filtration (1μ)		

### ERDH - Filter elements for DOMNICK-HUNTER filter Oil-X Plus series

#### 1 Standard filter elements

FST	dh	FST	dh	FST	dh	FST	dh	FST	dh	Price	Prod.-grp.
ERDH 009 V	K 009 PF	ERDH 009 ZN	K 009 AO	ERDH 009 XN	K 009 AA	ERDH 009 XXN	K 009 AX	ERDH 009 A	K 009 ACS	82 €	12
ERDH 017 V	K 017 PF	ERDH 017 ZN	K 017 AO	ERDH 017 XN	K 017 AA	ERDH 017 XXN	K 017 AX	ERDH 017 A	K 017 ACS	107 €	12
ERDH 030 V	K 030 PF	ERDH 030 ZN	K 030 AO	ERDH 030 XN	K 030 AA	ERDH 030 XXN	K 030 AX	ERDH 030 A	K 030 ACS	137 €	12
ERDH 058 V	K 058 PF	ERDH 058 ZN	K 058 AO	ERDH 058 XN	K 058 AA	ERDH 058 XXN	K 058 AX	ERDH 058 A	K 058 ACS	186 €	12
ERDH 145 V	K 145 PF	ERDH 145 ZN	K 145 AO	ERDH 145 XN	K 145 AA	ERDH 145 XXN	K 145 AX	ERDH 145 A	K 145 ACS	247 €	12
ERDH 220 V	K 220 PF	ERDH 220 ZN	K 220 AO	ERDH 220 XN	K 220 AA	ERDH 220 XXN	K 220 AX	ERDH 220 A	K 220 ACS	316 €	12
ERDH 330 V	K 330 PF	ERDH 330 ZN	K 330 AO	ERDH 330 XN	K 330 AA	ERDH 330 XXN	K 330 AX	ERDH 330 A	K 330 ACS	451 €	12
ERDH 430 V	K 430 PF	ERDH 430 ZN	K 430 AO	ERDH 430 XN	K 430 AA	ERDH 430 XXN	K 430 AX	ERDH 430 A	K 430 ACS	513 €	12
ERDH 620 V	K 620 PF	ERDH 620 ZN	K 620 AO	ERDH 620 XN	K 620 AA	ERDH 620 XXN	K 620 AX	ERDH 620 A	K 620 ACS	624 €	12

#### 2 High temperature filter elements

FST	dh	FST	dh	FST	dh	Price	Prod.-grp.
ERDH 009 ZN/HT	K 009 AOTS	ERDH 009 XN/HT	K 009 AATS	ERDH 009 XXN/HT	K 009 AXTS	99 €	17
ERDH 017 ZN/HT	K 017 AOTS	ERDH 017 XN/HT	K 017 AATS	ERDH 017 XXN/HT	K 017 AXTS	129 €	17
ERDH 030 ZN/HT	K 030 AOTS	ERDH 030 XN/HT	K 030 AATS	ERDH 030 XXN/HT	K 030 AXTS	165 €	17
ERDH 058 ZN/HT	K 058 AOTS	ERDH 058 XN/HT	K 058 AATS	ERDH 058 XXN/HT	K 058 AXTS	224 €	17
ERDH 145 ZN/HT	K 145 AOTS	ERDH 145 XN/HT	K 145 AATS	ERDH 145 XXN/HT	K 145 AXTS	297 €	17
ERDH 220 ZN/HT	K 220 AOTS	ERDH 220 XN/HT	K 220 AATS	ERDH 220 XXN/HT	K 220 AXTS	380 €	17
ERDH 330 ZN/HT	K 330 AOTS	ERDH 330 XN/HT	K 330 AATS	ERDH 330 XXN/HT	K 330 AXTS	542 €	17
ERDH 430 ZN/HT	K 430 AOTS	ERDH 430 XN/HT	K 430 AATS	ERDH 430 XXN/HT	K 430 AXTS	616 €	17
ERDH 620 ZN/HT	K 620 AOTS	ERDH 620 XN/HT	K 620 AATS	ERDH 620 XXN/HT	K 620 AXTS	749 €	17

#### 3 High temperature / chemical resistant filter elements

FST	dh	FST	dh	FST	dh	Price	Prod.-grp.
ERDH 145 ZN/TC	K 145 AOSS	ERDH 145 XN/TC	K 145 AASS	ERDH 145 XXN/TC	K 145 AXSS	346 €	17
ERDH 220 ZN/TC	K 220 AOSS	ERDH 220 XN/TC	K 220 AASS	ERDH 220 XXN/TC	K 220 AXSS	443 €	17
ERDH 330 ZN/TC	K 330 AOSS	ERDH 330 XN/TC	K 330 AASS	ERDH 330 XXN/TC	K 330 AXSS	632 €	17
ERDH 620 ZN/TC	K 620 AOSS	ERDH 620 XN/TC	K 620 AASS	ERDH 620 XXN/TC	K 620 AXSS	874 €	17

#### 4 Activated carbon cartridges

FST	dh	Price	Prod.-grp.
ERDH 006 CA	K 006 AC	100 €	12
ERDH 013 CA	K 013 AC	112 €	12
ERDH 025 CA	K 025 AC	118 €	12
ERDH 040 CA	K 040 AC	193 €	12
ERDH 065 CA	K 065 AC	241 €	12
ERDH 085 CA	K 085 AC	302 €	12

#### 5 Catalyst cartridges

FST	dh	Price	Prod.-grp.
ERDH 013 CHL	K 013 HC	365 €	12
ERDH 040 CHL	K 040 HC	586 €	12

#### 6 Control air filter element

FST	dh	Price	Prod.-grp.
ERDH 003 XN	K 003 AA	75 €	12

## Filtration

### Filter elements for DOMNICK-HUNTER filter housings

#### ERDHE - Filter elements for DOMNICK-HUNTER filter Oil-X Evolution | Oil-X series

##### 7 Standard filter elements

FST	dh	FST	Evo Oil-X	FST	Evo Oil-X	FST	Evo Oil-X	Price	Prod.-grp.
ERDHE 005 V	---	ERDHE 005 ZN	005 AO	ERDHE 005 XN	005 AA	ERDHE 005 A	005 ACS	79 €	12
ERDHE 010 V	---	ERDHE 010 ZN	010 AO, P 010 AO	ERDHE 010 XN	010 AA, P 010 AA	ERDHE 010 A	010 ACS, P 010 ACS	92 €	12
ERDHE 015 V	---	ERDHE 015 ZN	015 AO, P 015 AO	ERDHE 015 XN	015 AA, P 015 AA	ERDHE 015 A	015 ACS, P 015 ACS	143 €	12
ERDHE 020 V	---	ERDHE 020 ZN	020 AO, P 020 AO	ERDHE 020 XN	020 AA, P 020 AA	ERDHE 020 A	020 ACS, P 020 ACS	164 €	12
ERDHE 025 V	---	ERDHE 025 ZN	025 AO, P 025 AO	ERDHE 025 XN	025 AA, P 025 AA	ERDHE 025 A	025 ACS, P 025 ACS	203 €	12
ERDHE 030 V	---	ERDHE 030 ZN	030 AO, P 030 AO	ERDHE 030 XN	030 AA, P 030 AA	ERDHE 030 A	030 ACS, P 030 ACS	242 €	12
ERDHE 035 V	---	ERDHE 035 ZN	035 AO	ERDHE 035 XN	035 AA	ERDHE 035 A	035 ACS	276 €	12
ERDHE 040 V	---	ERDHE 040 ZN	040 AO	ERDHE 040 XN	040 AA	ERDHE 040 A	040 ACS	337 €	12
ERDHE 045 V	---	ERDHE 045 ZN	045 AO	ERDHE 045 XN	045 AA	ERDHE 045 A	045 ACS	465 €	12
ERDHE 050 V	---	ERDHE 050 ZN	050 AO	ERDHE 050 XN	050 AA	ERDHE 050 A	050 ACS	563 €	12
ERDHE 055 V	---	ERDHE 055 ZN	055 AO	ERDHE 055 XN	055 AA	ERDHE 055 A	055 ACS	731 €	12
ERDHE 100 V	---	ERDHE 100 ZN	100 AO	ERDHE 100 XN	100 AA	ERDHE 100 A	100 ACS	395 €	12
ERDHE 150 V	---	ERDHE 150 ZN	150 AO	ERDHE 150 XN	150 AA	ERDHE 150 A	150 ACS	482 €	12
ERDHE 200 V	---	ERDHE 200 ZN	200 AO	ERDHE 200 XN	200 AA	ERDHE 200 A	200 ACS	717 €	12
ERDHE 060 V	---	ERDHE 060 ZN	060 AO	ERDHE 060 XN	060 AA	ERDHE 060 A	060 ACS	467 €	12

Note: for Oil-X sizes P 035–P 055 see „ERZAE“ on page 41; ERDHE filter elements are also available with filtration grade XXN

##### 8 Activated carbon cartridges

FST	dh Oil-X	Price	Prod.-grp.
ERDHE 010 CA	010 AC, P 010 AC	96 €	12
ERDHE 015 CA	015 AC, P 015 AC	123 €	12
ERDHE 020 CA	020 AC, P 020 AC	145 €	12
ERDHE 025 CA	025 (D)AC, P 010 AC	199 €	12
ERDHE 025 ECA	025 EAC	199 €	12
ERDHE 030 CA	030AC, P 010 AC	249 €	12

#### EFSTP - Filter elements for DOMNICK-HUNTER process filter VBA series

##### 9 Sterile filter elements

FST	dh	Price	Prod.-grp.
EFSTP 90 STPL	ZCHB-BT	156 €	18
EFSTP 120 STPL	ZCHB-AT	189 €	18
EFSTP 140 STPL	ZCHB-1C	322 €	18
EFSTP 180 STPL	ZCHB-2C	487 €	18
EFSTP 190 STPL	ZCHB-3C	649 €	18

FST	dh	Price	Prod.-grp.
EFSTP 90 SMPL	ZHFT/BT-E	281 €	18
EFSTP 120 SMPL	ZHFT/AT-E	341 €	18
EFSTP 140 SMPL	ZHFT/1C-E	580 €	18
EFSTP 180 SMPL	ZHFT/2C-E	877 €	18
EFSTP 190 SMPL	ZHFT/3C-E	1.169 €	18

##### 10 Steam filter elements

FST	dh	Price	Prod.-grp.
EFSTP 90 D25	ZCSSB-025T	289 €	19
EFSTP 120 D25	ZCSSA-025T	345 €	19
EFSTP 140 D25	ZCSS1-025T	525 €	19
EFSTP 180 D25	ZCSS2-025T	799 €	19
EFSTP 190 D25	ZCSS3-025T	989 €	19

FST	dh	Price	Prod.-grp.
EFSTP 90 D1	ZCSSB-001T	289 €	19
EFSTP 120 D1	ZCSSA-001T	345 €	19
EFSTP 140 D1	ZCSS1-001T	525 €	19
EFSTP 180 D1	ZCSS2-001T	799 €	19
EFSTP 190 D1	ZCSS3-001T	989 €	19

For latest technical figures and information please refer to the relevant product data sheets, which are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

## Filtration

Filter elements for ATLAS-COPCO, BEKO filter housings



### Scope of supply

Filter element, sealed in a foil bag; additional single cardboard packing; transport packing is not included in the scope of supply and is charged separately.

### Filtration grades

V	Coarse filtration (3μ)			
ZN, ZF	General purpose filtration (1μ)			
XN, XF	Fine filtration (0,01μ)	XXN	Super fine filtration (0,01μ)	
A	Activated carbon element			

## ERAC - Filter elements for ATLAS-COPCO filter

### Standard filter elements

FST	AC	FST	AC	FST	AC	FST	AC	FST	AC	Price	Prod.-grp.
ERAC 009 V	---	ERAC 009 ZN	DD(p) 9	ERAC 009 XN	PD 9	ERAC 009 XXN	---	ERAC 009 A	QD 9	82 €	14
ERAC 017 V	---	ERAC 017 ZN	DD(p) 17	ERAC 017 XN	PD 17	ERAC 017 XXN	---	ERAC 017 A	QD 17	107 €	14
ERAC 032 V	---	ERAC 032 ZN	DD(p) 32	ERAC 032 XN	PD 32	ERAC 032 XXN	---	ERAC 032 A	QD 32	149 €	14
ERAC 044 V	---	ERAC 044 ZN	DD(p) 44	ERAC 044 XN	PD 44	ERAC 044 XXN	---	ERAC 044 A	QD 44	174 €	14
ERAC 060 V	---	ERAC 060 ZN	DD(p) 60	ERAC 060 XN	PD 60	ERAC 060 XXN	---	ERAC 060 A	QD 60	211 €	14
ERAC 120 V	---	ERAC 120 ZN	DD(p) 120	ERAC 120 XN	PD 120	ERAC 120 XXN	---	ERAC 120 A	QD 120	266 €	14
ERAC 150 V	---	ERAC 150 ZN	DD(p) 150	ERAC 150 XN	PD 150	ERAC 150 XXN	---	ERAC 150 A	QD 150	291 €	14
ERAC 175 V	---	ERAC 175 ZN	DD(p) 175	ERAC 175 XN	PD 175	ERAC 175 XXN	---	ERAC 175 A	QD 175	310 €	14
ERAC 260 V	---	ERAC 260 ZN	DD(p) 260	ERAC 260 XN	PD 260	ERAC 260 XXN	---	ERAC 260 A	QD 260	401 €	14
ERAC 390 V	---	ERAC 390 ZN	DD(p) 390	ERAC 390 XN	PD 390	ERAC 390 XXN	---	ERAC 390 A	QD 390	525 €	14
ERAC 520 V	---	ERAC 520 ZN	DD(p) 520	ERAC 520 XN	PD 520	ERAC 520 XXN	---	ERAC 520 A	QD 520	642 €	14
ERACF 520 V	---	ERACF 520 ZN	DD(p) 520 F	ERACF 520 XN	PD 520 F	ERACF 520 XXN	---	ERACF 520 A	QD 520 F	611 €	14
ERACF 780 V	---	ERACF 780 ZN	DD(p) 780 F	ERACF 780 XN	PD 780 F	ERACF 780 XXN	---	ERACF 780 A	QD 780 F	532 €	14
ERACF 850 V	---	ERACF 850 ZN	DD(p) 850 F	ERACF 850 XN	PD 850 F	ERACF 850 XXN	---	ERACF 850 A	QD 850 F	565 €	14

Note: size 260 and 280 are identical!

## ERBE - Filter elements for BEKO filters

### Standard filter elements

FST	Beko	FST	Beko	FST	Beko	FST	Beko	Price	Prod.-grp.
---	04 C, CX	ERBE 04 ZN	04 G, F, FX	ERBE 04 XN	04 S, N, SX	ERBE 04 A	04 A	85 €	15
---	05 C, CX	ERBE 05 ZN	05 G, F, FX	ERBE 05 XN	05 S, N, SX	ERBE 05 A	05 A	130 €	15
---	06 C, CX	ERBE 06 ZN	06 G, F, FX	ERBE 06 XN	06 S, N, SX	ERBE 06 A	06 A	152 €	15
---	07 C, CX	ERBE 07 ZN	07 G, F, FX	ERBE 07 XN	07 S, N, SX	ERBE 07 A	07 A	158 €	15
---	10 C, CX	ERBE 10 ZN	10 G, F, FX	ERBE 10 XN	10 S, N, SX	ERBE 10 A	10 A	172 €	15
---	12 C, CX	ERBE 12 ZN	12 G, F, FX	ERBE 12 XN	12 S, N, SX	ERBE 12 A	12 A	194 €	15
---	15 C, CX	ERBE 15 ZN	15 G, F, FX	ERBE 15 XN	15 S, N, SX	ERBE 15 A	15 A	237 €	15
---	18 C, CX	ERBE 18 ZN	18 G, F, FX	ERBE 18 XN	18 S, N, SX	ERBE 18 A	18 A	261 €	15
---	20 C, CX	ERBE 20 ZN	20 G, F, FX	ERBE 20 XN	20 S, N, SX	ERBE 20 A	20 A	303 €	15
---	22 C, CX	ERBE 22 ZN	22 G, F, FX	ERBE 22 XN	22 S, N, SX	ERBE 22 A	22 A	387 €	15
---	23 C, CX	ERBE 23 ZN	23 G, F, FX	ERBE 23 XN	23 S, N, SX	ERBE 23 A	23 A	472 €	15
---	25 C, CX	ERBE 25 ZN	25 G, F, FX	ERBE 25 XN	25 S, N, SX	ERBE 25 A	25 A	510 €	15
---	27 C, CX	ERBE 27 ZN	27 G, F, FX	ERBE 27 XN	27 S, N, SX	ERBE 27 A	27 A	543 €	15
---	30 C, CX	ERBE 30 ZN	30 G, F, FX	ERBE 30 XN	30 S, N, SX	ERBE 30 A	30 A	743 €	15
---	32 C, CX	ERBE 32 ZN	32 G, F, FX	ERBE 32 XN	32 S, N, SX	ERBE 32 A	32 A	912 €	15

Note: Size 88 is identical to ERWK 88

## Filtration

Filter elements for HANKISON, HIROSS, OMEGA AIR filter housings

### ERHK - Filter elements for HANKISON filter HF series

#### Standard filter elements

FST	Hankison	FST	Hankison	FST	Hankison	FST	Hankison	FST	Hankison	Price	Prod.-grp.
ERHK 012 V	E9-12	ERHK 012 ZN	E7-12	ERHK 012 XN	E5-12	ERHK 012 XXN	E3-12	ERHK 012 A	E1-12	88 €	15
ERHK 016 V	E9-16	ERHK 016 ZN	E7-16	ERHK 016 XN	E5-16	ERHK 016 XXN	E3-16	ERHK 016 A	E1-16	112 €	15
ERHK 020 V	E9-20	ERHK 020 ZN	E7-20	ERHK 020 XN	E5-20	ERHK 020 XXN	E3-20	ERHK 020 A	E1-20	137 €	15
ERHK 024 V	E9-24	ERHK 024 ZN	E7-24	ERHK 024 XN	E5-24	ERHK 024 XXN	E3-24	ERHK 024 A	E1-24	174 €	15
ERHK 028 V	E9-28	ERHK 028 ZN	E7-28	ERHK 028 XN	E5-28	ERHK 028 XXN	E3-28	ERHK 028 A	E1-28	216 €	15
ERHK 032 V	E9-32	ERHK 032 ZN	E7-32	ERHK 032 XN	E5-32	ERHK 032 XXN	E3-32	ERHK 032 A	E1-32	241 €	15
ERHK 036 V	E9-36	ERHK 036 ZN	E7-36	ERHK 036 XN	E5-36	ERHK 036 XXN	E3-36	ERHK 036 A	E1-36	302 €	15
ERHK 040 V	E9-40	ERHK 040 ZN	E7-40	ERHK 040 XN	E5-40	ERHK 040 XXN	E3-40	ERHK 040 A	E1-40	360 €	15
ERHK 044 V	E9-44	ERHK 044 ZN	E7-44	ERHK 044 XN	E5-44	ERHK 044 XXN	E3-44	ERHK 044 A	E1-44	408 €	15
ERHK 048 V	E9-48	ERHK 048 ZN	E7-48	ERHK 048 XN	E5-48	ERHK 048 XXN	E3-48	ERHK 048 A	E1-48	445 €	15
ERHK 052 V	E9-52	ERHK 052 ZN	E7-52	ERHK 052 XN	E5-52	ERHK 052 XXN	E3-52	ERHK 052 A	E1-52	516 €	15
ERHK 054 V	E9-54	ERHK 054 ZN	E7-54	ERHK 054 XN	E5-54	ERHK 054 XXN	E3-54	ERHK 054 A	E1-54	505 €	15

Note: size 52 and PV are identical!

### ERHI - Filter elements for HIROSS filter

#### Standard filter elements

FST	Hiross	FST	Hiross	FST	Hiross	FST	Hiross	Price	Prod.-grp.
ERHI 005 V	Q 005	ERHI 005 ZF	P 005	ERHI 005 XF	S 005	ERHI 005 A	C 005	50 €	15
ERHI 010 V	Q 010,006,004	ERHI 010 ZF	P 010,006,004	ERHI 010 XF	S 010,006,004	ERHI 010 A	C 010,006,004	57 €	15
ERHI 016 V	Q 016,009,007	ERHI 016 ZF	P 016,009,007	ERHI 016 XF	S 016,009,007	ERHI 016 A	C 016,009,007	70 €	15
ERHI 022 V	Q 022,020,015	ERHI 022 ZF	P 022,020,015	ERHI 022 XF	S 022,020,015	ERHI 022 A	C 022,020,015	82 €	15
ERHI 030 V	Q 030,024	ERHI 030 ZF	P 030,024	ERHI 030 XF	S 030,024	ERHI 030 A	C 030,024	94 €	15
ERHI 045 V	Q 045,035	ERHI 045 ZF	P 045,035	ERHI 045 XF	S 045,035	ERHI 045 A	C 045,035	107 €	15
ERHI 072 V	Q 072,060	ERHI 072 ZF	P 072,060	ERHI 072 XF	S 072,060	ERHI 072 A	C 072,060	137 €	15
ERHI 135 V	Q 135,110,090	ERHI 135 ZF	P 135,110,090	ERHI 135 XF	S 135,110,090	ERHI 135 A	C 135,110,090	162 €	15
ERHI 175 V	Q 175	ERHI 175 ZF	P 175	ERHI 175 XF	S 175	ERHI 175 A	C 175	231 €	15
ERHI 205 V	Q 205,151,120	ERHI 205 ZF	P 205,151,120	ERHI 205 XF	S 205,151,120	ERHI 205 A	C 205,151,120	340 €	15
ERHI 250 V	Q 250,180,150	ERHI 250 ZF	P 250,180,150	ERHI 250 XF	S 250,180,150	ERHI 250 A	C 250,180,150	385 €	15
ERHI 280 V	Q 280,240	ERHI 280 ZF	P 280,240	ERHI 280 XF	S 280,240	ERHI 280 A	C 280,240	482 €	15
ERHI 300 V	Q 300	ERHI 300 ZF	P 300	ERHI 300 XF	S 300	ERHI 300 A	C 300	488 €	15

### EROA - Filter elements for OMEGA-AIR filter

#### Standard filter elements

FST	OMEGA-AIR	FST	OMEGA-AIR	FST	OMEGA-AIR	FST	OMEGA-AIR	Price	Prod.-grp.
EROA-06050P-V	06050 P	EROA-06050M-ZF	06050 M	EROA-06050S-XF	06050 S	EROA-06050A-A	06050 A	50 €	16
EROA-07050P-V	07050 P	EROA-07050M-ZF	07050 M	EROA-07050S-XF	07050 S	EROA-07050A-A	07050 A	62 €	16
EROA-14050P-V	14050 P	EROA-14050M-ZF	14050 M	EROA-14050S-XF	14050 S	EROA-14050A-A	14050 A	75 €	16
EROA-12075P-V	12075 P	EROA-12075M-ZF	12075 M	EROA-12075S-XF	12075 S	EROA-12075A-A	12075 A	94 €	16
EROA-22075P-V	22075 P	EROA-22075M-ZF	22075 M	EROA-22075S-XF	22075 S	EROA-22075A-A	22075 A	118 €	16
EROA-32075P-V	32075 P	EROA-32075M-ZF	32075 M	EROA-32075S-XF	32075 S	EROA-32075A-A	32075 A	143 €	16
EROA-50075P-V	50075 P	EROA-50075M-ZF	50075 M	EROA-50075S-XF	50075 S	EROA-50075A-A	50075 A	181 €	16
EROA-51090P-V	51090 P	EROA-51090M-ZF	51090 M	EROA-51090S-XF	51090 S	EROA-51090A-A	51090 A	255 €	16
EROA-76090P-V	76090 P	EROA-76090M-ZF	76090 M	EROA-76090S-XF	76090 S	EROA-76090A-A	76090 A	310 €	16
EROA-51140P-V	51140 P	EROA-51140M-ZF	51140 M	EROA-51140S-XF	51140 S	EROA-51140A-A	51140 A	391 €	16
EROA-75140P-V	75140 P	EROA-75140M-ZF	75140 M	EROA-75140S-XF	75140 S	EROA-75140A-A	75140 A	452 €	16

For latest technical figures and information please refer to the relevant product data sheets, which are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

## Filtration

Filter elements for OMI, ULTRAFILTER/DONALDSON filter housings



### Scope of supply

Filter element, sealed in a foil bag; additional single cardboard packing; transport packing is not included in the scope of supply and is charged separately.

### Filtration grades

V	Coarse filtration (3μ)				
ZN	General purpose filtration (1μ)				
XN	Fine filtration (0,01μ)	XXN	Super fine filtration (0,01μ)		
A	Activated carbon element				
STPL	Sterile depth filtration	SMPL	Sterile membrane filtration(0,01μ)	ST	Sterile depth filtration (0,01μ)
D25	Steam filtration (25μ)	D1	Steam filtration (1μ)	STBE	Sterile depth filtration (0,01μ)

## EROM - Filter elements for OMI filter

### Standard filter elements

FST	OMI	FST	OMI	FST	OMI	FST	OMI	Price	Prod.-grp.
EROM-0004QF-V	0004 QF	EROM-0004PF-ZF	0004 PF	EROM-0004HF-XF	0004 HF	EROM-0004CF-A	0004 CF	57 €	16
EROM-0008QF-V	0008 QF	EROM-0008PF-ZF	0008 PF	EROM-0008HF-XF	0008 HF	EROM-0008CF-A	0008 CF	70 €	16
EROM-0016QF-V	0016 QF	EROM-0016PF-ZF	0016 PF	EROM-0016HF-XF	0016 HF	EROM-0016CF-A	0016 CF	75 €	16
EROM-0030QF-V	0030 QF	EROM-0030PF-ZF	0030 PF	EROM-0030HF-XF	0030 HF	EROM-0030CF-A	0030 CF	82 €	16
EROM-0025QF-V	0025 QF	EROM-0025PF-ZF	0025 PF	EROM-0025HF-XF	0025 HF	EROM-0025CF-A	0025 CF	87 €	16
EROM-0036QF-V	0036 QF	EROM-0036PF-ZF	0036 PF	EROM-0036HF-XF	0036 HF	EROM-0036CF-A	0036 CF	94 €	16
EROM-0072QF-V	0072 QF	EROM-0072PF-ZF	0072 PF	EROM-0072HF-XF	0072 HF	EROM-0072CF-A	0072 CF	107 €	16
EROM-0060QF-V	0060 QF	EROM-0060PF-ZF	0060 PF	EROM-0060HF-XF	0060 HF	EROM-0060CF-A	0060 CF	118 €	16
EROM-0070QF-V	0070 QF	EROM-0070PF-ZF	0070 PF	EROM-0070HF-XF	0070 HF	EROM-0070CF-A	0070 CF	132 €	16
EROM-0090QF-V	0090 QF	EROM-0090PF-ZF	0090 PF	EROM-0090HF-XF	0090 HF	EROM-0090CF-A	0090 CF	156 €	16
EROM-0120QF-V	0120 QF	EROM-0120PF-ZF	0120 PF	EROM-0120HF-XF	0120 HF	EROM-0120CF-A	0120 CF	199 €	16
EROM-0190QF-V	0190 QF	EROM-0190PF-ZF	0190 PF	EROM-0190HF-XF	0190 HF	EROM-0190CF-A	0190 CF	231 €	16
EROM-0185QF-V	0185 QF	EROM-0185PF-ZF	0185 PF	EROM-0185HF-XF	0185 HF	EROM-0185CF-A	0185 CF	279 €	16
EROM-0280QF-V	0280 QF	EROM-0280PF-ZF	0280 PF	EROM-0280HF-XF	0280 HF	EROM-0280CF-A	0280 CF	352 €	16
EROM-0350QF-V	0350 QF	EROM-0350PF-ZF	0350 PF	EROM-0350HF-XF	0350 HF	EROM-0350CF-A	0350 CF	401 €	16
EROM-0440QF-V	0440 QF	EROM-0440PF-ZF	0440 PF	EROM-0440HF-XF	0440 HF	EROM-0440CF-A	0440 CF	464 €	16

## ERUF - Filter elements for ULTRAFILTER/DONALDSON 80 series filter

### 1 Standard filter elements

FST	ultrafilter	FST	ultrafilter	FST	ultrafilter	ultrafilter	Price	Prod.-grp.
ERUF 03/1 V	VP-E 03/1	ERUF 03/1 ZN	FF 03/1	ERUF 03/1 XN	MF 03/1	SMF 03/1	87 €	15
ERUF 03/1,5 V	VP-E 03/1,5	ERUF 03/1,5 ZN	FF 03/1,5	ERUF 03/1,5 XN	MF 03/1,5	SMF 03/1,5	100 €	15
ERUF 04/1,5 V	VP-E 04/1,5	ERUF 04/1,5 ZN	FF 04/1,5	ERUF 04/1,5 XN	MF 04/1,5	SMF 04/1,5	118 €	15
ERUF 04/2,5 V	VP-E 04/2,5	ERUF 04/2,5 ZN	FF 04/2,5	ERUF 04/2,5 XN	MF 04/2,5	SMF 04/2,5	143 €	15
ERUF 05/2,5 V	VP-E 05/2,5	ERUF 05/2,5 ZN	FF 05/2,5	ERUF 05/2,5 XN	MF 05/2,5	SMF 05/2,5	174 €	15
ERUF 05/3 V	VP-E 05/3	ERUF 05/3 ZN	FF 05/3	ERUF 05/3 XN	MF 05/3	SMF 05/3	211 €	15
ERUF 10/3 V	VP-E 10/3	ERUF 10/3 ZN	FF 10/3	ERUF 10/3 XN	MF 10/3	SMF 10/3	279 €	15
ERUF 15/3 V	VP-E 15/3	ERUF 15/3 ZN	FF 15/3	ERUF 15/3 XN	MF 15/3	SMF 15/3	365 €	15
ERUF 20/3 V	VP-E 20/3	ERUF 20/3 ZN	FF 20/3	ERUF 20/3 XN	MF 20/3	SMF 20/3	432 €	15
ERUF 30/3 V	VP-E 30/3	ERUF 30/3 ZN	FF 30/3	ERUF 30/3 XN	MF 30/3	SMF 30/3	556 €	15
ERUF 30/5 V	V-PE 30/5	ERUF 30/5 ZN	FF 30/5	ERUF 30/5 XN	MF 30/5	SMF 30/5	735 €	15

FST	ultrafilter	FST	ultrafilter	Price	Prod.-grp.
ERUF 03/1 XXN	---	ERUF 03/1 A	A 03/1	87 €	15
ERUF 03/1,5 XXN	---	ERUF 03/1,5 A	A 03/1,5	100 €	15
ERUF 04/1,5 XXN	---	ERUF 04/1,5 A	A 04/1,5	118 €	15
ERUF 04/2,5 XXN	---	ERUF 04/2,5 A	A 04/2,5	143 €	15
ERUF 05/2,5 XXN	---	ERUF 05/2,5 A	A 05/2,5	174 €	15
ERUF 05/3 XXN	---	ERUF 05/3 A	A 05/3	211 €	15
ERUF 10/3 XXN	---	ERUF 10/3 A	A 10/3	279 €	15
ERUF 15/3 XXN	---	ERUF 15/3 A	A 15/3	365 €	15
ERUF 20/3 XXN	---	ERUF 20/3 A	A 20/3	432 €	15
ERUF 30/3 XXN	---	ERUF 30/3 A	A 30/3	556 €	15
ERUF 30/5 XXN	---	ERUF 30/5 A	A 30/5	735 €	15

## Filtration

### Filter elements for ULTRAFILTER/DONALDSON filter housings

#### ERUF - Filter elements for ULTRAFILTER/DONALDSON 90 series filter

##### 2 Standard filter elements

FST	ultrafilter	FST	ultrafilter	FST	ultrafilter	ultrafilter	Price	Prod.-grp.
ERUF 02/05 V	VP-E 02/05	ERUF 02/05 ZN	FF 02/05	ERUF 02/05 XN	MF 02/05	SMF 02/05	62 €	13
ERUF 03/05 V	VP-E 03/05	ERUF 03/05 ZN	FF 03/05	ERUF 03/05 XN	MF 03/05	SMF 03/05	70 €	13
ERUF 03/10 V	VP-E 03/10	ERUF 03/10 ZN	FF 03/10	ERUF 03/10 XN	MF 03/10	SMF 03/10	82 €	13
ERUF 04/10 V	VP-E 04/10	ERUF 04/10 ZN	FF 04/10	ERUF 04/10 XN	MF 04/10	SMF 04/10	94 €	13
ERUF 04/20 V	VP-E 04/20	ERUF 04/20 ZN	FF 04/20	ERUF 04/20 XN	MF 04/20	SMF 04/20	107 €	13
ERUF 05/20 V	VP-E 05/20	ERUF 05/20 ZN	FF 05/20	ERUF 05/20 XN	MF 05/20	SMF 05/20	124 €	13
ERUF 05/25 V	VP-E 05/25	ERUF 05/25 ZN	FF 05/25	ERUF 05/25 XN	MF 05/25	SMF 05/25	156 €	13
ERUF 07/25 V	VP-E 07/25	ERUF 07/25 ZN	FF 07/25	ERUF 07/25 XN	MF 07/25	SMF 07/25	193 €	13
ERUF 07/30 V	VP-E 07/30	ERUF 07/30 ZN	FF 07/30	ERUF 07/30 XN	MF 07/30	SMF 07/30	247 €	13
ERUF 10/30 V	VP-E 10/30	ERUF 10/30 ZN	FF 10/30	ERUF 10/30 XN	MF 10/30	SMF 10/30	297 €	13
ERUF 15/30 V	VP-E 15/30	ERUF 15/30 ZN	FF 15/30	ERUF 15/30 XN	MF 15/30	SMF 15/30	377 €	13
ERUF 20/30 V	VP-E 20/30	ERUF 20/30 ZN	FF 20/30	ERUF 20/30 XN	MF 20/30	SMF 20/30	457 €	13
ERUF 30/30 V	VP-E 30/30	ERUF 30/30 ZN	FF 30/30	ERUF 30/30 XN	MF 30/30	SMF 30/30	556 €	13
ERUF 30/50 V	VP-E 30/50	ERUF 30/50 ZN	FF 30/50	ERUF 30/50 XN	MF 30/50	SMF 30/50	710 €	13

FST	ultrafilter	FST	ultrafilter	Price	Prod.-grp.
ERUF 02/05 XXN	---	ERUF 02/05 A	AK 02/05	62 €	13
ERUF 03/05 XXN	---	ERUF 03/05 A	AK 03/05	70 €	13
ERUF 03/10 XXN	---	ERUF 03/10 A	AK 03/10	82 €	13
ERUF 04/10 XXN	---	ERUF 04/10 A	AK 04/10	94 €	13
ERUF 04/20 XXN	---	ERUF 04/20 A	AK 04/20	107 €	13
ERUF 05/20 XXN	---	ERUF 05/20 A	AK 05/20	124 €	13
ERUF 05/25 XXN	---	ERUF 05/25 A	AK 05/25	156 €	13
ERUF 07/25 XXN	---	ERUF 07/25 A	AK 07/25	193 €	13
ERUF 07/30 XXN	---	ERUF 07/30 A	AK 07/30	247 €	13
ERUF 10/30 XXN	---	ERUF 10/30 A	AK 10/30	297 €	13
ERUF 15/30 XXN	---	ERUF 15/30 A	AK 15/30	377 €	13
ERUF 20/30 XXN	---	ERUF 20/30 A	AK 20/30	457 €	13
ERUF 30/30 XXN	---	ERUF 30/30 A	AK 30/30	556 €	13
ERUF 30/50 XXN	---	ERUF 30/50 A	AK 30/50	710 €	13

##### 3 High temperature filter elements

FST	ultrafilter	FST	ultrafilter	ultrafilter	FST	ultrafilter	Price	Prod.-grp.
ERUF 02/05 ZN/HT	FF 02/05 HTNX	ERUF 02/05 XN/HT	MF 02/05 HTNX	SMF 02/05 HTNX	ERUF 02/05 XXN/HT	---	75 €	17
ERUF 03/05 ZN/HT	FF 03/05 HTNX	ERUF 03/05 XN/HT	MF 03/05 HTNX	SMF 03/05 HTNX	ERUF 03/05 XXN/HT	---	84 €	17
ERUF 03/10 ZN/HT	FF 03/10 HTNX	ERUF 03/10 XN/HT	MF 03/10 HTNX	SMF 03/10 HTNX	ERUF 03/10 XXN/HT	---	99 €	17
ERUF 04/10 ZN/HT	FF 04/10 HTNX	ERUF 04/10 XN/HT	MF 04/10 HTNX	SMF 04/10 HTNX	ERUF 04/10 XXN/HT	---	113 €	17
ERUF 04/20 ZN/HT	FF 04/20 HTNX	ERUF 04/20 XN/HT	MF 04/20 HTNX	SMF 04/20 HTNX	ERUF 04/20 XXN/HT	---	129 €	17
ERUF 05/20 ZN/HT	FF 05/20 HTNX	ERUF 05/20 XN/HT	MF 05/20 HTNX	SMF 05/20 HTNX	ERUF 05/20 XXN/HT	---	149 €	17
ERUF 05/25 ZN/HT	FF 05/25 HTNX	ERUF 05/25 XN/HT	MF 05/25 HTNX	SMF 05/25 HTNX	ERUF 05/25 XXN/HT	---	188 €	17
ERUF 07/25 ZN/HT	FF 07/25 HTNX	ERUF 07/25 XN/HT	MF 07/25 HTNX	SMF 07/25 HTNX	ERUF 07/25 XXN/HT	---	232 €	17
ERUF 07/30 ZN/HT	FF 07/30 HTNX	ERUF 07/30 XN/HT	MF 07/30 HTNX	SMF 07/30 HTNX	ERUF 07/30 XXN/HT	---	297 €	17
ERUF 10/30 ZN/HT	FF 10/30 HTNX	ERUF 10/30 XN/HT	MF 10/30 HTNX	SMF 10/30 HTNX	ERUF 10/30 XXN/HT	---	357 €	17
ERUF 15/30 ZN/HT	FF 15/30 HTNX	ERUF 15/30 XN/HT	MF 15/30 HTNX	SMF 15/30 HTNX	ERUF 15/30 XXN/HT	---	453 €	17
ERUF 20/30 ZN/HT	FF 20/30 HTNX	ERUF 20/30 XN/HT	MF 20/30 HTNX	SMF 20/30 HTNX	ERUF 20/30 XXN/HT	---	549 €	17
ERUF 30/30 ZN/HT	FF 30/30 HTNX	ERUF 30/30 XN/HT	MF 30/30 HTNX	SMF 30/30 HTNX	ERUF 30/30 XXN/HT	---	668 €	17
ERUF 30/50 ZN/HT	FF 30/50 HTNX	ERUF 30/50 XN/HT	MF 30/50 HTNX	SMF 30/50 HTNX	ERUF 30/50 XXN/HT	---	852 €	17

## Filtration

Filter elements for ULTRAFILTER/DONALDSON filter housings

### ERUF - Filter elements for ULTRAFILTER 90 series process filter (P-EG, P-BE)

#### 4 Industrial filtration grades

FST	ultrafilter	FST	ultrafilter	FST	ultrafilter	ultrafilter	Price	Prod.-grp.
ERUF 03/10 PV	P-PE 03/10	ERUF 03/10 PZN	P-PF 03/10	ERUF 03/10 PXN	P-MF 03/10	P-SMF 03/10	123 €	18
ERUF 04/10 PV	P-PE 04/10	ERUF 04/10 PZN	P-PF 04/10	ERUF 04/10 PXN	P-MF 04/10	P-SMF 04/10	135 €	18
ERUF 04/20 PV	P-PE 04/20	ERUF 04/20 PZN	P-PF 04/20	ERUF 04/20 PXN	P-MF 04/20	P-SMF 04/20	146 €	18
ERUF 05/20 PV	P-PE 05/20	ERUF 05/20 PZN	P-PF 05/20	ERUF 05/20 PXN	P-MF 05/20	P-SMF 05/20	171 €	18
ERUF 05/25 PV	P-PE 05/25	ERUF 05/25 PZN	P-PF 05/25	ERUF 05/25 PXN	P-MF 05/25	P-SMF 05/25	216 €	18
ERUF 07/25 PV	P-PE 07/25	ERUF 07/25 PZN	P-PF 07/25	ERUF 07/25 PXN	P-MF 07/25	P-SMF 07/25	245 €	18
ERUF 07/30 PV	P-PE 07/30	ERUF 07/30 PZN	P-PF 07/30	ERUF 07/30 PXN	P-MF 07/30	P-SMF 07/30	319 €	18
ERUF 10/30 PV	P-PE 10/30	ERUF 10/30 PZN	P-PF 10/30	ERUF 10/30 PXN	P-MF 10/30	P-SMF 10/30	387 €	18
ERUF 15/30 PV	P-PE 15/30	ERUF 15/30 PZN	P-PF 15/30	ERUF 15/30 PXN	P-MF 15/30	P-SMF 15/30	467 €	18
ERUF 20/30 PV	P-PE 20/30	ERUF 20/30 PZN	P-PF 20/30	ERUF 20/30 PXN	P-MF 20/30	P-SMF 20/30	569 €	18
ERUF 30/30 PV	P-PE 30/30	ERUF 30/30 PZN	P-PF 30/30	ERUF 30/30 PXN	P-MF 30/30	P-SMF 30/30	680 €	18
ERUF 30/50 PV	P-PE 30/50	ERUF 30/50 PZN	P-PF 30/50	ERUF 30/50 PXN	P-MF 30/50	P-SMF 30/50	765 €	18

FST	ultrafilter	FST	ultrafilter	Price	Prod.-grp.
ERUF 03/10 PXXN	---	ERUF 03/10 PA	P-AK 03/10	123 €	18
ERUF 04/10 PXXN	---	ERUF 04/10 PA	P-AK 04/10	135 €	18
ERUF 04/20 PXXN	---	ERUF 04/20 PA	P-AK 04/20	146 €	18
ERUF 05/20 PXXN	---	ERUF 05/20 PA	P-AK 05/20	171 €	18
ERUF 05/25 PXXN	---	ERUF 05/25 PA	P-AK 05/25	216 €	18
ERUF 07/25 PXXN	---	ERUF 07/25 PA	P-AK 07/25	245 €	18
ERUF 07/30 PXXN	---	ERUF 07/30 PA	P-AK 07/30	319 €	18
ERUF 10/30 PXXN	---	ERUF 10/30 PA	P-AK 10/30	387 €	18
ERUF 15/30 PXXN	---	ERUF 15/30 PA	P-AK 15/30	467 €	18
ERUF 20/30 PXXN	---	ERUF 20/30 PA	P-AK 20/30	569 €	18
ERUF 30/30 PXXN	---	ERUF 30/30 PA	P-AK 30/30	680 €	18
ERUF 30/50 PXXN	---	ERUF 30/50 PA	P-AK 30/50	765 €	18

#### 5 Sterile filter elements

FST	ultrafilter	Price	Prod.-grp.
ERUF 03/10 PST	P-SRF 03/10	144 €	18
ERUF 04/10 PST	P-SRF 04/10	158 €	18
ERUF 04/20 PST	P-SRF 04/20	171 €	18
ERUF 05/20 PST	P-SRF 05/20	201 €	18
ERUF 05/25 PST	P-SRF 05/25	253 €	18
ERUF 07/25 PST	P-SRF 07/25	288 €	18
ERUF 07/30 PST	P-SRF 07/30	375 €	18
ERUF 10/30 PST	P-SRF 10/30	455 €	18
ERUF 15/30 PST	P-SRF 15/30	549 €	18
ERUF 20/30 PST	P-SRF 20/30	669 €	18
ERUF 30/30 PST	P-SRF 30/30	799 €	18
ERUF 30/50 PST	P-SRF 30/50	899 €	18

FST	ultrafilter	Price	Prod.-grp.
ERUF 03/10 PSTBE	P-BE 03/10	144 €	18
ERUF 05/25 PSTBE	P-BE 05/25	253 €	18
ERUF 05/30 PSTBE	P-BE 05/30	301 €	18
ERUF 10/30 PSTBE	P-BE 10/30	455 €	18
ERUF 20/30 PSTBE	P-BE 20/30	669 €	18
ERUF 30/30 PSTBE	P-BE 30/30	799 €	18
ERUF 30/50 PSTBE	P-BE 30/50	899 €	18

FST	ultrafilter	Price	Prod.-grp.
EFSTP 140 STPL	SRF N 10/3 code 7	322 €	18
EFSTP 180 STPL	SRF N 20/3 code 7	487 €	18
EFSTP 190 STPL	SRF N 30/3 code 7	649 €	18

FST	ultrafilter	Price	Prod.-grp.
EFSTP 140 SMPL	PF-PT 10/3 code 7	580 €	18
EFSTP 180 SMPL	PF-PT 20/3 code 7	877 €	18
EFSTP 190 SMPL	PF-PT 30/3 code 7	1.169 €	18



## Filtration

Filter elements for ULTRAFILTER/DONALDSON filter housings

### ERUF - Filter elements for ULTRAFILTER 90 series process filter (P-EG, P-BE)

#### 6 Steam filter elements

FST	ultrafilter	Price	Prod.- grp.
ERUF 03/10 PD25	P-GS 03/10 25µ	195 €	19
ERUF 04/10 PD25	P-GS 04/10 25µ	234 €	19
ERUF 04/20 PD25	P-GS 04/20 25µ	245 €	19
ERUF 05/20 PD25	P-GS 05/20 25µ	268 €	19
ERUF 05/25 PD25	P-GS 05/25 25µ	324 €	19
ERUF 07/25 PD25	P-GS 07/25 25µ	404 €	19
ERUF 07/30 PD25	P-GS 07/30 25µ	474 €	19
ERUF 10/30 PD25	P-GS 10/30 25µ	597 €	19
ERUF 15/30 PD25	P-GS 15/30 25µ	785 €	19
ERUF 20/30 PD25	P-GS 20/30 25µ	855 €	19
ERUF 30/30 PD25	P-GS 30/30 25µ	1.024 €	19
ERUF 30/50 PD25	P-GS 30/50 25µ	1.320 €	19

FST	ultrafilter	Price	Prod.- grp.
ERUF 03/10 PD1	P-GS 03/10 1µ	195 €	19
ERUF 04/10 PD1	P-GS 04/10 1µ	234 €	19
ERUF 04/20 PD1	P-GS 04/20 1µ	245 €	19
ERUF 05/20 PD1	P-GS 05/20 1µ	268 €	19
ERUF 05/25 PD1	P-GS 05/25 1µ	324 €	19
ERUF 07/25 PD1	P-GS 07/25 1µ	404 €	19
ERUF 07/30 PD1	P-GS 07/30 1µ	474 €	19
ERUF 10/30 PD1	P-GS 10/30 1µ	597 €	19
ERUF 15/30 PD1	P-GS 15/30 1µ	785 €	19
ERUF 20/30 PD1	P-GS 20/30 1µ	855 €	19
ERUF 30/30 PD1	P-GS 30/30 1µ	1.024 €	19
ERUF 30/50 PD1	P-GS 30/50 1µ	1.320 €	19

FST	ultrafilter	Price	Prod.- grp.
EFSTP 140 D25	GS N 10/3 25µ	525 €	19
EFSTP 180 D25	GS N 10/3 25µ	799 €	19
EFSTP 190 D25	GS N 10/3 25µ	989 €	19

FST	ultrafilter	Price	Prod.- grp.
EFSTP 140 D1	GS N 10/3 1µ	525 €	19
EFSTP 180 D1	GS N 10/3 1µ	799 €	19
EFSTP 190 D1	GS N 10/3 1µ	989 €	19

### ERUF - Filter elements for DONALDSON DF series filter

Filter elements for ULTRAFILTER/DONALDSON DF series filter on request.

## Filtration

### Filter elements for WALKER filter housings



#### Scope of supply

Filter element, sealed in a foil bag; additional single cardboard packing; transport packing is not included in the scope of supply and is charged separately.

#### Filtration grades

V	Coarse filtration (3 $\mu$ )			
ZF	General purpose filtration (1 $\mu$ )			
XF	Fine filtration (0,01 $\mu$ )			
A	Activated carbon element			

### ERWK - Filter elements for WALKER filter

#### Standard filter elements

FST	Walker	FST	Walker	FST	Walker	FST	Walker	Price	Prod.- grp.
ERWK 361 V	E 361 X5	ERWK 361 ZF	E 361 X1	ERWK 361 XF	E 361 XA	ERWK 361 A	E 361 AC	72 €	15
ERWK 371 V	E 371 X5	ERWK 371 ZF	E 371 X1	ERWK 371 XF	E 371 XA	ERWK 371 A	E 371 AC	72 €	15
						ERWK 381 A	E 381 AC	83 €	15
ERWK 511 V	E 511 X5	ERWK 511 ZF	E 511 X1	ERWK 511 XF	E 511 XA	ERWK 511 A	E 511 AC	95 €	15
ERWK 711 V	E 711 X5	ERWK 711 ZF	E 711 X1	ERWK 711 XF	E 711 XA	ERWK 711 A	E 711 AC	137 €	15
ERWK 811 V	E 811 X5	ERWK 811 ZF	E 811 X1	ERWK 811 XF	E 811 XA	ERWK 811 A	E 811 AC	161 €	15
ERWK 731 V	E 731 X5	ERWK 731 ZF	E 731 X1	ERWK 731 XF	E 731 XA	ERWK 731 A	E 731 AC	173 €	15
ERWK 821 V	E 821 X5	ERWK 821 ZF	E 821 X1	ERWK 821 XF	E 821 XA	ERWK 821 A	E 821 AC	196 €	15
ERWK 831 V	E 831 X5	ERWK 831 ZF	E 831 X1	ERWK 831 XF	E 831 XA	ERWK 831 A	E 831 AC	238 €	15
ERWK 851 V	E 851 X5	ERWK 851 ZF	E 851 X1	ERWK 851 XF	E 851 XA	ERWK 851 A	E 851 AC	302 €	15
ERWK 1251 V	E 1251 X5	ERWK 1251 ZF	E 1251 X1	ERWK 1251 XF	E 1251 XA	ERWK 1251 A	E 1251 AC	398 €	15
ERWK 1261 V	E 1261 X5	ERWK 1261 ZF	E 1261 X1	ERWK 1261 XF	E 1261 XA	ERWK 1261 A	E 1261 AC	504 €	15
ERWK 1281 V	E 1281 X5	ERWK 1281 ZF	E 1281 X1	ERWK 1281 XF	E 1281 XA	ERWK 1281 A	E 1281 AC	558 €	15
ERWK 139 V	E 139 X5	ERWK 139 ZF	E 139 X1	ERWK 139 XF	E 139 XA	ERWK 139 A	E 139 AC	653 €	15
ERWK 88 V	E 88 X5	ERWK 88 ZF	E 88 X1	ERWK 88 XF	E 88 XA	ERWK 88 A	E 88 AC	440 €	15

## Filtration

## Cooling

Cooler up to 16 bar – air-cooled – HAO series



### Scope of supply


Ready-to-use cooler; transport packing is not included in the scope of supply and is charged separately. Operating manuals including the manufacturer's declaration and/or declaration of conformity are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“  
Operating manuals are available in English and German language.


### Standard version

Air-cooled cooler with water separator without condensate drain

	Nominal volume flow <sup>*1</sup>	Maximum operating pressure	Connection compressed air	Connection condensate discharge	Supply voltage	Demand of cooling air	Price	Prod.-grp.
HAO-RA 10 WS	60 m <sup>3</sup> /h	16 bar	G 1	R 3/8	230 V	800 m <sup>3</sup> /h	<b>693 €</b>	42
HAO-RA 20 WS	120 m <sup>3</sup> /h	16 bar	G 1	R 3/8	230 V	800 m <sup>3</sup> /h	<b>961 €</b>	42
HAO-RA 30 WS	180 m <sup>3</sup> /h	16 bar	G 1 ½	R 3/8	400 V	2.980 m <sup>3</sup> /h	<b>1.030 €</b>	42
HAO-RA 40 WS	240 m <sup>3</sup> /h	16 bar	G 1 ½	R 3/8	400 V	3.790 m <sup>3</sup> /h	<b>1.132 €</b>	42
HAO-RA 65 WS	390 m <sup>3</sup> /h	16 bar	G 2 - G 1 ½	R 3/8	400 V	6.500 m <sup>3</sup> /h	<b>1.551 €</b>	42
HAO-RA 80 WS	480 m <sup>3</sup> /h	16 bar	G 2 - G 1 ½	R 3/8	400 V	6.500 m <sup>3</sup> /h	<b>1.634 €</b>	42
HAO-RA 120 WS	720 m <sup>3</sup> /h	16 bar	G 2	R 3/8	400 V	8.200 m <sup>3</sup> /h	<b>2.715 €</b>	42
HAO-RA 160 WS	960 m <sup>3</sup> /h	16 bar	G 2 ½	R 3/8	400 V	8.200 m <sup>3</sup> /h	<b>3.184 €</b>	42
HAO-RA 200 WS	1.200 m <sup>3</sup> /h	16 bar	G 3 - G 2 ½	R 3/8	400 V	12.000 m <sup>3</sup> /h	<b>3.902 €</b>	42
HAO-RA 250 WS	1.500 m <sup>3</sup> /h	16 bar	G 3	R 3/8	400 V	12.000 m <sup>3</sup> /h	<b>4.583 €</b>	42
HAO-RA 300 WS	1.800 m <sup>3</sup> /h	16 bar	DN 100	R 3/8	400 V	12.000 m <sup>3</sup> /h	<b>5.997 €</b>	42
HAO-RA 400 WS	2.400 m <sup>3</sup> /h	16 bar	DN 100	R 3/8	400 V	16.400 m <sup>3</sup> /h	<b>7.500 €</b>	42
HAO-RA 500 WS	3.000 m <sup>3</sup> /h	16 bar	DN 125	R 1	400 V	26.000 m <sup>3</sup> /h	<b>8.958 €</b>	42
HAO-RA 650 WS	3.900 m <sup>3</sup> /h	16 bar	DN 125	R 1	400 V	26.000 m <sup>3</sup> /h	<b>10.935 €</b>	42
HAO-RA 750 WS	4.500 m <sup>3</sup> /h	16 bar	DN 150	R 2	400 V	26.000 m <sup>3</sup> /h	<b>12.243 €</b>	42

\*1 – refers to 1 bar(a) and 20°C at 7 bar operating pressure, 25°C ambient temperature

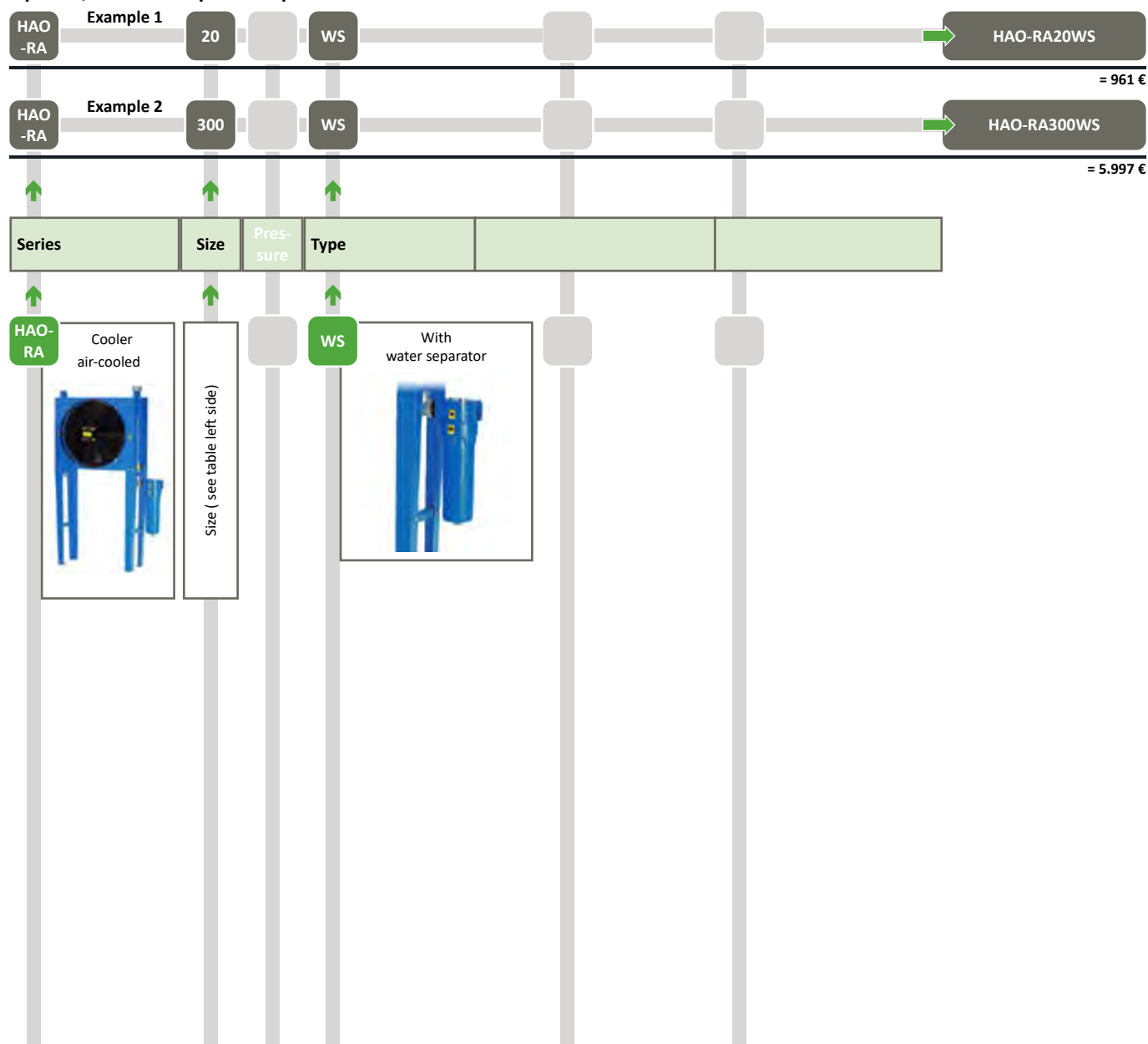
 Coolers with pneumatically driven fan are available on request.

 **Sizing for your individual operating conditions**  
Please contact the technical support of FST.

## Cooling

Cooler up to 16 bar – air-cooled – HAO series

### Options, order examples and price calculations



### Sizes and weights (including water separator)

	Height [A]	Width [B]	Depth [C]	Weight
HAO-RA 10 WS	955 mm	600 mm	270 mm	19 kg
HAO-RA 20 WS	955 mm	600 mm	270 mm	20 kg
HAO-RA 30 WS	1145 mm	820 mm	270 mm	29 kg
HAO-RA 40 WS	1145 mm	1030 mm	330 mm	32 kg
HAO-RA 65 WS	1145 mm	1030 mm	360 mm	51 kg
HAO-RA 80 WS	1390 mm	1030 mm	380 mm	53 kg
HAO-RA 120 WS	1555 mm	1030 mm	655 mm	97 kg
HAO-RA 160 WS	2110 mm	1230 mm	655 mm	120 kg
HAO-RA 200 WS	2120 mm	1410 mm	490 mm	240 kg
HAO-RA 250 WS	2120 mm	1410 mm	490 mm	250 kg
HAO-RA 300 WS	2060 mm	1970 mm	490 mm	280 kg
HAO-RA 400 WS	2060 mm	2290 mm	490 mm	300 kg
HAO-RA 500 WS	2000 mm	3245 mm	560 mm	310 kg
HAO-RA 650 WS	2000 mm	3245 mm	560 mm	360 kg
HAO-RA 750 WS	2020 mm	3325 mm	565 mm	390 kg

## Cooling

Cooler up to 16 bar – water-cooled – HWO series



### Scope of supply

Ready-to-use cooler; transport packing is not included in the scope of supply and is charged separately. Operating manuals including the manufacturer's declaration and/or declaration of conformity are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“  
Operating manuals are available in English and German language.

### Standard version

Water-cooled cooler with fixed bundle; option for downstream water separator without condensate drain

	Nominal volume flow <sup>*1</sup>	Maximum operating pressure	Connection compressed air	Connection cooling water	Connection condensate discharge	Price	Prod.-grp.
HWO-A 30	180 m <sup>3</sup> /h	16 bar	G 1 ½	G 1/2	---	1.188 €	42
HWO-A 60	360 m <sup>3</sup> /h	12 bar	G 2 ½	G 3/4	---	1.475 €	42
HWO-A 80	480 m <sup>3</sup> /h	12 bar	G 2 ½	G 3/4	---	1.640 €	42
HWO-A 140	840 m <sup>3</sup> /h	16 bar	DN 100	G 1	---	3.207 €	42
HWO-A 250	1.500 m <sup>3</sup> /h	16 bar	DN 100	G 1	---	3.479 €	42
HWO-A 400	2.400 m <sup>3</sup> /h	16 bar	DN 150	G 1 ¼	---	5.813 €	42
HWO-A 500	3.000 m <sup>3</sup> /h	16 bar	DN 175	G 1 ¼	---	6.146 €	42
HWO-A 800	4.800 m <sup>3</sup> /h	16 bar	DN 250	G 1 ¼	---	7.907 €	42
HWO-A 1100	6.600 m <sup>3</sup> /h	16 bar	DN 250	G 1 ½	---	15.543 €	42
HWO-A 1500	9.000 m <sup>3</sup> /h	16 bar	DN 300	G 2	---	19.660 €	42
HWO-A 1800	10.800 m <sup>3</sup> /h	16 bar	DN 350	G 2	---	20.663 €	42
HWO-A 2100	12.600 m <sup>3</sup> /h	16 bar	DN 400	G 2 ½	---	22.979 €	42
HWO-A 30 WS	180 m <sup>3</sup> /h	16 bar	G 1 ½	G 1/2	R 3/8	1.557 €	42
HWO-A 60 WS	360 m <sup>3</sup> /h	12 bar	G 2 ½ - G 1 ½	G 3/4	R 3/8	1.939 €	42
HWO-A 80 WS	480 m <sup>3</sup> /h	12 bar	G 2 ½ - G 1 ½	G 3/4	R 3/8	2.159 €	42
HWO-A 140 WS	840 m <sup>3</sup> /h	16 bar	DN 100	G 1	R 3/8	4.162 €	42
HWO-A 250 WS	1.500 m <sup>3</sup> /h	16 bar	DN 100	G 1	R 3/8	4.693 €	42
HWO-A 400 WS	2.400 m <sup>3</sup> /h	16 bar	DN 150 - DN 125	G 1 ¼	R 3/8	7.707 €	42
HWO-A 500 WS	3.000 m <sup>3</sup> /h	16 bar	DN 175 - DN 125	G 1 ¼	R 1	8.193 €	42
HWO-A 800 WS	4.800 m <sup>3</sup> /h	16 bar	DN 250 - DN 150	G 1 ¼	R 2	10.522 €	42
HWO-A 1100 WS	6.600 m <sup>3</sup> /h	16 bar	DN 250 - DN 150	G 1 ½	R 2	20.986 €	42
HWO-A 1500 WS	9.000 m <sup>3</sup> /h	16 bar	DN 300 - DN 200	G 2	R 2	24.184 €	42
HWO-A 1800 WS	10.800 m <sup>3</sup> /h	16 bar	DN 350 - DN 200	G 2	R 2	25.228 €	42
HWO-A 2100 WS	12.600 m <sup>3</sup> /h	16 bar	DN 400 - DN 200	G 2 ½	R 2	28.639 €	42

\*1 – refers to 1 bar(a) and 20°C at 7 bar operating pressure



Water-cooled coolers for higher volume flows, bigger connection sizes or stainless-steel materials are available on request.



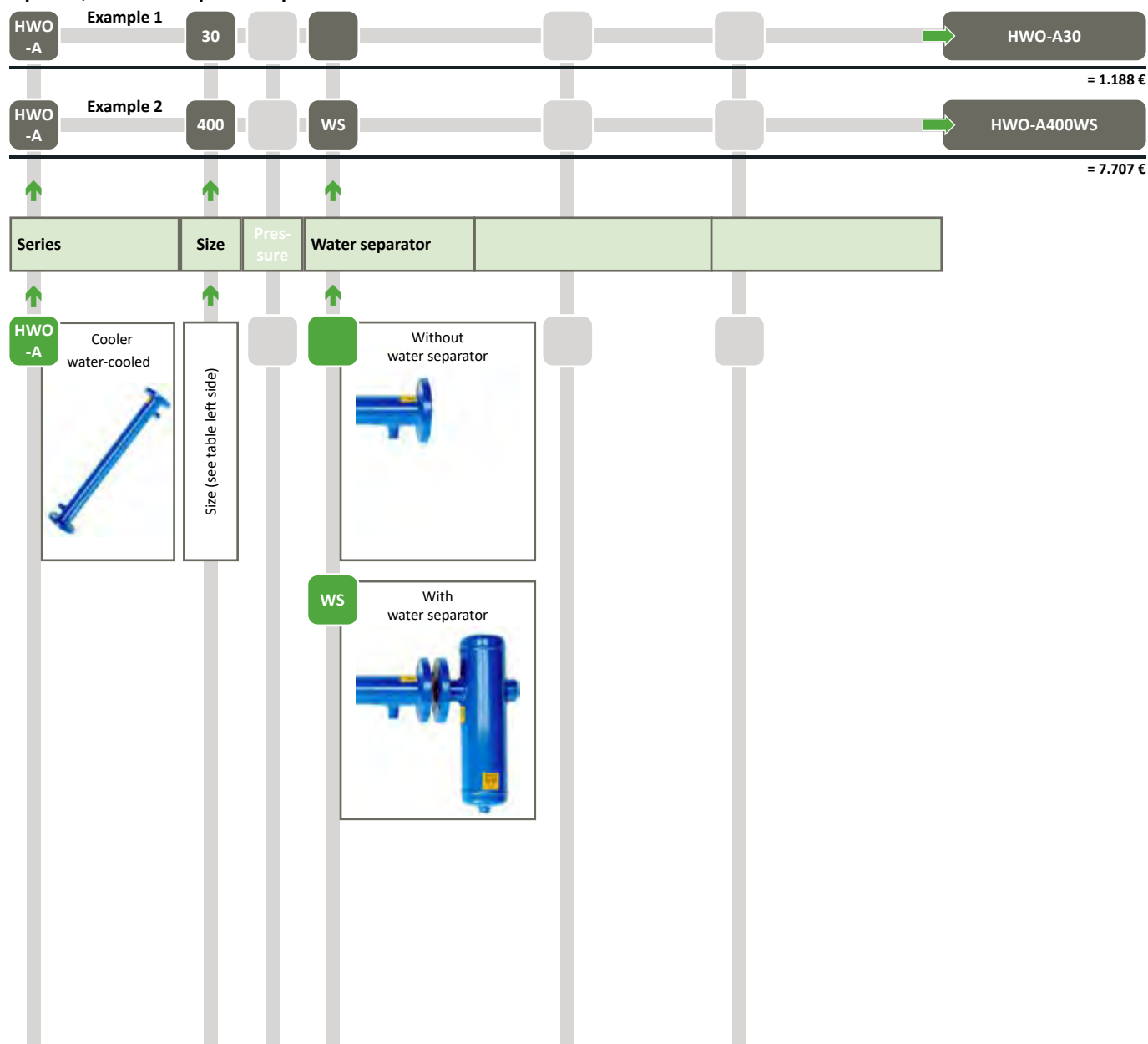
### Sizing for your individual operating conditions

Please contact the technical support of FST.

## Cooling

Cooler up to 16 bar – water-cooled – HWO series

### Options, order examples and price calculations



### Sizes and weights

	Height [A]	Width [B]	Depth [C]	Weight		Height [A]	Width [B]	Depth [C]	Weight
HWO-A 30	165 mm	970 mm	165 mm	17 kg	HWO-A 30 WS	385 mm	1110 mm	165 mm	18 kg
HWO-A 60	185 mm	1210 mm	185 mm	24 kg	HWO-A 60 WS	675 mm	1405 mm	185 mm	29 kg
HWO-A 80	185 mm	1450 mm	185 mm	33 kg	HWO-A 80 WS	675 mm	1645 mm	185 mm	38 kg
HWO-A 140	220 mm	1300 mm	220 mm	43 kg	HWO-A 140 WS	757 mm	1845 mm	220 mm	49 kg
HWO-A 250	220 mm	1300 mm	220 mm	109 kg	HWO-A 250 WS	757 mm	1845 mm	220 mm	115 kg
HWO-A 400	285 mm	1300 mm	285 mm	153 kg	HWO-A 400 WS	772 mm	2068 mm	285 mm	160 kg
HWO-A 500	315 mm	1300 mm	315 mm	156 kg	HWO-A 500 WS	790 mm	1907 mm	315 mm	210 kg
HWO-A 800	405 mm	1300 mm	405 mm	250 kg	HWO-A 800 WS	845 mm	2023 mm	405 mm	330 kg
HWO-A 1100	405 mm	1300 mm	405 mm	280 kg	HWO-A 1100 WS	845 mm	2023 mm	405 mm	360 kg
HWO-A 1500	460 mm	1300 mm	460 mm	304 kg	HWO-A 1500 WS	1025 mm	2182 mm	460 mm	460 kg
HWO-A 1800	520 mm	1300 mm	520 mm	334 kg	HWO-A 1800 WS	1025 mm	2307 mm	520 mm	460 kg
HWO-A 2100	580 mm	1500 mm	580 mm	374 kg	HWO-A 2100 WS	1025 mm	2567 mm	580 mm	530 kg

## Drying

### Refrigeration dryer up to 16 bar – DFX.. series



#### Scope of supply

Ready-to-use refrigeration dryer with hot-gas by-pass, incl. zero-loss condensate drain, and potential-free contact; transport packing is not included in the scope of supply and is charged separately. Operating manuals including the manufacturer's declaration and/or declaration of conformity are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“  
Operating manuals are available in English and German language.

#### Standard version

Refrigeration dryer with electronic condensate drain and alarm contact; with hot gas bypass control; DFX 2-15 suitable for wall mounting

	Nominal volume flow <sup>*1</sup>	Maximum operating pressure	Connection	Supply voltage	Refrigerant	Price	Prod.-grp.
DFX 2	20 m <sup>3</sup> /h	16 bar	G 3/8	230 V	R 513A	1.384 €	41
DFX 4	35 m <sup>3</sup> /h	16 bar	G 1/2	230 V	R 513A	1.547 €	41
DFX 5	50 m <sup>3</sup> /h	16 bar	G 1/2	230 V	R 513A	1.628 €	41
DFX 7	65 m <sup>3</sup> /h	16 bar	G 1/2	230 V	R 513A	1.726 €	41
DFX 9	85 m <sup>3</sup> /h	16 bar	G 1/2	230 V	R 513A	1.792 €	41
DFX 11	105 m <sup>3</sup> /h	16 bar	G 1/2	230 V	R 513A	2.180 €	41
DFX 13	125 m <sup>3</sup> /h	14 bar	G 1	230 V	R 513A	2.329 €	41
DFX 15	150 m <sup>3</sup> /h	14 bar	G 1	230 V	R 513A	2.450 €	41
DFX 18	180 m <sup>3</sup> /h	14 bar	G 1 ¼	230 V	R 513A	2.803 €	41
DFX 23	225 m <sup>3</sup> /h	14 bar	G 1 ¼	230 V	R 407C	3.308 €	41
DFX 30	300 m <sup>3</sup> /h	14 bar	G 1 ½	230 V	R 407C	3.826 €	41
DFX 36	360 m <sup>3</sup> /h	14 bar	G 1 ½	230 V	R 407C	4.562 €	41
DFX 45	450 m <sup>3</sup> /h	14 bar	G 1 ½	230 V	R 407C	5.898 €	41
DFX 55	550 m <sup>3</sup> /h	14 bar	G 2	230 V	R 407C	6.831 €	41
DFX 65	650 m <sup>3</sup> /h	14 bar	G 2	230 V	R 407C	7.967 €	41
DFX 75	750 m <sup>3</sup> /h	14 bar	G 2	230 V	R 407C	9.009 €	41
DFX 85	850 m <sup>3</sup> /h	14 bar	G 2	230 V	R 407C	9.588 €	41

\*1 – refers to 1 bar(a) and 20°C at 7 bar operating pressure, 35°C inlet temperature, 25°C ambient temperature



#### Sizing for your individual operating conditions

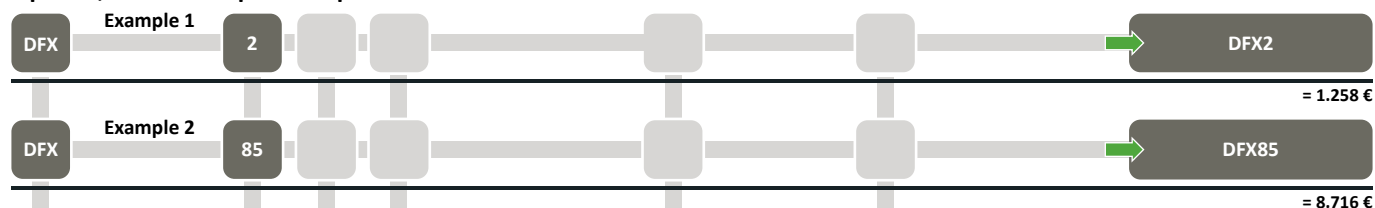
Please contact the technical support of FST.



## Drying

### Refrigeration dryer up to 16 bar – DFX.. series

#### Options, order examples and price calculations



Series	Size	Pressure	Type	Cooling
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Size (see table left side)

#### Sizes and weight

	Height [A]	Width [B]	Depth [C]	Weight
DFX 2	645 mm	360 mm	410 mm	24 kg
DFX 4	645 mm	360 mm	410 mm	26 kg
DFX 5	645 mm	360 mm	410 mm	27 kg
DFX 7	645 mm	360 mm	410 mm	29 kg
DFX 9	645 mm	360 mm	410 mm	31 kg
DFX 11	645 mm	360 mm	410 mm	31 kg
DFX 13	645 mm	360 mm	410 mm	33 kg
DFX 15	645 mm	360 mm	410 mm	33 kg
DFX 18	870 mm	480 mm	660 mm	55 kg
DFX 23	870 mm	480 mm	660 mm	56 kg
DFX 30	870 mm	480 mm	660 mm	57 kg
DFX 36	870 mm	480 mm	660 mm	61 kg
DFX 45	870 mm	480 mm	660 mm	68 kg
DFX 55	1055 mm	645 mm	920 mm	116 kg
DFX 65	1055 mm	645 mm	920 mm	118 kg
DFX 75	1055 mm	645 mm	920 mm	121 kg
DFX 85	1055 mm	645 mm	920 mm	155 kg

## Drying

### Refrigeration dryer up to 16 bar – DFLO series



#### Scope of supply

Ready-to-use refrigeration dryer; transport packing is not included in the scope of supply and is charged separately.

Operating manuals including the manufacturer's declaration and/or declaration of conformity are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“  
Operating manuals are available in English and German language.

#### Standard version

Refrigeration dryer with electronic condensate drain and alarm contact; option for water-cooled version (W)

		Nominal volume flow <sup>*1</sup>	Maximum operating pressure	Connection	Price		Refrigerant	Price	Prod.-grp.
DFLO 2.4		24 m <sup>3</sup> /h	16 bar	G 3/8	1.381 €		R 513A		41
DFLO 5.4		54 m <sup>3</sup> /h	16 bar	G 1/2	1.479 €		R 513A		41
DFLO 7.2		72 m <sup>3</sup> /h	16 bar	G 1/2	1.740 €		R 513A		41
DFLO 10.8		108 m <sup>3</sup> /h	16 bar	G 3/4	1.930 €		R 513A		41
DFLO 14.4		144 m <sup>3</sup> /h	16 bar	G 3/4	2.094 €		R 513A		41
DFLO 18		180 m <sup>3</sup> /h	16 bar	G 3/4	2.542 €		R 513A		41
DFLO 22.5		225 m <sup>3</sup> /h	16 bar	G 1	3.107 €		R 513A		41
DFLO 26		260 m <sup>3</sup> /h	16 bar	G 1	3.359 €		R 407C		41
DFLO 36		360 m <sup>3</sup> /h	16 bar	G 1 ½	4.393 €		R 407C		41
DFLO 48		480 m <sup>3</sup> /h	16 bar	G 1 ½	5.695 €		R 407C		41
DFLO 66		660 m <sup>3</sup> /h	16 bar	G 2	6.949 €	DFLO 66 W	R 407C	8.913 €	41
DFLO 78		780 m <sup>3</sup> /h	16 bar	G 2	8.210 €	DFLO 78 W	R 407C	10.314 €	41
DFLO 100		1.000 m <sup>3</sup> /h	13 bar	G 2	9.787 €	DFLO 100 W	R 407C	11.366 €	41
DFLO 150		1.500 m <sup>3</sup> /h	14 bar	G 3	13.518 €	DFLO 150 W	R 407C	15.094 €	41
DFLO 180		1.800 m <sup>3</sup> /h	14 bar	G 3	14.968 €	DFLO 180 W	R 407C	16.325 €	41
DFLO 225		2.250 m <sup>3</sup> /h	14 bar	G 3	16.220 €	DFLO 225 W	R 407C	17.689 €	41
DFLO 260		2.600 m <sup>3</sup> /h	14 bar	G 3	20.813 €	DFLO 260 W	R 407C	22.227 €	41
DFLO 360		3.600 m <sup>3</sup> /h	13 bar	DN 125	25.546 €	DFLO 360 W	R 407C	25.055 €	41
DFLO 420		4.200 m <sup>3</sup> /h	13 bar	DN 125	29.152 €	DFLO 420 W	R 407C	28.591 €	41
DFLO 530		5.300 m <sup>3</sup> /h	13 bar	DN 150	32.755 €	DFLO 530 W	R 407C	32.125 €	41
DFLO 600		6.000 m <sup>3</sup> /h	13 bar	DN 150	36.390 €	DFLO 600 W	R 407C	35.676 €	41
DFLO 680		6.800 m <sup>3</sup> /h	13 bar	DN 150	41.496 €	DFLO 680 W	R 407C	41.891 €	41
DFLO 880		8.800 m <sup>3</sup> /h	13 bar	DN 150	54.667 €	DFLO 880 W	R 407C	54.667 €	41
DFLO 1000		10.000 m <sup>3</sup> /h	13 bar	DN 200	60.794 €	DFLO 1000 W	R 407C	60.794 €	41
DFLO 1200		12.000 m <sup>3</sup> /h	13 bar	DN 200	66.922 €	DFLO 1200 W	R 407C	66.922 €	41
DFLO 1360		13.600 m <sup>3</sup> /h	13 bar	DN 200	73.839 €	DFLO 1360 W	R 407C	73.839 €	41
DFLO 1760		17.600 m <sup>3</sup> /h	13 bar	2x DN 200	97.173 €	DFLO 1760 W	R 407C	97.173 €	41
DFLO 2000		20.000 m <sup>3</sup> /h	13 bar	2x DN 200	105.825 €	DFLO 2000 W	R 407C	105.825 €	41
DFLO 2400		24.000 m <sup>3</sup> /h	13 bar	2x DN 200	126.730 €	DFLO 2400 W	R 407C	126.730 €	41

\*1 – refers to 1 bar(a) and 20°C at 7 bar operating pressure, 35°C inlet temperature, 25°C ambient temperature, +3°C pressure dew-point



Refrigeration dryers for higher volume flows, higher operating pressures or bigger connection sizes are available on request.



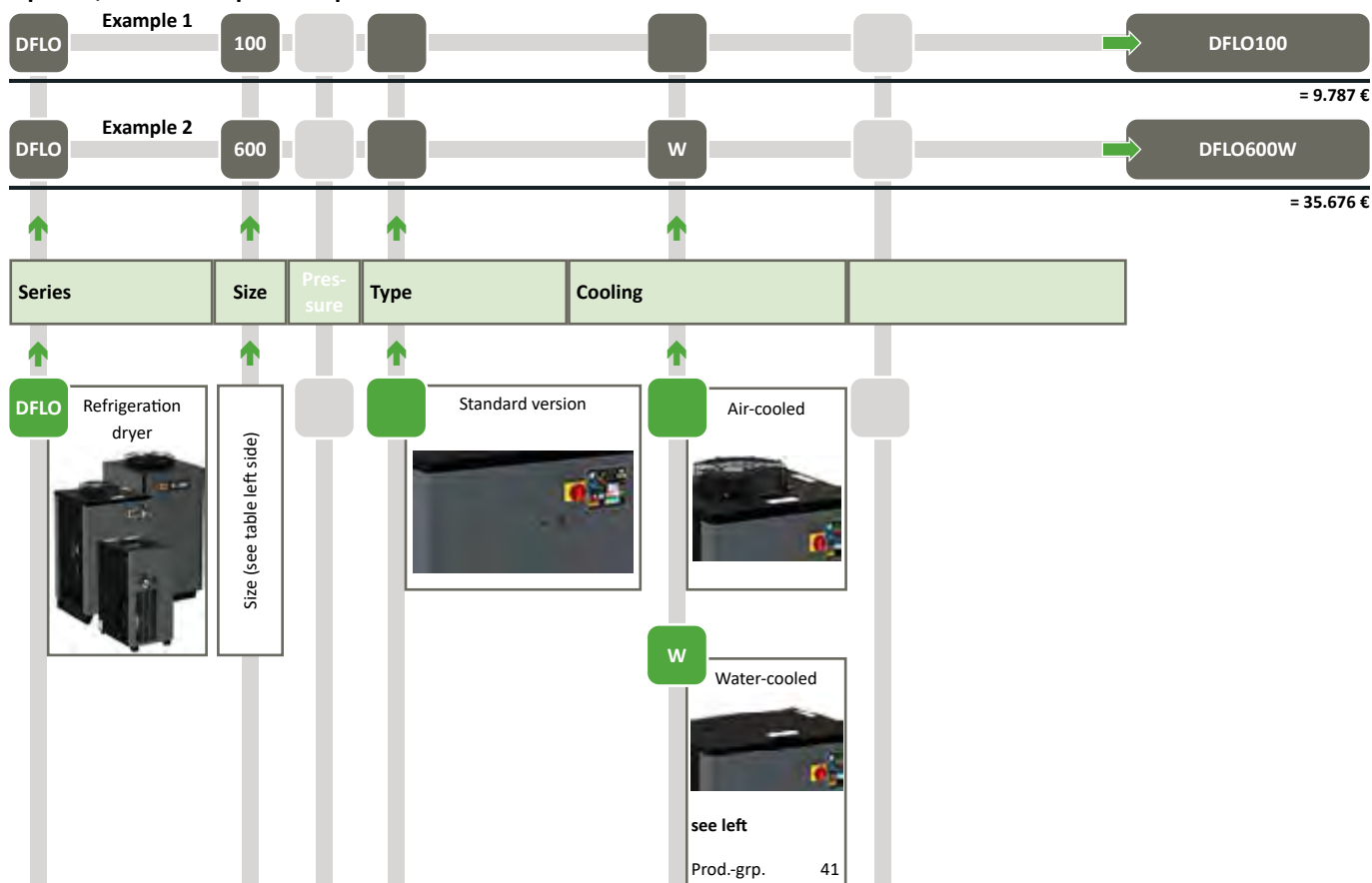
#### Sizing for your individual operating conditions

Please contact the technical support of FST.

## Drying

### Refrigeration dryer up to 16 bar – DFLO series

#### Options, order examples and price calculations



#### Sizes and weights

		Height [A]	Width [B]	Depth [C]	Weight		Height [A]	Width [B]	Depth [C]	Weight
DFLO 2.4		404 mm	305 mm	360 mm	18 kg					
DFLO 5.4		435 mm	370 mm	433 mm	26 kg					
DFLO 7.2		435 mm	370 mm	433 mm	26 kg					
DFLO 10.8		555 mm	420 mm	515 mm	33 kg					
DFLO 14.4		555 mm	420 mm	515 mm	34 kg					
DFLO 18		555 mm	420 mm	515 mm	43 kg					
DFLO 22.4		614 mm	485 mm	595 mm	62 kg					
DFLO 26		614 mm	485 mm	595 mm	64 kg					
DFLO 36		980 mm	500 mm	679 mm	87 kg					
DFLO 48		980 mm	500 mm	679 mm	110 kg					
DFLO 66		1360 mm	779 mm	720 mm	120 kg	DFLO 66 W	1360 mm	779 mm	720 mm	130 kg
DFLO 78		1360 mm	779 mm	720 mm	130 kg	DFLO 78 W	1360 mm	779 mm	720 mm	140 kg
DFLO 100		1360 mm	779 mm	720 mm	150 kg	DFLO 100 W	1360 mm	779 mm	720 mm	160 kg
DFLO 150		1539 mm	806 mm	1012 mm	234 kg	DFLO 150 W	1539 mm	806 mm	1012 mm	240 kg
DFLO 180		1539 mm	806 mm	1012 mm	234 kg	DFLO 180 W	1539 mm	806 mm	1012 mm	240 kg
DFLO 225		1539 mm	806 mm	1012 mm	260 kg	DFLO 225 W	1539 mm	806 mm	1012 mm	300 kg
DFLO 260		1555 mm	806 mm	1012 mm	260 kg	DFLO 260 W	1539 mm	806 mm	1012 mm	270 kg
DFLO 360		1555 mm	1510 mm	1500 mm	420 kg	DFLO 360 W	1555 mm	1510 mm	1500 mm	420 kg
DFLO 420		1555 mm	1510 mm	1500 mm	520 kg	DFLO 420 W	1555 mm	1510 mm	1500 mm	520 kg
DFLO 530		1555 mm	1510 mm	1500 mm	620 kg	DFLO 530 W	1555 mm	1510 mm	1500 mm	620 kg
DFLO 600		1555 mm	1510 mm	1500 mm	720 kg	DFLO 600 W	1555 mm	1510 mm	1500 mm	720 kg
DFLO 680		1555 mm	1510 mm	1500 mm	735 kg	DFLO 680 W	1555 mm	1510 mm	1500 mm	745 kg
DFLO 880		1570 mm	2270 mm	1500 mm	1058 kg	DFLO 880 W	1570 mm	2270 mm	1500 mm	1095 kg
DFLO 1000		1570 mm	2270 mm	1590 mm	1128 kg	DFLO 1000 W	1570 mm	2270 mm	1590 mm	1165 kg
DFLO 1200		1565 mm	2270 mm	1590 mm	1205 kg	DFLO 1200 W	1565 mm	2270 mm	1590 mm	1245 kg
DFLO 1360		1565 mm	3025 mm	1590 mm	1360 kg	DFLO 1360 W	1565 mm	3025 mm	1590 mm	1380 kg
DFLO 1760		1570 mm	4535 mm	1500 mm	2116 kg	DFLO 1760 W	1570 mm	4535 mm	1500 mm	2190 kg
DFLO 2000		1570 mm	4535 mm	1590 mm	2256 kg	DFLO 2000 W	1570 mm	4535 mm	1590 mm	2330 kg
DFLO 2400		1565 mm	4535 mm	1590 mm	2720 kg	DFLO 2400 W	1565 mm	4535 mm	1590 mm	2490 kg

## Drying

### Refrigeration dryer up to 16 bar – DFLO..ES series



#### Scope of supply

Ready-to-use refrigeration dryer; transport packing is not included in the scope of supply and is charged separately.

Operating manuals including the manufacturer's declaration and/or declaration of conformity are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

Operating manuals are available in English and German language.

#### Standard version

Refrigeration dryer with energy saving thermal mass circuit (ES), electronic condensate drain and alarm contact; option for water-cooled version (W)

	Nominal volume flow <sup>*1</sup>	Maximum operating pressure	Connection	Price	Refrigerant	Price	Prod.-grp.
DFLO 5.4 ES	54 m <sup>3</sup> /h	16 bar	G 1/2	2.306 €	R 513A		43
DFLO 7.2 ES	72 m <sup>3</sup> /h	16 bar	G 1/2	2.564 €	R 513A		43
DFLO 10.8 ES	108 m <sup>3</sup> /h	16 bar	G 3/4	2.829 €	R 513A		43
DFLO 14.4 ES	144 m <sup>3</sup> /h	16 bar	G 3/4	2.959 €	R 513A		43
DFLO 18 ES	180 m <sup>3</sup> /h	16 bar	G 1	3.571 €	R 513A		43
DFLO 24 ES	240 m <sup>3</sup> /h	16 bar	G 1	4.810 €	R 513A		43
DFLO 30 ES	300 m <sup>3</sup> /h	16 bar	G 1 ½	5.964 €	R 513A		43
DFLO 36 ES	360 m <sup>3</sup> /h	16 bar	G 1 ½	6.174 €	R 513A		43
DFLO 48 ES	480 m <sup>3</sup> /h	16 bar	G 1 ½	7.754 €	R 513A		43
DFLO 66 ES	660 m <sup>3</sup> /h	16 bar	G 2	9.032 €	R 513A		43
DFLO 78 ES	780 m <sup>3</sup> /h	13 bar	G 2	10.675 €	R 513A		43
DFLO 100 ES	1.000 m <sup>3</sup> /h	13 bar	G 2	12.452 €	R 513A		43
DFLO 150 ES	1.500 m <sup>3</sup> /h	14 bar	G 3	18.673 €	DFLO 150 ESW	R 513A	19.983 € 43
DFLO 180 ES	1.800 m <sup>3</sup> /h	14 bar	G 3	20.123 €	DFLO 180 ESW	R 513A	22.518 € 43
DFLO 225 ES	2.250 m <sup>3</sup> /h	14 bar	G 3	23.693 €	DFLO 225 ESW	R 513A	24.634 € 43
DFLO 260 ES	2.600 m <sup>3</sup> /h	14 bar	G3	26.369 €	DFLO 260 ESW	R 513A	26.497 € 43
DFLO 320 ES <sub>eco</sub>	3.200 m <sup>3</sup> /h	14 bar	DN 150	33.322 €	DFLO 320 ESW <sub>eco</sub>	R 513A	34.245 € 43
DFLO 420 ES <sub>eco</sub>	4.200 m <sup>3</sup> /h	14 bar	DN 150	35.863 €	DFLO 420 ESW <sub>eco</sub>	R 513A	41.254 € 43
DFLO 480 ES <sub>eco</sub>	4.800 m <sup>3</sup> /h	14 bar	DN 150	41.694 €	DFLO 480 ESW <sub>eco</sub>	R 513A	44.411 € 43
DFLO 530 ES	5.300 m <sup>3</sup> /h	13 bar	DN 150	42.519 €	DFLO 530 ESW	R 513A	41.151 € 43
DFLO 600 ES	6.000 m <sup>3</sup> /h	13 bar	DN 150	49.932 €	DFLO 600 ESW	R 513A	49.003 € 43

\*1 – refers to 1 bar(a) and 20°C at 7 bar operating pressure, 35°C inlet temperature, 25°C ambient temperature, +3°C pressure dew-point



Refrigeration dryers for higher volume flows, higher operating pressures or bigger connection sizes are available on request.



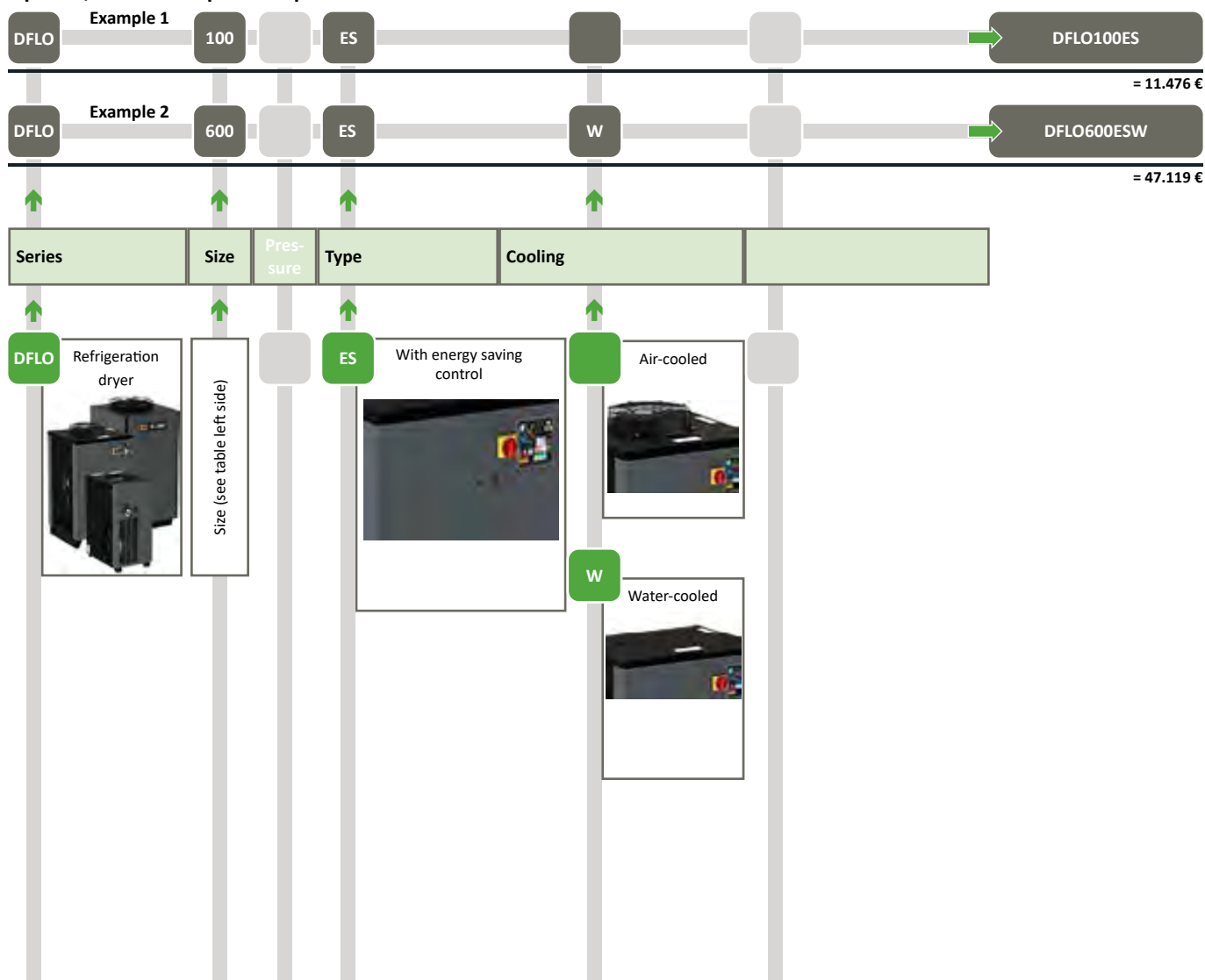
#### Sizing for your individual operating conditions

Please contact the technical support of FST.

## Drying

### Refrigeration dryer up to 16 bar – DFLO..ES series

#### Options, order examples and price calculations



#### Sizes and weights

		Height [A]	Width [B]	Depth [C]	Weight		Height [A]	Width [B]	Depth [C]	Weight
DFLO 5.4 ES		651 mm	386 mm	500 mm	33 kg					
DFLO 7.2 ES		651 mm	386 mm	500 mm	35 kg					
DFLO 10.8 ES		651 mm	386 mm	500 mm	45 kg					
DFLO 14.4 ES		651 mm	386 mm	500 mm	50 kg					
DFLO 18 ES		771 mm	420 mm	567 mm	60 kg					
DFLO 24 ES		771 mm	420 mm	567 mm	70 kg					
DFLO 30 ES		980 mm	500 mm	720 mm	95 kg					
DFLO 36 ES		980 mm	500 mm	720 mm	100 kg					
DFLO 48 ES		980 mm	500 mm	720 mm	130 kg					
DFLO 66 ES		1340 mm	750 mm	780 mm	186 kg					
DFLO 78 ES		1340 mm	750 mm	780 mm	227 kg					
DFLO 100 ES		1340 mm	750 mm	780 mm	237 kg					
DFLO 150 ES		1539 mm	806 mm	1012 mm	244 kg	DFLO 150 ESW	1539 mm	806 mm	1012 mm	270 kg
DFLO 180 ES		1539 mm	806 mm	1012 mm	244 kg	DFLO 180 ES	1539 mm	806 mm	1012 mm	270 kg
DFLO 225 ES		1539 mm	806 mm	1012 mm	270 kg	DFLO 225 ES	1539 mm	806 mm	1012 mm	300 kg
DFLO 260 ES		1539 mm	806 mm	1012 mm	399 kg	DFLO 260 ES	1539 mm	806 mm	1012 mm	410 kg
DFLO 320 ES <sub>eco</sub>		1796 mm	880 mm	1819 mm	810 kg	DFLO 320 ESW <sub>eco</sub>	1796 mm	880 mm	1819 mm	830 kg
DFLO 420 ES <sub>eco</sub>		1796 mm	880 mm	1819 mm	820 kg	DFLO 420 ESW <sub>eco</sub>	1796 mm	880 mm	1819 mm	860 kg
DFLO 480 ES <sub>eco</sub>		1796 mm	880 mm	1819 mm	820 kg	DFLO 480 ESW <sub>eco</sub>	1796 mm	880 mm	1819 mm	860 kg
DFLO 530 ES		1570 mm	1510 mm	1500 mm	620 kg	DFLO 530 ESW	1570 mm	1510 mm	1500 mm	620 kg
DFLO 600 ES		1570 mm	1510 mm	1500 mm	720 kg	DFLO 600 ESW	1570 mm	1510 mm	1500 mm	720 kg

## Drying

### Membrane dryer up to 12,5 bar – DM-SWC., DM-FP.. series



#### Scope of supply

Ready-to-use membrane dryer including selected options (already installed or, in order to avoid transport damages, pre-installed / separately enclosed); single cardboard packing; transport packing is not included in the scope of supply and is charged separately.

Operating manuals including the manufacturer's declaration and/or declaration of conformity are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Operating Manual“  
Operating manuals are available in English and German language.

#### Standard version

Membrane dryer module with fixed (DM-SWCM, DM-FP) or variable amount of purge air; option for pre-filter (XN)

#### Up to 8,5 bar for dew-point reduction from 10°C up to 30°C

	Nominal volume flow <sup>*1</sup>	Maximum operating pressure	Connection	Price		Pre-filter	Connection	Price	Prod.-grp.
DM-SWCM-08-100	4,2 m³/h	8,5 bar	G 1/8	600 €	DM-SWCM-08-100XN	FCA20	G 1/4	810 €	45
DM-SWCM-15-100	7,2 m³/h	8,5 bar	G 1/8	644 €	DM-SWCM-15-100XN	FCA20	G 1/4	854 €	45
DM-SWC-01-150	12 m³/h	8,5 bar	G 1/4	865 €	DM-SWC-01-150XN	FCA20	G 1/4	1.075 €	45
DM-SWC-02-250	18 m³/h	8,5 bar	G 3/8	1.609 €	DM-SWC-02-250XN	FCA25	G 3/8	1.825 €	45
DM-SWC-03-250	24 m³/h	8,5 bar	G 3/8	1.703 €	DM-SWC-03-250XN	FCA25	G 3/8	1.919 €	45

\*1 – refers to 1 bar(a) and 20°C at 7 bar operating pressure, 35°C inlet temperature, 30°C dew-point reduction

#### Up to 12,5 bar for pressure dew-points from +15°C up to -40°C

	Nominal volume flow <sup>*2</sup>	Maximum operating pressure	Connection	Price		Pre-filter	Connection	Price	Prod.-grp.
DM-FP 50	3 m³/h	12,5 bar	G 1/4	660 €	DM-FP50 XN	FCA20	G 1/4	863 €	45
DM-FP 100	6 m³/h	12,5 bar	G 1/4	769 €	DM-FP100 XN	FCA20	G 1/4	971 €	45
DM-FP 150	9 m³/h	12,5 bar	G 1/4	862 €	DM-FP150 XN	FCA20	G 1/4	1.062 €	45
DM-FP 200	12 m³/h	12,5 bar	G 1/4	958 €	DM-FP200 XN	FCA20	G 1/4	1.167 €	45
DM-FP 300	18 m³/h	12,5 bar	G 1/2	1.066 €	DM-FP300 XN	FCA50	G 1/2	1.345 €	45
DM-FP 400	24 m³/h	12,5 bar	G 1/2	1.204 €	DM-FP400 XN	FCA50	G 1/2	1.482 €	45
DM-FP 600	36 m³/h	12,5 bar	G 1/2	1.472 €	DM-FP600 XN	FCA50	G 1/2	1.744 €	45
DM-FP 800	48 m³/h	12,5 bar	G 1/2	1.660 €	DM-FP800 XN	FCA50	G 1/2	1.928 €	45
DM-FP 1050	63 m³/h	12,5 bar	G 1/2	1.845 €	DM-FP1050 XN	FCA50	G 1/2	2.110 €	45

\*2 – refers to 1 bar(a) and 20°C at 7 bar operating pressure, 35°C inlet temperature, 30°C dew-point reduction



#### Sizing for your individual operating conditions

Please contact the technical support of FST.

#### Volume flow correction factors for operating conditions deviating from reference conditions (DM-FP only)

Operating pressure	4 bar	5 bar	6 bar	7 bar	8 bar	9 bar	10 bar	11 bar	12 bar
	0,41	0,56	0,76	1,00	1,22	1,48	1,76	1,86	2,22
Pressure dew-point	-40 °C			-20 °C			+3 °C		
	0,34			0,47			0,72		

The correction factor is based on the lowest operating pressure and the lowest pressure dew-point.

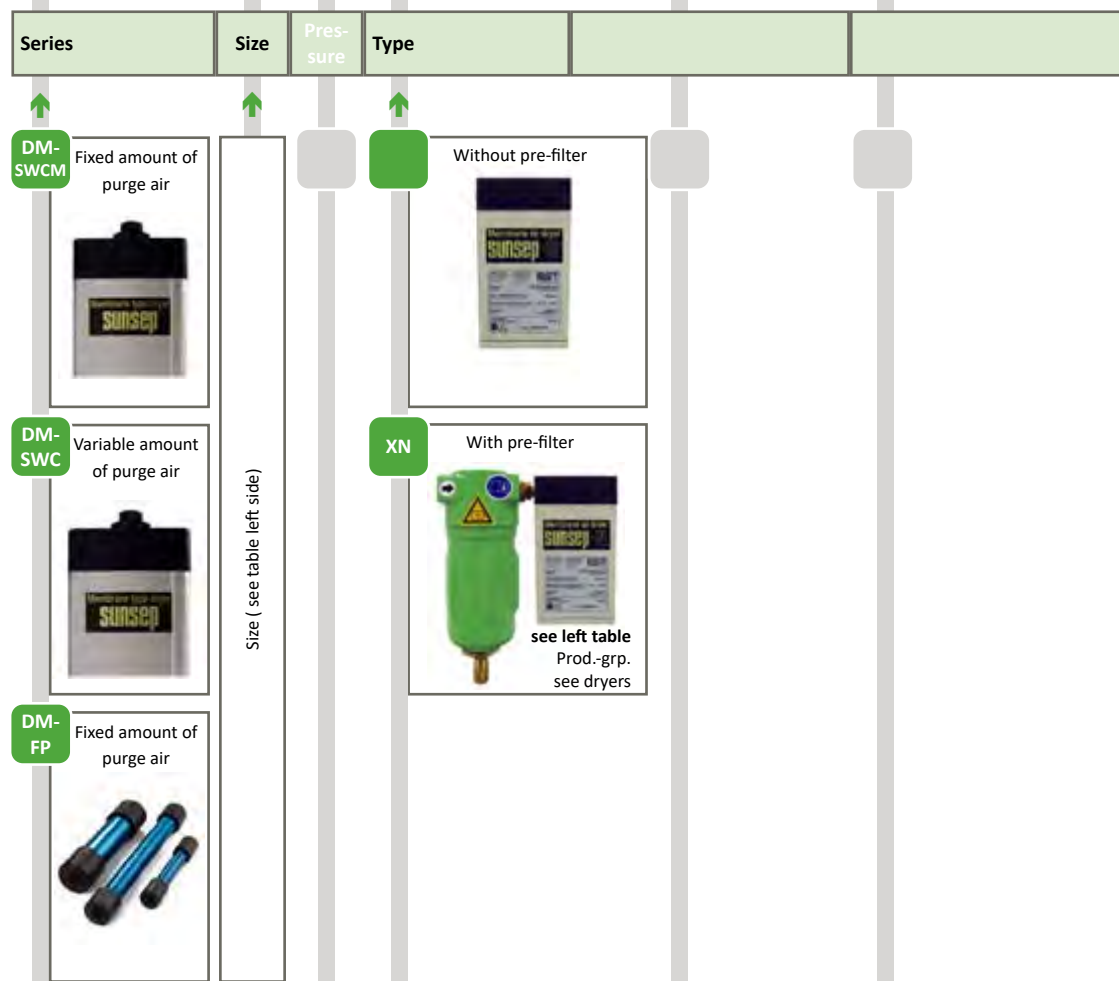
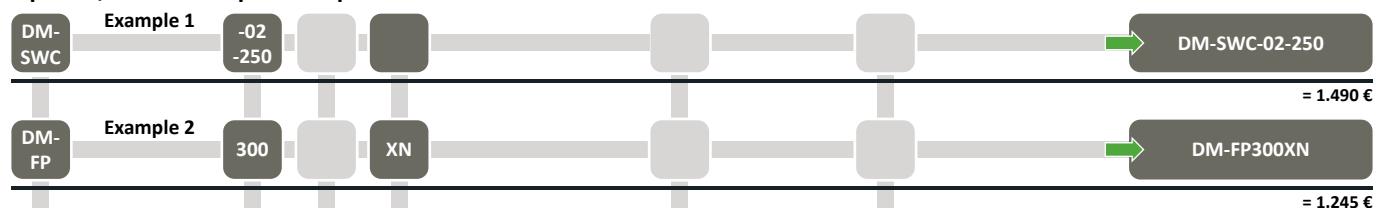
For a comprehensive description of how to use the correction factors, latest technical figures and information please refer to the relevant product data sheets, which are available in electronic format on our web site:

→ [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

## Drying

Membrane dryer up to 12,5 bar – DM-SWC., DM-FP.. series

### Options, order examples and price calculations



### Sizes and weights

	Height [A]	Width [B]	Depth [C]	Weight		Height [A]	Width [B]	Depth [C]	Weight
DM-SWCM-08-100	112 mm	61 mm	31 mm	0,26 kg	DM-SWCM-08-100XN	112 mm	130 mm	60 mm	0,91 kg
DM-SWCM-15-100	112 mm	61 mm	31 mm	0,27 kg	DM-SWCM-15-100XN	112 mm	130 mm	60 mm	0,92 kg
DM-SWC-01-150	150 mm	70 mm	40 mm	0,39 kg	DM-SWC-01-150XN	150 mm	140 mm	60 mm	1,04 kg
DM-SWC-02-250	200 mm	90 mm	50 mm	0,69 kg	DM-SWC-02-250XN	200 mm	160 mm	60 mm	1,34 kg
DM-SWC-03-250	200 mm	90 mm	50 mm	0,71 kg	DM-SWC-03-250XN	200 mm	160 mm	60 mm	1,36 kg
DM-FP50	58,4 mm	224 mm	58,4 mm	0,50 kg	DM-FP50XN	169 mm	290 mm	60 mm	1,10 kg
DM-FP100	58,4 mm	325 mm	58,4 mm	0,65 kg	DM-FP100XN	169 mm	395 mm	60 mm	1,25 Kg
DM-FP150	58,4 mm	427 mm	58,4 mm	0,80 kg	DM-FP150XN	169 mm	495 mm	60 mm	1,40 Kg
DM-FP200	58,4 mm	503 mm	58,4 mm	0,95 kg	DM-FP200XN	169 mm	570 mm	60 mm	1,55 Kg
DM-FP300	81,3 mm	312 mm	81,3 mm	1,10 kg	DM-FP300XN	215 mm	410 mm	80 mm	2,20 Kg
DM-FP400	81,3 mm	376 mm	81,3 mm	1,25 kg	DM-FP400XN	215 mm	475 mm	80 mm	2,35 Kg
DM-FP600	81,3 mm	465 mm	81,3 mm	1,45 kg	DM-FP600XN	215 mm	560 mm	80 mm	2,55 Kg
DM-FP800	81,3 mm	592 mm	81,3 mm	1,70 kg	DM-FP800XN	215 mm	690 mm	80 mm	2,80 Kg
DM-FP1050	109,2 mm	411 mm	109,2 mm	2,00 kg	DM-FP1050XN	215 mm	510 mm	80 mm	3,10 kg

## Drying

Adsorption dryer up to 16 bar – Point of use dryer – series FCA..CMS.. series



### Scope of supply

Ready-to-use point of use dryer including selected options (already installed or, in order to avoid transport damages, pre-installed / separately enclosed); single cardboard packing; transport packing is not included in the scope of supply and is charged separately.

Operating manuals including the manufacturer's declaration and/or declaration of conformity are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“  
Operating manuals are available in English and German language.

### Standard version

Dryer housing including desiccant cartridge; plug screws; manual drain;  
flow direction from top to bottom

	Nominal volume flow <sup>*1</sup>	Capacity <sup>*2</sup>	Maximum operating pressure	Connection		Cartridge	Quantity	Price	Prod.-grp.
<b>FCA 90 CMS M</b>	0,5 m <sup>3</sup> /h	11 m <sup>3</sup>	16 bar	G 1/2		EFST 90 CMS	1	556 €	01
<b>FCA 110 CMS M</b>	1,5 m <sup>3</sup> /h	32 m <sup>3</sup>	16 bar	G 1/2		EFST 110 CMS	1	704 €	01
<b>FCA 120 CMS M</b>	2,5 m <sup>3</sup> /h	54 m <sup>3</sup>	16 bar	G 1/2		EFST 120 CMS	1	840 €	01
<b>FCA 130 CMS M</b>	4,0 m <sup>3</sup> /h	95 m <sup>3</sup>	16 bar	G 1/2		EFST 130 CMS	1	1.087 €	01

\*1 – refers to 1 bar(a) and 20°C at 7 bar operating pressure; inlet temperature 20°C; pressure dew-point reduction 30°C

\*2 – refers to 20°C inlet temperature and 20% load capacity of the desiccant related to its weight

### Volume flow correction factors for operating conditions deviating from reference conditions

0 bar	1 bar	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar	8 bar	9 bar	10 bar	11 bar	12 bar	13 bar	14 bar	15 bar	16 bar
0,125	0,25	0,38	0,50	0,63	0,75	0,88	1,00	1,13	1,25	1,38	1,50	1,63	1,75	1,88	2,00	2,13

The correction factor is based on the filter's lowest operating pressure.

For a comprehensive description of how to use the correction factor, additional correction factors and latest technical figures and information please refer to the relevant product data sheets, which are available in electronic format on our web site:

→ [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“










## Drying

Adsorption dryer up to 16 bar – Point of use dryer – series FCA..CMS.. series

### Options, order examples and price calculations

Example 1		FCA	90		CMS			M	W	FCA90CMSMW
					556 € (see table left side)			(no add. price - see below)	+ 69 € (see below)	= 625 €
Example 2		FCA	130		CMS		HI	M		FCA130CMSHM
					1.087 € (see table left side)		+ 100 € (see below)	(no add. price - see below)		= 1.187 €

Housing type	Size	Pressure	Filtration grade	Flow	Differential pressure indication	Condensate discharge	Mounting
FCA Threaded filter (aluminium) 	Size (see table left side)		CMS Desiccant cartridge 	Top → Bottom	Plug screws (no indication)  HI Humidity indicator  FCA90-130 100 € Prod.-grp. 08	M Manual condensate drain 	Pipe mounting  W Wall mounting  FCA90-130 69 € Prod.-grp. 08

### Sizes and weights ( housings only)

	Height [A]	Width [B]	Depth [C]	Weight
FCA 90	289 mm	130 mm	122 mm	3,9 kg
FCA 110	387 mm	130 mm	122 mm	4,3 kg
FCA 120	487 mm	130 mm	122 mm	4,7 kg
FCA 130	689 mm	130 mm	122 mm	5,7 kg

## Drying

Adsorption dryer up to 10 bar – heatless regeneration – DPM.. series



### Scope of supply

Ready-to-use adsorption dryer; transport packing is not included in the scope of supply and is charged separately.

Operating manuals including the manufacturer's declaration and/or declaration of conformity are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

Operating manuals are available in English and German language.

### Standard version

Adsorption dryer with CO electronic control unit ; PLUS version with additional valve for compressor synchronization.

	Nominal volume flow <sup>*1</sup>	Maximum operating pressure	Connection	Price		Price	Prod.-grp.
<b>DPM 02</b>	2 m <sup>3</sup> /h	10 bar	Ø 8 mm	<b>861 €</b>	<b>DPM 02 PLUS</b>	<b>1.074 €</b>	29
<b>DPM 04</b>	4 m <sup>3</sup> /h	10 bar	Ø 8 mm	<b>920 €</b>	<b>DPM 04 PLUS</b>	<b>1.145 €</b>	29

\*1 – refers to 1 bar(a) and 20°C at 7 bar operating pressure, Inlet temperature 35°C, Pressure dew-point at outlet -25°C (DPM) / -40°C (DPM PLUS)

### Option for DPM02..04 PLUS - additional adsorption vessel with activated carbon filling

	Nominal volume flow <sup>*1</sup>	Maximum operating pressure	Connection		Price	Prod.-grp.
<b>DSM 02 A</b>	2 m <sup>3</sup> /h	10 bar	Ø 8 mm		<b>291 €</b>	29
<b>DSM 04 A</b>	4 m <sup>3</sup> /h	10 bar	Ø 8 mm		<b>335 €</b>	29



### Sizing for your individual operating conditions

Please contact the technical support of FST.

### Volume flow correction factors for operating conditions deviating from reference conditions

Operating pressure	4 bar	5 bar	6 bar	7 bar	8 bar	9 bar	10 bar
	0,63	0,75	0,88	1,00	1,13	1,25	1,38

Inlet temperature	25 °C	30 °C	35 °C	40 °C	45 °C	50 °C
	1,00	1,00	1,00	0,97	0,87	0,80

The correction factor is based on the lowest operating pressure as well as the maximum (highest) temperature.

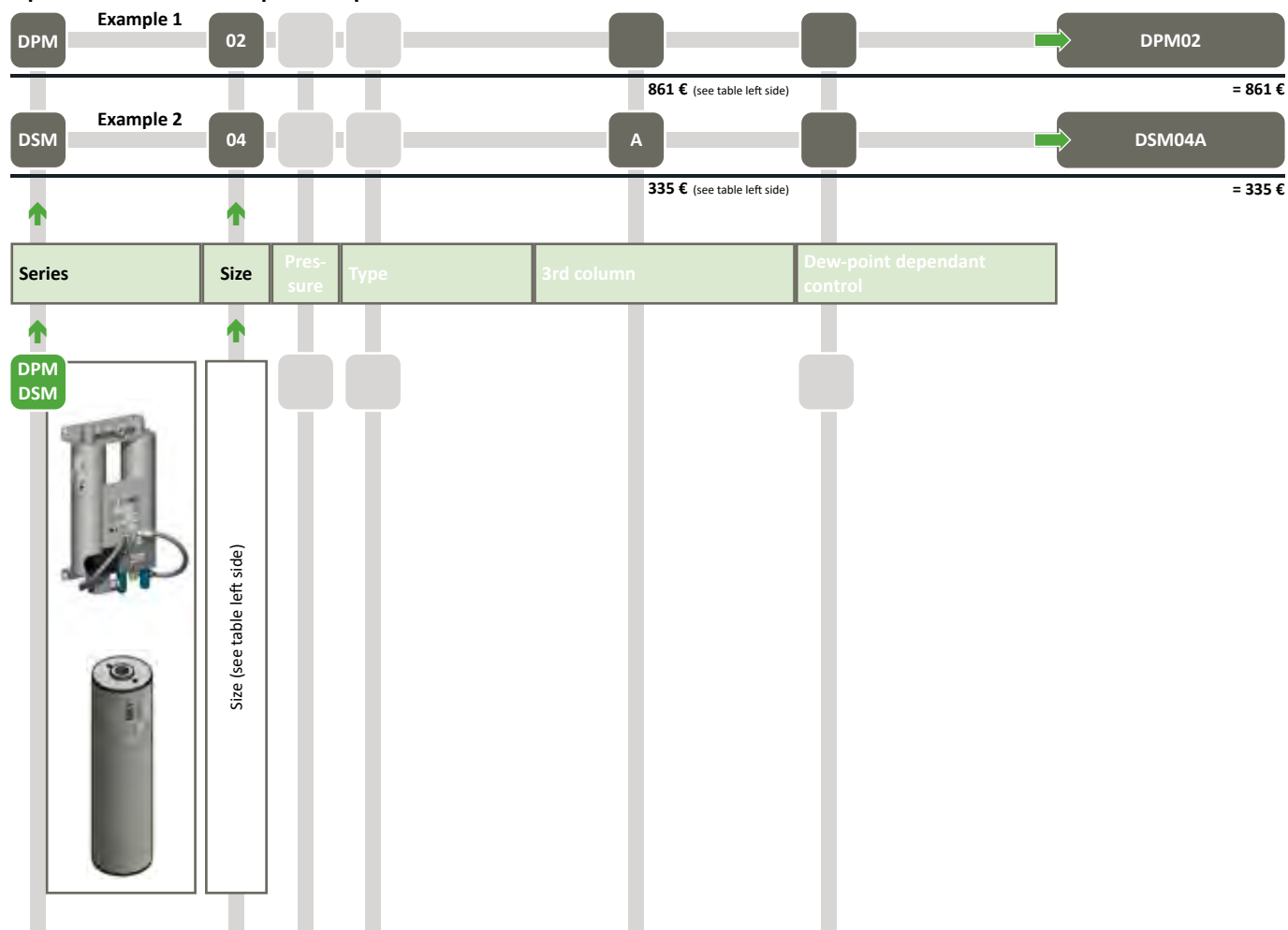
For a comprehensive description of how to use the correction factors, latest technical figures and information please refer to the relevant product data sheets, which are available in electronic format on our web site:

→ [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

## Drying

Adsorption dryer up to 10 bar – heatless regeneration – DPM.. series

### Options and order examples and price calculations



### Sizes and weights

	Height [A]	Width [B]	Depth [C]	Weight
DPM 02	263 mm	150 mm	95 mm	1,5 kg
DPM 04	403 mm	150 mm	95 mm	2,3 kg
DPM 02 PLUS	263 mm	150 mm	95 mm	1,5 kg
DPM 04 PLUS	403 mm	150 mm	95 mm	2,3 kg
DSM 02A	210 mm	55 mm	55 mm	0,94 kg
DSM 02A	350 mm	55 mm	55 mm	1,78 kg

## Drying

### Adsorption dryer up to 16 bar – heatless regeneration – DPS.. series



#### Scope of supply

Ready-to-use adsorption dryer including initial desiccant filling and selected options (already installed or, in order to avoid transport damages, pre-installed / separately enclosed); transport packing is not included in the scope of supply and is charged separately.

Operating manuals including the manufacturer's declaration and/or declaration of conformity are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

Operating manuals are available in English and German language. Additional pressure vessel documents are provided for welded pressure vessels. These vessel documents are created individually for each of these products and will be sent separately.

#### Standard version

Adsorption dryer with C1 electronic control unit; pre- and after-filter (DPS 1-100 only); option for additional activated carbon tower (A) and/or pressure dew-point dependant control (H)

	Nominal volume flow <sup>1</sup>	Maximum operating pressure	Connection	Price		Price	Prod.-grp.
DPS 1	8 m <sup>3</sup> /h	16 bar	G 3/8	2.230 €	DPS 1 A	3.011 €	22
DPS 2	15 m <sup>3</sup> /h	16 bar	G 3/8	2.391 €	DPS 2 A	3.228 €	22
DPS 3	25 m <sup>3</sup> /h	16 bar	G 3/8	2.742 €	DPS 3 A	3.704 €	22
DPS 4	35 m <sup>3</sup> /h	16 bar	G 3/8	3.069 €	DPS 4 A	4.093 €	22
DPS 6	57 m <sup>3</sup> /h	16 bar	G 1/2	3.906 €	DPS 6 A	5.272 €	22
DPS 7	72 m <sup>3</sup> /h	16 bar	G 1/2	4.297 €	DPS 7 A	5.730 €	22
DPS 8	82 m <sup>3</sup> /h	16 bar	G 1/2	4.950 €	DPS 8 A	6.553 €	22
DPS 10	110 m <sup>3</sup> /h	16 bar	G 1	7.304 €	DPS 10 A	10.045 €	23
DPS 15	150 m <sup>3</sup> /h	16 bar	G 1	7.840 €	DPS 15 A	10.738 €	23
DPS 20	200 m <sup>3</sup> /h	16 bar	G 1	8.510 €	DPS 20 A	11.559 €	23
DPS 25	260 m <sup>3</sup> /h	16 bar	G 1	9.314 €	DPS 25 A	12.737 €	23
DPS 30	320 m <sup>3</sup> /h	16 bar	G 1 ½	11.525 €	DPS 30 A	15.503 €	23
DPS 40	410 m <sup>3</sup> /h	16 bar	G 1 ½	12.732 €	DPS 40 A	17.095 €	23
DPS 60	590 m <sup>3</sup> /h	16 bar	G 1 ½	15.144 €	DPS 60 A	19.985 €	23
DPS 80	770 m <sup>3</sup> /h	16 bar	G 2	18.695 €	DPS 80 A	24.972 €	23
DPS 100	1.000 m <sup>3</sup> /h	16 bar	G 2	21.778 €	DPS 100 A	28.674 €	23
DPS 120	1.200 m <sup>3</sup> /h	11 bar	DN 50	26.859 €			24
DPS 150	1.480 m <sup>3</sup> /h	11 bar	DN 65	29.858 €			24
DPS 210	2.080 m <sup>3</sup> /h	11 bar	DN 65	34.230 €			24
DPS 240	2.430 m <sup>3</sup> /h	11 bar	DN 80	40.914 €			24
DPS 290	2.930 m <sup>3</sup> /h	11 bar	DN 80	44.662 €			24
DPS 370	3.700 m <sup>3</sup> /h	11 bar	DN 100	on request <sup>*2</sup>			24
DPS 510	5.080 m <sup>3</sup> /h	11 bar	DN 100	on request <sup>*2</sup>			24
DPS 630	6.290 m <sup>3</sup> /h	11 bar	DN 125	on request <sup>*2</sup>			24

\*1 – refers to 1 bar(a) and 20°C at 7 bar operating pressure, 35°C inlet temperature

\*2 – for an up to date commercial quotation please contact your account manager or use the dryer sizing software on our website.



Adsorption dryers for higher volume flows, higher operating pressures or bigger connection sizes are available on request.



#### Sizing for your individual operating conditions

Please contact the technical support of FST.

#### Volume flow correction factors for operating conditions deviating from reference conditions

Operating pressure	4 bar	5 bar	6 bar	7 bar	8 bar	9 bar	10 bar	11 bar	12 bar	13 bar	14 bar	15 bar	16 bar
		0,63	0,75	0,88	1,0	1,13	1,25	1,38	1,50	1,63	1,75	1,88	2,00

Inlet temperature	25°C	30°C	35°C	40°C	45°C	50°C	55°C <sup>*2</sup>	60°C <sup>*2</sup>
		1,00	1,00	1,00	0,97	0,87	0,80	0,64

\*2 – DPS10 to DPS630 only

For conversion the lowest appearing operating pressure, respectively the highest inlet temperature must be considered.

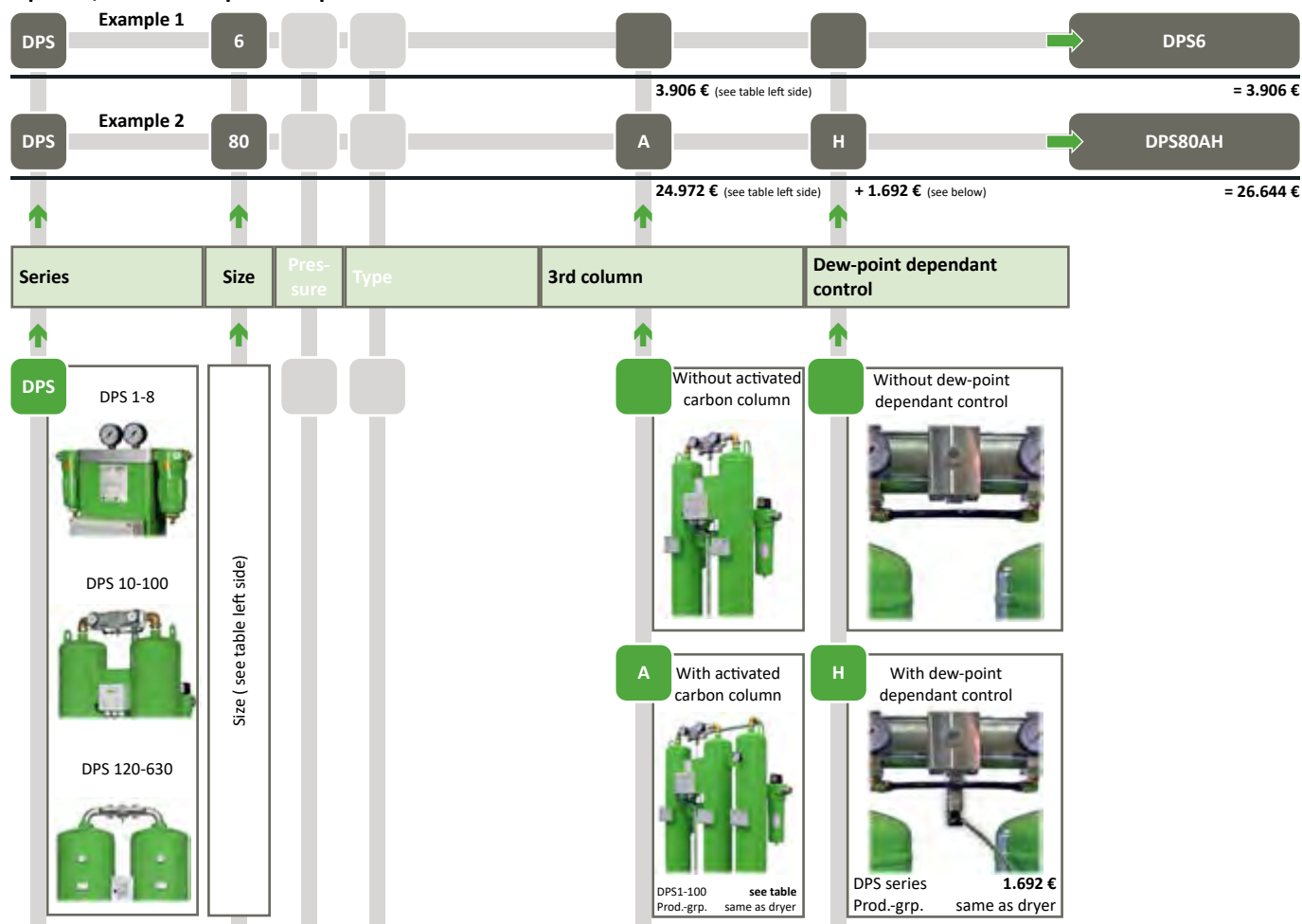
For a comprehensive description of how to use the correction factor, additional correction factors and latest technical figures and information please refer to the relevant product data sheets, which are available in electronic format on our web site:

→ [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

## Drying

Adsorption dryer up to 16 bar – heatless regeneration – DPS.. series

### Options, order examples and price calculations



### Sizes and weights

	Height [A]	Width [B]	Depth [C]	Weight		Height [A]	Width [B]	Depth [C]	Weight
DPS 1	450 mm	312 mm	185 mm	11 kg	DPS 1 A	450 mm	412 mm	210 mm	14 kg
DPS 2	625 mm	312 mm	185 mm	15 kg	DPS 2 A	625 mm	412 mm	210 mm	20 kg
DPS 3	875 mm	312 mm	185 mm	20 kg	DPS 3 A	875 mm	412 mm	210 mm	27 kg
DPS 4	1125 mm	312 mm	185 mm	25 kg	DPS 4 A	1125 mm	412 mm	210 mm	35 kg
DPS 6	1180 mm	484 mm	220 mm	45 kg	DPS 6 A	1180 mm	614 mm	245 mm	65 kg
DPS 7	1405 mm	484 mm	220 mm	54 kg	DPS 7 A	1405 mm	614 mm	245 mm	78 kg
DPS 8	1605 mm	484 mm	220 mm	62 kg	DPS 8 A	1605 mm	614 mm	245 mm	90 kg
DPS 10	1460 mm	675 mm	515 mm	126 kg	DPS 10 A	1460 mm	955 mm	515 mm	173 kg
DPS 15	1700 mm	675 mm	515 mm	142 kg	DPS 15 A	1700 mm	955 mm	515 mm	195 kg
DPS 20	1720 mm	675 mm	515 mm	180 kg	DPS 20 A	1720 mm	955 mm	515 mm	250 kg
DPS 25	1735 mm	675 mm	515 mm	220 kg	DPS 25 A	1735 mm	985 mm	515 mm	300 kg
DPS 30	1830 mm	745 mm	555 mm	250 kg	DPS 30 A	1830 mm	1130 mm	555 mm	350 kg
DPS 40	1840 mm	755 mm	570 mm	280 kg	DPS 40 A	1840 mm	1140 mm	570 mm	395 kg
DPS 60	1870 mm	775 mm	600 mm	355 kg	DPS 60 A	1870 mm	1180 mm	600 mm	525 kg
DPS 80	2045 mm	1045 mm	715 mm	470 kg	DPS 80 A	2045 mm	1450 mm	715 mm	630 kg
DPS 100	2060 mm	1050 mm	750 mm	560 kg	DPS 100 A	2060 mm	1450 mm	750 mm	740 kg
DPS 120	1975 mm	1110 mm	670 mm	670 kg					
DPS 150	2070 mm	1250 mm	870 mm	850 kg					
DPS 210	2090 mm	1340 mm	920 mm	1080 kg					
DPS 240	2185 mm	1520 mm	970 mm	1300 kg					
DPS 290	2200 mm	1585 mm	1000 mm	1490 kg					
DPS 370	2340 mm	1850 mm	1130 mm	1930 kg					
DPS 510	2600 mm	1870 mm	1160 mm	2400 kg					
DPS 630	2780 mm	2350 mm	1350 mm	3100 kg					

## Drying

### Adsorption dryer up to 420 bar – heatless regeneration – DHW.. series



#### Scope of supply

Ready-to-use adsorption dryer including initial desiccant filling and selected options (already installed or, in order to avoid transport damages, pre-installed / separately enclosed); transport packing is not included in the scope of supply and is charged separately.

#### Standard version

Adsorption dryer with C1 electronic control unit; pre- and after-filter; option for additional activated carbon tower (A) and/or pressure dew-point dependant control (H)

		Nominal volume flow <sup>*1</sup>	Maximum operating pressure	Connection	Price	Prod.-grp.
DHW 11 /50		40 m <sup>3</sup> /h	50 bar	G 1/2	on request	31
DHW 19 /50		85 m <sup>3</sup> /h	50 bar	G 1/2	on request	31
DHW 39 /50		180 m <sup>3</sup> /h	50 bar	G 1/2	on request	31
DHW 49 /50		225 m <sup>3</sup> /h	50 bar	G 1/2	on request	31
DHW 72 /50		330 m <sup>3</sup> /h	50 bar	G 1/2	on request	31
DHW 96 /50		440 m <sup>3</sup> /h	50 bar	G 1/2	on request	31
DHW 156 /50		770 m <sup>3</sup> /h	50 bar	G 3/4 <sup>*2</sup>	on request	31
DHW 239 /50		1.170 m <sup>3</sup> /h	50 bar	G 3/4 <sup>*2</sup>	on request	31
DHW 5 /100		70 m <sup>3</sup> /h	100 bar	G 1/2	on request	31
DHW 9 /100		85 m <sup>3</sup> /h	100 bar	G 1/2	on request	31
DHW 12 /100		145 m <sup>3</sup> /h	100 bar	G 1/2	on request	31
DHW 24 /100		270 m <sup>3</sup> /h	100 bar	G 1/2	on request	31
DHW 37 /100		410 m <sup>3</sup> /h	100 bar	G 1/2	on request	31
DHW 58 /100		750 m <sup>3</sup> /h	100 bar	G 1/2 <sup>*2</sup>	on request	31
DHW 5 /250		115 m <sup>3</sup> /h	250 bar	G 1/2	on request	31
DHW 9 /250		170 m <sup>3</sup> /h	250 bar	G 1/2	on request	31
DHW 12 /250		275 m <sup>3</sup> /h	250 bar	G 1/2	on request	31
DHW 24 /250		490 m <sup>3</sup> /h	250 bar	G 1/2	on request	31
DHW 37 /250		730 m <sup>3</sup> /h	250 bar	G 1/2	on request	31
DHW 58 /250		1.450 m <sup>3</sup> /h	250 bar	G 1/2 <sup>*2</sup>	on request	31
DHW 5 /350		160 m <sup>3</sup> /h	350 bar	G 1/2	on request	31
DHW 9 /350		235 m <sup>3</sup> /h	350 bar	G 1/2	on request	31
DHW 12 /350		320 m <sup>3</sup> /h	350 bar	G 1/2	on request	31
DHW 24 /350		580 m <sup>3</sup> /h	350 bar	G 1/2	on request	31
DHW 37 /350		860 m <sup>3</sup> /h	350 bar	G 1/2	on request	31
DHW 58 /350		1.750 m <sup>3</sup> /h	350 bar	G 1/2 <sup>*2</sup>	on request	31
DHW 5 /420		150 m <sup>3</sup> /h	420 bar	G 1/2	on request	31
DHW 9 /420		225 m <sup>3</sup> /h	420 bar	G 1/2	on request	31
DHW 12 /420		315 m <sup>3</sup> /h	420 bar	G 1/2	on request	31
DHW 24 /420		560 m <sup>3</sup> /h	420 bar	G 1/2	on request	31
DHW 37 /420		850 m <sup>3</sup> /h	420 bar	G 1/2 <sup>*2</sup>	on request	31

\*1 – refers to 1 bar(a) and 20°C at 7 bar operating pressure, 35°C inlet temperature

\*2 – alternative connection sizes available



Adsorption dryers for higher volume flows, higher operating pressures or bigger connection sizes are available on request.



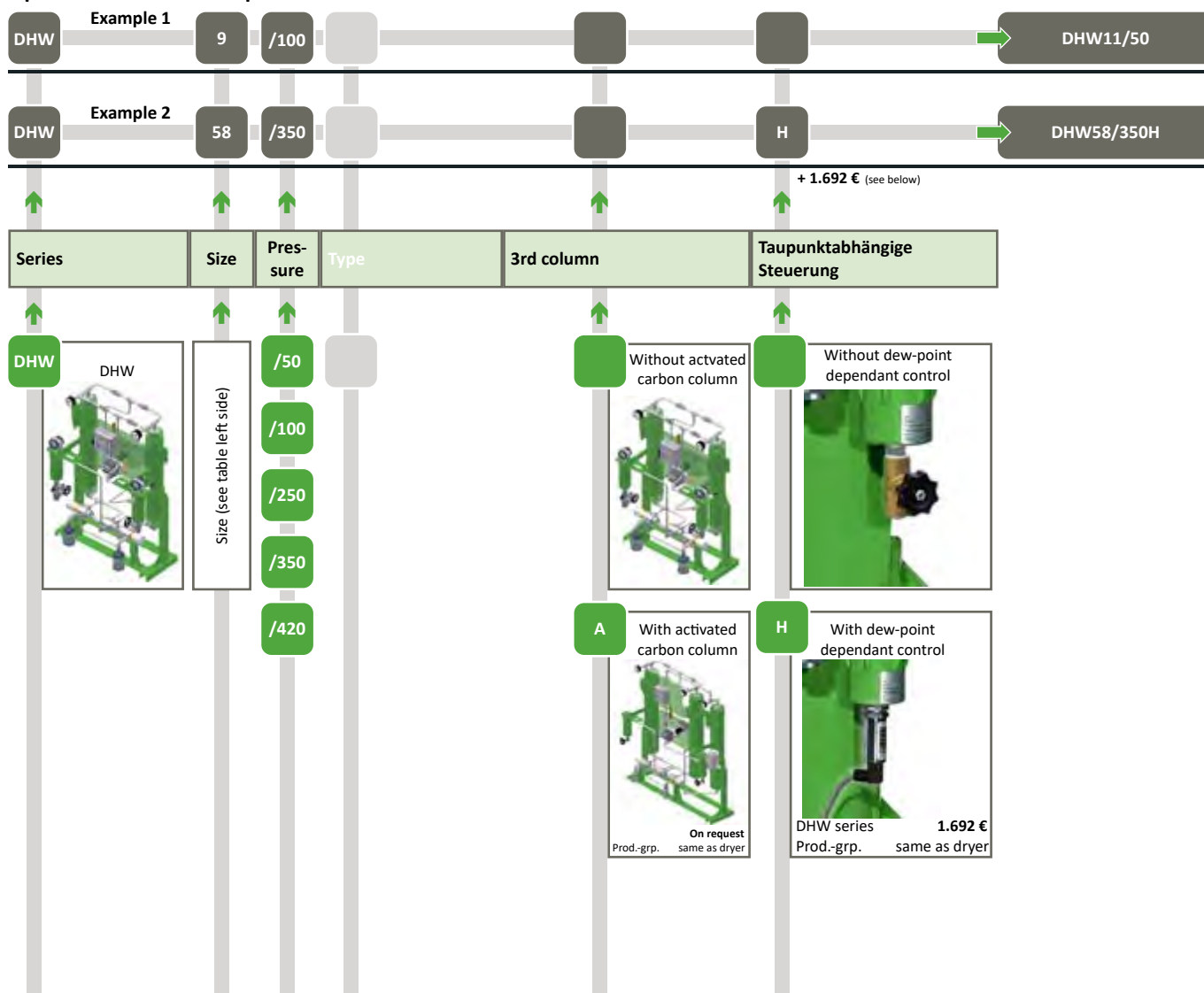
**Sizing for your individual operating conditions**  
Please contact the technical support of FST.

For latest technical figures and information please refer to the relevant product data sheets, which are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

## Drying

Adsorption dryer up to 420 bar – heatless regeneration – DHW.. series

### Options and order examples



### Sizes and weights

	Height [A]	Width [B]	Depth [C]	Weight		Height [A]	Width [B]	Depth [C]	Weight
DHW 11 /50	1155 mm	735 mm	465 mm	65 kg	DHW 5 /250	1030 mm	800 mm	430 mm	127 kg
DHW 19 /50	1425 mm	735 mm	465 mm	80 kg	DHW 9 /250	1260 mm	800 mm	430 mm	139 kg
DHW 39 /50	1505 mm	810 mm	480 mm	105 kg	DHW 12 /250	1130 mm	800 mm	430 mm	150 kg
DHW 49 /50	1715 mm	810 mm	480 mm	115 kg	DHW 24 /250	1260 mm	850 mm	445 mm	196 kg
DHW 72 /50	1780 mm	930 mm	500 mm	150 kg	DHW 37 /250	1300 mm	910 mm	460 mm	252 kg
DHW 96 /50	1785 mm	980 mm	525 mm	180 kg	DHW 58 /250	1600 mm	960 mm	470 mm	349 kg
DHW 156 /50	1870 mm	1080 mm	575 mm	240 kg					
DHW 239 /50	1870 mm	1190 mm	630 mm	390 kg	DHW 5 /350	1050 mm	840 mm	700 mm	177 kg
					DHW 9 /350	1280 mm	840 mm	700 mm	189 kg
DHW 5 /100	1030 mm	800 mm	430 mm	105 kg	DHW 12 /350	1150 mm	890 mm	725 mm	210 kg
DHW 9 /100	1260 mm	800 mm	430 mm	111 kg	DHW 24 /350	1280 mm	940 mm	750 mm	262 kg
DHW 12 /100	1130 mm	800 mm	430 mm	120 kg	DHW 37 /350	1320 mm	1000 mm	780 mm	327 kg
DHW 24 /100	1260 mm	850 mm	445 mm	145 kg	DHW 58 /350	1620 mm	1050 mm	805 mm	441 kg
DHW 37 /100	1300 mm	910 mm	460 mm	179 kg					
DHW 58 /100	1600 mm	960 mm	470 mm	254 kg	DHW 5 /420	1050 mm	840 mm	700 mm	184 kg
					DHW 9 /420	1280 mm	840 mm	700 mm	196 kg
					DHW 12 /420	1150 mm	890 mm	725 mm	220 kg
					DHW 24 /420	1280 mm	940 mm	750 mm	280 kg
					DHW 37 /420	1320 mm	1000 mm	780 mm	350 kg

## Drying

Adsorption dryer up to 350 bar – heatless regeneration – DHM.. series



### Scope of supply

Ready-to-use adsorption dryer including initial desiccant filling and selected options (already installed or, in order to avoid transport damages, pre-installed / separately enclosed); operating manual including declaration of conformity; transport packing is not included in the scope of supply and is charged separately.

### Standard version

Adsorption dryer with C1 electronic control unit; pre- and after-filter

	Nominal volume flow <sup>*1</sup>	Maximum operating pressure	Connection	Price	Prod.-grp.
DHM 8 /100	160 m <sup>3</sup> /h	100 bar	G 1/2	on request	32
DHM 13 /100	215 m <sup>3</sup> /h	100 bar	G 1/2	on request	32
DHM 18 /100	270 m <sup>3</sup> /h	100 bar	G 1/2	on request	32
DHM 26 /100	325 m <sup>3</sup> /h	100 bar	G 1/2	on request	32
DHM 31 /100	415 m <sup>3</sup> /h	100 bar	G 1/2	on request	32
DHM 41 /100	540 m <sup>3</sup> /h	100 bar	G 3/4	on request	32
DHM 52 /100	635 m <sup>3</sup> /h	100 bar	G 3/4	on request	32
DHM 59 /100	735 m <sup>3</sup> /h	100 bar	G 3/4	on request	32
DHM 66 /100	860 m <sup>3</sup> /h	100 bar	G 3/4	on request	32
DHM 8 /350	300 m <sup>3</sup> /h	350 bar	G 1/2	on request	32
DHM 13 /350	400 m <sup>3</sup> /h	350 bar	G 1/2	on request	32
DHM 18 /350	500 m <sup>3</sup> /h	350 bar	G 1/2	on request	32
DHM 26 /350	600 m <sup>3</sup> /h	350 bar	G 1/2	on request	32
DHM 31 /350	765 m <sup>3</sup> /h	350 bar	G 1/2	on request	32
DHM 41 /350	1.260 m <sup>3</sup> /h	350 bar	G 3/4	on request	32
DHM 52 /350	1.490 m <sup>3</sup> /h	350 bar	G 3/4	on request	32
DHM 59 /350	1.720 m <sup>3</sup> /h	350 bar	G 3/4	on request	32
DHM 66 /350	2.000 m <sup>3</sup> /h	350 bar	G 3/4	on request	32

\*1 – refers to 1 bar(a) and 20°C with an operating pressure of 100 bar or 350 bar, respectively



### Sizing for your individual operating conditions

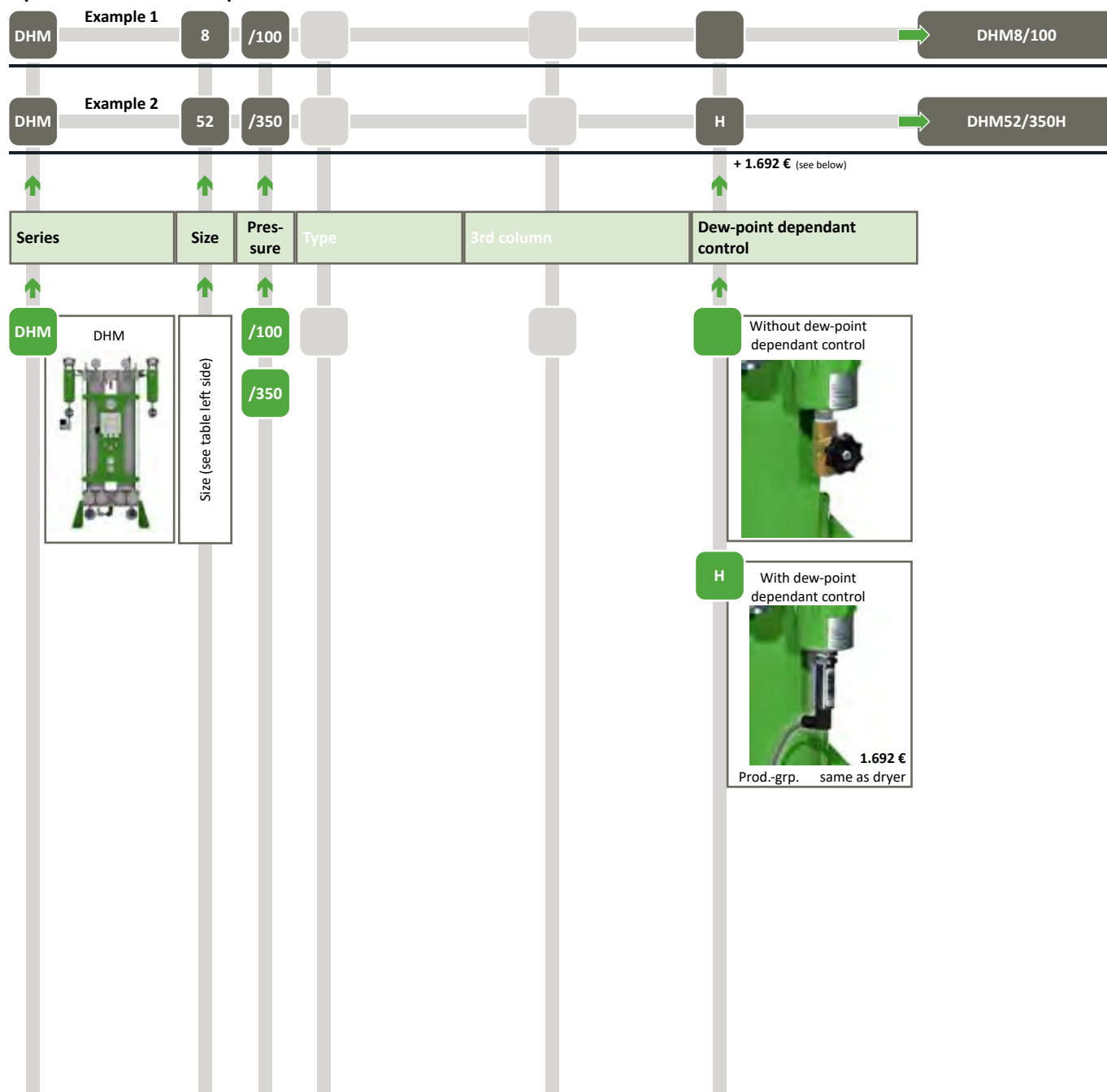
Please contact the technical support of FST



## Drying

Adsorption dryer up to 350 bar – heatless regeneration – DHM.. series

### Options and order examples



### Sizes and weights

	Height [A]	Width [B]	Depth [C]	Weight		Height [A]	Width [B]	Depth [C]	Weight
DHM 8 /100	1100 mm	715 mm	320 mm	149 kg	DHM 8 /350	1100 mm	715 mm	715 mm	191 kg
DHM 13 /100	1250 mm	715 mm	320 mm	159 kg	DHM 13 /350	1250 mm	715 mm	715 mm	218 kg
DHM 18 /100	1400 mm	715 mm	320 mm	168 kg	DHM 18 /350	1400 mm	715 mm	715 mm	241 kg
DHM 26 /100	1550 mm	715 mm	320 mm	178 kg	DHM 26 /350	1550 mm	715 mm	715 mm	264 kg
DHM 31 /100	1800 mm	715 mm	320 mm	194 kg	DHM 31 /350	1800 mm	715 mm	715 mm	303 kg
DHM 41 /100	1750 mm	715 mm	320 mm	292 kg	DHM 41 /350	1750 mm	715 mm	715 mm	402 kg
DHM 52 /100	1950 mm	715 mm	320 mm	314 kg	DHM 52 /350	1950 mm	715 mm	715 mm	444 kg
DHM 59 /100	2150 mm	715 mm	320 mm	336 kg	DHM 59 /350	2150 mm	715 mm	715 mm	483 kg
DHM 66 /100	2400 mm	715 mm	320 mm	364 kg	DHM 66 /350	2400 mm	715 mm	715 mm	535 kg

## Drying

Pressure dew-point booster up to 16 bar - heat regeneration - DTS HPI series - for pre-dried compressed air



### Scope of supply

Ready-to-use dryer including initial desiccant filling and selected options (already installed or, in order to avoid transportation damages, pre-installed); transport packing is not included in the scope of supply and is charged separately.

Operating manuals including the manufacturer's declaration and/or declaration of conformity are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

Operating manuals are available in English and German language. Additional pressure vessel documents are provided for welded pressure vessels. These vessel documents are created individually for each of these products and will be sent separately.

### Standard version

Dryer with C15 electronic control unit; isolated vessels with heating elements and pre- and after-filter; incl. dew-point dependant control (H)

	Nominal volume flow <sup>*1</sup>	Maximum operating pressure	Connection	Price	Prod.-grp.
DTS 15 HPI	150 m <sup>3</sup> /h	16 bar	G 1	20.309 €	20
DTS 20 HPI	200 m <sup>3</sup> /h	16 bar	G 1	20.406 €	20
DTS 25 HPI	260 m <sup>3</sup> /h	16 bar	G 1	20.874 €	20
DTS 30 HPI	320 m <sup>3</sup> /h	16 bar	G 1 1/2	23.223 €	20
DTS 40 HPI	410 m <sup>3</sup> /h	16 bar	G 1 1/2	24.543 €	20
DTS 60 HPI	590 m <sup>3</sup> /h	16 bar	G 1 1/2	27.559 €	20
DTS 80 HPI	770 m <sup>3</sup> /h	16 bar	G 2	31.738 €	20
DTS 100 HPI	1.000 m <sup>3</sup> /h	16 bar	G 2	32.572 €	20

\*1 – refers to 1 bar(a) and 20°C at 7 bar operating pressure, 35°C inlet temperature

Correction factors for operating pressure can be taken from DPS series.

Inlet conditions: up to + 50°C inlet temperature of compressed air and < + 10 °C pressure dew-point at inlet.



### Sizing for your individual operating conditions

Please contact the technical support of FST

## Drying

Pressure dew-point booster up to 16 bar - heat regeneration - DTS HPI series - for pre-dried compressed air

Back-Up Mode* <sup>2</sup>	Price	2-stage expansion* <sup>3</sup>	Price	Prod.-grp.
DA-Backup-Mode-01	680 €	DA-NR25-DPS10-25	515 €	20
DA-Backup-Mode-01	680 €	DA-NR25-DPS10-25	515 €	20
DA-Backup-Mode-01	680 €	DA-NR25-DPS10-25	515 €	20
DA-Backup-Mode-01	680 €	DA-NR25-DPS30-60	704 €	20
DA-Backup-Mode-01	680 €	DA-NR25-DPS30-60	704 €	20
DA-Backup-Mode-01	680 €	DA-NR25-DPS30-60	704 €	20
DA-Backup-Mode-01	680 €	DA-NR25-DPS80-100	763 €	20
DA-Backup-Mode-01	680 €	DA-NR25-DPS80-100	763 €	20

\*2 – automatic switch-over into the mode of a heatless regenerated adsorption dryer in case the required inlet dewpoint fails

\*3 – noise reduction to < 78 db(A).

## Sizes and weights

	Height [A]	Width [B]	Depth [C]	Weight
<b>DTS 15 HPI</b>	1820 mm	925 mm	790 mm	173 kg
<b>DTS 20 HPI</b>	1830 mm	950 mm	790 mm	215 kg
<b>DTS 25 HPI</b>	1835 mm	976 mm	820 mm	259 kg
<b>DTS 30 HPI</b>	1935 mm	990 mm	820 mm	295 kg
<b>DTS 40 HPI</b>	1935 mm	1125 mm	800 mm	333 kg
<b>DTS 60 HPI</b>	1935 mm	1225 mm	825 mm	400 kg
<b>DTS 80 HPI</b>	1935 mm	1300 mm	915 mm	520 kg
<b>DTS 100 HPI</b>	2150 mm	1420 mm	940 mm	615 kg

## Drying

### Adsorption dryer up to 11 bar – heat regeneration – DTS..V.. series



#### Scope of supply

Ready-to-use adsorption dryer including initial desiccant filling and selected options (already installed or, in order to avoid transport damages, pre-installed / separately enclosed); transport packing is not included in the scope of supply and is charged separately.  
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Operating manuals are available in English and German language. Additional pressure vessel documents are provided for welded pressure vessels. These vessel documents are created individually for each of these products and will be sent separately.

#### Standard version

Adsorption dryer with C10 electronic control unit; option for thermal insulation (/TI) and/or pressure dew-point dependant control (H)

	Nominal volume flow <sup>1</sup>	Maximum operating pressure	Connection	Price <sup>2</sup>		Price <sup>2</sup>	Prod.-grp.
DTS 45 V	410 m <sup>3</sup> /h	11 bar	DN 40	on request	DTS 45 V/TI	on request	21
DTS 55 V	500 m <sup>3</sup> /h	11 bar	DN 40	on request	DTS 55 V/TI	on request	21
DTS 65 V	645 m <sup>3</sup> /h	11 bar	DN 50	on request	DTS 65 V/TI	on request	21
DTS 85 V	790 m <sup>3</sup> /h	11 bar	DN 50	on request	DTS 85 V/TI	on request	21
DTS 125 V	1.210 m <sup>3</sup> /h	11 bar	DN 80	on request	DTS 125 V/TI	on request	21
DTS 155 V	1.490 m <sup>3</sup> /h	11 bar	DN 80	on request	DTS 155 V/TI	on request	21
DTS 215 V	2.100 m <sup>3</sup> /h	11 bar	DN 80	on request	DTS 215 V/TI	on request	21
DTS 250 V	2.440 m <sup>3</sup> /h	11 bar	DN 100	on request	DTS 250 V/TI	on request	21
DTS 300 V	2.950 m <sup>3</sup> /h	11 bar	DN 100	on request	DTS 300 V/TI	on request	21
DTS 380 V	3.750 m <sup>3</sup> /h	11 bar	DN 100	on request	DTS 380 V/TI	on request	21
DTS 430 V	4.250 m <sup>3</sup> /h	11 bar	DN 150	on request	DTS 430 V/TI	on request	21
DTS 500 V	4.930 m <sup>3</sup> /h	11 bar	DN 150	on request	DTS 500 V/TI	on request	21
DTS 540 V	5.330 m <sup>3</sup> /h	11 bar	DN 150	on request	DTS 540 V/TI	on request	21
DTS 650 V	6.510 m <sup>3</sup> /h	11 bar	DN 150	on request	DTS 650 V/TI	on request	21
DTS 720 V	7.180 m <sup>3</sup> /h	11 bar	DN 150	on request	DTS 720 V/TI	on request	21
DTS 860 V	8.600 m <sup>3</sup> /h	11 bar	DN 200	on request	DTS 860 V/TI	on request	21
DTS 940 V	9.400 m <sup>3</sup> /h	11 bar	DN 200	on request	DTS 940 V/TI	on request	21
DTS 1100 V	11.000 m <sup>3</sup> /h	11 bar	DN 200	on request	DTS 1100 V/TI	on request	21
DTS 1280 V	12.800 m <sup>3</sup> /h	11 bar	DN 200	on request	DTS 1280 V/TI	on request	21
DTS 1470 V	14.700 m <sup>3</sup> /h	11 bar	DN 200	on request	DTS 1470 V/TI	on request	21

\*1 – refers to 1 bar(a) and 20°C at 7 bar operating pressure, 35°C inlet temperature, 25°C ambient temperature at 50% relative humidity

\*2 – for an up to date commercial quotation please contact your account manager or use the dryer sizing software on our website.



Heat regenerated adsorption dryers for higher volume flows, higher operating pressures, bigger connection sizes or further modifications are available on request.



#### Sizing for your individual operating conditions

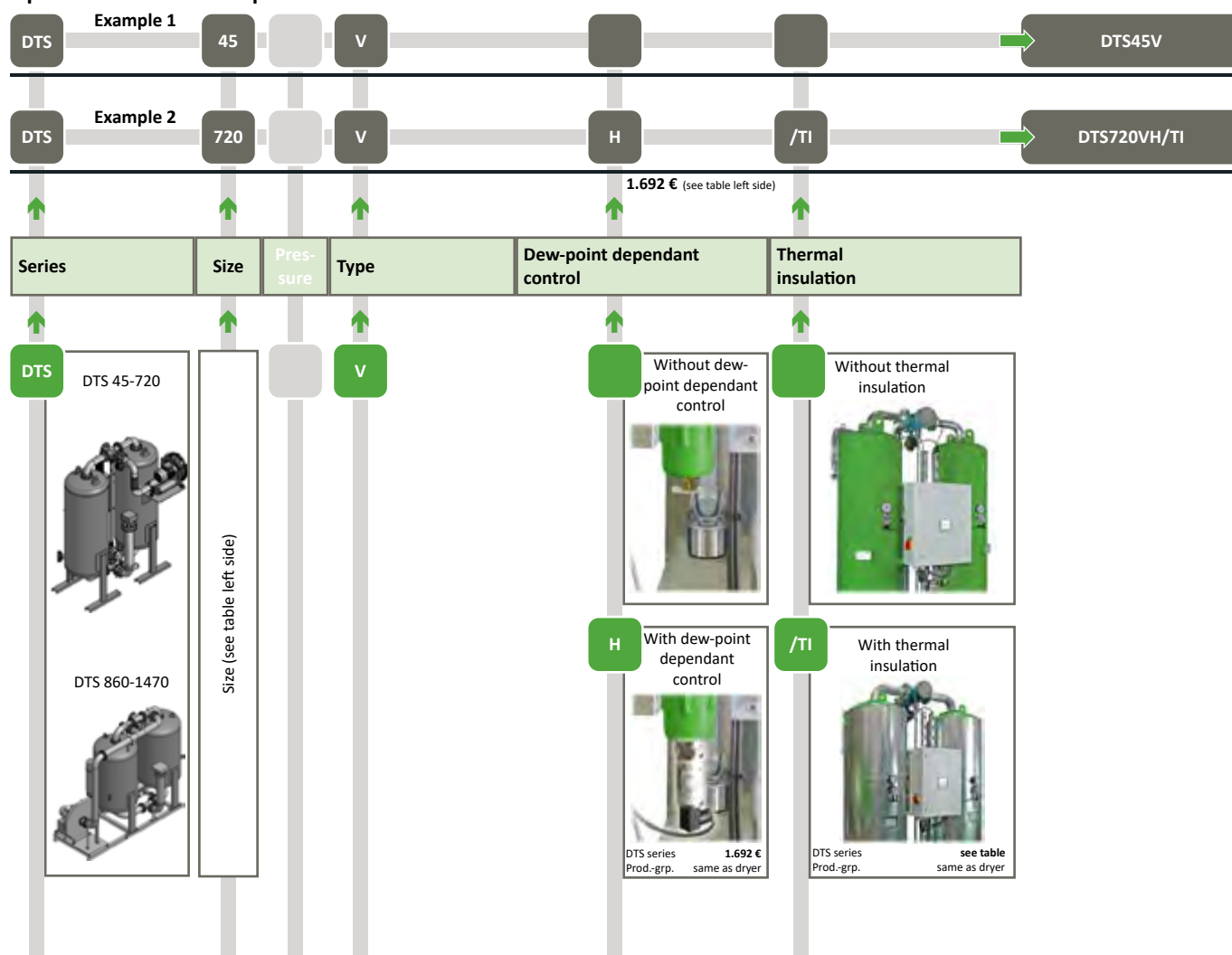
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For latest technical figures and information please refer to the relevant product data sheets, which are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

## Drying

Adsorption dryer up to 11 bar – heat regeneration – DTS..V.. series

### Options and order examples



### Sizes and weights

	Height [A]	Width [B]	Depth [C]	Weight		Height [A]	Width [B]	Depth [C]	Weight
DTS 45 V	2225 mm	1190 mm	1000 mm	529 kg	DTS 45 V/TI	2225 mm	1240 mm	1000 mm	545 kg
DTS 55 V	2225 mm	1190 mm	1000 mm	560 kg	DTS 55 V/TI	2225 mm	1240 mm	1000 mm	575 kg
DTS 65 V	2325 mm	1310 mm	1085 mm	640 kg	DTS 65 V/TI	2325 mm	1360 mm	1085 mm	660 kg
DTS 85 V	2325 mm	1310 mm	1085 mm	780 kg	DTS 85 V/TI	2325 mm	1360 mm	1085 mm	800 kg
DTS 125 V	2705 mm	1460 mm	1150 mm	1020 kg	DTS 125 V/TI	2705 mm	1510 mm	1150 mm	1045 kg
DTS 155 V	2720 mm	1510 mm	1230 mm	1320 kg	DTS 155 V/TI	2720 mm	1560 mm	1230 mm	1350 kg
DTS 215 V	2770 mm	1600 mm	1460 mm	1690 kg	DTS 215 V/TI	2770 mm	1650 mm	1460 mm	1725 kg
DTS 250 V	2885 mm	2015 mm	1475 mm	1900 kg	DTS 250 V/TI	2885 mm	2065 mm	1475 mm	1935 kg
DTS 300 V	2920 mm	2045 mm	1505 mm	2400 kg	DTS 300 V/TI	2920 mm	2095 mm	1505 mm	2440 kg
DTS 380 V	2970 mm	2160 mm	1590 mm	2800 kg	DTS 380 V/TI	2970 mm	2210 mm	1590 mm	2845 kg
DTS 430 V	3210 mm	2370 mm	1560 mm	3800 kg	DTS 430 V/TI	3210 mm	2420 mm	1560 mm	3850 kg
DTS 500 V	3235 mm	2475 mm	1745 mm	4050 kg	DTS 500 V/TI	3235 mm	2525 mm	1745 mm	4100 kg
DTS 540 V	3250 mm	2520 mm	1870 mm	4220 kg	DTS 540 V/TI	3250 mm	2570 mm	1870 mm	4275 kg
DTS 650 V	3520 mm	2520 mm	1920 mm	5000 kg	DTS 650 V/TI	3520 mm	2570 mm	1920 mm	6065 kg
DTS 720 V	3560 mm	2640 mm	1985 mm	5650 kg	DTS 720 V/TI	3560 mm	2690 mm	1985 mm	5720 kg
DTS 860 V	3590 mm	4400 mm	1995 mm	6380 kg	DTS 860 V/TI	3590 mm	4450 mm	1995 mm	6455 kg
DTS 940 V	3610 mm	4500 mm	1995 mm	7520 kg	DTS 940 V/TI	3610 mm	4550 mm	1995 mm	7595 kg
DTS 1100 V	3650 mm	4750 mm	1995 mm	8730 kg	DTS 1100 V/TI	3650 mm	4800 mm	1995 mm	8815 kg
DTS 1280 V	4050 mm	4945 mm	2030 mm	8730 kg	DTS 1280 V/TI	4050 mm	4995 mm	2030 mm	8820 kg
DTS 1470 V	4050 mm	5145 mm	2055 mm	8730 kg	DTS 1470 V/TI	4050 mm	5195 mm	2055 mm	8830 kg

## Drying

### Adsorption dryer up to 11 bar – heat regeneration – DTS..BVL.. series



#### Scope of supply

Ready-to-use adsorption dryer including initial desiccant filling and selected options (already installed or, in order to avoid transport damages, pre-installed / separately enclosed); transport packing is not included in the scope of supply and is charged separately.

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Operating manuals are available in English and German language. Additional pressure vessel documents are provided for welded pressure vessels. These vessel documents are created individually for each of these products and will be sent separately.

#### Standard version

Adsorption dryer with C10 electronic control unit; option for thermal insulation (/TI) and/or pressure dew-point dependant control (H)

	Nominal volume flow <sup>1</sup>	Maximum operating pressure	Connection	Price <sup>2</sup>		Price <sup>2</sup>	Prod.-grp.
DTS 125 BVL	1.230 m <sup>3</sup> /h	11 bar	DN 80	on request	DTS 125 BVL/TI	on request	21
DTS 155 BVL	1.540 m <sup>3</sup> /h	11 bar	DN 80	on request	DTS 155 BVL/TI	on request	21
DTS 215 BVL	2.140 m <sup>3</sup> /h	11 bar	DN 80	on request	DTS 215 BVL/TI	on request	21
DTS 250 BVL	2.470 m <sup>3</sup> /h	11 bar	DN 100	on request	DTS 250 BVL/TI	on request	21
DTS 300 BVL	2.990 m <sup>3</sup> /h	11 bar	DN 100	on request	DTS 300 BVL/TI	on request	21
DTS 380 BVL	3.800 m <sup>3</sup> /h	11 bar	DN 100	on request	DTS 380 BVL/TI	on request	21
DTS 430 BVL	4.300 m <sup>3</sup> /h	11 bar	DN 150	on request	DTS 430 BVL/TI	on request	21
DTS 500 BVL	4.980 m <sup>3</sup> /h	11 bar	DN 150	on request	DTS 500 BVL/TI	on request	21
DTS 540 BVL	5.390 m <sup>3</sup> /h	11 bar	DN 150	on request	DTS 540 BVL/TI	on request	21
DTS 650 BVL	6.540 m <sup>3</sup> /h	11 bar	DN 150	on request	DTS 650 BVL/TI	on request	21
DTS 720 BVL	7.220 m <sup>3</sup> /h	11 bar	DN 150	on request	DTS 720 BVL/TI	on request	21
DTS 860 BVL	8.620 m <sup>3</sup> /h	11 bar	DN 200	on request	DTS 860 BVL/TI	on request	21
DTS 940 BVL	9.400 m <sup>3</sup> /h	11 bar	DN 200	on request	DTS 940 BVL/TI	on request	21
DTS 1100 BVL	11.100 m <sup>3</sup> /h	11 bar	DN 200	on request	DTS 1100 BVL/TI	on request	21
DTS 1280 BVL	12.800 m <sup>3</sup> /h	11 bar	DN 200	on request	DTS 1280 BVL/TI	on request	21
DTS 1470 BVL	14.700 m <sup>3</sup> /h	11 bar	DN 200	on request	DTS 1470 BVL/TI	on request	21

\*1 – refers to 1 bar(a) and 20°C at 7 bar operating pressure, 35°C inlet temperature

\*2 – for an up to date commercial quotation please contact your account manager or use the dryer sizing software on our website.



Heat regenerated adsorption dryers for higher volume flows, higher operating pressures, bigger connection sizes or further modifications are available on request.



#### Sizing for your individual operating conditions

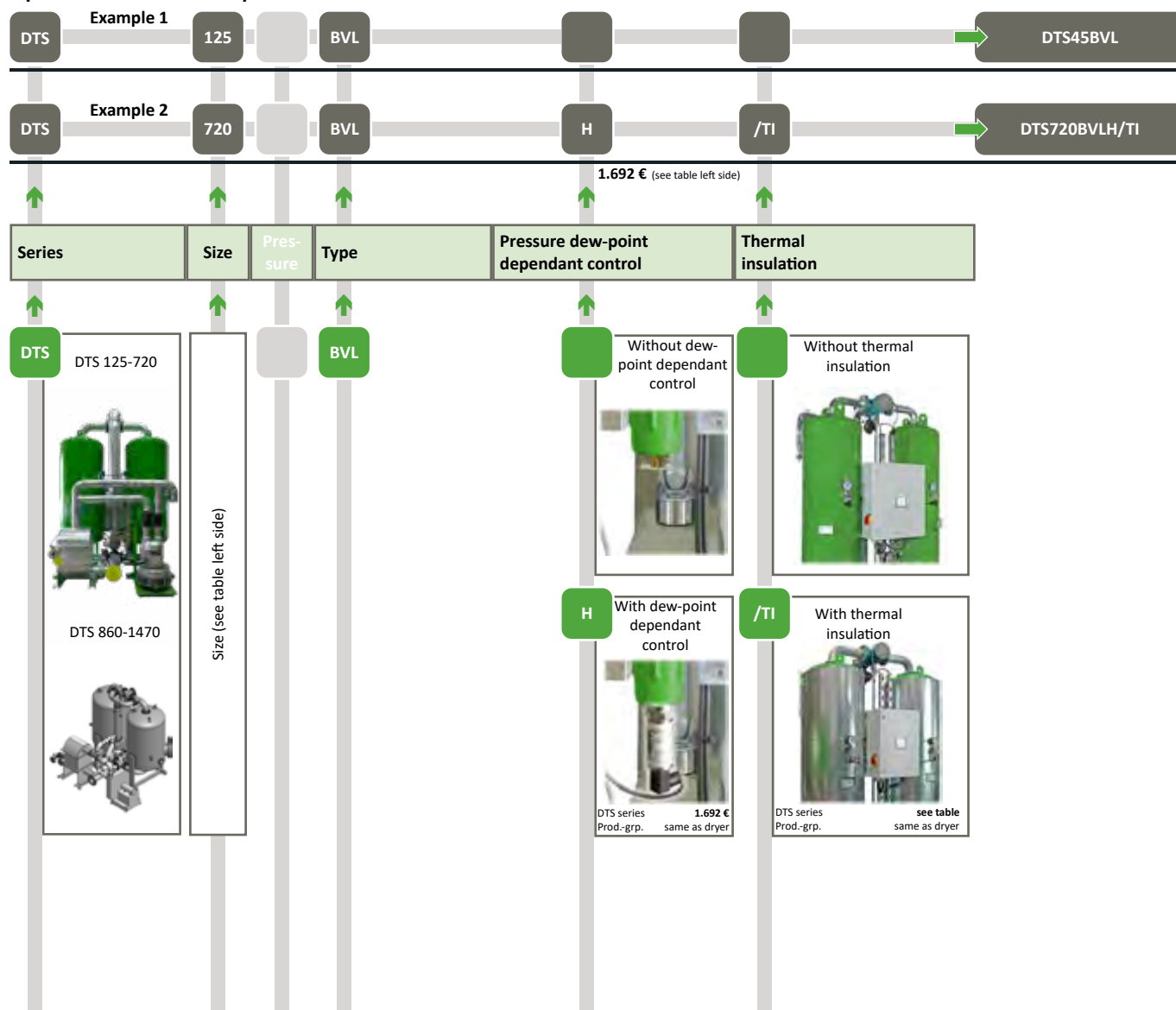
Please contact the technical support of FST

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## Drying

Adsorption dryer up to 11 bar – heat regeneration – DTS..BVL.. series

### Options and order example



### Sizes and weights

	Height [A]	Width [B]	Depth [C]	Weight		Height [A]	Width [B]	Depth [C]	Weight
DTS 125 BVL	2705 mm	1460 mm	1370 mm	1380 kg	DTS 125 BVL/TI	2705 mm	1510 mm	1370 mm	1405 kg
DTS 155 BVL	2720 mm	1510 mm	1450 mm	1620 kg	DTS 155 BVL/TI	2720 mm	1560 mm	1450 mm	1650 kg
DTS 215 BVL	2770 mm	1600 mm	1620 mm	2040 kg	DTS 215 BVL/TI	2770 mm	1650 mm	1620 mm	2075 kg
DTS 250 BVL	2885 mm	2015 mm	1620 mm	2160 kg	DTS 250 BVL/TI	2885 mm	2065 mm	1620 mm	2195 kg
DTS 300 BVL	2920 mm	2000 mm	1715 mm	2880 kg	DTS 300 BVL/TI	2920 mm	2095 mm	1715 mm	2920 kg
DTS 380 BVL	2970 mm	2160 mm	1890 mm	3420 kg	DTS 380 BVL/TI	2970 mm	2210 mm	1890 mm	3465 kg
DTS 430 BVL	3210 mm	2370 mm	2000 mm	4530 kg	DTS 430 BVL/TI	3210 mm	2420 mm	2000 mm	4580 kg
DTS 500 BVL	3235 mm	2475 mm	2060 mm	4860 kg	DTS 500 BVL/TI	3235 mm	2525 mm	2060 mm	4915 kg
DTS 540 BVL	3250 mm	2520 mm	2200 mm	5100 kg	DTS 540 BVL/TI	3250 mm	2570 mm	2200 mm	5155 kg
DTS 650 BVL	3520 mm	2520 mm	2335 mm	6000 kg	DTS 650 BVL/TI	3520 mm	2570 mm	2335 mm	6065 kg
DTS 720 BVL	3560 mm	2640 mm	2350 mm	6780 kg	DTS 720 BVL/TI	3560 mm	2690 mm	2350 mm	6850 kg
DTS 860 BVL	3590 mm	3150 mm	2850 mm	7680 kg	DTS 860 BVL/TI	3590 mm	3200 mm	2850 mm	7755 kg
DTS 940 BVL	3610 mm	3250 mm	2900 mm	9000 kg	DTS 940 BVL/TI	3610 mm	3300 mm	2900 mm	9080 kg
DTS 1100 BVL	3650 mm	3470 mm	3430 mm	10500 kg	DTS 1100 BVL/TI	3650 mm	3520 mm	3430 mm	10585 kg
DTS 1280 BVL	4050 mm	3800 mm	3600 mm	12100 kg	DTS 1280 BVL/TI	4050 mm	3850 mm	3600 mm	12190 kg
DTS 1470 BVL	4050 mm	4000 mm	3700 mm	13750 kg	DTS 1470 BVL/TI	4050 mm	4050 mm	3700 mm	13850 kg

**Drying**

Adsorption dryer - heat regeneration - regeneration types

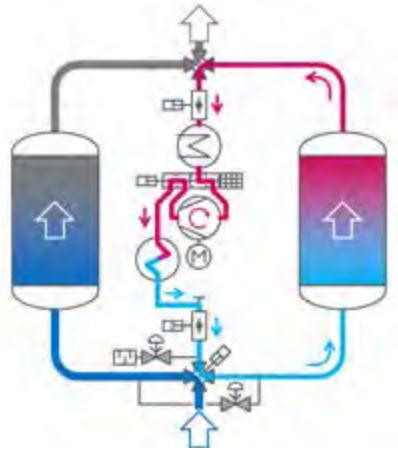
**DTS..V..**

Heating utilizing blower heat and closed-loop cooling in suction mode (vacuum) - **zero purge**



**DTS..BVL..**

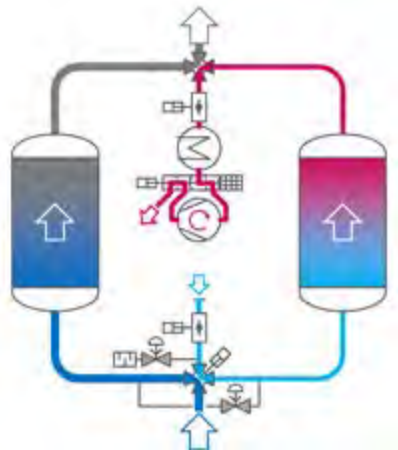
Heating utilizing blower heat and closed-loop cooling in suction mode (vacuum) - **zero purge**



Many further regeneration types are available on request, e.g.

**DTS..BV..**

Heating utilizing blower heat and cooling in suction mode (vacuum) – **zero purge**



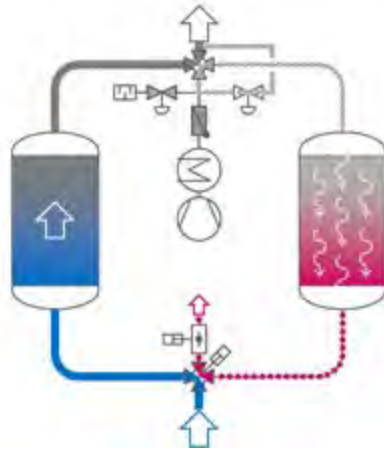


## Drying

Adsorption dryer - heat regeneration - regeneration types

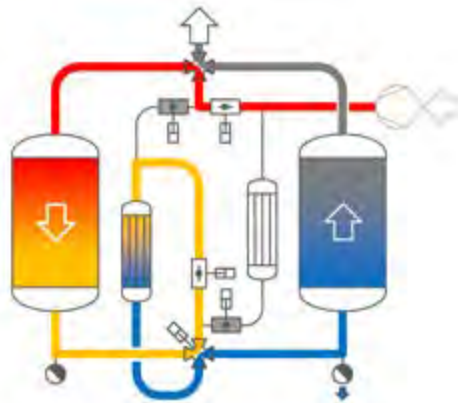
### DTS..BP..

Heating utilizing blower heat and cooling with purge air



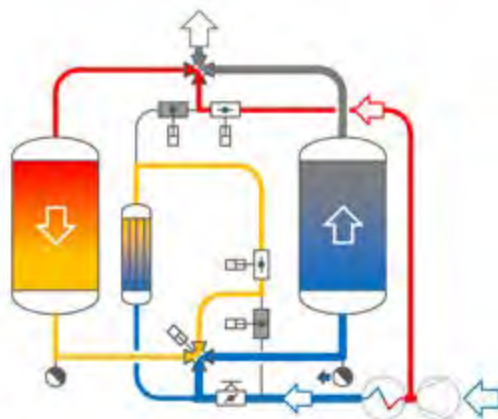
### DTC..F..

Full flow regeneration with compressor heat - zero purge



### DTC..P..

Partial flow regeneration with compressor heat - zero purge



## Drying

### Dryer accessories – DA.. series



#### Scope of supply

Accessories, ordered as option together with a dryer, will be mounted ready-to-use to the dryer or, in order to avoid transport damages, pre-installed / separately enclosed.

Accessories, ordered separately (retrofit), will be supplied as single parts without connecting material (e.g. counter flange, bolts, nuts, and seals). Transport packing is not included in the scope of supply and is charged separately.

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→ [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

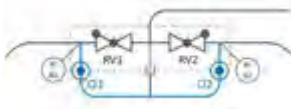
### 1 Start-up device (pressure maintaining valve) for all adsorption dryers



	Suitable for dryer	Maximum operating pressure	Size	Opening pressure	Price	Prod.-grp.
DA-VPM-B15/16	DPS1 - DPS8	16 bar	G 1/2	3-5 bar	281 €	39
DA-VPM-B25/16	DPS10 - DPS25	16 bar	G 1	3-5 bar	356 €	39
DA-VPM-B40/16	DPS30-60, DTS 45-55	16 bar	G 1 ½	3-5 bar	563 €	39
DA-VPM-B50/16	DPS80-120, DTS65-85	16 bar	G 2	3-5 bar	927 €	39
DA-VPM-F80/11-APE	DPS240-290, DTS125-215	11 bar	DN 80	3-4 bar	1.291 €	39
DA-VPM-F100/11-APE	DPS370-510, DTS250-380	11 bar	DN 100	3-4 bar	1.372 €	39
DA-VPM-F150/11-APE	DPS630, DTS430-720	11 bar	DN 150	3-4 bar	1.996 €	39
DA-VPM-F200/11-APE	DTS860 - DTS1470	11 bar	DN 200	3-4 bar	2.921 €	39
DA-VPM-F250/11-APE	> DPS630, > DTS1470	11 bar	DN 250	3-4 bar	4.420 €	39
DA-VPM-B15/450	DHW (DHM)	450 bar	G 1/2	*1	1.321 €	39
DA-VPM-B20/415	DHW (DHM)	415 bar	G 3/4	3-400 bar	3.794 €	39

\*1 – available in 3 different ranges: 10-80 bar, 80-150 bar, 140 – 450 bar, please specify with order

### 2 Regeneration gas feedback for heatless adsorption dryer (DPS 10-100)



	Suitable for dryer	Maximum operating pressure	Size	Price	Prod.-grp.
	DPS1 - DPS8	16 bar		<b>Standard</b>	
DA-RGF-DPS10-100-02	DPS10 - DPS100	16 bar	Ø12-1/2"	106 €	39

### 3 Non-return valve high pressure




	Suitable for dryer	Maximum operating pressure	Size	Opening pressure	Price	Prod.-grp.
DA-VRV-B15/500-FST	DHW (DHM)	500 bar	G 1/2	< 0,5 bar	474 €	39

## Drying


### Dryer accessories – DA.. series

#### 4 Automatic pressure control of the regeneration air for heatless adsorption dryer (DPS 10-100)



	Suitable for dryer	Maximum operating pressure	Price Option dryer	Price retrofit	Prod.-grp.
DA-RGR-DPS10-30	DPS10-30	16 bar	947 €	947 €	39
DA-RGR-DPS40-100	DPS40-100	16 bar	1.201 €	1.201 €	39
DA-RGR-DPS120-150	DPS120-150	11 bar	1.592 €	---	39
DA-RGR-DPS210-290	DPS210-290	11 bar	1.845 €	---	39
DA-RGR-DPS370-630	DPS370-630	11 bar	2.537 €	---	39


#### 5 Operations control for heatless adsorption dryer (DPS, DHW, DHM)



	Suitable for dryer	Maximum operating pressure	Price Option dryer	Price retrofit	Prod.-grp.
DA-EFC-C1	DPS, DHW, DHM	25/40/100/250/400 bar	941 €	941 € <sup>*1</sup>	39

\*1 – only for dryers with C1-controller from version 2.1 on, max. operating pressure is to specify

#### 6 Quick shut-off valve for heatless adsorption dryer (DPS 1-100)



	Suitable for dryer	Maximum operating pressure	Size	Price Option dryer	Price retrofit	Prod.-grp.
DA-VQC-B15/40-2/2-SS	DPS1 - DPS8	40 bar	G 1/2	763 €	763 €	39
DA-VQC-B20/40-2/2-SS	---	40 bar	G 3/4	809 €	809 €	39
DA-VQC-B25/40-2/2-SS	DPS10 - DPS25	40 bar	G 1	969 €	969 €	39
DA-VQC-B40/40-2/2-SS	DPS30 - DPS60	40 bar	G 1 ½	1.276 €	1.276 €	39
DA-VQC-B50/40-2/2-SS	DPS80 - DPS100	40 bar	G 2	1.406 €	1.406 €	39

## Drying

### Dryer accessories – DA.. series



#### Scope of supply

Accessories, ordered as option together with a dryer, will be mounted ready-to-use to the dryer or, in order to avoid transport damages, pre-installed / separately enclosed.

Accessories, ordered separately (retrofit), will be supplied as single parts without connecting material (e.g. counter flange, bolts, nuts, and seals). Transport packing is not included in the scope of supply and is charged separately.

Operating manuals are available in electronic format on our web site:

→ [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

### 7 Regeneration air inlet filter for heat-regenerated adsorption dryer (DTS)



	Suitable for dryer	Filtration grade	Price	Prod.-grp.
DA-FIF-DTS45-55-F7G4	DTS45-55, WVM40-50 <sup>*1</sup>	DIN EN 779-G4	461 €	39
DA-FIF-DTS65-85-F7G4	DTS65-85, WVM65-85 <sup>*1</sup>	DIN EN 779-G4	461 €	39
DA-FIF-DTS125-215-F12G4	DTS125-215, WVM120-200 <sup>*1</sup>	DIN EN 779-G4	717 €	39
DA-FIF-DTS250-500-F19G4	DTS250-500, WVM235-475 <sup>*1</sup>	DIN EN 779-G4	1.026 €	39
DA-FIF-DTS540-650-F19G4	DTS540-650, WVM525-620 <sup>*1</sup>	DIN EN 779-G4	1.105 €	39
DA-FIF-DTS720-940-F21G4	DTS720-940, WVM710-920 <sup>*1</sup>	DIN EN 779-G4	1.671 €	39
DA-FIF-DTS1100-1700-F21G4	DTS1100-1700, WVM1080-1450 <sup>*1</sup>	DIN EN 779-G4	1.763 €	39

\*1 – for WVM dryer the  $\varnothing$  of the heater-flange need to be given to check correct flange size of connecting parts

### 8 Additional noise reduction for adsorption dryer (DPS, DTS)



#### DPS and DTS series - Noise reduction

	Suitable for dryer	Maximum operating pressure	Price option dryer	Price retrofit	Prod.-grp.
DA-NR2S-DPS10-25	DPS10 - DPS25	16 bar	617 €	510 €	39 82
DA-NR2S-DPS30-60	DPS30 - DPS60	16 bar	844 €	749 €	39 82
DA-NR2S-DPS80-100	DPS80 - DPS100	16 bar	874 €	780 €	39 82

## Drying

### Dryer accessories – DA.. series


#### 9 Control units, interface modules, final position switch

	Pneumatic control	Suitable for dryer		Price option dryer	Price retrofit	Prod.-grp.
DA-CP-02		DPS, DHW		2.260 €	1.888 €	39
DA-CP-02-HD		DPS, DHW (heavy duty)		2.870 €	on request	39

	Change-over control	Suitable for dryer	Supply voltage		Price	Prod.-grp.
DA-CM1-230-NO		DPS, DHW, DHM	230 V		3.240 €	39

Suitable line block valves on request

	GSM module	Suitable for dryer	Supply voltage		Price option dryer	Price retrofit	Prod.-grp.
DA-ETR-107		DPS, DHW, DHM	24 VDC		609 €	609 €	39

	Interface gateway	Suitable for dryer	Interface		Price option dryer	Price retrofit	Prod.-grp.
DA-ETR-C1-RS232		DPS and DH series	RS232		243 €	on request	39
DA-ETR-C1-MODBUS-RTU-SLAVE		DPS and DH series	Modbus-RTU		1.562 €	on request	39
DA-ETR-C1-PROFIBUS-DP-SLAVE		DPS and DH series	Profibus-DP-Slave		1.562 €	on request	39
DA-ETR-C1-CANopen		DPS and DH series	CANopen		1.562 €	on request	39
DA-ETR-C10-CAN-MODBUS		DTS series	Modbus-RTU		2.447 €	on request	39
DA-ETR-C10-CAN-PROFIBUS		DTS series	Profibus-DP-Slave		2.447 €	on request	39

	Final position switch	Suitable for dryer	Supply voltage		Price option dryer	Price retrofit	Prod.-grp.
SP-ENI-IN5337-VBA-GEF		DTS series	10...36 VDC		504 €	504 €	39

## Oil vapour adsorption

Activated carbon oil vapour adsorber up to 16 bar – DSS..A series



### Scope of supply

Ready-to-use oil vapour adsorber including initial activated carbon filling; transport packing is not included in the scope of supply and is charged separately.

Operating manuals including the manufacturer's declaration and/or declaration of conformity are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

Operating manuals are available in English and German language. Additional pressure vessel documents are provided for welded pressure vessels. These vessel documents are created individually for each of these products and will be sent separately.

### Standard version

Activated carbon oil vapour adsorber, suitable for DPS dryer series; including initial filling; pressure gauge (not for DSS 1-8); oil indicator

	Nominal volume flow <sup>*1</sup>	Maximum operating pressure	Connection	Price	Prod.-grp.
DSS 1 A	8 m <sup>3</sup> /h	16 bar	G 3/8	755 €	25
DSS 2 A	15 m <sup>3</sup> /h	16 bar	G 3/8	838 €	25
DSS 3 A	25 m <sup>3</sup> /h	16 bar	G 3/8	960 €	25
DSS 4 A	35 m <sup>3</sup> /h	16 bar	G 3/8	1.024 €	25
DSS 6 A	57 m <sup>3</sup> /h	16 bar	G 1/2	1.368 €	25
DSS 7 A	72 m <sup>3</sup> /h	16 bar	G 1/2	1.432 €	25
DSS 8 A	82 m <sup>3</sup> /h	16 bar	G 1/2	1.603 €	25
DSS 10 A	110 m <sup>3</sup> /h	16 bar	G 1	2.683 €	26
DSS 15 A	150 m <sup>3</sup> /h	16 bar	G 1	2.834 €	26
DSS 20 A	200 m <sup>3</sup> /h	16 bar	G 1	2.978 €	26
DSS 25 A	260 m <sup>3</sup> /h	16 bar	G 1	3.347 €	26
DSS 30 A	320 m <sup>3</sup> /h	16 bar	G 1 ½	3.878 €	26
DSS 40 A	410 m <sup>3</sup> /h	16 bar	G 1 ½	4.251 €	26
DSS 60 A	590 m <sup>3</sup> /h	16 bar	G 1 ½	4.699 €	26
DSS 80 A	770 m <sup>3</sup> /h	16 bar	G 2	6.109 €	26
DSS 100 A	1.000 m <sup>3</sup> /h	16 bar	G 2	6.690 €	26
DSS 120 A	1.200 m <sup>3</sup> /h	11 bar	DN 50	10.475 €	26
DSS 150 A	1.480 m <sup>3</sup> /h	11 bar	DN 65	11.644 €	26
DSS 210 A	2.080 m <sup>3</sup> /h	11 bar	DN 65	13.350 €	26
DSS 240 A	2.430 m <sup>3</sup> /h	11 bar	DN 80	15.957 €	26
DSS 290 A	2.930 m <sup>3</sup> /h	11 bar	DN 80	on request	26
DSS 370 A	3.700 m <sup>3</sup> /h	11 bar	DN 100	on request	26
DSS 510 A	5.080 m <sup>3</sup> /h	11 bar	DN 100	on request	26
DSS 630 A	6.290 m <sup>3</sup> /h	11 bar	DN 125	on request	26

\*1 – refers to 1 bar(a) and 20°C at 7 bar operating pressure and 35°C inlet temperature



Activated carbon oil vapour adsorbers for higher volume flows or bigger connection sizes are available on request.



The operation of an activated carbon oil vapour adsorber requires compressed air with a pressure dew-point of at least +3°C.



### Sizing for your individual operating conditions

Please contact the technical support of FST.

### Volume flow correction factors for operating conditions deviating from reference conditions:

Operating pressure	4 bar	5 bar	6 bar	7 bar	8 bar	9 bar	10 bar	11 bar	12 bar	13 bar	14 bar	15 bar	16 bar
		0,63	0,75	0,88	1,0	1,13	1,25	1,38	1,50	1,63	1,75	1,88	2,00

The correction factor is based on the lowest operating pressure.

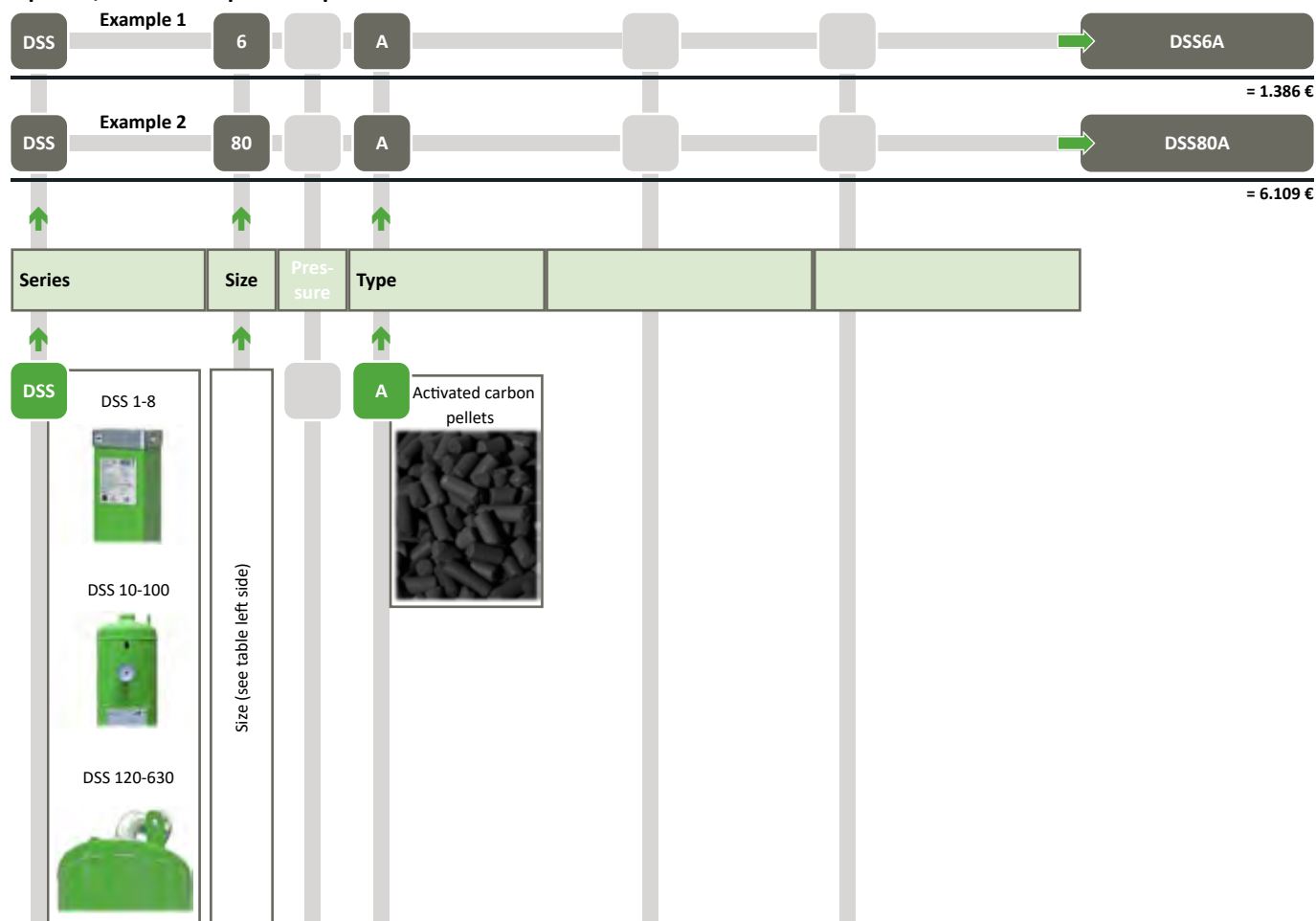
For a comprehensive description of how to use the correction factor, additional correction factors and latest technical figures and information please refer to the relevant product data sheets, which are available in electronic format on our web site:

→ [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

## Oil vapour adsorption

Activated carbon oil vapour adsorber up to 16 bar – DSS..A series

### Options, order examples and price calculations



### Sizes and weights

	Height [A]	Width [B]	Depth [C]	Weight
DSS 1 A	392 mm	160 mm	210 mm	3 kg
DSS 2 A	567 mm	160 mm	210 mm	5 kg
DSS 3 A	817 mm	160 mm	210 mm	8 kg
DSS 4 A	1067 mm	160 mm	210 mm	10 kg
DSS 6 A	1107 mm	212 mm	245 mm	20 kg
DSS 7 A	1332 mm	212 mm	245 mm	24 kg
DSS 8 A	1532 mm	212 mm	245 mm	28 kg
DSS 10 A	1460 mm	265 mm	350 mm	45 kg
DSS 15 A	1700 mm	265 mm	350 mm	52 kg
DSS 20 A	1710 mm	290 mm	350 mm	67 kg
DSS 25 A	1720 mm	320 mm	350 mm	80 kg
DSS 30 A	1760 mm	345 mm	350 mm	95 kg
DSS 40 A	1820 mm	375 mm	350 mm	107 kg
DSS 60 A	1850 mm	425 mm	350 mm	143 kg
DSS 80 A	1980 mm	460 mm	400 mm	190 kg
DSS 100 A	2000 mm	515 mm	400 mm	230 kg
DSS 120 A	2020 mm	450 mm	570 mm	260 kg
DSS 150 A	2070 mm	500 mm	650 mm	325 kg
DSS 210 A	2100 mm	600 mm	745 mm	410 kg
DSS 240 A	2200 mm	650 mm	800 mm	495 kg
DSS 290 A	2200 mm	700 mm	855 mm	570 kg
DSS 370 A	2340 mm	800 mm	950 mm	715 kg
DSS 510 A	2600 mm	850 mm	1030 mm	940 kg
DSS 630 A	2820 mm	950 mm	1100 mm	1200 kg

## Oil vapour adsorption

Activated carbon oil vapour adsorber up to 11 bar – DSS..A series



### Scope of supply

Ready-to-use oil vapour adsorber including initial activated carbon filling; transport packing is not included in the scope of supply and is charged separately.

Operating manuals including the manufacturer's declaration and/or declaration of conformity are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

Operating manuals are available in English and German language. Additional pressure vessel documents are provided for welded pressure vessels. These vessel documents are created individually for each of these products and will be sent separately.

### Standard version

Activated carbon oil vapour adsorber, suitable for DTS dryer series; including initial filling; pressure gauge; oil indicator

	Nominal volume flow <sup>*1</sup>	Maximum operating pressure	Connection	Price	Prod.-grp.
DSS 85 A	1.090 m <sup>3</sup> /h	11 bar	DN 50	9.258 €	26
DSS 125 A	1.690 m <sup>3</sup> /h	11 bar	DN 80	10.981 €	26
DSS 155 A	2.080 m <sup>3</sup> /h	11 bar	DN 80	11.694 €	26
DSS 215 A	2.920 m <sup>3</sup> /h	11 bar	DN 80	13.304 €	26
DSS 250 A	3.400 m <sup>3</sup> /h	11 bar	DN 100	14.710 €	26
DSS 300 A	4.110 m <sup>3</sup> /h	11 bar	DN 100	16.791 €	26
DSS 380 A	5.230 m <sup>3</sup> /h	11 bar	DN 100	20.051 €	26
DSS 430 A	5.920 m <sup>3</sup> /h	11 bar	DN 100	on request	26
DSS 500 A	6.880 m <sup>3</sup> /h	11 bar	DN 150	on request	26
DSS 540 A	7.430 m <sup>3</sup> /h	11 bar	DN 150	on request	26
DSS 650 A	9.050 m <sup>3</sup> /h	11 bar	DN 150	on request	26
DSS 720 A	10.000 m <sup>3</sup> /h	11 bar	DN 150	on request	26
DSS 860 A	11.940 m <sup>3</sup> /h	11 bar	DN 200	on request	26
DSS 940 A	13.020 m <sup>3</sup> /h	11 bar	DN 200	on request	26
DSS 1100 A	15.320 m <sup>3</sup> /h	11 bar	DN 200	on request	26
DSS 1280 A	17.750 m <sup>3</sup> /h	11 bar	DN 200	on request	26
DSS 1470 A	20.420 m <sup>3</sup> /h	11 bar	DN 200	on request	26

\*1 – refers to 1 bar(a) and 20°C at 7 bar operating pressure and 35°C inlet temperature



Activated carbon oil vapour adsorbers for higher volume flows, bigger connection sizes or stainless-steel versions are available on request.



The operation of an activated carbon oil vapour adsorber requires compressed air with a pressure dew-point of at least +3°C.



### Sizing for your individual operating conditions

Please contact the technical support of FST.

### Volume flow correction factors for operating conditions deviating from reference conditions:

Operating pressure	4 bar	5 bar	6 bar	7 bar	8 bar	9 bar	10 bar	11 bar	12 bar	13 bar	14 bar	15 bar	16 bar
	0,63	0,75	0,88	1,0	1,13	1,25	1,38	1,50	1,63	1,75	1,88	2,00	2,13

The correction factor is based on the lowest operating pressure.

For a comprehensive description of how to use the correction factor, additional correction factors and latest technical figures and information please refer to the relevant product data sheets, which are available in electronic format on our web site:

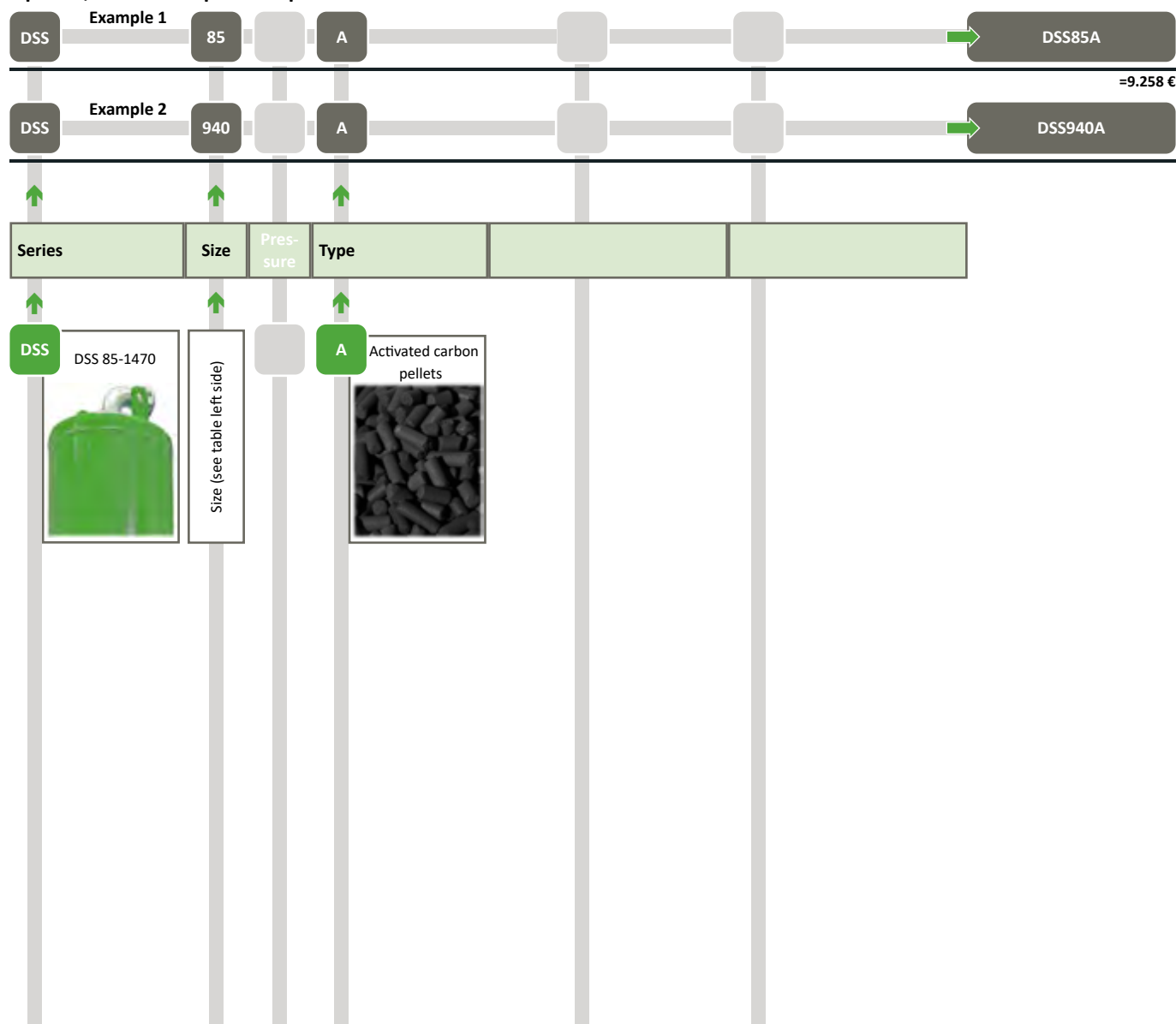
→ [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“



## Oil vapour adsorption

Activated carbon oil vapour adsorber up to 11 bar – DSS..A series

### Options, order examples and price calculations



### Sizes and weights

	Height [A]	Width [B]	Depth [C]	Weight
DSS 85 A	2325 mm	410 mm	530 mm	240 kg
DSS 125 A	2705 mm	500 mm	600 mm	350 kg
DSS 155 A	2720 mm	500 mm	600 mm	410 kg
DSS 215 A	2765 mm	600 mm	750 mm	550 kg
DSS 250 A	2885 mm	650 mm	800 mm	570 kg
DSS 300 A	2910 mm	710 mm	850 mm	655 kg
DSS 380 A	2970 mm	800 mm	1000 mm	950 kg
DSS 430 A	3210 mm	850 mm	1100 mm	1050 kg
DSS 500 A	3235 mm	950 mm	1165 mm	1340 kg
DSS 540 A	3250 mm	1000 mm	1200 mm	1410 kg
DSS 650 A	3520 mm	1000 mm	1250 mm	1550 kg
DSS 720 A	3560 mm	1100 mm	1325 mm	1850 kg
DSS 860 A	3585 mm	1200 mm	1400 mm	2100 kg
DSS 940 A	3605 mm	1250 mm	1500 mm	2475 kg
DSS 1100 A	3670 mm	1350 mm	1600 mm	2890 kg
DSS 1280 A	3680 mm	1450 mm	1700 mm	3900 kg
DSS 1470 A	3720 mm	1550 mm	1800 mm	4620 kg

## Oil vapour adsorption

Activated carbon oil vapour adsorber up to 350 bar – DSW..A series



### Scope of supply

Ready-to-use oil vapour adsorber including initial activated carbon filling; transport packing is not included in the scope of supply and is charged separately.

Operating manuals including the manufacturer's declaration and/or declaration of conformity are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

Operating manuals are available in English and German language. Additional pressure vessel documents are provided for welded pressure vessels. These vessel documents are created individually for each of these products and will be sent separately.

### Standard version

Activated carbon oil vapour adsorber, suitable for DHW dryer series; including initial filling; pressure gauge

	Nominal volume flow <sup>*1</sup>	Maximum operating pressure	Connection	Price	Prod.-grp.
DSW 11 / 50 A	45 m <sup>3</sup> /h	50 bar	G 1/2	on request	31
DSW 19 / 50 A	91 m <sup>3</sup> /h	50 bar	G 1/2	on request	31
DSW 39 / 50 A	200 m <sup>3</sup> /h	50 bar	G 1/2	on request	31
DSW 49 / 50 A	244 m <sup>3</sup> /h	50 bar	G 1/2	on request	31
DSW 72 / 50 A	357 m <sup>3</sup> /h	50 bar	G 1/2	on request	31
DSW 96 / 50 A	475 m <sup>3</sup> /h	50 bar	G 1/2	on request	31
DSW 156 / 50 A	825 m <sup>3</sup> /h	50 bar	G 3/4 <sup>*2</sup>	on request	31
DSW 239 / 50 A	1.254 m <sup>3</sup> /h	50 bar	G 3/4 <sup>*2</sup>	on request	31
DSW 5 /100 A	72 m <sup>3</sup> /h	100 bar	G 1/2	on request	31
DSW 9 /100 A	87 m <sup>3</sup> /h	100 bar	G 1/2	on request	31
DSW 12 /100 A	153 m <sup>3</sup> /h	100 bar	G 1/2	on request	31
DSW 24 /100 A	283 m <sup>3</sup> /h	100 bar	G 1/2	on request	31
DSW 37 /100 A	429 m <sup>3</sup> /h	100 bar	G 1/2	on request	31
DSW 58 /100 A	750 m <sup>3</sup> /h	100 bar	G 1/2 <sup>*2</sup>	on request	31
DSW 5 /250 A	115 m <sup>3</sup> /h	250 bar	G 1/2	on request	31
DSW 9 /250 A	140 m <sup>3</sup> /h	250 bar	G 1/2	on request	31
DSW 12 /250 A	270 m <sup>3</sup> /h	250 bar	G 1/2	on request	31
DSW 24 /250 A	500 m <sup>3</sup> /h	250 bar	G 1/2	on request	31
DSW 37 /250 A	800 m <sup>3</sup> /h	250 bar	G 1/2	on request	31
DSW 58 /250 A	1.400 m <sup>3</sup> /h	250 bar	G 1/2 <sup>*2</sup>	on request	31
DSW 5 /350 A	150 m <sup>3</sup> /h	350 bar	G 1/2	on request	31
DSW 9 /350 A	180 m <sup>3</sup> /h	350 bar	G 1/2	on request	31
DSW 12 /350 A	300 m <sup>3</sup> /h	350 bar	G 1/2	on request	31
DSW 24 /350 A	525 m <sup>3</sup> /h	350 bar	G 1/2	on request	31
DSW 37 /350 A	850 m <sup>3</sup> /h	350 bar	G 1/2	on request	31
DSW 58 /350 A	1.560 m <sup>3</sup> /h	350 bar	G 1/2 <sup>*2</sup>	on request	31

\*1 – refers to 1 bar(a) and 20°C at 7 bar operating pressure and 35°C inlet temperature

\*2 – alternative connection sizes available



High pressure activated carbon oil vapour adsorbers for higher volume flows, higher operating pressures, bigger connection sizes or stainless-steel versions are available on request.



The operation of an activated carbon oil vapour adsorber requires compressed air with a pressure dew-point of at least +3°C.



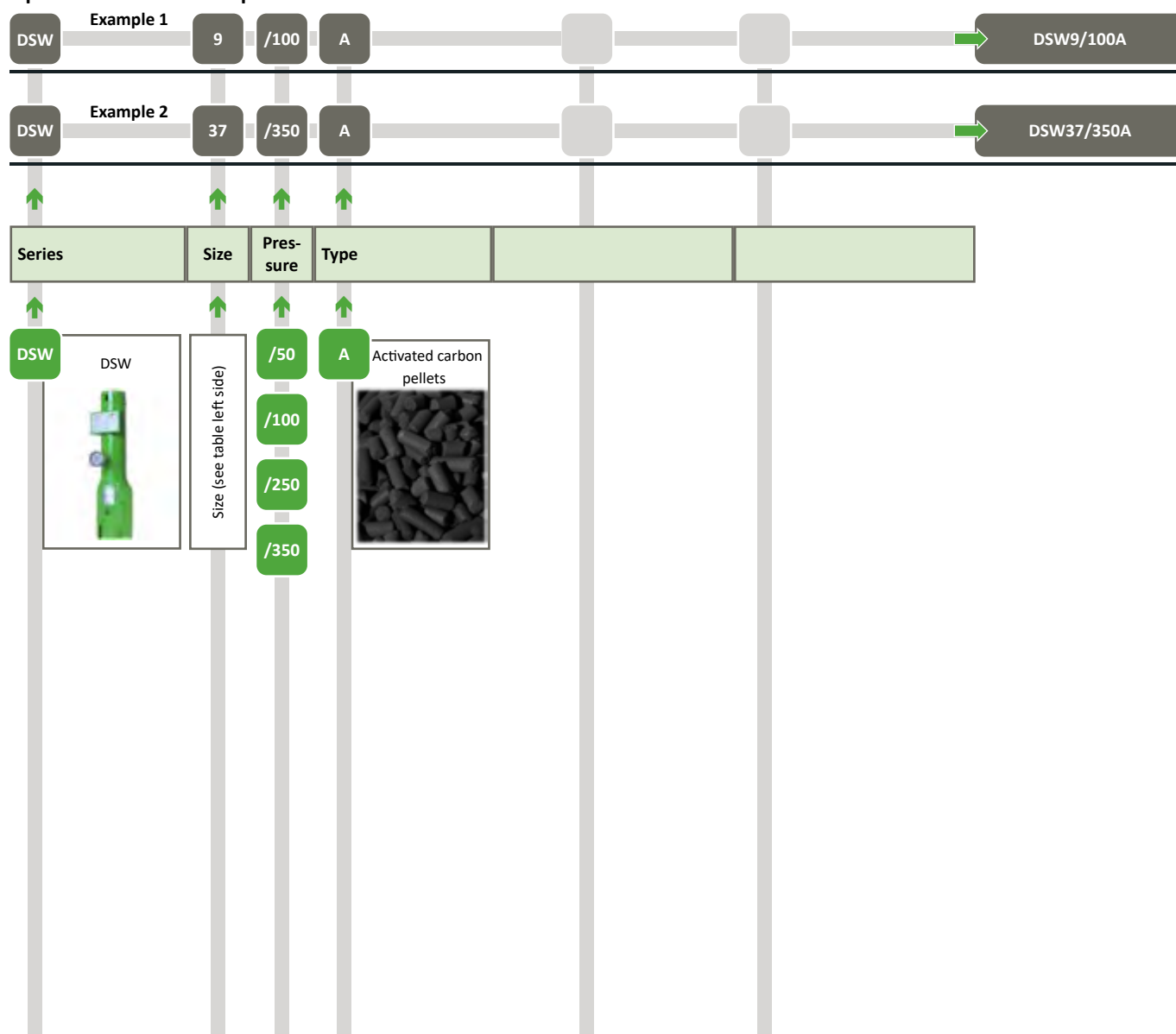
### Sizing for your individual operating conditions

Please contact the technical support of FST

## Oil vapour adsorption

Activated carbon oil vapour adsorber up to 350 bar – DSW..A series

### Options and order examples



### Sizes and weights

	Height [A]	Width [B]	Depth [C]	Weight		Height [A]	Width [B]	Depth [C]	Weight
DSW 11 / 50 A	1155 mm	210 mm	400 mm	23 kg	DSW 5 / 250 A	1050 mm	190 mm	400 mm	34 kg
DSW 19 / 50 A	1425 mm	250 mm	400 mm	28 kg	DSW 9 / 250 A	1150 mm	190 mm	400 mm	40 kg
DSW 39 / 50 A	1505 mm	250 mm	400 mm	37 kg	DSW 12 / 250 A	1150 mm	215 mm	400 mm	45 kg
DSW 49 / 50 A	1715 mm	280 mm	400 mm	40 kg	DSW 24 / 250 A	1280 mm	240 mm	400 mm	67 kg
DSW 72 / 50 A	1780 mm	815 mm	400 mm	53 kg	DSW 37 / 250 A	1320 mm	270 mm	400 mm	95 kg
DSW 96 / 50 A	1785 mm	305 mm	400 mm	63 kg	DSW 58 / 250 A	1620 mm	295 mm	400 mm	141 kg
DSW 156 / 50 A	1870 mm	365 mm	400 mm	84 kg					
DSW 239 / 50 A	1870 mm	420 mm	400 mm	137 kg	DSW 5 / 350 A	1050 mm	190 mm	400 mm	35 kg
					DSW 9 / 350 A	1150 mm	190 mm	400 mm	41 kg
DSW 5 / 100 A	1030 mm	190 mm	400 mm	28 kg	DSW 12 / 350 A	1150 mm	215 mm	400 mm	51 kg
DSW 9 / 100 A	1260 mm	190 mm	400 mm	31 kg	DSW 24 / 350 A	1280 mm	240 mm	400 mm	77 kg
DSW 12 / 100 A	1130 mm	215 mm	400 mm	35 kg	DSW 37 / 350 A	1320 mm	270 mm	400 mm	109 kg
DSW 24 / 100 A	1260 mm	240 mm	400 mm	47 kg	DSW 58 / 350 A	1620 mm	295 mm	400 mm	163 kg
DSW 37 / 100 A	1300 mm	270 mm	400 mm	63 kg					
DSW 58 / 100 A	1600 mm	295 mm	400 mm	98 kg					

## Breathing air systems

Breathing air systems up to 16 bar – heatless regeneration – DPS..BI., DPS..BM.. series



### Scope of supply

Ready-to-use breathing air system including initial fillings and selected options (already installed or, in order to avoid transport damages, pre-installed / separately enclosed); transport packing is not included in the scope of supply and is charged separately.

Operating manuals including the manufacturer's declaration and/or declaration of conformity are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

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### Standard version

Breathing air system with C1 electronic control unit; pre- and after-filter; option for industrial (BI) or medical (BM) breathing air; option for pressure dew-point dependant control (H)

		Nominal volume flow*1	Maximum operating pressure	Connection	Price			Price	Prod.-grp.
DPS	1 BI	8 m <sup>3</sup> /h	16 bar	G 3/8	3.463 €	DPS	1 BM	3.763 €	27
DPS	2 BI	15 m <sup>3</sup> /h	16 bar	G 3/8	3.711 €	DPS	2 BM	4.034 €	27
DPS	3 BI	25 m <sup>3</sup> /h	16 bar	G 3/8	4.259 €	DPS	3 BM	4.629 €	27
DPS	4 BI	35 m <sup>3</sup> /h	16 bar	G 3/8	4.707 €	DPS	4 BM	5.115 €	27
DPS	6 BI	57 m <sup>3</sup> /h	16 bar	G 1/2	6.063 €	DPS	6 BM	6.590 €	27
DPS	7 BI	72 m <sup>3</sup> /h	16 bar	G 1/2	6.589 €	DPS	7 BM	7.164 €	27
DPS	8 BI	82 m <sup>3</sup> /h	16 bar	G 1/2	7.536 €	DPS	8 BM	8.192 €	27
DPS	10 BI	110 m <sup>3</sup> /h	16 bar	G 1	12.856 €	DPS	10 BM	13.661 €	28
DPS	15 BI	150 m <sup>3</sup> /h	16 bar	G 1	13.744 €	DPS	15 BM	14.603 €	28
DPS	20 BI	200 m <sup>3</sup> /h	16 bar	G 1	14.796 €	DPS	20 BM	15.721 €	28
DPS	25 BI	260 m <sup>3</sup> /h	16 bar	G 1	16.303 €	DPS	25 BM	17.323 €	28
DPS	30 BI	320 m <sup>3</sup> /h	16 bar	G 1 ½	19.845 €	DPS	30 BM	21.085 €	28
DPS	40 BI	410 m <sup>3</sup> /h	16 bar	G 1 ½	21.880 €	DPS	40 BM	23.248 €	28
DPS	60 BI	590 m <sup>3</sup> /h	16 bar	G 1 ½	25.580 €	DPS	60 BM	27.179 €	28
DPS	80 BI	770 m <sup>3</sup> /h	16 bar	G 2	32.588 €	DPS	80 BM	33.961 €	28
DPS	100 BI	1.000 m <sup>3</sup> /h	16 bar	G 2	37.562 €	DPS	100 BM	38.996 €	28

\*1 - refers to 1 bar(a) and 20°C at 7 bar operating pressure, 35°C inlet temperature



Breathing air systems for higher volume flows, higher operating pressures or bigger connection sizes are available on request.



### Sizing for your individual operating conditions

Please contact the technical support of FST.

Operating pressure	4 bar	5 bar	6 bar	7 bar	8 bar	9 bar	10 bar	11 bar	12 bar	13 bar	14 bar	15 bar	16 bar
		0,63	0,75	0,88	1,0	1,13	1,25	1,38	1,50	1,63	1,75	1,88	2,00

Inlet temperature	25°C	30°C	35°C	40°C	45°C	50°C	55°C <sup>*2</sup>	60°C <sup>*2</sup>
		1,00	1,00	1,00	0,97	0,87	0,80	0,64

\*2 - DPS10 to DPS100 only

The correction factor is based on the lowest appearing operating pressure nad the maximum (highest) inlet temperature.

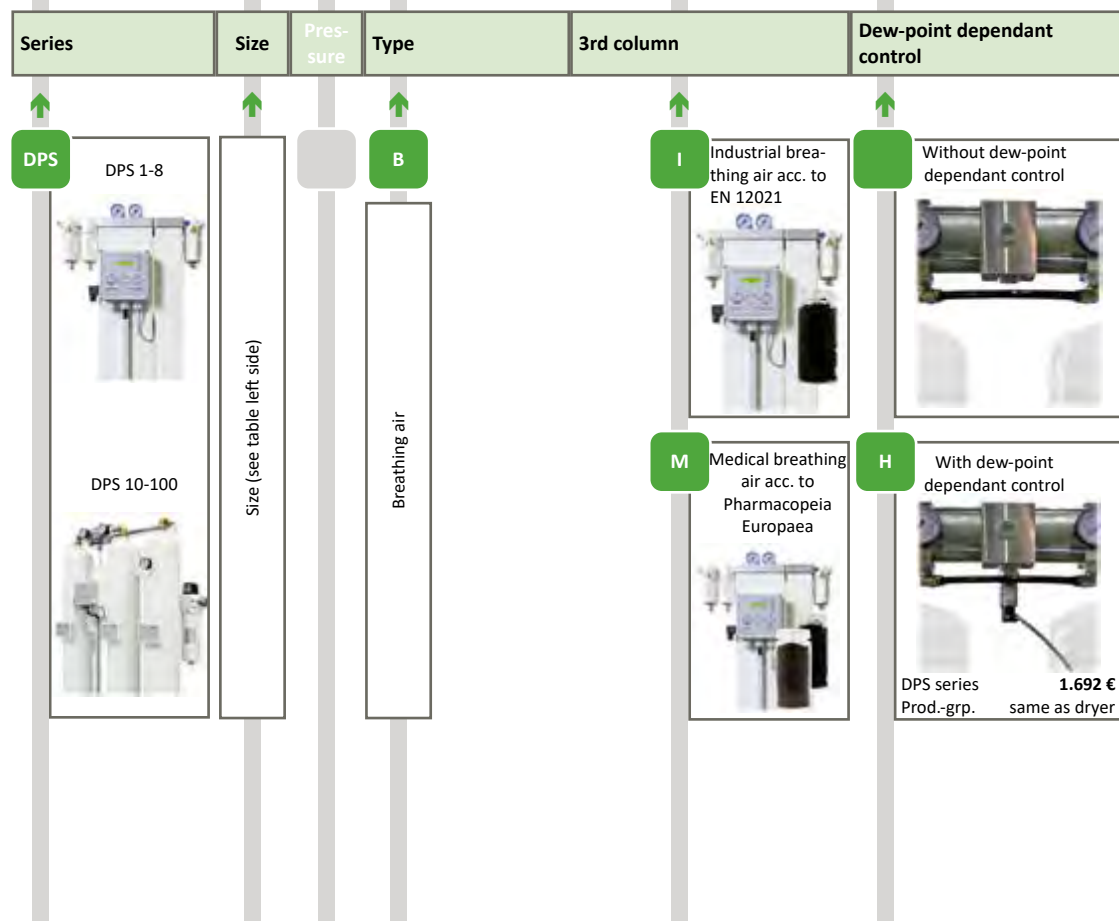
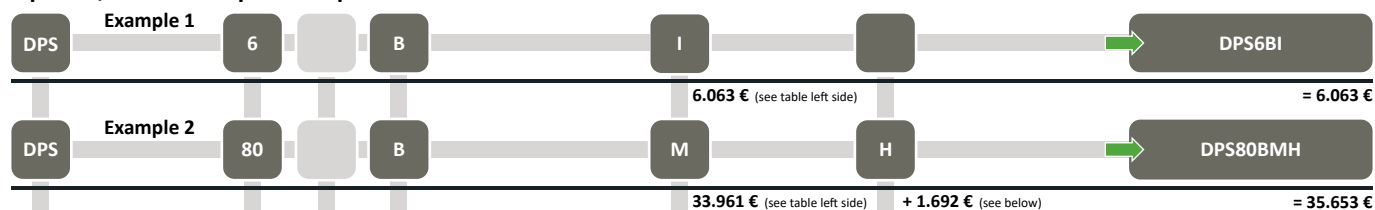
For a comprehensive description of how to use the correction factor, additional correction factors and latest technical figures and information please refer to the relevant product data sheets, which are available in electronic format on our web site:

→ [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

## Breathing air systems

Breathing air systems up to 16 bar – heatless regeneration – DPS..BI., DPS..BM.. series

### Options, order examples and price calculations



### Sizes and weights

	Height [A]	Width [B]	Depth [C]	Weight		Height [A]	Width [B]	Depth [C]	Weight
DPS 1 BI	450 mm	412 mm	185 mm	14 kg	DPS 1 BM	450 mm	502 mm	185 mm	15 kg
DPS 2 BI	625 mm	412 mm	185 mm	20 kg	DPS 2 BM	625 mm	502 mm	185 mm	21 kg
DPS 3 BI	875 mm	412 mm	185 mm	27 kg	DPS 3 BM	875 mm	502 mm	185 mm	28 kg
DPS 4 BI	1125 mm	412 mm	185 mm	35 kg	DPS 4 BM	1125 mm	502 mm	185 mm	36 kg
DPS 6 BI	1180 mm	614 mm	220 mm	65 kg	DPS 6 BM	1180 mm	704 mm	220 mm	66 kg
DPS 7 BI	1405 mm	614 mm	220 mm	78 kg	DPS 7 BM	1405 mm	704 mm	220 mm	79 kg
DPS 8 BI	1605 mm	614 mm	220 mm	90 kg	DPS 8 BM	1605 mm	704 mm	220 mm	91 kg
DPS 10 BI	1460 mm	955 mm	515 mm	173 kg	DPS 10 BM	1460 mm	1085 mm	515 mm	178 kg
DPS 15 BI	1700 mm	955 mm	515 mm	195 kg	DPS 15 BM	1700 mm	1085 mm	515 mm	200 kg
DPS 20 BI	1720 mm	955 mm	515 mm	250 kg	DPS 20 BM	1720 mm	1085 mm	515 mm	255 kg
DPS 25 BI	1735 mm	955 mm	515 mm	300 kg	DPS 25 BM	1735 mm	1085 mm	515 mm	305 kg
DPS 30 BI	1830 mm	1130 mm	555 mm	350 kg	DPS 30 BM	1830 mm	1260 mm	555 mm	355 kg
DPS 40 BI	1840 mm	1140 mm	570 mm	395 kg	DPS 40 BM	1840 mm	1270 mm	570 mm	400 kg
DPS 60 BI	1870 mm	1200 mm	600 mm	525 kg	DPS 60 BM	1870 mm	1330 mm	600 mm	532 kg
DPS 80 BI	2045 mm	1470 mm	715 mm	630 kg	DPS 80 BM	2045 mm	1635 mm	715 mm	640 kg
DPS 100 BI	2060 mm	1520 mm	750 mm	740 kg	DPS 100 BM	2060 mm	1685 mm	750 mm	750 kg

## Nitrogen generators

### Nitrogen generators up to 10 bar – GNA.. series



#### Scope of supply

Ready-to-use nitrogen generator including initial filling CMS and selected options (already installed or, in order to avoid transport damages, pre-installed / separately enclosed); transport packing is not included in the scope of supply and is charged separately.

Operating manuals including the manufacturer's declaration and/or declaration of conformity are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

Operating manuals are available in English and German language. Additional pressure vessel documents are provided for welded pressure vessels. These vessel documents are created individually for each of these products and will be sent separately.

#### Standard version

Generator with S7 electronic control unit.

	Volume flow N <sub>2</sub> <sup>*1</sup>	Volume flow N <sub>2</sub> <sup>*2</sup>	Maximum operating pressure	Connection inlet	Connection outlet	Price	Prod.-grp.
<b>GNA2</b>	6,5 m <sup>3</sup> /h	3,2 m <sup>3</sup> /h	10 bar	G 1/2	G 1/2	<b>26.427 €</b>	37
<b>GNA4</b>	13 m <sup>3</sup> /h	6,4 m <sup>3</sup> /h	10 bar	G 1/2	G 1/2	<b>30.809 €</b>	37
<b>GNA6</b>	19,4 m <sup>3</sup> /h	9,5 m <sup>3</sup> /h	10 bar	G 1/2	G 1/2	<b>34.077 €</b>	37
<b>GNA9</b>	29,2 m <sup>3</sup> /h	14,3 m <sup>3</sup> /h	10 bar	G 1/2	G 1/2	<b>36.985 €</b>	37
<b>GNA12</b>	38,9 m <sup>3</sup> /h	19,1 m <sup>3</sup> /h	10 bar	G 3/4	G 1/2	<b>42.504 €</b>	37
<b>GNA15</b>	48,6 m <sup>3</sup> /h	23,9 m <sup>3</sup> /h	10 bar	G 3/4	G 1/2	<b>47.487 €</b>	37
<b>GNA20</b>	64 m <sup>3</sup> /h	31,8 m <sup>3</sup> /h	10 bar	G 1	G 3/4	<b>56.997 €</b>	37
<b>GNA27</b>	87,5 m <sup>3</sup> /h	42,9 m <sup>3</sup> /h	10 bar	G 1	G 3/4	<b>62.299 €</b>	37
<b>GNA35</b>	113,4 m <sup>3</sup> /h	55,7 m <sup>3</sup> /h	10 bar	G 1 ½	G 1	<b>73.293 €</b>	37
<b>GNA50</b>	162 m <sup>3</sup> /h	79,5 m <sup>3</sup> /h	10 bar	G 1 ½	G 1	<b>107.448 €</b>	37
<b>GNA65</b>	210,5 m <sup>3</sup> /h	103,4 m <sup>3</sup> /h	10 bar	G 1 ½	G 1	<b>123.981 €</b>	37
<b>GNA80</b>	259,1 m <sup>3</sup> /h	127,2 m <sup>3</sup> /h	10 bar	G 1 ½	G 1	<b>144.040 €</b>	37
<b>GNA100</b>	323,9 m <sup>3</sup> /h	159,1 m <sup>3</sup> /h	10 bar	G 2	G 1 ½	<b>170.940 €</b>	37
<b>GNA125</b>	404,9 m <sup>3</sup> /h	198,8 m <sup>3</sup> /h	10 bar	G 2	G 1 ½	<b>192.910 €</b>	37
<b>GNA150</b>	485,9 m <sup>3</sup> /h	238,6 m <sup>3</sup> /h	10 bar	G 2	G 1 ½	<b>225.162 €</b>	37

\*1 – refers to a nitrogen saturation of 99,50%

\*2 – refers to a nitrogen saturation of 99,90%



Nitrogen generators for higher volume flows, higher operating pressures or bigger connection sizes are available on request.



#### Sizing for your individual operating conditions

Please contact the technical support of FST.

#### Sizes and weights

	Height [A]	Width [B]	Depth [C]	Weight
<b>GNA2</b>	1700 mm	550 mm	700 mm	165 kg
<b>GNA4</b>	1920 mm	620 mm	720 mm	200 kg
<b>GNA6</b>	1950 mm	650 mm	800 mm	250 kg
<b>GNA9</b>	1930 mm	780 mm	820 mm	350 kg
<b>GNA12</b>	2120 mm	820 mm	820 mm	450 kg
<b>GNA15</b>	2130 mm	870 mm	830 mm	550 kg
<b>GNA20</b>	2100 mm	1050 mm	950 mm	750 kg
<b>GNA27</b>	2200 mm	1300 mm	850 mm	1000 kg
<b>GNA35</b>	2200 mm	1350 mm	950 mm	1100 kg
<b>GNA50</b>	2130 mm	1620 mm	1130 mm	1800 kg
<b>GNA65</b>	2250 mm	1810 mm	1130 mm	2300 kg
<b>GNA80</b>	2250 mm	1920 mm	1250 mm	2800 kg
<b>GNA100</b>	2650 mm	2050 mm	1400 mm	3000 kg
<b>GNA125</b>	3000 mm	2050 mm	1400 mm	3300 kg
<b>GNA150</b>	3500 mm	2050 mm	1400 mm	4000 kg

For latest technical figures and information please refer to the relevant product data sheets, which are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

## Nitrogen generators

### Accessories for nitrogen generators – GA.. series

#### 1 Molecular sieve protection from moisture

Molecular sieve protection incl. dew-point sensor for surveillance of air quality at the inlet.

	Price	Prod.- grp.
GA-ESH-N2-B15-OXW	2.414 €	37
GA-ESH-N2-B50-OXW	3.449 €	37

#### 2 Volume flow controller (electrical)

Electrical volume flow controller ensuring a steady, constant nitrogen purity even if the volume flow is fluctuating.

GA-VPR-N2-MFCV1-OXW	1.300 €	37
GA-VPR-N2-MFCV2-OXW	1.985 €	37
GA-VPR-N2-FCV1-OXW	2.714 €	37
GA-VPR-N2-FCV2-OXW	3.611 €	37

#### 3 Purity control

Oxygen sensor for monitoring the nitrogen purity with automatic flushing unit if nitrogen quality is insufficient.

GA-VPN-N2-2/35-OXW	1.751 €	37
GA-VPN-N2-50/150-OXW	1.860 €	37

#### 4 7", 9" or 11" display for control unit

Touch display with increased size und 65536 colours for maximum visibilty and clarity.

GA-UGD-N2-7-OXW	1.226 €	37
GA-UGD-N2-9-OXW	2.558 €	37
GA-UGD-N2-11-OXW	3.546 €	37

#### 5 Purity control

Unit for monitoring the nitrogen purity, with automatic flushing unit if nitrogen quality is not reached.

GA-FLM-N2-B15-OXW-02	2.666 €	37
GA-FLM-N2-B20-OXW-02	2.911 €	37
GA-FLM-N2-B25-OXW-02	3.355 €	37
GA-FLM-N2-B32-OXW-02	3.515 €	37
GA-FLM-N2-B40-OXW-01	3.585 €	37
GA-FLM-N2-B50-OXW-02	3.769 €	37

#### 6 Energy saving system

This energy saving system monitors the volume flow aligning it to the actually used amount of nitrogen.

GA-ESS-N2-5m-OXW	4.903 €	37
GA-ESS-N2-10m-OXW	5.866 €	37
GA-ESS-N2-15m-OXW	6.829 €	37
GA-ESS-N2-25m-OXW	8.383 €	37

#### 7 Rotating beacon with acoustic signal

Rotating beacon with acoustic singal allowing for immediate recognition of errors.

GA-AOS-N2-OXW	506 €	37
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#### 8 Dew-point Sensor Nitrogen

Dew-point sensor for monitoring the generated nitrogen's dew-point.

GA-STA-N2-80-OXW	3.436 €	37
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## Nitrogen generators

### Nitrogen generators up to 10 bar – GNM.. series



#### Scope of supply

Ready-to-use nitrogen generator with membrane technology including flow control and selected options (already installed or, in order to avoid transport damages, pre-installed / separately enclosed); transport packing is not included in the scope of supply and is charged separately.

Operating manuals including the manufacturer's declaration and/or declaration of conformity are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

Operating manuals are available in English and German language. Additional pressure vessel documents are provided for welded pressure vessels. These vessel documents are created individually for each of these products and will be sent separately.

#### Standard version

Generator with 2 pre-filters and flow control

	Volume flow N <sub>2</sub> <sup>*1</sup>	Maximum operating pressure	Connection inlet	Connection outlet	Price	Prod.-grp.
<b>GNM0,01</b>	1,3 m <sup>3</sup> /h	10 bar	NPT 1/2	NPT 1/2	<b>7.833 €</b>	38
<b>GNM0,2</b>	2,6 m <sup>3</sup> /h	10 bar	NPT 1/2	NPT 1/2	<b>8.833 €</b>	38
<b>GNM0,3</b>	3,9 m <sup>3</sup> /h	10 bar	NPT 1/2	NPT 1/2	<b>11.633 €</b>	38
<b>GNM0,5</b>	5,2 m <sup>3</sup> /h	10 bar	NPT 1/2	NPT 1/2	<b>14.433 €</b>	38
<b>GNM1,1</b>	11,3 m <sup>3</sup> /h	10 bar	NPT 1/2	NPT 1/2	<b>16.483 €</b>	38
<b>GNM3</b>	33,9 m <sup>3</sup> /h	10 bar	NPT 3/4	NPT 3/4	<b>18.563 €</b>	38
<b>GNM4</b>	41,2 m <sup>3</sup> /h	10 bar	NPT 3/4	NPT 3/4	<b>31.042 €</b>	38
<b>GNM6</b>	61,8 m <sup>3</sup> /h	10 bar	NPT 1 ½	NPT 1 ½	<b>31.636 €</b>	38
<b>GNM14</b>	144,0 m <sup>3</sup> /h	10 bar	NPT 1 ½	NPT 1 ½	<b>41.764 €</b>	38
<b>GNM20</b>	196,5 m <sup>3</sup> /h	10 bar	NPT 1 ½	NPT 1 ½	<b>76.604 €</b>	38
<b>GNM22</b>	216,0 m <sup>3</sup> /h	10 bar	NPT 1 ½	NPT 1 ½	<b>111.750 €</b>	38

\*1 – refers to a nitrogen saturation of 95,00%



Nitrogen generators for higher volume flows, higher operating pressures or bigger connection sizes are available on request.



#### Sizing for your individual operating conditions

Please contact the technical support of FST.

#### Sizes and weights

	Height [A]	Width [B]	Depth [C]	Weight
<b>GNM0,1</b>	1200 mm	600 mm	400 mm	91 kg
<b>GNM0,2</b>	1200 mm	600 mm	400 mm	102 kg
<b>GNM0,3</b>	1200 mm	600 mm	400 mm	110 kg
<b>GNM0,5</b>	1200 mm	600 mm	400 mm	118 kg
<b>GNM1,1</b>	1200 mm	600 mm	400 mm	102 kg
<b>GNM2.0</b>	1200 mm	600 mm	400 mm	105 kg
<b>GNM2.5</b>	1200 mm	600 mm	400 mm	118 kg
<b>GNM3</b>	1200 mm	600 mm	400 mm	134 kg
<b>GNM4</b>	2000 mm	600 mm	400 mm	124 kg
<b>GNM5</b>	2000 mm	600 mm	400 mm	143 kg
<b>GNM6</b>	2000 mm	600 mm	400 mm	147 kg
<b>GNM7</b>	2000 mm	600 mm	400 mm	154 kg
<b>GNM13</b>	2000 mm	600 mm	400 mm	189 kg
<b>GNM14</b>	2000 mm	600 mm	400 mm	203 kg
<b>GNM20</b>	2000 mm	600 mm	400 mm	231 kg
<b>GNM22</b>	2000 mm	600 mm	400 mm	252 kg

For latest technical figures and information please refer to the relevant product data sheets, which are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“



## Nitrogen generators

### Accessories for nitrogen generators – GM.. series

#### 1 Membrane protection with energy saving system

Motorized ball valve protects the membrane from pressure surges. Unused membranes are switched off to save energy.

	Price	Prod.-grp.
GM-MEP-N2-B20-FST	3.800 €	37

#### 2 Purity control

Sensor for monitoring nitrogen purity. Protects the application from nitrogen with an insufficient purity.

	Price	Prod.-grp.
GM-VPN-N2-B20-FST	6.000 €	37

#### 3 All-inclusive protection

All-inclusive protection combining the benefits of the membrane protection with energy saving system and purity control.

	Price	Prod.-grp.
GM-FUP-N2-B25-FST	7.000 €	37

#### 4 Dew-point sensor nitrogen

The activated carbon cartridge protects the membrane from residue oil in the compressed air.

	Price	prod.-grp.
GM-ACC-N2-FST	3.436 €	37

## Condensate

### Condensate drain – CDM., CDF.. series



#### Scope of supply








Condensate drain without installation parts; without sealing material; single cardboard packing or shrink wrap foil; transport packing is not included in the scope of supply and is charged separately.

Operating manuals of the condensate drains CDF130 and CDF140 are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

Operating manuals are available in English and German language.

Adapters and manual drains without documentation.


#### Up to 16 Bar

	Adapter		Manual drain			Automatic drain	
							
	<b>CAK-B15-14,5</b>	<b>CAK-B15-M14</b>	<b>CDM 14 N</b>	<b>CDM 15 N</b>	<b>CDM 25 N</b>	<b>CDF 130 NO</b>	<b>CDF 140 NC</b>
Suitable for Filter	FCA 20-130	FCA 20-130	FCA 20-130(*1)	FCA 140- FWS 190	FWS 200- 2000	FCA 20-130(*2)	FCA 140- FWS 2000
Connection	G 1/2 - Ø14,5	G 1/2 - M14	M14	G 1/2	G 1	Ø14,5 (M14)	G 1/2
Price	<b>21 €</b>	<b>21 €</b>	<b>32 €</b>	<b>45 €</b>	<b>62 €</b>	<b>86 €</b>	<b>168 €</b>
Prod.-grp.	51	51	51	51	51	51	51


\*1 – adapter CAK-B15-M14 required

\*2 – adapter CAK-B15-14,5 required

#### Up to 50 Bar

	Manual drain
	
	<b>CDM 15/50 N</b>
Suitable for Filter	FCA 20-130 FWS 140-190
Connection	G 1/2
Price	<b>82 €</b>
Prod.-grp.	51

#### Up to 350 Bar

	Manual drain (stainless steel)
	
	<b>CDM 08/350 N</b>
Suitable for Filter	FMA 30-70 FMS 90-110
Connection	G 1/4
Price	<b>168 €</b>
Prod.-grp.	52

## Service

<b>SK-CDF140NC</b>	Service-Kit	See Service Price list
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For latest technical figures and information please refer to the relevant product data sheets, which are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

## Condensate

### Condensate drain for Vacuum – CDMV.. series



#### Scope of supply

Manual vacuum condensate drain; without sealing material; single cardboard packing; transport packing is not included in the scope of supply and is charged separately.  
Without documentation.

#### Standard version

Vacuum-resistant, sterilisable flask including manual valve and mounting material

#### Down to 0,02 bar(a) Vacuum

#### Vacuum condensate drain



	CDMV 70	CDMV 90
Suitable for Filter	FCA 20-70	FCA 90-190
Pressure range	0,02 bar(a) - 2 bar(a)	0,02 bar(a) - 2 bar(a)
Collecting volume	100 ml	250 ml
Connection	G 1/2	G 1/2
<b>Price</b>	<b>107 €</b>	<b>111 €</b>
Prod.-grp.	51	51

## Condensate

Electronic condensate drain up to 16 bar – CDE..L series



### Scope of supply

Ready-to-use electronic condensate drain; single cardboard packing; transport packing is not included in the scope of supply and is charged separately.

Operating manuals including the manufacturer's declaration and/or declaration of conformity are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

Operating manuals are available in English and German language.

### Standard version

Condensate drain; power supply plug; 230V versions with ready to install power supply cable (approx. 2m cable length with Schuko plug); metal outlet nipple; CDE6LC - CDE500LC with potential free alarm contact (cable available as option)

	Nominal volume flow After-cooler* <sup>1</sup>	Nominal volume flow Refrigeration dryer* <sup>1,2</sup>	Nominal volume flow Filter* <sup>1,3</sup>	Maximum operating pressure	Connection inlet	Connection condensate outlet	Price	Prod.-grp.
<b>CDE 4 L</b>	250 m <sup>3</sup> /h	500 m <sup>3</sup> /h	2.500 m <sup>3</sup> /h	16 bar	G 1/2	G 3/8 - 10-12mm	<b>174 €</b>	53
<b>CDE 6 LC</b>	380 m <sup>3</sup> /h	760 m <sup>3</sup> /h	3.800 m <sup>3</sup> /h	16 bar	G 1/2	G 3/8 - 10-12mm	<b>241 €</b>	53
<b>CDE 8 LC</b>	500 m <sup>3</sup> /h	1.000 m <sup>3</sup> /h	5.000 m <sup>3</sup> /h	16 bar	2x G 1/2	G 3/8 - 10-12mm	<b>322 €</b>	53
<b>CDE 16 LC</b>	1.000 m <sup>3</sup> /h	2.000 m <sup>3</sup> /h	10.000 m <sup>3</sup> /h	16 bar	2x G 1/2	G 3/8 - 10-12mm	<b>370 €</b>	53
<b>CDE 40 LC</b>	2.500 m <sup>3</sup> /h	5.000 m <sup>3</sup> /h	25.000 m <sup>3</sup> /h	16 bar	2x G 1/2	G 3/8 - 10-12mm	<b>482 €</b>	53
<b>CDE 160 LC</b>	9.600 m <sup>3</sup> /h	19.200 m <sup>3</sup> /h	96.000 m <sup>3</sup> /h	16 bar	2x G 1/2	G 3/8 - 10-12mm	<b>729 €</b>	53
<b>CDE 500 LC</b>	30.000 m <sup>3</sup> /h	60.000 m <sup>3</sup> /h	300.000 m <sup>3</sup> /h	16 bar	G 1 + 2x G 1/2	G 3/8 - 10-12mm	<b>2.199 €</b>	53

\*1 – refers to 1 bar(a) and 20°C at 7 bar operating pressure; suction air compressor 25°C at 60% relative humidity; outlet temperature after-cooler 35°C

\*2 – pressure dew-point refrigeration dryer +3°C

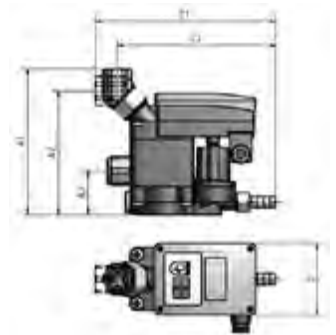
\*3 – condensate generated from coolers or dryers already discharged upstream; discharge of residual amounts of liquids only

## Service

<b>SK-CDE4-500</b>	Service-Kit	
<b>SP-CDE4-500/ECA2</b>	Power supply cable, 2m cable length, solenoid/German Schuko plug	See Service Price list
<b>SP-ECA3-ECN15</b>	Cable potential free alarm contact, 5m cable length, M12 plug/wire end ferrules	
<b>SR-CDE/ED3000</b>	Metal outlet nipple with hex nut and O-ring	

## Sizes and weights

	Height [A1]	Height [A2]	Height [A3]	Width [B]	Depth [C1]	Depth [C2]	Weight
<b>CDE 4 L</b>	120 mm	---	---	60 mm	143 mm	124 mm	0,4 kg
<b>CDE 6 LC</b>	107 mm	86 mm	---	69 mm	170 mm	148 mm	0,5 kg
<b>CDE 8 LC</b>	140 mm	118 mm	42 mm	69 mm	172 mm	151 mm	0,6 kg
<b>CDE 16 LC</b>	155 mm	133 mm	42 mm	69 mm	172 mm	151 mm	0,7 kg
<b>CDE 40 LC</b>	215 mm	193 mm	42 mm	69 mm	172 mm	151 mm	1,2 kg
<b>CDE 160 LC</b>	230 mm	209 mm	66 mm	121 mm	184 mm	162 mm	2,8 kg
<b>CDE 500 LC</b>	281 mm	225 mm	75 mm	230 mm	492 mm	---	18 kg



For correction factors, latest technical figures and information please refer to the relevant product data sheets, which are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

## Condensate

### Electronic condensate drain up to 350 bar – CDE..T series



#### Scope of supply

Ready-to-use electronic condensate drain; single cardboard packing; transport packing is not included in the scope of supply and is charged separately.

Operating manuals including the manufacturer's declaration and/or declaration of conformity are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

Operating manuals are available in English and German language.

#### Standard version

Condensate drain, made up of pressure resistant solenoid valve and electronic timer; power supply plug; double-nipple inlet connection

	Nominal volume flow after-cooler <sup>*1</sup>	Nominal volume flow refrigeration <sup>*1*2</sup>	Nominal volume flow Filter <sup>*1*3</sup>	Maximum operating pressure	Connection condensate inlet	Connection condensate outlet	Price	Prod.-grp.
<b>CDE 40 T</b>	2.500 m <sup>3</sup> /h	5.000 m <sup>3</sup> /h	25.000 m <sup>3</sup> /h	16 bar	G 1/2	G 1/2	<b>156 €</b>	53
<b>CDE 500 T</b>	30.0000 m <sup>3</sup> /h	60.000 m <sup>3</sup> /h	300.000 m <sup>3</sup> /h	16 bar	G 1	G 1/2	<b>216 €</b>	53
<b>CDE 200 / 50 T</b>	12.000 m <sup>3</sup> /h	24.000 m <sup>3</sup> /h	120.000 m <sup>3</sup> /h	50 bar	G 1/2	G 1/4	<b>241 €</b>	54
<b>CDE 80 /100 T</b>	4.800 m <sup>3</sup> /h	9.600 m <sup>3</sup> /h	48.000 m <sup>3</sup> /h	100 bar	G 1/4	G 1/4	<b>464 €</b>	54
<b>CDE 80 /250 T</b>	4.800 m <sup>3</sup> /h	9.600 m <sup>3</sup> /h	48.000 m <sup>3</sup> /h	250 bar	G 1/4	G 1/4	<b>804 €</b>	54
<b>CDE 80 /350 T</b>	4.800 m <sup>3</sup> /h	9.600 m <sup>3</sup> /h	48.000 m <sup>3</sup> /h	350 bar	G 1/4	G 1/4	<b>980 €</b>	54
<b>CDE 80 /420 T</b>	4.800 m <sup>3</sup> /h	9.600 m <sup>3</sup> /h	48.000 m <sup>3</sup> /h	420 bar	G 1/4	G 1/4	<b>1.323 €</b>	54
<b>CDE 80 /500 T</b>	4.800 m <sup>3</sup> /h	9.600 m <sup>3</sup> /h	48.000 m <sup>3</sup> /h	500 bar	G 1/4	G 1/4	<b>1.938 €</b>	54

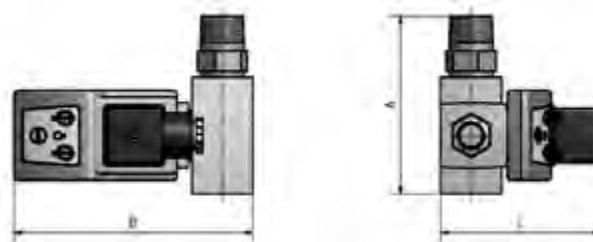
\*1 – refers to 1 bar(a) and 20°C at 7 bar operating pressure; suction air compressor 25°C at 60% relative humidity; outlet temperature after-cooler 35°C

\*2 – pressure dew-point refrigeration dryer +3°C

\*3 – condensate generated from coolers or dryers already discharged upstream; discharge of residual amounts of liquids only

#### Sizes and weights

	Height [A]	Width [B]	Depth [C]	Weight
<b>CDE 40 T</b>	75 mm	118 mm	86 mm	0,6 kg
<b>CDE 500 T</b>	86 mm	118 mm	86 mm	0,7 kg
<b>CDE 200 / 50 T</b>	65 mm	118 mm	86 mm	0,4 kg
<b>CDE 80 /100 T</b>	58 mm	112 mm	81 mm	0,5 kg
<b>CDE 80 /250 T</b>	58 mm	112 mm	81 mm	0,5 kg
<b>CDE 80 /350 T</b>	58 mm	112 mm	81 mm	0,5 kg
<b>CDE 80 /420 T</b>	58 mm	112 mm	81 mm	0,5 kg
<b>CDE 80 /500 T</b>	58 mm	112 mm	81 mm	0,5 kg



For correction factors, latest technical figures and information please refer to the relevant product data sheets, which are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

## Condensate

### Condensate drain Installation kit – CAK series



#### Scope of Supply

Mounting kit including shut-off valve and installation parts; without sealing material; single carbad packing or shring wrap; transport packing is not included in the scope of supply and is charged seperately. Without documentation.

#### Standard version

Each mounting kit includes all components in order to connect the according condensate drain to the according filter housing, offering a manual shut-off valve in between.

#### Up to 16 bar (for condensate drains with integrated screwed inlet connection)

	Connection filter	Suitable for filters	connection condensate drains	Suitable for condensate drains	Price	Prod.-grp.
<b>CAKF-B15-B15</b>	G 1/2	FCA 20-190, FWS 140-190, FCA-CKL	G 1/2	CDE4L - CDE40LC, CDE160 <sup>*1</sup>	<b>45 €</b>	51
<b>CAKF-B25-B15</b>	G 1	FWS 200-2000	G 1	CDE4L - CDE40LC, CDE160 <sup>*1</sup>	<b>62 €</b>	51

\*1 – condensate drain for floor mounting; flexible hose and hose fitting additionally required

#### Up to 16 bar (for condensate drains with integrated screwed inlet connection)

	Connection filter	Suitable for filters	connection condensate drains	Suitable for condensate drains	Price	Prod.-grp.
<b>CAKR-B15-B15</b>	G 1/2	FCA 20-190, FWS 140-190, FCA-CKL	G 1/2	CDF140, CDE40T - CDE500T	<b>45 €</b>	51
<b>CAKR-B25-B15</b>	G 1	FWS 200-2000	G 1/2	CDF140, CDE40T - CDE500T	<b>57 €</b>	51
<b>CAKR-B25-B25</b>	G 1	FWS 200-2000	G 1	CDE500LC <sup>*2</sup>	<b>100 €</b>	51
<b>CAKR-B50-B25</b>	G 2	--	G 1	CDE500LC <sup>*2</sup>	<b>100 €</b>	51

\*2 – condensate drain for floor mounting; flexible hose and hose fitting additionally required

#### Up to 50 bar

	Connection filter	Suitable for filters	connection condensate drains	Suitable for condensate drains	Price	Prod.-grp.
<b>CAKF/50-B15-B15</b>	G 1/4	FCA 20-130, FWS 140-190	G 1/2	CDE200/50T	<b>107 €</b>	52

#### Up to 350 bar

	Connection filter	Suitable for filters	connection condensate drains	Suitable for condensate drains	Price	Prod.-grp.
<b>CAKF/50-B15-B15</b>	G 1/4	FMA 30-70, FMS 90-110	G 1/4	CDE80/100T, CDE80/350T	<b>181 €</b>	52

## Condensate

### Oil water separator – CSQ.. series



#### Scope of supply

Oil water separator with already installed filter bags; without water filling (non water flooded); assembly materials; transport packing is not included in the scope of supply and is charged separately.

The manufacturer's operating manual is included.

Operating manuals are available in English and German language.

#### Standard version

Oil water separator with documentation compartment; test set; incl. 3m connection cable and plug; approval of the Deutsches Institut für Bautechnik Berlin, Germany, (DiBt)

	Nominal volume flow	Nominal condensate amount	Connection inlet	Connection outlet	Price	Prod.-grp.
CSQ-P10	600 m <sup>3</sup> /h	12,7 L	2x G ½/1x G1	G 1/2	1.461 €	57
CSQ-P15	900 m <sup>3</sup> /h	19,0 L	2x G ½/1x G1	G 1/2	2.117 €	57
CSQ-P30	1.800 m <sup>3</sup> /h	38,0 L	2x G ½/1x G1	G 1/2	2.607 €	57
CSQ-P60	3.600 m <sup>3</sup> /h	76,0 L	2x G ½/1x G1	G 1/2	3.261 €	57
CSQ-P90	5.400 m <sup>3</sup> /h	114,0 L	2x G ½/1x G1	G 1/2	4.299 €	57

#### Accessory

#### Description

CA-BCW-CSQP10-15-BE	Expansion kit CSQ-P10 to P15	1.385,00 €	81
CA-BCW-CSQP15-30-BE	Expansion kit CSQ-P15 to 30	1.315,00 €	81
CA-BCW-CSQP30-60-BE	Expansion kit CSQ-P30 to P60	1.550,00 €	81
CA-BCW-CSQP60-90-BE	Expansion kit CSQ-P60 to P90	2.095,00 €	81
CA-ECR-CSQ-BE	Alarm contact (overflow) CSQ oil-water-separator	229,00 €	81

## Service

#### Article

#### Description

SEWAPAC-CSQ-P10-P90-BE	Replacement cartridge(s) for all sizes	pc. 261,00 €	87
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#### Sizes and weights

	Height [A]	Width [B]	Depth [C]	Weight (unfilled)
CSQ-P10	1482 mm	625 mm	540 mm	16 kg
CSQ-P15	1482 mm	744 mm	1482 mm	16 kg
CSQ-P30	1482 mm	790 mm	1482 mm	35 kg
CSQ-P60	1482 mm	899 mm	1482 mm	45 kg
CSQ-P90	1482 mm	1234 mm	1482 mm	67 kg

For additional correction factors, latest technical figures and information please refer to the relevant product data sheets, which are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

## Condensate

### Oil water separator – CSJ.. series



#### Scope of supply

Oil water separator with already installed filter bags; without water filling (non water flooded); transport packing is not included in the scope of supply and is charged separately. The manufacturer's operating manual is included. Operating manuals are available in English and German language.

#### Standard version

Oil water separator with documentation compartment; test valve; test set; approval of the Deutsches Institut für Bautechnik Berlin, Germany, (DiBt)

	Max. compressor capacity	Max. oil adsorption	Connection inlet	Connection outlet	Test valve	Price	Prod.-grp.
CSJ2	120 m <sup>3</sup> /h	2 L	R 1/2	R 1/2	Yes	165 €	56
CSJ3.5	210 m <sup>3</sup> /h	4 L	R 1/2	R 1/2	Yes	392 €	56
CSJ5	300 m <sup>3</sup> /h	5 L	R 1/2 (2)	R1	Yes	789 €	56
CSJ10	600 m <sup>3</sup> /h	10 L	R 1/2 (2)	R1	Yes	999 €	56
CSJ20	1.200 m <sup>3</sup> /h	15 L	R 1/2 (2)	R1	Yes	1.339 €	56
CSJ30	1.800 m <sup>3</sup> /h	25 L	R 1/2 (2)	R1	Yes	1.713 €	56
CSJ60	3.600 m <sup>3</sup> /h	50 L	R 1/2 (2)	R1	Yes	3.419 €	56

## Service

SEWAPAC® service kits for oil water separator CSJ series and oil water separators of other suppliers

See Service Price list

### Sizes and weights

	Height [A]	Width [B]	Depth [C]	Weight (unfilled)
CSJ2	245 mm	255 mm	230 mm	3 kg
CSJ3.5	385 mm	396 mm	240 mm	6 kg
CSJ5	610 mm	580 mm	190 mm	10 kg
CSJ10	750 mm	650 mm	240 mm	20 kg
CSJ20	900 mm	780 mm	305 mm	30 kg
CSJ30	900 mm	970 mm	380 mm	43 kg
CSJ60	1040 mm	1160 mm	480 mm	74 kg

### Volume flow correction factors for operating conditions deviating from reference conditions

35°C	25°C	15°C	3°C (with refrigeration dryer)
1,00	0,83	0,72	0,67

For additional correction factors, latest technical figures and information please refer to the relevant product data sheets, which are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“



## Condensate

### Oil water separator – CSW.. series



#### Scope of supply

Oil water separator with already installed filter bags; without water filling (non water flooded); transport packing is not included in the scope of supply and is charged separately. The manufacturer's operating manual is included. Operating manuals are available in English and German language.

#### Standard version

Oil water separator with documentation compartment; test valve; test set; approval of the Deutsches Institut für Bautechnik Berlin, Germany, (DiBt)

		Nominal volume flow <sup>1</sup>	Nominal volume flow <sup>2</sup>	Connection inlet	Connection water outlet	Connection oil outlet	Price	Prod.-grp.
CSW-DRUKOSEP	1	108 m <sup>3</sup> /h	48 m <sup>3</sup> /h	3x R 1/2	R 1	---	352 €	55
CSW-DRUKOSEP	2	150 m <sup>3</sup> /h	72 m <sup>3</sup> /h	3x R 1/2	R 1	---	445 €	55
CSW-DRUKOSEP	3	210 m <sup>3</sup> /h	108 m <sup>3</sup> /h	3x R 1/2	R 1	---	556 €	55
CSW-DRUKOSEP	6	360 m <sup>3</sup> /h	180 m <sup>3</sup> /h	4x R 1/2	R 1	---	740 €	55
CSW-DRUKOSEP	8	600 m <sup>3</sup> /h	300 m <sup>3</sup> /h	4x R 1/2	R 1	---	975 €	55
CSW-DRUKOSEP	10	720 m <sup>3</sup> /h	360 m <sup>3</sup> /h	4x R 1/2	R 1	---	1.087 €	55
CSW-DRUKOMAT	15	900 m <sup>3</sup> /h	300 m <sup>3</sup> /h	4x R 1/2	R 1	R 1	1.258 €	55
CSW-DRUKOMAT	30	1.800 m <sup>3</sup> /h	600 m <sup>3</sup> /h	4x R 1/2	R 1	R 1	1.837 €	55
CSW-DRUKOMAT	61	4.200 m <sup>3</sup> /h	1.200 m <sup>3</sup> /h	4x R 1/2	R 2	R 2	5.669 €	55
CSW-DRUKOMAT	15 PLUS	1.500 m <sup>3</sup> /h	720 m <sup>3</sup> /h	4x R 1/2	R 1	R 1	2.157 €	55
CSW-DRUKOMAT	30 PLUS	3.000 m <sup>3</sup> /h	1.500 m <sup>3</sup> /h	4x R 1/2	R 1	R 1	2.896 €	55
CSW-DRUKOMAT	31 PLUS	3.600 m <sup>3</sup> /h	1.800 m <sup>3</sup> /h	4x R 1/2	R 1	R 1	3.944 €	55
CSW-DRUKOMAT	61 PLUS	6.000 m <sup>3</sup> /h	3.000 m <sup>3</sup> /h	4x R 1/2	R 2	R 2	7.217 €	55

\*1 – refers to 1 bar(a) and 20°C at 7 bar operating pressure, compressed air produced by screw compressors, intake air of compressor 25°C at 60% relative humidity, 35°C compressed air temperature, for non-emulsifying oils; for different intake air conditions or lower compressed air temperatures correction factors need to be applied.

\*2 – refers to 1 bar(a) and 20°C at 7 bar operating pressure, compressed air produced by piston compressors, intake air of compressor 25°C at 60% relative humidity, 35°C compressed air temperature, for non-emulsifying oils; for different intake air conditions or lower compressed air temperatures correction factors need to be applied.

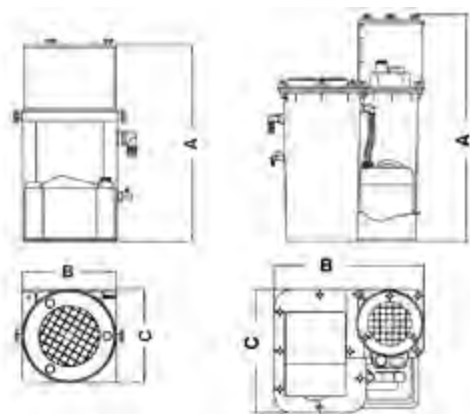
## Service

SEWAPAC® service kits for oil water separator CSW series and oil water separators of other suppliers

See Service Price list

### Sizes and weights

		Height [A]	Width [B]	Depth [C]	Weight (unfilled)
CSW-DRUKOSEP	1	450 mm	280 mm	210 mm	5 kg
CSW-DRUKOSEP	2	550 mm	280 mm	210 mm	7 kg
CSW-DRUKOSEP	3	610 mm	285 mm	285 mm	10 kg
CSW-DRUKOSEP	6	908 mm	437 mm	325 mm	17 kg
CSW-DRUKOSEP	8	962 mm	595 mm	375 mm	25 kg
CSW-DRUKOSEP	10	965 mm	620 mm	520 mm	35 kg
CSW-DRUKOMAT	15	1160 mm	620 mm	520 mm	28 kg
CSW-DRUKOMAT	30	1160 mm	850 mm	520 mm	55 kg
CSW-DRUKOMAT	61	1450 mm	1300 mm	1000 mm	90 kg
CSW-DRUKOMAT	15 PLUS	1160 mm	620 mm	520 mm	40 kg
CSW-DRUKOMAT	30 PLUS	1160 mm	850 mm	520 mm	60 kg
CSW-DRUKOMAT	31 PLUS	1160 mm	850 mm	520 mm	70 kg
CSW-DRUKOMAT	61 PLUS	1450 mm	1300 mm	1000 mm	96 kg



### Volume flow correction factors for operating conditions deviating from reference conditions

35°C	25°C	15°C	3°C (with refrigeration dryer)
1,00	0,83	0,72	0,67

For additional correction factors, latest technical figures and information please refer to the relevant product data sheets, which are available in electronic format on our web site: → [www.fstweb.de](http://www.fstweb.de) → „Know-How“ → „Product information“

## General Terms of Sale and Delivery

- § 1**  
All deliveries, services and offers shall be deemed to be made solely upon the basis of these conditions. These conditions shall be deemed to have been acknowledged with placing an order at the latest. Any counterclaims on the part of the purchaser and references to his own terms of business or purchasing are herewith deemed ineffective. All divergences from these conditions shall require our own written confirmation to obtain validity.
- § 2**  
All offers shall be deemed to remain unbinding and shall be deemed binding for a maximum of eight weeks calculated from the date of offer only when expressly so endorsed. Our prices are subject to alteration and are valid only until revoked. Based on the development of the steel prices we must reserve the right to change prices at short notice. As a general principle, a contract shall come into existence only by our order confirmation, unless stated otherwise in the General Terms of Sale and Delivery. The price stated in our confirmation of order shall apply in all cases.
- § 3**  
All payments shall be made to us in EURO within 30 days without deduction referred to the invoice date.  
The precondition for granting discount is the full and complete payment of all invoices which have previously become due for payment and whose amount or basis has not been contested. The due date shall remain unaffected by the receipt of acceptance documents of any type.
- § 4**  
Our representatives are not empowered to make contracts nor to collect amounts outstanding.
- § 5**  
Should the purchaser fall into arrears with any payment, we shall be entitled upon corresponding notification to the purchaser to cease work on all contracts already in progress until advance payment is made in full or until appropriate security is provided. Where such advance payment or provision of security is not effected within a reasonable period specified by ourselves, we shall have the right, without prejudice to our right to claim any further damages to which we may be entitled, to cancel all contracts currently in progress and to charge all costs already incurred therefore to the purchaser, whereby such costs shall be specified in detail.
- § 6**  
The purchaser shall be deemed to have no right of retention from any other contractual relationship. The same provision shall be deemed to apply to rights of refusal of performance on the part of the purchaser, such rights arising from the same contractual relationship in accordance with §§ 273,320 BGB (German Civil Code) and §§ 369 HGB (German Commercial Code). Where it shall become apparent that such exclusion would disadvantage the purchaser disproportionately, in contravention of the obligations of fair and equitable trading and that such exclusion is therefore invalid, we shall be entitled to remedy any such refusal of performance on the part of the purchaser by means of a written bank guarantee to the value of the right to be secured. Setting off of claims by the purchaser shall be deemed permissible only provided the corresponding counterclaim is not contested by ourselves or has been judicially established.
- § 7**  
Delivery dates shall be binding only if explicitly stated as such. An order shall only be deemed accepted when all technical and commercial questions have been clarified and, where necessary, technical drawings / documentations have been approved by the purchaser. This time shall in particular be authoritative for the calculation of any delivery period. We shall have the right to make partial deliveries.
- § 8**  
We deliver in accordance with Incoterm FCA, excluding packing. Other individually agreed delivery conditions are affected by Incoterm rules as well. Where deliveries are made ex works / carriage forward, the costs of transport as well as the insurance risk shall be borne by the consignee. The risk shall thereby pass to the purchaser when the goods leave our works or the works of our supplier. Any evident transport damage must be recorded on the freight document upon arrival and also notified to us without delay. In the case of hidden transport damage, the period of notification for such damage shall be one year from delivery.
- § 9**  
We guarantee that our products are free from manufacturing and material defects. The period of warranty is 12 months and shall be deemed to commence on the date of delivery; in the case of defects as referred to in § 13 BGB (German Civil Code), the period of warranty shall be 2 years. Any evident defects must be notified to us by the purchaser in writing without delay, and in all cases not later than within one week from receipt of the item of delivery. Any defects which could not be discovered within this period even on careful examination must be notified to us in writing immediately upon discovery, though at the latest within one year. In the case of justified complaints, we hereby undertake to effect repair or to provide replacement free of charge. Where such attempt at repair or replacement proves abortive, the purchaser shall have the right, at his option, to claim a reduction in the price for the goods or services or to cancel the contract.  
Any changes to the design or form of the goods which either increase or do not affect their value shall not give the purchaser the right to refuse acceptance of such goods provided the changes do not impair the suitability of the goods for their intended use (on-ward sale, commercial or industrial use, etc.). All data and statements of dimensions, colour, weight, etc., shall be subject to the tolerances common in trade.
- §10**  
In the case of any breach of obligations by ourselves or our vicarious agents, we shall only be liable if such breach was caused by intent or gross negligence, in the case of a breach of obligations caused by ordinary negligence only, our liability shall be limited only to the foreseeable damage typical for a contract of the type in question. The foregoing limitations of liability shall not apply in the case of injury to life and limb or to health. Should it emerge that these limitations of liability would put the purchaser to an unreasonable disadvantage in contradiction to our obligations to fair and equitable trading, we shall pay compensation, though not for loss of production or loss of profit on the part of the purchaser or his customer, nor for any damage or loss which we could not have foreseen at the time of concluding the contract as a possible consequence of our breach of obligations (foreseeable loss or damage). Moreover, our duty to compensate shall be limited to the amount of the payment agreed with us (excluding incidental costs and value added tax). Where damage or loss from delay is due to gross negligence on the part of our senior managerial staff, we shall likewise only be liable for the foreseeable loss or damage.
- §11**  
The following securities are hereby granted to us until fulfilment of all (balance) claims arising for us from any or all legal reasons against the purchaser and his group companies at the time of order or at any future time, we shall at our option release such amount of the securities as exceeds the value of the claim by more than 10%. The goods remain our property. Any processing or working or other conversion or modification of such goods shall at all times be deemed to be performed on our behalf but without any obligation arising for us. The purchaser's remainder right shall be extended to the new good, resulting from such processing or change. Where a condition of combination or mixture in the sense of §§ 946 - 948 BGB (German Civil Code) exists, the purchaser undertakes to grant to us (co-)ownership rights where the main good resulting is his property. The purchaser shall be deemed to grant us such rights of (co-)ownership free of charge.

## General Terms of Sale and Delivery

### § 11 continuation

The purchaser shall be entitled to dispose of or further process or work the reserved goods of which we possess (co-)ownership. Mortgaging or pledging in security of the reserved goods or of the inchoate rights thereto shall be deemed impermissible. The purchaser hereby assigns to us by way of security a first-priority claim to the amount of our invoice of any claims on the part of the purchaser against third parties arising from onward disposal or for any other legal reason in connection with the reserved goods. FST hereby accepts such assignment. Where claims on the part of the purchaser arising from the sale to a third party of the goods or further processing of the goods become part of a current account, the purchaser hereby assigns to us his claims on the current account against his customer to an amount equal to the amount which we invoice to the purchaser for the reserved goods sold or processed. The purchaser is hereby authorized until further notice to collect in his own name but on our amount the claims assigned to us. The purchaser undertakes to disclose at our request such assignment and to provide to us the necessary information and documentation. In case of seizure by third parties of the reserved goods, the purchaser shall without delay draw attention to our ownership rights to such goods and shall notify us immediately. All costs and loss or damage involved therewith shall be borne by the purchaser. Where the purchaser shall infringe the contract, in particular in cases of delay in payment, the purchaser shall be obliged to return the reserved goods to us at our request and at his own expense, or, if appropriate, to assign to us the right of reclaim of the goods with respect to any third party involved. Return will be effected at the amount received by us. Where the Hire Purchase Act does not apply, return of the goods or seizure of the goods by ourselves shall not be deemed to constitute with-drawal from the contract.

### § 12

Our prices shall be understood ex works, excluding packing, carriage, customs' duties, insurance, subsidiary dues and legally payable Sales or Value Added Tax, if not otherwise agreed. In case, where no costs for packaging are shown in our Pricelist, we will invoice 2.5% of the net value of the goods. If the order value is under 100 € net, an administrative surcharge of 20 € is applied and conditions are ex works, excluding packing. Packing cannot be returned.

### § 13

The purchaser asserts that he has knowledge of all national and international regulations prohibiting export of certain goods. The purchaser further asserts that he will not violate such regulations when exporting the goods supplied by FST.

### § 14

The purchaser shall be entitled to withdraw from the contract only with our expressed agreement. In case of withdrawal by the purchaser from the contract, we shall be entitled to require payment from the purchaser of all costs incurred in connection with the execution of the contract up to the time of the purchaser's with-drawal from the contract including out loss of profits resulting from the purchaser's withdrawal from the contract. In case of return of goods, a charge will be made to the purchaser of 15 % of the net value of the goods. This provision shall not apply where a legally justifiable reason for withdrawal from the contract applies.

### § 15

Where individual provisions of these conditions shall be deemed or shall become invalid, the remaining provisions shall nonetheless be deemed unaffected by such occurrence.

### § 16

The place of performance for all claims and obligations shall be deemed to be Siegen / Germany, including legal venue for matters involving documents and certification, bills of exchange and cheques.

### § 17

The law of the Federal Republic of Germany shall apply to all contracts arising on the basis of these General Conditions of Sale and Supply. International commercial law shall not apply.

**FST GmbH**

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