

Water separators MS-LWS, MS series

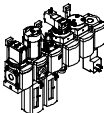
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Product range overview – MS series service units

Type		Size			Pressure regulation range						Grade of filtration					
					[bar]						[µm]					
					0.05 ... 0.7	0.05 ... 2.5	0.1 ... 4	0.3 ... 7	0.1 ... 12	0.5 ... 16						
Code			Pneumatic connection in housing	Connecting plate	AG...	D2	D4	D5	D6	D7	D8	A	B	5	40	
Service units																
MSB-FRC		4	G1/8, G1/4	G1/8, G1/4, G3/8	–	–	–	■	■	–	–	–	■	■		
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	–	–	–	■	■	–	–	–	■	■		
		9	–													
		12	–													
Service unit combinations (further variants can be ordered using the configurator → Internet: msb4, msb6 or msb9)																
MSB		4	G1/4	G1/8, G1/4, G3/8	–	–	–	■	■	–	–	–	■	■		
		6	G1/2	G1/4, G3/8, G1/2, G3/4	–	–	–	■	■	–	–	–	■	■		
		9	–													
		12	–													
Individual devices																
Filter regulators MS-LFR		4	G1/8, G1/4	G1/8, G1/4, G3/8	–	–	■	■	■	–	–	–	■	■		
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	–	–	■	■	■	■	–	–	■	■		
		9	G3/4, G1	G1/2, G3/4, G1, G11/4, G11/2	–	–	■	■	■	■	–	–	■	■		
		12	–	G1, G11/4, G11/2, G2	–	–	–	■	■	■	–	–	■	■		
Filters MS-LF		4	G1/8, G1/4	G1/8, G1/4, G3/8	–	–	–	–	–	–	–	–	■	■		
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	–	–	–	–	–	–	–	–	■	■		
		9	G3/4, G1	G1/2, G3/4, G1, G11/4, G11/2	–	–	–	–	–	–	–	–	■	■		
		12	–	G1, G11/4, G11/2, G2	–	–	–	–	–	–	–	–	■	■		
Fine and micro filters MS-LFM		4	G1/8, G1/4	G1/8, G1/4, G3/8	–	–	–	–	–	–	■	■	–	–		
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	–	–	–	–	–	–	■	■	–	–		
		9	G3/4, G1	G1/2, G3/4, G1, G11/4, G11/2	–	–	–	–	–	–	■	■	–	–		
		12	–	G1, G11/4, G11/2, G2	–	–	–	–	–	–	■	■	–	–		
Activated carbon filters MS-LFX		4	G1/8, G1/4	G1/8, G1/4, G3/8	–	–	–	–	–	–	–	–	–	–		
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	–	–	–	–	–	–	–	–	–	–		
		9	G3/4, G1	G1/2, G3/4, G1, G11/4, G11/2	–	–	–	–	–	–	–	–	–	–		
		12	–	G1, G11/4, G11/2, G2	–	–	–	–	–	–	–	–	–	–		
Water separators MS-LWS		4	–													
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	–	–	–	–	–	–	–	–	–	–		
		9	G3/4, G1	G1/2, G3/4, G1, G11/4, G11/2	–	–	–	–	–	–	–	–	–	–		
		12	–													

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Product range overview – MS series service units

Type	Size	Bowl guard		Condensate drains				Pressure indicator					Security		Options		→ Page/ Internet
		Plastic bowl with plastic bowl guard	Metal bowl	Manual rotary	Semi-automatic	Fully automatic	External, fully automatic, electrical	Cover plate (without pressure gauge)	Integrated MS pressure gauge	Adapter plate for EN pressure gauge G1/8	Adapter plate for EN pressure gauge G1/4	Pressure sensor	Rotary knob with detent, lockable via accessories	Rotary knob with integrated lock	Silencer	Flow direction from right to left	
Code		R	U	M	H	V	E...	VS	AG	A8	A4	AD...	AS	E11	S	Z	
Service units																	
MSB-FRC	4	■	–	■	–	■	–	–	■	–	–	–	■	–	–	■	msb4
	6	■	■	■	–	■	–	–	■	–	–	–	■	–	–	■	msb6
	9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	12	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Service unit combinations																	
MSB	4	■	■	■	–	■	–	–	■	–	–	–	■	–	–	■	msb4
	6	■	■	■	–	■	–	–	■	–	–	–	■	–	–	■	msb6
	9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	12	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Individual devices																	
Filter regulators MS-LFR	4	■	■	■	■	■	–	■	■	■	■	■	■	■	–	■	ms4-lfr
	6	■	■	■	■	■	■	■	■	–	■	■	■	■	–	■	ms6-lfr
	9	–	■	■	■	■	■	■	■	–	■	■	■	■	–	■	ms9-lfr
	12	–	■	■	–	■	■	■	■	–	■	–	■	■	–	■	ms12-lfr
Filters MS-LF	4	■	■	■	■	■	–	–	–	–	–	–	–	–	–	■	ms4-lf
	6	■	■	■	■	■	■	–	–	–	–	–	–	–	–	■	ms6-lf
	9	–	■	■	■	■	■	–	–	–	–	–	–	–	–	■	ms9-lf
	12	–	■	■	–	■	■	–	–	–	–	–	–	–	–	■	ms12-lf
Fine and micro filters MS-LFM	4	■	■	■	■	■	–	–	–	–	–	–	–	–	–	■	ms4-lfm
	6	■	■	■	■	■	■	–	–	–	–	–	–	–	–	■	ms6-lfm
	9	–	■	■	■	■	■	–	–	–	–	–	–	–	–	■	ms9-lfm
	12	–	■	■	–	■	■	–	–	–	–	–	–	–	–	■	ms12-lfm
Activated carbon filters MS-LFX	4	■	■	–	–	–	–	–	–	–	–	–	–	–	–	■	ms4-lfx
	6	■	■	–	–	–	–	–	–	–	–	–	–	–	–	■	ms6-lfx
	9	–	■	–	–	–	–	–	–	–	–	–	–	–	–	■	ms9-lfx
	12	–	■	–	–	–	–	–	–	–	–	–	–	–	–	■	ms12-lfx
Water separators MS-LWS	4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	6	–	■	–	–	■	■	–	–	–	–	–	–	–	–	■	8
	9	–	■	–	–	■	■	–	–	–	–	–	–	–	–	■	14
	12	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

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Product range overview – MS series service units

Type	Size	Pneumatic connection in housing	Connecting plate	Pressure regulation range [bar]						Supply voltage			
				0.05 ... 0.7	0.05 ... 2.5	0.1 ... 4	0.3 ... 7	0.1 ... 12	0.5 ... 16	24 V DC, connection pattern to EN 175301	24 V DC, connection pattern M12 to DESINA	110 V AC, connection pattern to EN 175301	230 V AC, connection pattern to EN 175301
Code			AG...	D2	D4	D5	D6	D7	D8	V24	V24P	V110	V230
Individual devices													
Pressure regulators MS-LR		4	G1/8, G1/4	G1/8, G1/4, G3/8	–	–	■	■	■	–	–	–	–
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	–	–	■	■	■	–	–	–	–
		9	G3/4, G1	G1/2, G3/4, G1, G1 1/4, G1 1/2	–	–	■	■	■	–	–	–	–
		12	–	G1, G1 1/4, G1 1/2, G2	–	–	–	■	■	–	–	–	–
Pressure regulators MS-LRB		4	G1/4	G1/8, G1/4, G3/8	–	–	■	■	■	–	–	–	–
		6	G1/2	G1/4, G3/8, G1/2, G3/4	–	–	■	■	■	–	–	–	–
		9	–	–	–	–	–	–	–	–	–	–	–
		12	–	–	–	–	–	–	–	–	–	–	–
Precision pressure regulators MS-LRP		4	–	–	–	–	–	–	–	–	–	–	–
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	■	■	■	–	■	–	–	–	–
		9	–	–	–	–	–	–	–	–	–	–	–
		12	–	–	–	–	–	–	–	–	–	–	–
Precision pressure regulators MS-LRPB		4	–	–	–	–	–	–	–	–	–	–	–
		6	G1/2	G1/4, G3/8, G1/2, G3/4	■	■	■	–	■	–	–	–	–
		9	–	–	–	–	–	–	–	–	–	–	–
		12	–	–	–	–	–	–	–	–	–	–	–
Electrical pressure regulators MS-LRE		4	–	–	–	–	–	–	–	–	–	–	–
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	–	–	■	■	■	–	–	–	–
		9	–	–	–	–	–	–	–	–	–	–	–
		12	–	–	–	–	–	–	–	–	–	–	–
Lubricators MS-LOE		4	G1/8, G1/4	G1/8, G1/4, G3/8	–	–	–	–	–	–	–	–	–
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	–	–	–	–	–	–	–	–	–
		9	G3/4, G1	G1/2, G3/4, G1, G1 1/4, G1 1/2	–	–	–	–	–	–	–	–	–
		12	–	G1, G1 1/4, G1 1/2, G2	–	–	–	–	–	–	–	–	–
Electrical on-off valves MS-EM(1)		4	G1/8, G1/4	G1/8, G1/4, G3/8	–	–	–	–	–	–	–	–	–
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	–	–	–	–	–	–	–	–	–
		9	G3/4, G1	G1/2, G3/4, G1, G1 1/4, G1 1/2	–	–	–	–	–	–	–	–	–
		12	–	G1, G1 1/4, G1 1/2, G2	–	–	–	–	–	–	–	–	–
Electrical on-off valves MS-EE		4	G1/8, G1/4	G1/8, G1/4, G3/8	–	–	–	–	–	■	–	■	■
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	–	–	–	–	–	■	–	■	■
		9	G3/4, G1	G1/2, G3/4, G1, G1 1/4, G1 1/2	–	–	–	–	–	■	■	■	■
		12	–	G1, G1 1/4, G1 1/2, G2	–	–	–	–	–	■	■	■	■
Electrical soft-start valves MS-DL		4	G1/8, G1/4	G1/8, G1/4, G3/8	–	–	–	–	–	–	–	–	–
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	–	–	–	–	–	–	–	–	–
		9	–	–	–	–	–	–	–	–	–	–	–
		12	–	G1, G1 1/4, G1 1/2, G2	–	–	–	–	–	–	–	–	–
Electrical soft-start valves MS-DE		4	G1/8, G1/4	G1/8, G1/4, G3/8	–	–	–	–	–	■	–	■	■
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	–	–	–	–	–	■	–	■	■
		9	–	–	–	–	–	–	–	–	–	–	–
		12	–	G1, G1 1/4, G1 1/2, G2	–	–	–	–	–	■	■	■	■
Soft start and exhaust valves MS-SV		4	–	–	–	–	–	–	–	–	–	–	–
		6	G1/2	G1/4, G3/8, G1/2, G3/4	–	–	–	–	–	■	–	–	–
		9	–	–	–	–	–	–	–	–	–	–	–
		12	–	–	–	–	–	–	–	–	–	–	–

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Product range overview – MS series service units

Type	Size	Bowl guard		Pressure indicator					Security		Options		→ Page/ Internet
		Plastic bowl with plastic bowl guard	Metal bowl	Cover plate (without pressure gauge)	Integrated MS pressure gauge	Adapter plate for EN pressure gauge G1/8	Adapter plate for EN pressure gauge G1/4	Pressure sensor	Rotary knob with detent, lockable via accessories	Rotary knob with integrated lock	Silencer	Flow direction from right to left	
Code		R	U	VS	AG	A8	A4	AD...	AS	E11	S	Z	
Individual devices													
Pressure regulators MS-LR	4	–	–	■	■	■	■	■	■	■	–	■	ms4-lr
	6	–	–	■	■	–	■	■	■	■	–	■	ms6-lr
	9	–	–	■	■	–	■	■	■	■	–	■	ms9-lr
	12	–	–	■	■	–	■	–	■	■	–	■	ms12-lr
Pressure regulators MS-LRB	4	–	–	■	■	■	■	■	■	■	–	■	ms4-lrb
	6	–	–	■	■	–	■	■	■	■	–	■	ms6-lrb
	9	–	–	–	–	–	–	–	–	–	–	–	–
	12	–	–	–	–	–	–	–	–	–	–	–	–
Precision pressure regulators MS-LRP	4	–	–	–	–	–	–	–	–	–	–	–	–
	6	–	–	■	–	■	■	■	■	■	–	■	ms6-lrp
	9	–	–	–	–	–	–	–	–	–	–	–	–
	12	–	–	–	–	–	–	–	–	–	–	–	–
Precision pressure regulators MS-LRPB	4	–	–	–	–	–	–	–	–	–	–	–	–
	6	–	–	■	–	■	■	■	■	■	–	■	ms6-lrpb
	9	–	–	–	–	–	–	–	–	–	–	–	–
	12	–	–	–	–	–	–	–	–	–	–	–	–
Electrical pressure regulators MS-LRE	4	–	–	–	–	–	–	–	–	–	–	–	–
	6	–	–	■	■	–	■	–	–	–	–	■	ms6-lre
	9	–	–	–	–	–	–	–	–	–	–	–	–
	12	–	–	–	–	–	–	–	–	–	–	–	–
Lubricators MS-LOE	4	■	■	–	–	–	–	–	–	–	–	■	ms4-loe
	6	■	■	–	–	–	–	–	–	–	–	■	ms6-loe
	9	–	■	–	–	–	–	–	–	–	–	■	ms9-loe
	12	–	■	–	–	–	–	–	–	–	–	■	ms12-loe
Electrical on-off valves MS-EM(1)	4	–	–	■	■	■	■	■	–	–	■	■	ms4-em1
	6	–	–	■	■	–	■	■	–	–	■	■	ms6-em1
	9	–	–	■	■	–	■	–	–	–	■	■	ms9-em
	12	–	–	■	■	–	■	–	–	–	■	■	ms12-em
Electrical on-off valves MS-EE	4	–	–	■	■	■	■	■	–	–	■	■	ms4-ee
	6	–	–	■	■	–	■	■	–	–	■	■	ms6-ee
	9	–	–	■	■	–	■	–	–	–	■	■	ms9-ee
	12	–	–	■	■	–	■	–	–	–	■	■	ms12-ee
Electrical soft-start valves MS-DL	4	–	–	■	■	■	■	■	–	–	–	■	ms4-dl
	6	–	–	■	■	–	■	■	–	–	–	■	ms6-dl
	9	–	–	–	–	–	–	–	–	–	–	–	–
	12	–	–	■	■	–	■	–	–	–	–	■	ms12-dl
Electrical soft-start valves MS-DE	4	–	–	■	■	■	■	■	–	–	–	■	ms4-de
	6	–	–	■	■	–	■	■	–	–	–	■	ms6-de
	9	–	–	–	–	–	–	–	–	–	–	–	–
	12	–	–	■	■	–	■	–	–	–	–	■	ms12-de
Soft start and exhaust valves MS-SV	4	–	–	–	–	–	–	–	–	–	–	–	–
	6	–	–	■	■	–	■	■	–	–	■	■	ms6-sv
	9	–	–	–	–	–	–	–	–	–	–	–	–
	12	–	–	–	–	–	–	–	–	–	–	–	–

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Product range overview – MS series service units

Type	Size	Pneumatic connection in housing	Connecting plate	Pressure regulation range [bar]				Supply voltage			
				0.1 ... 4	0.3 ... 7	0.1 ... 12	0.5 ... 16	24 V DC, connection pattern to EN 175301	24 V DC, connection pattern M12 to DESINA	110 V AC, connection pattern to EN 175301	230 V AC, connection pattern to EN 175301
Code			AG...	D5	D6	D7	D8	V24	V24P	V110	V230
Individual devices											
Membrane air dryers MS-LDM1		4	G1/8, G1/4	G1/8, G1/4, G3/8	–	–	–	–	–	–	–
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	–	–	–	–	–	–	–
		9	–	–	–	–	–	–	–	–	–
		12	–	–	–	–	–	–	–	–	–
Branching modules MS-FRM		4	G1/8, G1/4	G1/8, G1/4, G3/8	–	–	–	–	–	–	–
		6	G1/4, G3/8, G1/2	G1/4, G3/8, G1/2, G3/4	–	–	–	–	–	–	–
		9	G3/4, G1	G1/2, G3/4, G1, G1 1/4, G1 1/2	–	–	–	–	–	–	–
		12	–	G1, G1 1/4, G1 1/2, G2	–	–	–	–	–	–	–
Distributor blocks MS-FRM-FRZ		4	G1/4	–	–	–	–	–	–	–	–
		6	G1/2	–	–	–	–	–	–	–	–
		9	–	–	–	–	–	–	–	–	–
		12	–	–	–	–	–	–	–	–	–
Flow sensors SFAM		4	–	–	–	–	–	–	–	–	–
		6	G1/2	G1/2	–	–	–	–	–	–	–
		9	–	G1, G1 1/2	–	–	–	–	–	–	–
		12	–	–	–	–	–	–	–	–	–

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Product range overview – MS series service units

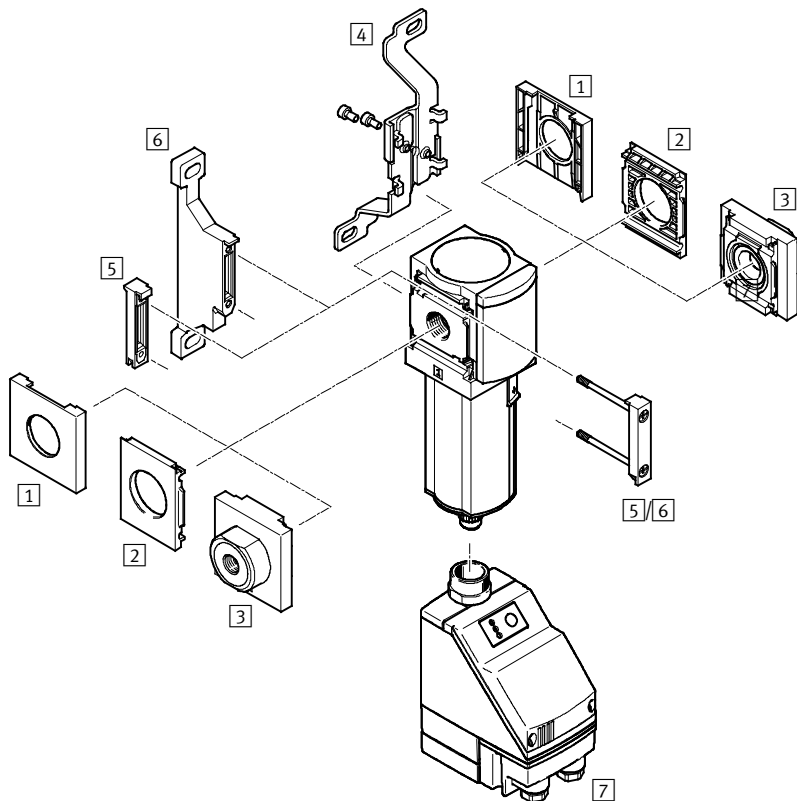
Type	Size	Bowl guard		Pressure indicator					Switch output		Options		→ Page/ Internet
		Plastic bowl with plastic bowl guard	Metal bowl	Cover plate (without pressure gauge)	Integrated MS pressure gauge	Adapter plate for EN pressure gauge G1/8	Adapter plate for EN pressure gauge G1/4	Pressure sensor	2x PNP or NPN, 1 analogue output 4 ... 20 mA	2x PNP or NPN, 1 analogue output 0 ... 10 V	Silencer	Flow direction from right to left	
Code		R	U	VS	AG	A8	A4	AD...	2SA	2SV	S	Z/R	
Individual devices													
Membrane air dryers MS-LDM1	4	–	■	–	–	–	–	–	–	–	–	■	ms4-ldm1
	6	–	■	–	–	–	–	–	–	–	–	■	ms6-ldm1
	9	–	–	–	–	–	–	–	–	–	–	–	–
	12	–	–	–	–	–	–	–	–	–	–	–	–
Branching modules MS-FRM	4	–	–	■	■	■	■	■	–	–	–	■	ms4-frm
	6	–	–	■	■	–	■	■	–	–	–	■	ms6-frm
	9	–	–	■	■	–	■	■	–	–	–	■	ms9-frm
	12	–	–	■	–	–	–	–	–	–	–	–	ms12-frm
Distributor blocks MS-FRM-FRZ	4	–	–	–	–	–	–	–	–	–	–	■	ms4-frm
	6	–	–	–	–	–	–	–	–	–	–	■	ms6-frm
	9	–	–	–	–	–	–	–	–	–	–	–	–
	12	–	–	–	–	–	–	–	–	–	–	–	–
Flow sensors SFAM	4	–	–	–	–	–	–	–	–	–	–	–	–
	6	–	–	–	–	–	–	–	■	■	–	■	sfam-62
	9	–	–	–	–	–	–	–	■	■	–	■	sfam-90
	12	–	–	–	–	–	–	–	–	–	–	–	–

Water separators MS6-LWS, MS series

Peripherals overview

FESTO

Water separator MS6-LWS



 Note

Additional accessories:

- Module connector for combination with size MS4/MS6 or size MS9 → Internet: amv, rmv, armv
- Adapter for mounting on profiles → Internet: ipm-80, ipm-40-80, ipm-80-80

Mounting attachments and accessories

		Individual device		Combination		→ Page/Internet
		Without connecting plate	With connecting plate	Without connecting plate	With connecting plate	
1	Cover cap MS6-END	■	–	■	–	ms6-end
2	Mounting plate MS6-AEND	■ ¹⁾	–	■ ¹⁾	–	ms6-aend
3	Connecting plate MS6-AG...	–	■ ¹⁾	–	■ ¹⁾	ms6-ag
4	Mounting bracket MS6-WB	■	■	–	–	ms6-wb
5	Module connector MS6-MV	–	■	■	■	ms6-mv
6	Mounting bracket MS6-WP	■	■	■	■	ms6-wp
	Mounting bracket (not illustrated) MS6-WPB/WPE/WPM	■	■	■	■	ms6-wp
7	Fully automatic, electrically actuated condensate drain E2/E3/E4	■	■	■	■	13

1) Module connector MS6-MV [5] or mounting bracket MS6-WP/WPB/WPE/WPM [6] is required for mounting.

Water separators MS6-LWS, MS series

FESTO

Type codes

		MS	6	-	LWS	-	1/4	-	U	-	V
Series											
MS	Standard service unit										
Size											
6	Grid dimension 62 mm										
Service function											
LWS	Water separator										
Pneumatic connection											
1/4	Thread G1/4										
3/8	Thread G3/8										
1/2	Thread G1/2										
Bowl guard											
U	Integrated as metal bowl										
Condensate drain											
V	Fully automatic										

Further variants can be ordered using the modular system → 13

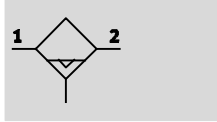
- Connecting plates
- Condensate drain
- Type of mounting
- Alternative flow direction

Water separators MS6-LWS, MS series

Technical data

FESTO

Condensate drain,
fully automatic



-  - Flow rate
2,400 ... 3,800 l/min
-  - Temperature range
+1 ... +60 °C
-  - Supply pressure
0.8 ... 16 bar



The maintenance-free water separator removes condensate from the compressed air.

- Constantly high condensate separation (99%) up to the maximum flow rate
- Metal bowl
- Available with fully automatic or fully automatic, electrically actuated condensate drain

General technical data				
Size	MS6			
Pneumatic connection 1, 2	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$	G $\frac{1}{4}$... G $\frac{3}{4}$ (with connecting plate AG...)
Constructional design	Centrifugal separator			
Type of mounting	Via accessories In-line installation			
Mounting position	Vertical $\pm 5^\circ$			
Air purity class at the output	Compressed air in accordance with ISO 8573-1:2010 [7:7:4]			
Bowl guard	Integrated as metal bowl			
Condensate drain	Fully automatic Fully automatic, electrically actuated			
Degree of condensate separation [%]	99			
Max. condensate volume [ml]	38			

• Note: This product conforms to ISO 1179-1 and to ISO 228-1

Standard nominal flow rate $q_{nN}^{1)}$			
Size	MS6		
Pneumatic connection	G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$
q_{nN} [l/min]	2,400	3,500	3,800

1) Measured at $p_1 = 6$ bar and $\Delta p = 1$ bar

Operating and environmental conditions		
Condensate drain	Fully automatic V	Fully automatic, electrically actuated E2/E3/E4
Size	MS6	MS6
Supply pressure [bar]	2 ... 12	0.8 ... 16
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [:-:-:-]	
Ambient temperature [°C]	+5 ... +60	+1 ... +60
Temperature of medium [°C]	+5 ... +60	+1 ... +60
Storage temperature [°C]	-10 ... +60	+1 ... +60
Corrosion resistance class CRC ¹⁾	2	

1) Corrosion resistance class 2 to Festo standard 940 070
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricants.

Water separators MS6-LWS, MS series

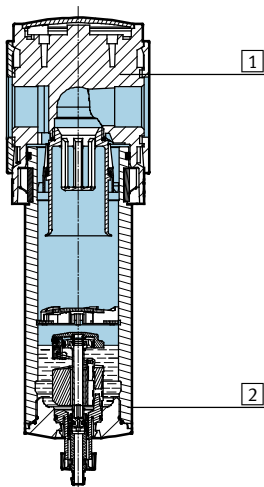
Technical data

FESTO

Weight [g]	
Size	MS6
Water separator	820
Water separator with fully automatic, electrically actuated condensate drain E2/E3/E4	1,800

Materials

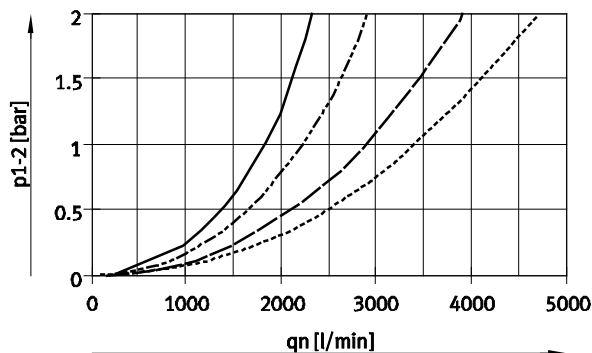
Sectional view



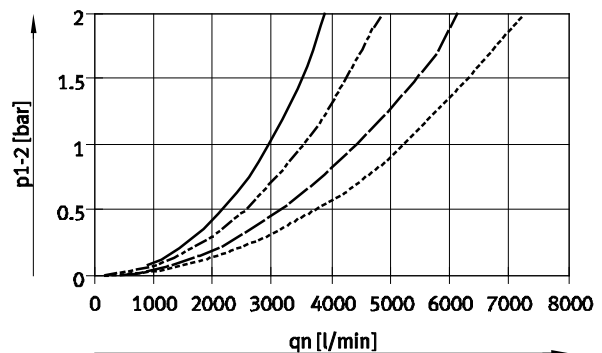
Water separator		
1	Housing	Die-cast aluminium
2	Bowl	Wrought aluminium alloy
	Inspection window	PA
–	Seals	NBR
Note on materials		Free of copper and PTFE
		RoHS-compliant (not with variant E2, E3 or E4)

Standard flow rate q_n as a function of differential pressure p_{1-2}

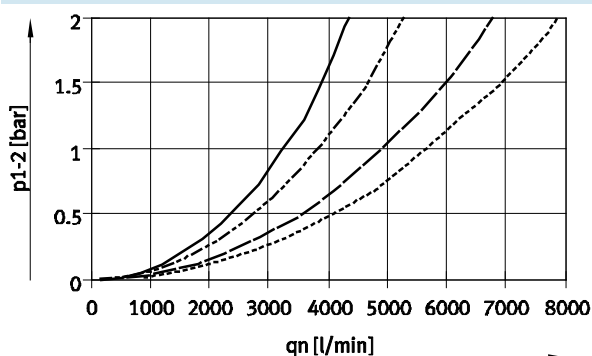
MS6-LWS-1/4



MS6-LWS-3/8



MS6-LWS-1/2



— 4 bar
 - - - 6 bar
 - · - 10 bar
 · · · 14 bar

Water separators MS6-LWS, MS series

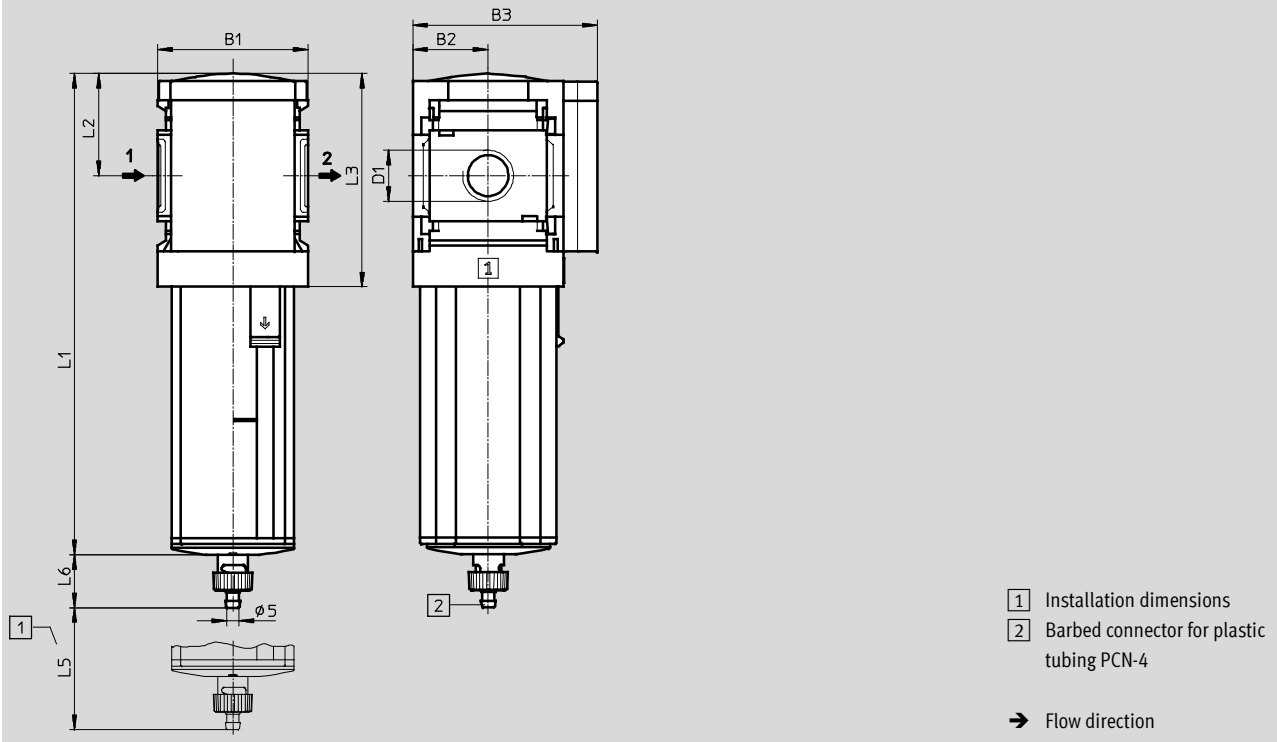
Technical data

FESTO

Dimensions – Standard

Download CAD data → www.festo.com

Fully automatic condensate drain V



Type	B1	B2	B3	D1	L1	L2	L3	L5	L6
MS6-LWS-1/4-...-V	62	31	76	G1/4	198	42	87	68	22
MS6-LWS-3/8-...-V				G3/8					
MS6-LWS-1/2-...-V				G1/2					

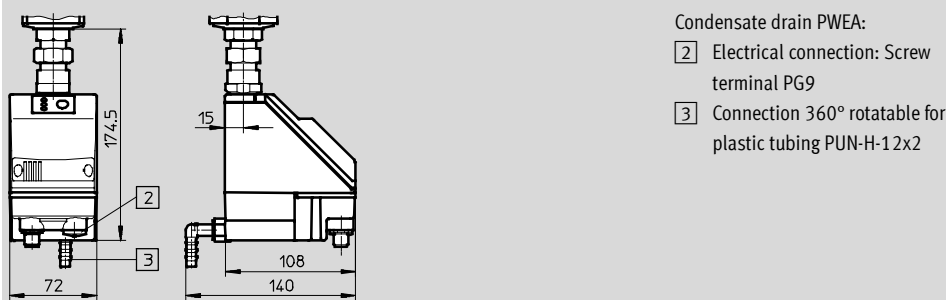
• • Note: This product conforms to ISO 1179-1 and to ISO 228-1

Dimensions – Condensate drain

Download CAD data → www.festo.com

Fully automatic, electrically actuated E2/E3/E4

Technical data → Internet: pwea



Ordering data

Size	Condensate drain	Connection	Part No.	Type
Integrated as metal bowl				
MS6	Fully automatic	G1/4	564868	MS6-LWS-1/4-U-V
		G3/8	564869	MS6-LWS-3/8-U-V
		G1/2	564870	MS6-LWS-1/2-U-V

Water separators MS6-LWS, MS series

Ordering data – Modular products

FESTO

M Mandatory data							O Options	
Module No.	Series	Size	Function	Connection size	Bowl guard	Condensate drain	Type of mounting	Alternative flow direction
564858	MS	6	LWS	1/4, 3/8, 1/2, AGB, AGC, AGD, AGE	U	V, E2, E3, E4	WP, WPM, WB	Z
Ordering example								
564858	MS	6	- LWS	- AGB	- U	- V	- WP	- Z

Ordering table					
Grid dimension	[mm]	62	Condi- tions	Code	Enter code
M	Module No.	564858			
	Series	Standard		MS	MS
	Size	6		6	6
	Function	Water separator		-LWS	-LWS
	Connection size	Thread G1/4		-1/4	
		Thread G3/8		-3/8	
		Thread G1/2		-1/2	
		Connecting plate G1/4		-AGB	
		Connecting plate G3/8		-AGC	
		Connecting plate G1/2		-AGD	
		Connecting plate G3/4		-AGE	
	Bowl guard	Metal bowl		-U	-U
	Condensate drain	Fully automatic (P1 max. 12 bar)		-V	
		External fully automatic condensate drain, electrical, 110 V AC, terminals (P1 max. 16 bar)		-E2	
		External fully automatic condensate drain, electrical, 230 V AC, terminals (P1 max. 16 bar)		-E3	
		External fully automatic condensate drain, electrical, 24 V DC, terminals (P1 max. 16 bar)		-E4	
O	Type of mounting	Mounting bracket	1	-WP	
		Mounting bracket	1	-WPM	
		Mounting bracket		-WB	
	Alternative flow direction	Flow direction from right to left		-Z	

1 WP, WPM Only with connecting plate AGB, AGC, AGD or AGE

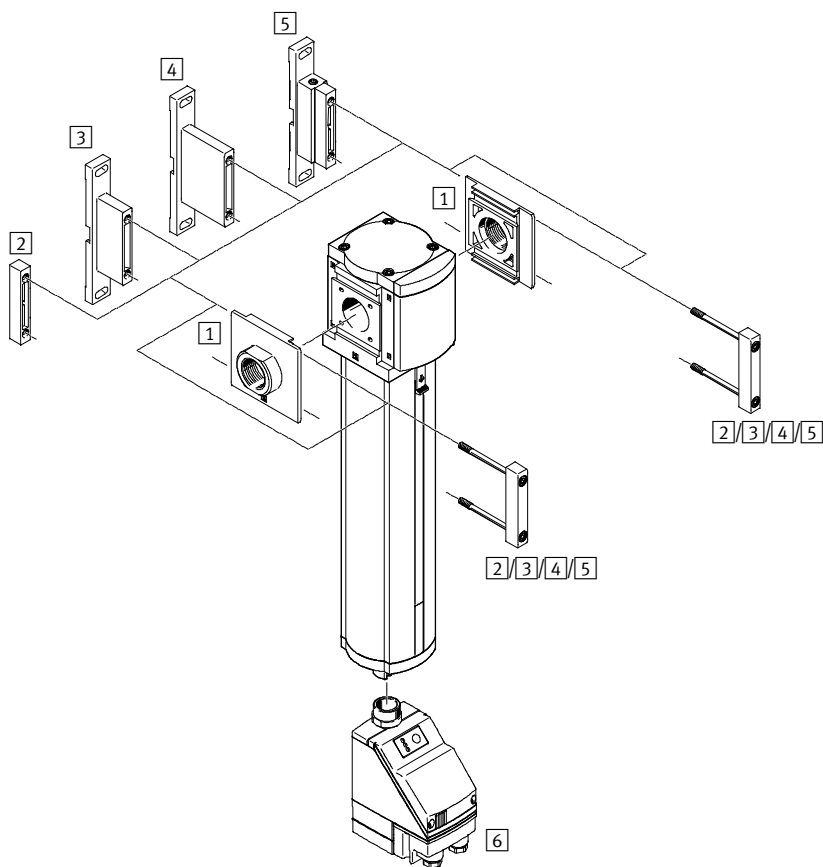
Transfer order code

564858	MS	6	-	LWS	-		-	U	-		-		-	
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Water separators MS9-LWS, MS series

Peripherals overview

FESTO



 Note

Additional accessories:

– Module connector for combinations with size MS6, MS9 or MS12

➔ Internet: rmv, armv

Mounting attachments and accessories					
		Individual device		Combination	➔ Page/Internet
		without connecting thread	with connecting thread ¾ or 1		
1	Connecting plate MS9-AG...	■	–	■	ms9-ag
2	Module connector MS9-MV	■	–	■	ms9-mv
3	Mounting bracket MS9-WP	■	■	■	ms9-wp
4	Mounting bracket MS9-WPB	■	■	■	ms9-wp
5	Mounting bracket MS9-WPM	■	–	■	ms9-wp
6	Condensate drain, fully automatic, electrically actuated E2/E3/E4	■	■	■	20

Water separators MS9-LWS, MS series

Type codes

		MS	9	-	LWS	-	G	-	U	V
Series										
MS	Standard service unit									
Size										
9	Grid dimension 90 mm									
Service function										
LWS	Water separator									
Connection size										
G	Module without connecting thread, without connecting plate									
Bowl guard										
U	Integrated as metal bowl									
Condensate drain										
V	Fully automatic									

Additional variants can be ordered using the modular product system → 20

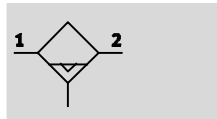
- Connecting plates
- Condensate drain
- Type of mounting
- Alternative flow direction

Water separators MS9-LWS, MS series

FESTO

Technical data

Condensate drain,
fully automatic



-  - Flow rate
12,000 ... 15,000 l/min
-  - Temperature range
+1 ... +60 °C
-  - Operating pressure
0.8 ... 16 bar



The water separator removes
condensate from the compressed air.

- Constantly high condensate separation (99%) up to the maximum flow rate
- Metal bowl
- Available with fully automatic or fully automatic, electrically actuated condensate drain

General technical data				
Size	MS9			
Pneumatic connection 1, 2	G¾	G1	G½ ... G1½ (with connecting plate AG...)	– (without connecting thread G)
Design	Centrifugal separator			
Type of mounting	Via accessories			
	In-line installation			
Mounting position	Vertical ±5°			
Air purity class at the output	Compressed air in accordance with ISO 8573-1:2010 [–:7:4]			
Bowl guard	Integrated as metal bowl			
Condensate drain	Fully automatic			
	Fully automatic, electrically actuated			
Degree of condensate separation [%]	99			
Max. condensate volume [ml]	220			

•  Note: This product conforms to ISO 1179-1 and to ISO 228-1

Standard nominal flow rate q _N ¹⁾ [l/min]			
Pneumatic connection	Thread G¾ or connecting plate AGE	Thread G1 or connecting plate AGF	Without connecting thread G
q _N [l/min]	12,000 ±15%	15,000 ±15%	15,000 ±15%

1) Measured at p₁ = 6 bar and Δp = 1 bar

Water separators MS9-LWS, MS series

Technical data

Operating and environmental conditions		
Condensate drain	Fully automatic V	Fully automatic, electrically actuated E2/E3/E4
Operating pressure [bar]	2 ... 12	0.8 ... 16
Operating medium	Compressed air in accordance with ISO 8573-1:2010 [---:--]	
Ambient temperature [°C]	+5 ... +60	+1 ... +60
Temperature of medium [°C]	+5 ... +60	+1 ... +60
Storage temperature [°C]	+5 ... +60	+1 ... +60
Corrosion resistance class CRC ¹⁾	2	

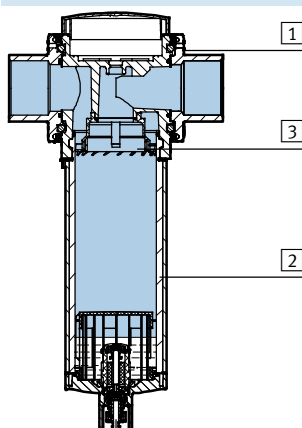
1) Corrosion resistance class 2 according to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Weight [g]	
Water separator	2,000
Water separator with condensate drain, fully automatic, electrically actuated E2/E3/E4	2,400

Materials

Sectional view

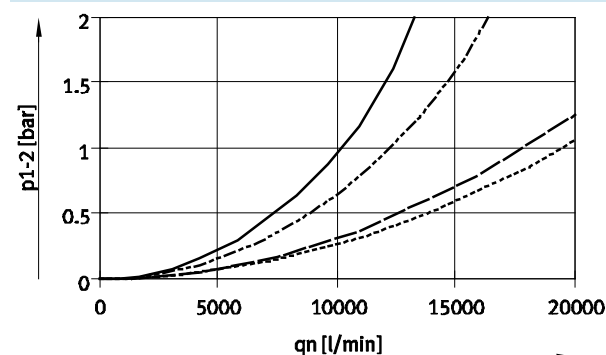


Water separator		
1	Housing	Die-cast aluminium
2	Bowl	Wrought aluminium alloy
	Inspection window	PA
3	Spin disc	POM
–	Cover	PA, reinforced
–	Connecting plate, module connector, mounting bracket	Die-cast aluminium
–	Seals	NBR
Note on materials		RoHS-compliant (not with variant E2, E3 or E4)

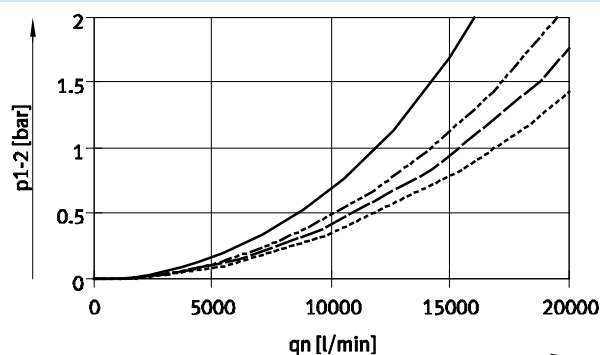
Standard flow rate q_n as a function of differential pressure Δp_{1-2}

MS9-LWS-3/4/AGE, pneumatic connection G3/4

MS9-LWS-1/AGF, pneumatic connection G1



— 4 bar - · - · 10 bar
 - - - 6 bar · · · · 12 bar



Water separators MS9-LWS, MS series

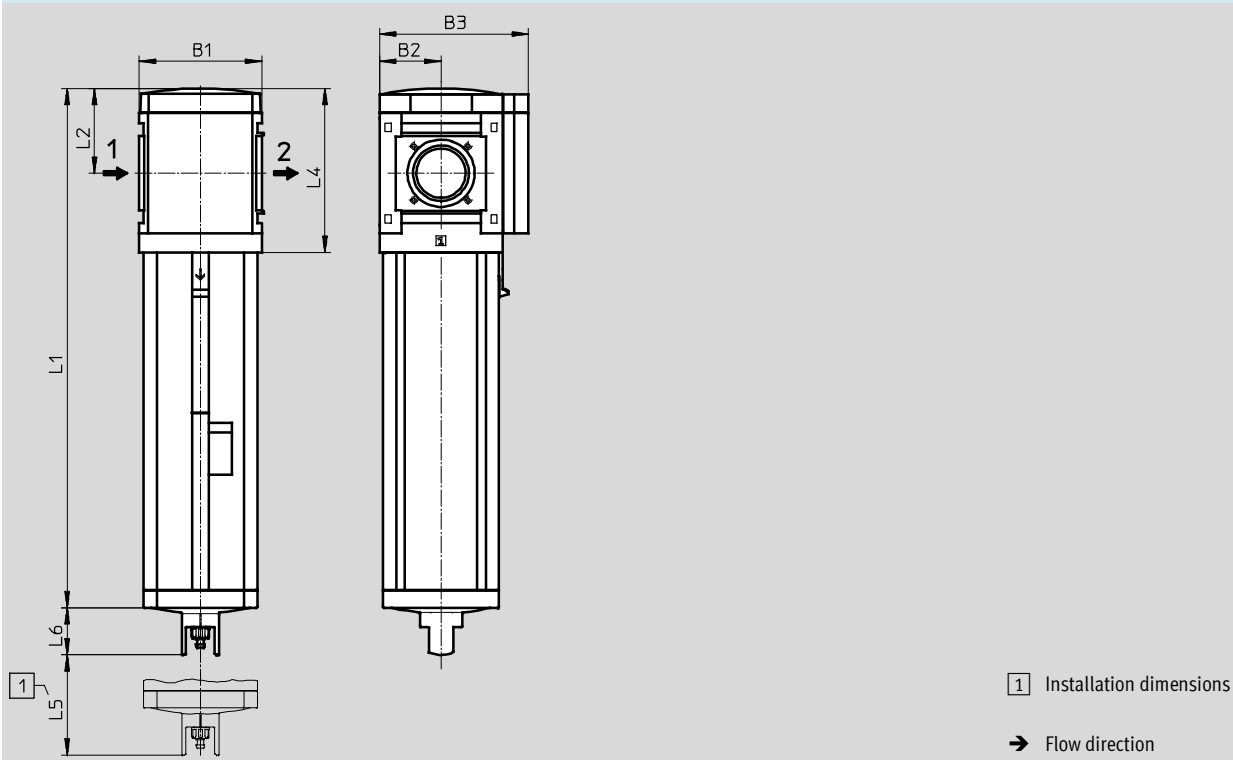
Technical data

FESTO

Dimensions – Basic version

Download CAD data → www.festo.com

Without connecting thread G, fully automatic condensate drain V



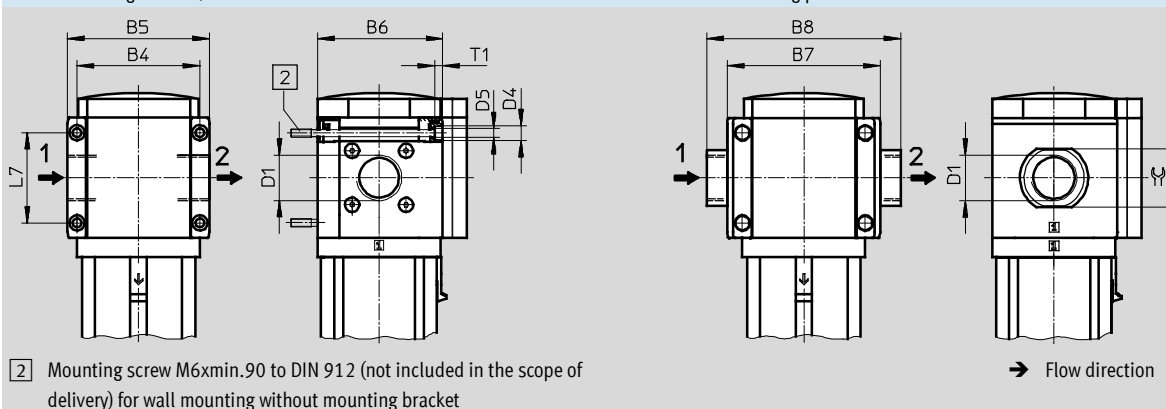
Type	B1	B2	B3	L1	L2	L4	L5	L6
MS9-LWS-G	90	45	109	310.5	62	120	50	34.5

Dimensions – Connecting thread/connecting plate

Download CAD data → www.festo.com

With connecting thread 3/4 or 1

With connecting plate AG...



Type	B4	B5	B6	B7	B8	D1	D4	D5	L7	T1	≅
MS9-LWS-3/4	90	104	91.5	-	-	G3/4	11	6.5	66	6	-
MS9-LWS-1						G1					
MS9-LWS-AGD	-	-	-	112	132	G1/2	-	-	-	-	30
MS9-LWS-AGE					132	G3/4					36
MS9-LWS-AGF					142	G1					41
MS9-LWS-AGG					162	G1 1/4					50
MS9-LWS-AGH					176	G1 1/2					55

• Note: This product conforms to ISO 1179-1 and to ISO 228-1

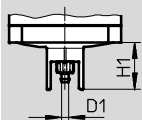
Water separators MS9-LWS, MS series

Technical data

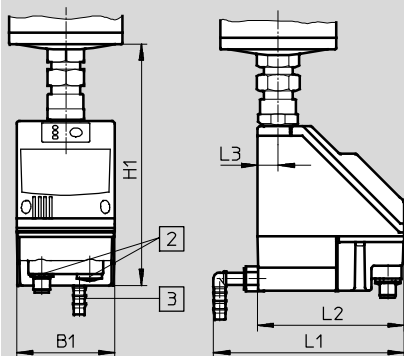
Dimensions – Condensate drain

Download CAD data → www.festo.com

Fully automatic V


Barbed connector for plastic tubing
PCN-4

Fully automatic, electrically actuated E2/E3/E4

Technical data → Internet: pwea


Condensate drain PWEA:

- 2 Electrical connection: Screw terminal PG9
- 3 Connection 360° rotatable for plastic tubing PUN-H-12x2

Type	B1	D1	H1	L1	L2	L3
MS9-LWS-...-V	–	5	34.5	–	–	–
MS9-LWS-...-E2/E3/E4	72	–	178	140	108	15

Ordering data

Size	Condensate drain	Connection	Part No.	Type
MS9	Fully automatic	–	571468	MS9-LWS-G-UV

Water separators MS9-LWS, MS series

Ordering data – Modular products

FESTO

M Mandatory data							O Options	
Module No.	Series	Size	Function	Connection size	Bowl	Condensate drain	Type of mounting	Alternative flow direction
567857	MS	9	LWS	¾, 1, AGD, AGE, AGF, AGG, AGH, G	U	V, E2, E3, E4	WP, WPM, WPB	Z
Ordering example								
567857	MS	9	- LWS	- AGD	- U	- V	- WP	- Z

Ordering table					Grid dimension	[mm]	90	Condi- tions	Code	Enter code
M	Module No.	567857								
	Series	Standard							MS	MS
	Size	9							9	9
	Function	Water separator							-LWS	-LWS
	Connection size	Thread G¾							-¾	
		Thread G1							-1	
		Connecting plate G½							-AGD	
		Connecting plate G¾							-AGE	
		Connecting plate G1							-AGF	
		Connecting plate G1¼							-AGG	
		Connecting plate G1½							-AGH	
		Module without connecting thread, without connecting plate							-G	
	Bowl	Metal bowl							-U	-U
	Condensate drain	Fully automatic (P1 max. 12 bar)							-V	
		External, fully automatic, 110 V AC, terminals (P1 max. 16 bar)							-E2	
		230 V AC, terminals (P1 max. 16 bar)							-E3	
		24 V DC, terminals (P1 max. 16 bar)							-E4	
O	Type of mounting	Mounting bracket						1	-WP	
		Mounting bracket						1	-WPM	
		Mounting bracket for large wall gap						1	-WPB	
	Alternative flow direction	Flow direction from right to left							-Z	

1 WP, WPM, WPB Not with module G

Transfer order code

567857	MS	9	- LWS	-	U	-	-	-	-
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