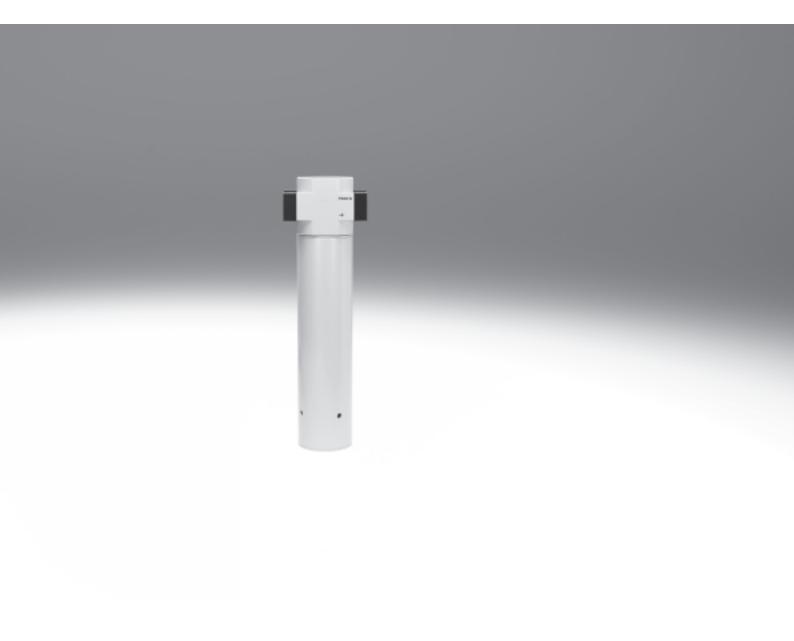
Membrane air dryers LDM1, D series





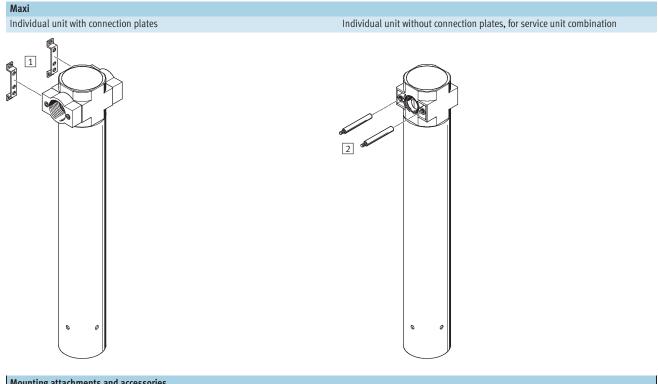
Туре		Size	Pneur	natic co	onnectio	on							Press	ure		Grade	of filtr	ation	
													regula	ation ra	nge				
													[bar]			[µm]			
													0.5	0.5	2.5				
			M5	M7	G1⁄8	G1⁄4	G3⁄8	G1⁄2	G3⁄4	G1	QS4	056	 7	 12	 12	0.01	1	5	40
			IN15	IN17	U-78	G 4/4	678	072	U-74	01	Q34	QS6	/	12	12	0.01	1	2	40
Service units		1.441		-	-	1	1	r	r —	1				r	1	1	1	T	
FRC/FRCS		Micro				-	-	-	-	-				-	-	-	-		-
		Mini	-	-				-	-	-	-	-			-	-	-		
		Midi	-	-	-					-	-	-			-	-	-		
	Ŷ	Maxi	-	-	-	-	-				-	-			-	-	-		
Service unit com	nbinations	1.44	1																
FRC-K		Micro	-	1		-	1	1		1	1	1	1	-	-	1	1	1	
	NOT	Mini	-	-			-	-	-	-	-	-	-			-	-	-	
	HO	Midi	-	-	-				-	-	-	-	-			-	-	-	
	Ų	Maxi	-	-	-	-	-			-	-	-	-			-	-	-	
LFR-K		Micro	-		-														
LFRS-K		Mini	-	-			-	-	-	-	-	-	-			-	-	-	
		Midi	-	-	-				-	-	-	-	-			-	-	-	
	Ŷ	Maxi	-	-	-	-	-			-	-	-	-			-	-	-	
Individual devic	ces	-												-					
Filter		Micro				-	-	-	-	-				-	-	-	-		-
regulators		Mini	-	-				-	-	-	-	-			-	-	-		
LFR/LFRS		Midi	-	-	-					-	-	-			-	-	-		
	Ŷ	Maxi	-	-	-	-	-				-	-			-	-	-		
					-				-					-					
Filters		Micro				-	-	-	-	-			-	-	-	-	-		-
LF		Mini	-	-				-	-	-	-	-	-	-	-	-	-		
	Y a	Midi	-	-	-					-	-	-	-	-	-	-	-		
	Ŷ	Maxi	-	-	-	-	-				-	-	-	-	-	-	-		
Fine and micro		Micro	-																
filters		Mini	-	-				-	-	-	-	-	-	-	-			-	-
LFMA/LFMB		Midi	-	-	-					-	-	-	-	-	-			-	-
		Maxi	-	-	-	-	-				-	-	-	-	-			-	-
Active carbon		Micro	-																-
filters		Mini	-	-				-	-	-	-	-	-	-	-	-	-	-	-
LFX		Midi	-	-	-					-	-	-	-	-	-	-	-	-	-
	U U	Maxi	-	-	-	-	-				-	-	-	-	-	-	-	-	-
Filter		Micro	-		•				•					•					
combinations		Mini	-	-				-	-	-	-	-	-	-	-			-	-
		Midi	-	-	-					-	-	-	-	-	-	•		-	-
LFMBA			1	+	1	-	-				-	-	-	-	-			-	-
LFMBA	ų į	Maxi	-	-	-	-	-	_		_								_	
LFMBA	Ū	Maxi	-	-	-	-	_	-	_		I	I	1			-	-		<u> </u>
LFMBA Pressure		Maxi Micro	-	-	-	-	-	-	-	-		•		-	-	-	-	-	-
					I	L			I	I	I	I		1		1	1	1	
Pressure		Micro				-	-	-	-	-	•		•	-	-	-	-	-	-

Туре	Size	Bowl g	guard	Conde	nsate dı	ain	Pressu indica		Actual	or lock	Supply	y voltage	9	Options			→ Page/ Internet
		Metal bowl guard	Plastic bowl	Manual rotary	Semi-automatic	Fully automatic	With pressure gauge	Without pressure gauge	Rotary knob with detent	Rotary knob with integrated lock	24 V DC	110 V AC	230 V AC	Directly actuated pressure regulator with integrated return flow function	Pilot actuated pressure regulator with integrated return flow function	Differential pressure indicator	
Service units	<u> </u>	<u> </u>	<u>.</u>	<u> </u>		<u> </u>	<u> </u>	<u>.</u>	<u>.</u>	<u>.</u>		<u> </u>	<u> </u>				•
FRC/FRCS	Micro	-	•	•	•	-	•	•	•	-	-	-	-	-	-	-	frc
	Mini		-		-		•				-	-	-	-	-	-	1
	Midi		-		-						-	-	-	-	-	-	
	Maxi		-		-						-	-	-			-	
Service unit con	1																
FRC-K	Micro	-	1	1 -	1	-	—	1	I -		I	1	1	1	1		frc
	Mini		-		-			-		-		-	-	-	-	-	
	Midi		-		-			-		-		-	-	-	-	-	-
	Maxi		-		-			-		-		-	-			-	
LFR-K	Micro	-		1	r	r	1				r	1	r	1	1		lfr
LFRS-K	Mini		-		-			-				-	-	-	-	-	-
	Midi		-		-			-				-	-	-	-	-	-
	Maxi		-		-			-				-	-			-	
Individual devic	~~																
Filter	Micro	1 -				- 1				-	- 1	1 -	-	-	-	_	lfr
regulators	Mini		-		-				-		-	-	-	_	_	-	
LFR/LFRS	Midi		-		-	-			-		-	-	-	_	_	-	
	Maxi		_		-	-	-		-		-	-	_			-	-
	maxi		l			-	-	_	_						_		
Filters	Micro	-				-	-	-	-	-	-	-	-	_	-	-	lf
LF	Mini		-		-		-	-	_	-	-	-	-	_	-	-	
	Midi		-		-		-	-	-	-	-	-	-	-	-	-	
	Maxi		-		-		-	-	-	-	-	-	-	-	-	-	-
Fine and micro	Micro	-	1	1	1	1	1	1	1	1	1	1	1	1	I		lfma, lfmb
filters	Mini		-		-		-	-	-	-	-	-	-	-	-		1
LFMA/LFMB	Midi		-		-		-	-	-	-	-	-	-	-	-		1
	Maxi		-		-		-	-	-	-	-	-	-	-	-		1
Active carbon	Micro	-	1	1		1	1	1	1	1		1	1	1	1		lfx
filters	Mini		-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
LFX	Midi		-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	Maxi		-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Filter	Micro	-															lfmba
combinations	Mini		-		-		-	-	-	-	-	-	-	-	-		1
LFMBA	Midi		-		-		-	-	-	-	-	-	-	-	-		1
	Maxi		-		-		-	-	-	-	-	-	-	-	-		1
						•							•	•	•	•	•
Pressure	Micro	-	-	-	-	-				-	-	-	-	-	-	-	lr
regulators	Mini	-	-	-	-	-					-	-	-		-	-	1
LR/LRS	Midi	-	-	-	-	-					-	-	-		-	-	
	Maxi	-	-	-	-	-					-	-	-			-	1

Туре Size Pneumatic Pressure connection regulation range [bar] 0.5 0.5 M5 M7 G1⁄8 G1⁄4 G3⁄8 G1⁄2 G3⁄4 G1 QS4 QS6 7 12 Individual devices Pressure Micro _ regulators Mini -_ _ _ _ _ _ _ _ LRB/LRBS Midi _ _ _ _ _ _ _ _ _ Maxi _ Pressure Micro _ m Mini regulator _ _ _ _ _ _ _ combinations Midi _ _ _ _ _ _ _ _ LRB-K Maxi _ Lubricators Micro _ _ -_ _ _ _ Ċ LOE Mini -----_ -_ _ Midi --_ _ _ -_ -Maxi _ _ _ _ _ -_ --On-off valves Micro _ Mini HE _ _ _ _ _ _ -_ _ Midi _ _ _ _ _ _ _ -Maxi _ _ _ _ _ _ _ _ _ On-off valves, Micro _ electrical Mini --_ _ _ _ _ _ _ HEE Midi _ -_ _ _ _ -Maxi -----_ _ _ On-off valves, Micro _ Mini pneumatic _ _ _ _ _ _ _ _ _ HEP Midi _ _ _ _ _ _ _ _ Maxi _ _ _ _ _ _ _ _ Soft-start Micro _ valves Mini _ _ _ -_ _ _ _ _ HEL Midi _ _ _ _ Maxi _ _ _ _ _ _ -_ Membrane air Micro e Mini dryers -LDM1 Midi _ Maxi _ _ _ _ _ _ _ _ _ Branching Micro _ Mini modules _ _ _ _ _ _ _ _ _ FRM Midi _ _ _ _ _ _ _ _ Maxi ---_ _ ----Distributor Micro -----_ -----block Mini _ _ _ _ _ _ _ _ _ _ _ -FRZ Midi -----------_ Maxi _ _ _ _ _ _ _ _ _ _ _ _

Туре	Size	Bowl guar	d	Pressure i	ndication	Actuator l	ock	Supply vo	ltage		Options		→ Page/ Internet
		Metal bowl guard	Plastic bowl	With pressure gauge	Without pressure gauge	Rotary knob with detent	Rotary knob with integrated lock	24 V DC	110 V AC	230 V AC	Non-return function	Pressure switch	
Individual devi	ces												
Pressure	Micro	-											lrb
regulators	Mini	-	-	-				-	-	-	-	-	
LRB/LRBS	Midi	-	-	-				-	-	-	-	-	
	Maxi	-	-										
Pressure	Micro	-											lrb
regulator	Mini	-	-	-			-	-	-	-	-	-]
combinations	Midi	-	-	-		•	-	-	-	-	-	-]
LRB-K	Maxi	-	-					•			·		1
Lubricatora	Micro	-		- 1	-	- 1	_	_	_	1	_	1	100
Lubricators LOE	Micro Mini	-	-	-		-	-	-	-				loe
LUE											-		-
	Midi		-	-		-	-	-	-	-	-	-	
	Maxi		-	-		-	-	-	-	-	-	-	
On-off valves	Micro	-											he
HE	Mini	-	-	-			-	-	-	-	-	-	1
	Midi	_	-	_			-	-	-	-	-	-	
	Maxi	-	-	_			-	-	-	_	-	-	
On-off valves,	Micro	-	I		I			1		1	1	1	hee
electrical	Mini	-	-	-		-	-				-	-	
HEE	Midi	-	-	_		-	-				-	-	
	Maxi	-	-	_		-	_				-	_	
On-off valves,	Micro	_	I		I			I					hep
pneumatic	Mini	_	-	_		_	_	_	_	-	-	_	
HEP	Midi	_	_	_		_	_	_	_	-	-	_	1
	Maxi	-	-	-	-	-	-	-	_	-	-	-	1
Soft-start	Micro	-	1	I		I	I	1	I	I	1	I	hel
valves	Mini	-	-	-		-	-	-	-	-	-	-	1
HEL	Midi	-	_	_	-	_	_	-	_	_	-	_	1
	Maxi	-	-	-	-	-	-	-	-	-	-	-	1
	1	T											-
Membrane air	Micro	-											6
dryers	Mini	-											1
LDM1	Midi	-	1	1	1	1	1	1	1	1	1	1	4
	Maxi		-	-		-	-	-	-	-	-	-	
Branching	Micro	-											frm
modules	Mini	-	-	_		-	_	-	_	-			
FRM	Midi	-	-	-	-	-	-	-	-	-	-	-	-
	Maxi	-	-	-		-	-	-	-	-	-		-
Distributor	Maxi Micro	-						-				-	frz
block			-	-		-	-		-	-	-		112
DIOCK FRZ	Mini	-	-	-		-	-	-	-	-	-	-	-
I NL	Midi	-	-	-		-	-	-	-	-	-	-	-
	Maxi	-	-	-		-	-	-	-	-	-	-	

Membrane air dryers LDM1, D series, metal design Peripherals overview and Type codes



Mounting attachments and accessories					
	Individual unit		Combination		→ Page/
	with connection	without connection	with connection	without connection	Internet
	plates	plates	plates	plates	
1 Mounting bracket	•		-		hfoe-d
HFOE	-	_	-	_	
2 Threaded pin (included in scope of delivery)			-	-	frb-d
FRB	_	_	-	-	

		LDM1	1/2	D		MAXI	7_	300
		LDMI	/2	D	┥└		┥└	
Basic fu	unction							
LDM1	Membrane air dryer							
	•							
Pneuma	atic connection							
-	Without connection plates							
1/2	Thread G1/2							
3⁄4	Thread G3⁄4							
1	Thread G1							
Series								
D	Series							
Size								
MAXI	Grid dimension 66 mm							
	(without connection plates)							
Standa	rd flow rate at output q _{n Off}							
300	300 l/min							
600	600 l/min							

FESTO

1000

1,000 l/min

Membrane air dryers LDM1, D series, metal design

Technical data

Function	Flow rate 300 1,000 l/min	4	1 1
12	Temperature range +2 +50 °C		
	Pressure 3 12.5 bar		
	Pressure dew point reduction: LDM1300/600: 20 K LDM11000: 17 K		
 Optimum final dryer with excellent operational reliability Suitable for use as an individual device or for integration in existing service unit combinations Elow rate-dependent dew point 	 Wear-free function requiring no external energy The composition of the compressed air remains almost unchanged due to the drying process 15% purge air flow rate with the 	Typical areas of application: • Drying, cleaning of precision parts • Measuring technology • Rinsing of precision glass scales • Painting systems • Paper and packaging machines	Note Prefiltration of the compressed air using a micro filter LFMA-D-MAXI, grade of filtration 0.01 μm (residual particles < 0.1 μm, residual oil

- Flow rate-dependent dew point reduction
- 15% purge air flow rate with the LDM1-...-300/600 and 20% with

the LDM1-...-1000

Paper and packaging machines

content < 0.1 mg/m³) is vital for flawless functioning of the unit.

General technical data				
Size	Maxi			
Pneumatic connection 1 ¹⁾	G1/2	G3⁄4	G1	
Pneumatic connection 2 ¹⁾	G1⁄2	G3⁄4	G1	
Operating medium	Compressed air in accor	dance with ISO 8573-1:2010 [1:3:1]		
Design	Membrane dryer with in	ternal air consumption		
Type of mounting	Via accessories			
	In-line installation			
Assembly position	Vertical ±5°			

1) with connection plates

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

Standard flow rate qn [l/min]

Туре	LDM1300 ¹⁾	LDM1600 ¹⁾	LDM11000 ²⁾
Input q _{n In}	353	706	1,250
Output q _{n Out}	300	600	1,000
Purge air q _{n Purge}	52.9	105.9	250

 $\begin{array}{l} 1) \quad \mbox{Measured at } p_1 = 6.9 \mbox{ bar, } \vartheta_{pd \mbox{ In}} = 25 \ ^\circ C, \ \vartheta_{pd \mbox{ Out}} = 5 \ ^\circ C \pm 1.5 \ ^\circ C \ (\vartheta_{pA \mbox{ Out}} = -21.5 \ ^\circ C \pm 1.2 \ ^\circ C), \ \vartheta_{amb} = 25 \ ^\circ C \ 2) \\ \mbox{Measured at } p_1 = 6.9 \mbox{ bar, } \vartheta_{pd \mbox{ In}} = 25 \ ^\circ C, \ \vartheta_{pd \mbox{ Out}} = 8 \ ^\circ C \pm 1.5 \ ^\circ C \ (\vartheta_{pA \mbox{ Out}} = -19.1 \ ^\circ C \pm 1.2 \ ^\circ C), \ \vartheta_{amb} = 25 \ ^\circ C \ ^\circ C \ ^\circ C \pm 1.2 \ ^\circ C), \ \vartheta_{amb} = 25 \ ^\circ C \ ^\circ C \ ^\circ C \pm 1.2 \ ^\circ C), \ \vartheta_{amb} = 25 \ ^\circ C \ ^$

Operating and environmental	conditions			
Туре		LDM1300	LDM1600	LDM11000
Input pressure	[bar]	3 12,5		
Pressure dew point reduction	[K]	20	20	17
Ambient temperature	[°C]	+2 +50		
Temperature of medium	[°C]	+2 +50		
Storage temperature	[°C]	-20 +60		
Corrosion resistance class	CRC ¹⁾	2		

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

Components requiring moderate corrosion resistance. 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.

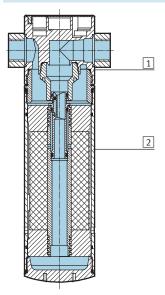
Membrane air dryers LDM1, D series, metal design Technical data

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Weights [g]							
Port	Without connection plates	With connection plates					
		G1/2	G3⁄4	G1			
LDM1300	1,650	1,800	1,900	2,000			
LDM1600	2,100	2,250	2,350	2,450			
LDM11000	2,100	2,250	2,350	2,450			

Materials

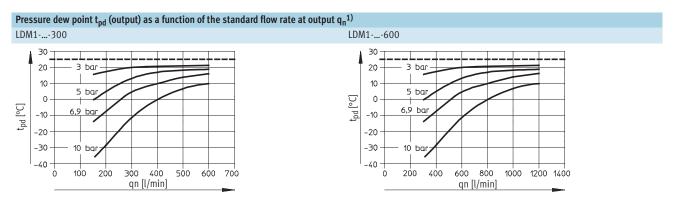
Sectional view



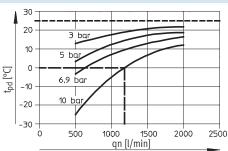
Membrane air dryer	
1 Housing	Die-cast zinc
2 Bowl	Wrought aluminium alloy
– Seals	Nitrile rubber

Membrane air dryers LDM1, D series, metal design

Technical data

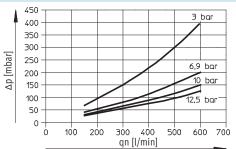


LDM1-...-1000

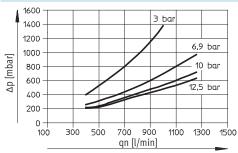


----- 1) Measured at pressure dew point t_{pd} (supply) = 25 °C. Example LDM1-...-1000 with 10 bar supply pressure: the pressure dew point reduction at a nominal flow rate of q_n = 1,200 l/min is 25 K.

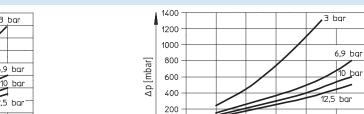
Differential pressure Δp as a function of the standard flow rate at output qn LDM1-...-300



LDM1-...-1000



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0

100

300

500

700

qn [l/min]

900

LDM1-...-600

2012/06 - Subject to change

10 bai

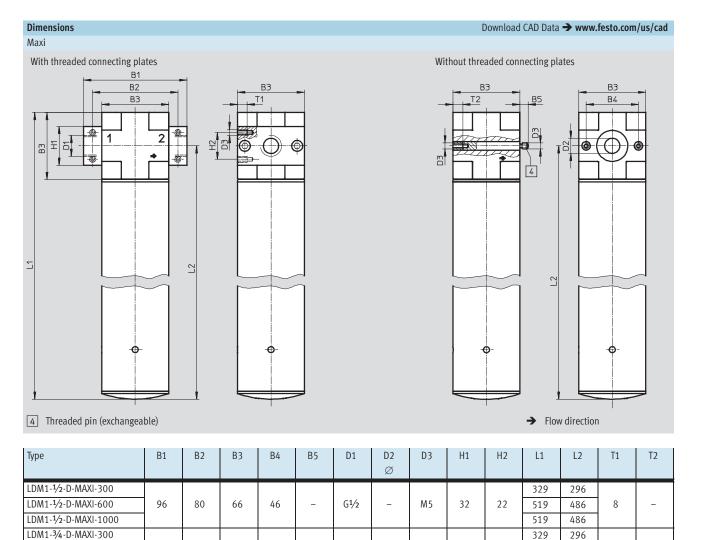
1300

1100

Membrane air dryers LDM1, D series, metal design

FESTO

Technical data



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

96

116

80

91

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7

LDM1-3/4-D-MAXI-600

LDM1-3/4-D-MAXI-1000

LDM1-1-D-MAXI-300

LDM1-1-D-MAXI-600

LDM1-1-D-MAXI-1000

LDM1-D-MAXI-300

LDM1-D-MAXI-600

LDM1-D-MAXI-1000

Ordering data – Without connection plates

Size	LDM1300		LDM1600		LDM11000		
	Part No. Type		Part No. Type		Part No. Type		
Maxi	543664 LDM1-D-MAXI-300		543665 LDM1-D-MAXI-600		543666 LDM1-D-MAXI-1000		

G3⁄4

G1

_

_

_

30

Μ5

M5

Μ5

36

41

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22

22

519

519

329

519

519

329

519

519

486

486

296

486

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296

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486

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8

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_

11

Ordering data – With connection plates

Size	Connection	LDM1300			LDM1600			LDM11000	
		Part No.	Туре		Part No.	Туре		Part No.	Туре
Maxi	G1⁄2	543667	LDM1-1/2-D-MAXI-300		543668	LDM1- ¹ /2-D-MAXI-600	-	543669	LDM1-1/2-D-MAXI-1000
	G3⁄4	543670	LDM1-3/4-D-MAXI-300		543671	LDM1-3/4-D-MAXI-600		543672	LDM1-3/4-D-MAXI-1000
	G1	543673	LDM1-1-D-MAXI-300		543674	LDM1-1-D-MAXI-600		543675	LDM1-1-D-MAXI-1000

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Custom Control Cabinets Comprehensive engineering support and on-site services



Complete Systems Shipment, stocking and storage services

The Broadest Range of Automation Components

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Pneumatics Pneumatic linear and rotary actuators, valves, and air supply



PLCs and I/O Devices PLC's, operator interfaces, sensors and I/O devices

Supporting Advanced Automation... As No One Else Can!

Festo is a leading global manufacturer of pneumatic and electromechanical systems, components and controls for industrial automation, with more than 12,000 employees in 56 national headquarters serving more than 180 countries. For more than 80 years, Festo has continuously elevated the state of manufacturing with innovations and optimized motion control solutions that deliver higher performing, more profitable automated manufacturing and processing equipment. Our dedication to the advancement of automation extends beyond technology to the education and development of current and future automation and robotics designers with simulation tools, teaching programs, and on-site services.

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Festo Corporation is committed to supply all Festo products and services that will meet or exceed our customers' requirements in product quality, delivery, customer service and satisfaction.





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