Membrane air dryers LDM1, D series





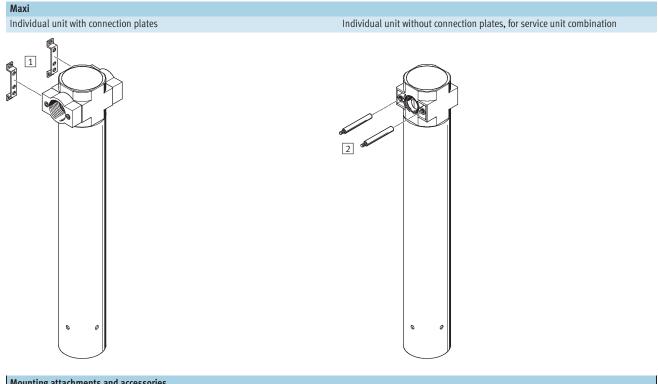
Туре		Size	Pneur	natic co	onnectio	on							Press	ure		Grade	of filtr	ation	
													regula	ation ra	nge				
													[bar]			[µm]			
													0.5	0.5	2.5				
			M5	M7	G1⁄8	G1⁄4	G3⁄8	G1⁄2	G3⁄4	G1	QS4	056	 7	 12	 12	0.01	1	5	40
			IN15	IN17	U-78	G 4/4	678	072	U-74	01	Q34	QS6	/	12	12	0.01	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							

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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.

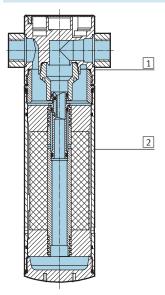
Membrane air dryers LDM1, D series, metal design Technical data

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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

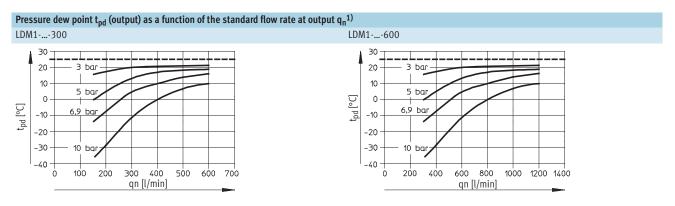
Sectional view



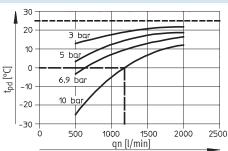
Membrane air dryer	
1 Housing	Die-cast zinc
2 Bowl	Wrought aluminium alloy
– Seals	Nitrile rubber

Membrane air dryers LDM1, D series, metal design

Technical data

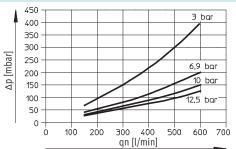


LDM1-...-1000

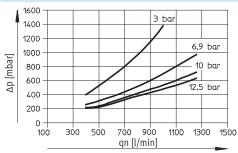


----- 1) Measured at pressure dew point t_{pd} (supply) = 25 °C. Example LDM1-...-1000 with 10 bar supply pressure: the pressure dew point reduction at a nominal flow rate of q_n = 1,200 l/min is 25 K.

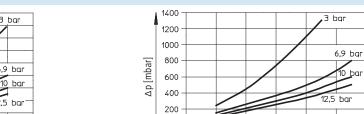
Differential pressure Δp as a function of the standard flow rate at output qn LDM1-...-300



LDM1-...-1000



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0

100

300

500

700

qn [l/min]

900

LDM1-...-600

2012/06 - Subject to change

10 bai

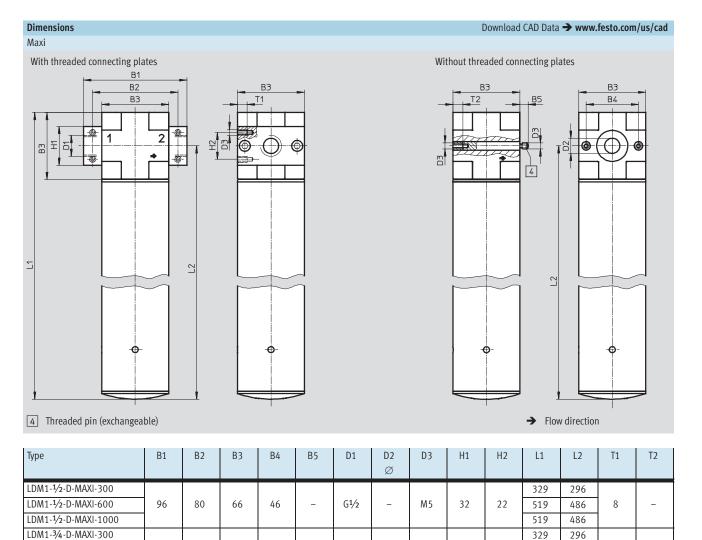
1300

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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66

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66

46

46

46

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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

486

296

486

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

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



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