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Find the *Festo LR-1/8-S-7-B* at our website: ***Click HERE***

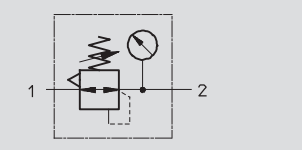
LR Pressure Regulators – D Series, NPT

Technical Data

FESTO

Function

LR-...-D-...



Flow rate

120 ... 12500 l/min

Temperature range

–10 ... +60 °C

Pressure

1 ... 16 bar



Integrated universal locking for pressure regulators of D series which prevents alteration of the set secondary pressure (p2) by unauthorized persons. Universal locking means that multiple locks can be closed with the same key. A cylinder lock is integrated in the rotary knob.

- Also suitable for front panel mounting
- Two pressure gauge connections for different fitting options
- Mini and Midi sizes: Directly actuated diaphragm regulator
- Maxi size: Pilot actuated piston regulator, diaphragm regulator
- Good regulating characteristics with minimal pressure hysteresis
- High flow rate
- Two pressure regulation ranges: 0.5 ... 7 bar and 0.5 ... 12 bar
- Setting values are secured by locking the rotary knob
- Return flow option for venting from output 2 to input 1
- Pressure sensor (optional)

General technical data									
Size	Micro	Mini			Midi			Maxi	
Pneumatic connection	⅛ NPT	⅛ NPT	¼ NPT	⅜ NPT	⅜ NPT	½ NPT	¾ NPT	¾ NPT	1 NPT
Operating medium	Compressed air	Filtered compressed air, lubricated or unlubricated, grade of filtration 40 µm							
Design	Diaphragm regulator	Directly actuated diaphragm regulator						Pilot actuated piston regulator	
								Directly actuated diaphragm regulator	
Type of mounting	Via accessories								
	In-line installation								
	Front panel mounting								
Mounting position	Any								
Max. hysteresis [bar]	0.3	0.2						0.4	
Input pressure [bar]	1 ... 10	1 ... 16							
Pressure regulation range [bar]	0.5 ... 7	0.5 ... 7							
		0.5 ... 12							
Pressure indication	Via pressure gauge								
Port connection	M5	G⅛			G¼			G¼	

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

LR Pressure Regulators – D Series, NPT

Technical Data

Standard nominal flow rate[1] qnN [l/min]	
Connection	Port block
	1/8 NPT
Micro	
LR	450

Standard nominal flow rate[1] qnN [l/min]						
Connection	1/8 NPT	1/4 NPT	3/8 NPT	1/2 NPT	3/4 NPT	1 NPT
Mini						
Pressure regulation range 0.5 ... 7 bar	1000	1600	1800	–	–	–
Pressure regulation range 0.5 ... 12 bar	800	1500	1700	–	–	–
Midi						
Pressure regulation range 0.5 ... 7 bar	–	2200	3300	4000	4500	–
Pressure regulation range 0.5 ... 12 bar	–	2100	3200	3500	3500	–
Maxi						
Pressure regulation range 0.5 ... 7 bar	–	–	–	10700	12000	12500
Pressure regulation range 0.5 ... 12 bar	–	–	–	10500	11000	11500

1) Measured at p1 = 10 bar, p2 = 6 bar and Δp = 1 bar.

Screw-in depth of connecting thread [mm]					
Connection	M5	M7	G1/8	QS4	QS6
Micro					
In housing	5	6	–	–	–
In connecting plates	–	–	8	–	–

Ambient conditions					
Size		Micro	Mini	Midi	Maxi
Ambient temperature	[°C]	–10 ... +60			
Temperature of medium	[°C]	–10 ... +60			
Corrosion resistance class	CRC[3]	2			

3) 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.

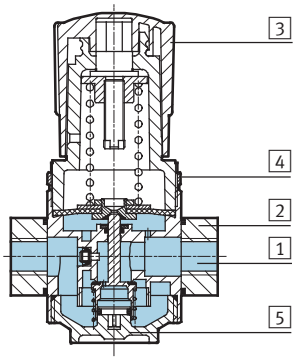
Weight [g]					
Size	Micro		Mini	Midi	Maxi
	Female thread	Connecting plate			
With pressure gauge					
LR	60	80	350	720	1200
Without pressure gauge					
LR	50	70	300	660	1 100

LR Pressure Regulators – D Series, NPT

Technical Data

Materials

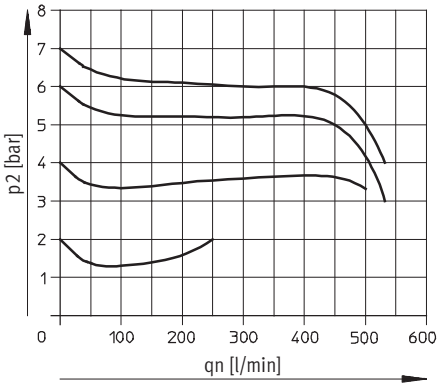
Sectional view



Pressure regulator		Micro	Mini/Midi/Maxi
1	Housing	Wrought aluminum alloy	Die-cast zinc/aluminum
2	Port blocks	Wrought aluminum alloy	Die-cast zinc/aluminum
3	Regulating knob	Polyacetal	Polyacetal
4	Knurled nut	–	Aluminum
5	Plug cap	Polycarbonate	Polycarbonate
–	Seals	Nitrile rubber	Nitrile rubber

Standard flow rate qn as a function of the output pressure p2

LR-⅛-...-MICRO



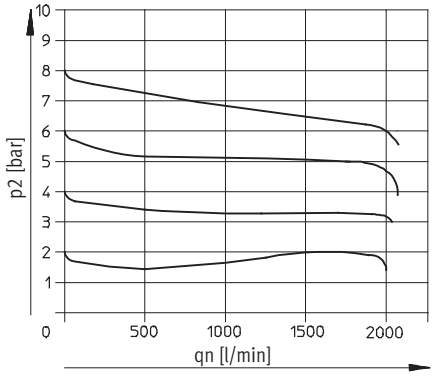
LR Pressure Regulators – D Series, NPT

Technical Data

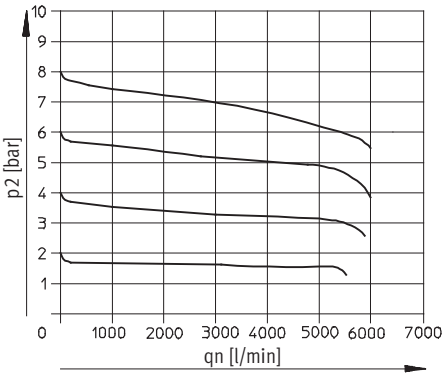
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Standard flow rate qn as a function of the output pressure p2

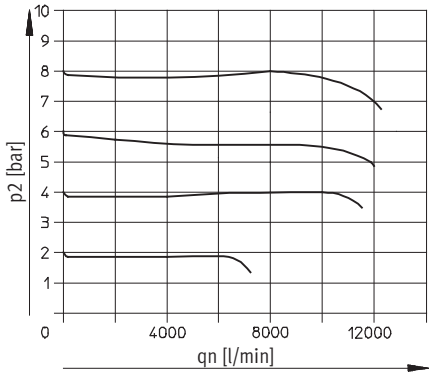
LR-¼-D-MINI



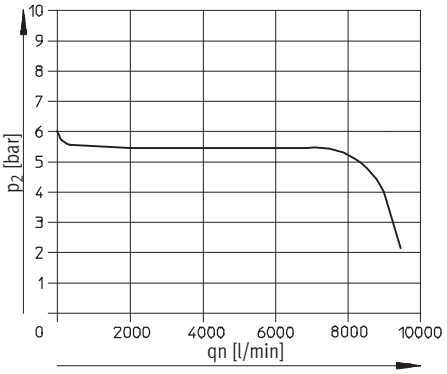
LR-½-D-MIDI



LR-1-D-MAXI



LR-1-D-DI-MAXI

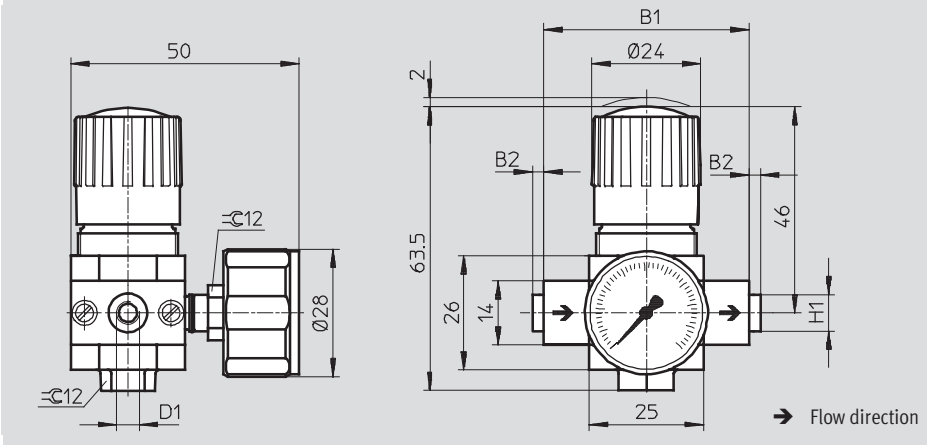


Primary pressure p1 = 10 bar

Dimensions

Download CAD Data ➔ **www.festo.com/us/cad**

Micro



Type	B1	B2	D1	H1
LR-⅛-D-7-MICRO, L-N⅛-D-7-MICRO	45	–	⅛ NPT	–

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

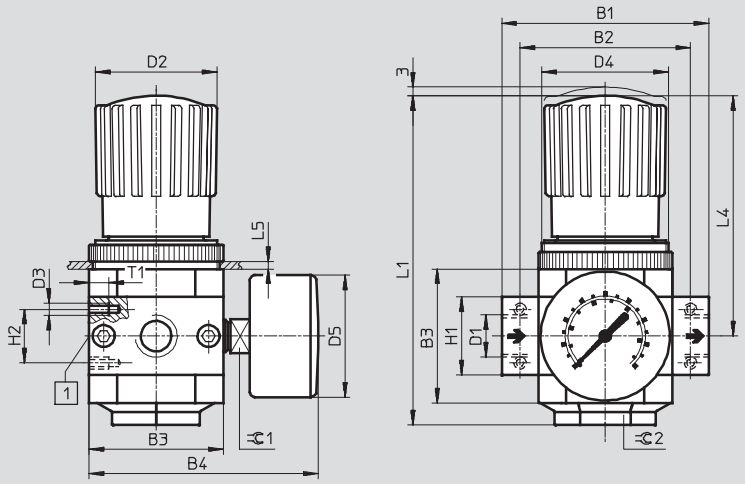
LR Pressure Regulators – D Series, NPT

Technical Data – Dimensional Drawings

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Dimensions Download CAD Data ➔ **www.festo.com/us/cad**

Mini/Midi/Maxi



1 Second pressure gauge connection

3 Installation dimensions

➔ Flow direction

Type	B1	B2	B3	B4	D1	D2 ∅	D3	D4	D5 ∅
Mini									
LR-1/8-D-MINI (NPT)	64	52	40	76	1/8 NPT	31	M4	M36x1.5	41
LR-1/4-D-MINI (NPT)					1/4 NPT				
LR-3/8-D-MINI (NPT)	70				3/8 NPT				
Midi									
LR-3/8-D-MIDI (NPT)	85	70	55	95	3/8 NPT	50	M5	M52x1.5	50
LR-1/2-D-MIDI (NPT)					1/2 NPT				
LR-3/4-D-MIDI (NPT)					3/4 NPT				
Maxi									
LR-3/4-D-MAXI (NPT)	96	80	66	107	3/4 NPT	31	M5	M36x1.5	50
LR-1-D-MAXI (NPT)	116	91			1 NPT				

Type	H1	H2	L1	L4	L5 max.	L6	L7	T1	⌀1	⌀2
Mini										
LR-1/8-D-MINI (NPT)	20	11	96	68	3	98	60	7	14	17
LR-1/4-D-MINI (NPT)										
LR-3/8-D-MINI (NPT)										
Midi										
LR-3/8-D-MIDI (NPT)	32	22	135	99	5	130	60	8	14	36
LR-1/2-D-MIDI (NPT)										
LR-3/4-D-MIDI (NPT)										
Maxi										
LR-3/4-D-MAXI (NPT)	32	22	125	82	4	111	60	8	14	22
LR-1-D-MAXI (NPT)	40		125	82		111				

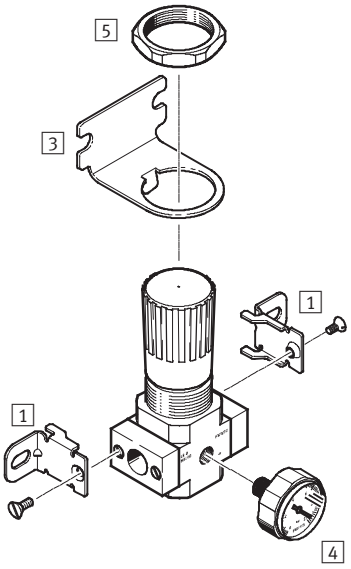
Note: This product conforms to ISO 1179-1 and ISO 228-1

LR/LRS Pressure Regulators – D Series, NPT

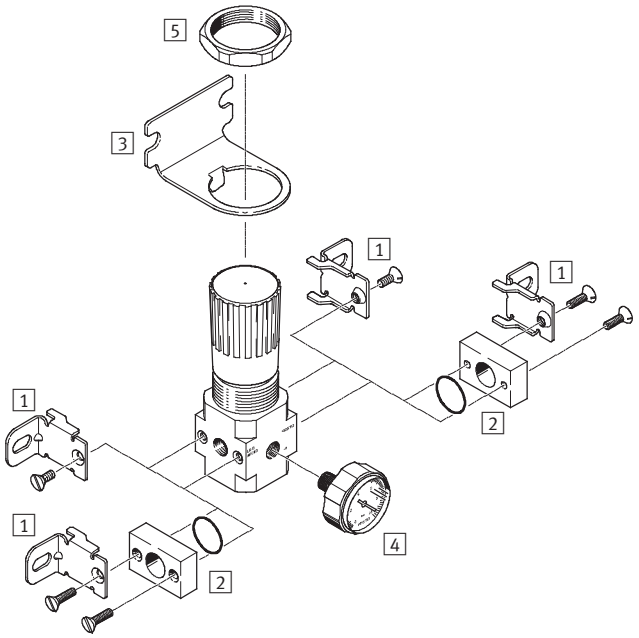
Accessories Overview

Micro

Individual unit with port blocks,
connection size 1/8NPT



Individual unit without port blocks, for service unit combination
connection size M5 or M7 in housing



Mounting attachments and accessories

	Individual unit		Combination		➔ Page/Internet
	with port blocks	without port blocks	with port blocks	without port blocks	
1 Mounting bracket HFOE	■	■	■	■	hfoe
2 Port block kit PBL	–	■	–	■	pbl
3 Mounting bracket HRS	■	■	■	■	hrs
4 Pressure gauge MA-27	■	■	■	■	ma
5 Hexagon nut (included in scope of delivery) HMR	■	■	■	■	hmr

Note

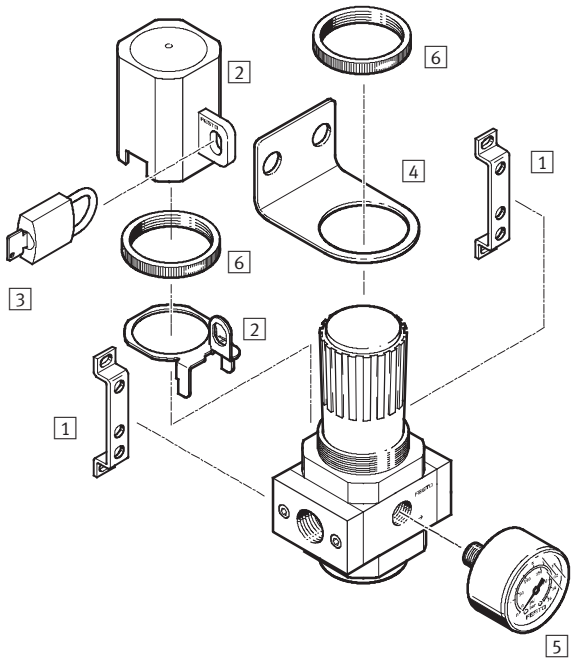
For Custom Combinations ➔ FAST Program Selector Guide starting page 10

LR/LRS Pressure Regulators – D Series, NPT

Accessories Overview

Mini/Midi/Maxi

Pressure regulator LR



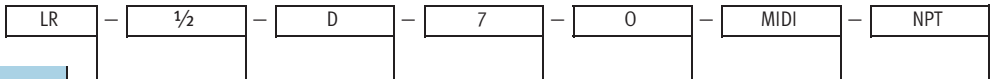
Mounting attachments and accessories			
	Rotary knob with detent	Rotary knob, lockable	➔ Page/Internet
1 Mounting bracket HFOE	■	■	hfoe
2 Regulator lock LRVS	■	–	lrvs
3 Padlock LRVS-D	■	–	lrvs-d
4 Mounting bracket HR-D	■	■	hr
5 Pressure gauge MA	■	■	ma
6 Knurled nut (included in scope of delivery) HMR	■	■	–

Note

For Custom Combinations ➔ FAST Program Selector Guide starting page 10

LR Pressure Regulators – D Series, NPT

Type Codes



Basic function	
LR	Pressure regulator

Pneumatic connection	
N⅛	⅛ NPT Thread (for Micro only)
⅛	⅛ NPT Thread
¼	¼ NPT Thread
⅜	⅜ NPT Thread
½	½ NPT Thread
¾	¾ NPT Thread
1	1 NPT Thread

Series	
D	Series

Pressure regulation range	
	0.5 ... 12 bar
7	0.5 ... 7 bar

Pressure gauge	
	With pressure gauge
O	Without pressure gauge

Size	
MICRO	Grid dimension 25 mm (without port blocks)
MINI	Grid dimension 40 mm (without port blocks)
MIDI	Grid dimension 55 mm (without port blocks)
MAXI	Grid dimension 66 mm (without port blocks)

NPT connection (where available)	
NPT	NPT threaded connection (not type code for Micro)

LR Pressure Regulators – D Series, NPT

Ordering Data

Ordering data			
Size	Connection	Pressure regulation range 0.5 ... 7 bar	
		Part No.	Type
With pressure gauge			
Micro	With threaded connecting plates		
	1/8 NPT	526265	LR-N1/8-D-7-MICRO
Without pressure gauge			
Micro	With threaded connecting plates		
	1/8 NPT	526266	LR-N1/8-D-O-7-MICRO

Ordering data						
Size	Connection	Pressure regulation range 0.5 ... 7 bar			Pressure regulation range 0.5 ... 12 bar	
		Part No.	Type		Part No.	Type
With pressure gauge						
Mini	1/8 NPT	173646	LR-1/8-D-7-MINI-NPT		173644	LR-1/8-D-MINI-NPT
	1/4 NPT	173650	LR-1/4-D-7-MINI-NPT		173648	LR-1/4-D-MINI-NPT
	3/8 NPT	173654	LR-3/8-D-7-MINI-NPT		173652	LR-3/8-D-MINI-NPT
Midi	3/8 NPT	173658	LR-3/8-D-7-MIDI-NPT		173656	LR-3/8-D-MIDI-NPT
	1/2 NPT	173662	LR-1/2-D-7-MIDI-NPT		173660	LR-1/2-D-MIDI-NPT
	3/4 NPT	173666	LR-3/4-D-7-MIDI-NPT		173664	LR-3/4-D-MIDI-NPT
Maxi	3/4 NPT	173670	LR-3/4-D-7-MAXI-NPT		173668	LR-3/4-D-MAXI-NPT
	1 NPT	173674	LR-1-D-7-MAXI-NPT		173672	LR-1-D-MAXI-NPT

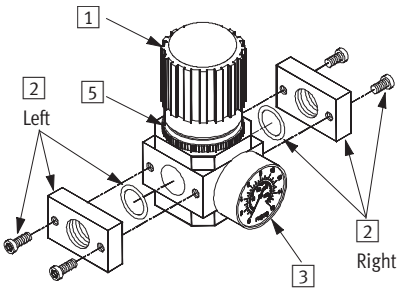
Ordering data						
Size	Connection	Pressure regulation range 0.5 ... 7 bar			Pressure regulation range 0.5 ... 12 bar	
		Part No.	Type		Part No.	Type
Without pressure gauge						
Mini	1/8 NPT	173647	LR-1/8-D-7-O-MINI-NPT[1]		173645	LR-1/8-D-O-MINI-NPT[1]
	1/4 NPT	173651	LR-1/4-D-7-O-MINI-NPT[1]		173649	LR-1/4-D-O-MINI-NPT[1]
	3/8 NPT	173655	LR-3/8-D-7-O-MINI-NPT[1]		173653	LR-3/8-D-O-MINI-NPT[1]
Midi	3/8 NPT	173659	LR-3/8-D-7-O-MIDI-NPT[1]		173657	LR-3/8-D-O-MIDI-NPT[1]
	1/2 NPT	173663	LR-1/2-D-7-O-MIDI-NPT[1]		173661	LR-1/2-D-O-MIDI-NPT[1]
	3/4 NPT	173667	LR-3/4-D-7-O-MIDI-NPT[1]		173665	LR-3/4-D-O-MIDI-NPT[1]
Maxi	3/4 NPT	173671	LR-3/4-D-7-O-MAXI-NPT[1]		173669	LR-3/4-D-O-MAXI-NPT[1]
	1 NPT	173675	LR-1-D-7-O-MAXI-NPT[1]		173673	LR-1-D-O-MAXI-NPT[1]

1) Free of copper, PTFE and silicone

FAST* Program – LR Pressure Regulator Selector Guide

LR Pressure Regulators – D Series, NPT

* FAST = Festo Assured Shipping Time. Ordering via the FAST program means same day / next day shipping from our warehouse of the parts required to assemble a complete air preparation unit.



A complete regulator assembly consists of the following items:

Item	Description	Qty Required per Assy
1	Main Unit	1
2	Port Block Kit	2 (one left, one right)
3	Gauge	1
4	Wall Mounting Bracket Kit (Optional, not shown)	1
5	Knurled Nut (Optional)	1

Note: Joining rods (not shown here) are not needed in this assembly.

Step 1: Based upon the required Port Size, Maximum Output Pressure, Maximum Flow, and Thread Type, select the Main Unit (Item 1), the Left and Right Port Block Kits (Item 2), and, if required, Gauge (Item 3) and Knurled Nut (Item 5).

				Item 1	2				3	5
Port size	Max. Output Pressure [bar/psi]	Max. Flow (l/min/sfcm]	Product Type/ Description	Main Body	NPT Thread		BSP Thread		Gauge [If required]	Knurled Nut [If required]
					Left Port Block Kit	Right Port Block Kit	Left Port Block Kit	Right Port Block Kit		
1/8	7/102	1000/35.3	LR-...-D-MINI-...	546452	546520	546521	546495	546496	546485	530025
	12/174	800/28.3		546430					546479	
1/4	7/102	1600/56.5		546452	546522	546523	546497	546498	546485	
		2200/77.7	LR-...-D-MIDI-...	546458	546536	546537	546532	546533	546484	530026
	12/174	1500/52.9	LR-...-D-MINI-...	546430	546522	546523	546497	546498	546479	530025
		2100/74.2	LR-...-D-MIDI-...	546424	546536	546537	546532	546533	546482	530026
3/8	7/102	1800/63.6	LR-...-D-MINI-...	546452	546524	546525	546499	546500	546485	530025
		3300/116.5	LR-...-D-MIDI-...	546458	546530	546531	546501	546502	546484	530026
	12/174	1700/60.0	LR-...-D-MINI-...	546430	546524	546525	546499	546500	546479	530025
		3200/113.0	LR-...-D-MIDI-...	546424	546530	546531	546501	546502	546482	530026
1/2	7/102	4000/141.3		546458	546526	546527	546503	546504	546484	
		10700/377.9	LR-...-D-MAXI-...	546465	546538	546539	546534	546535		530025
	12/174	3500/123.6	LR-...-D-MIDI-...	546424	546526	546527	546503	546504	546482	530026
		10500/370.8	LR-...-D-MAXI-...	546436	546538	546539	546534	546535		530025
3/4	7/102	4500/158.9	LR-...-D-MIDI-...	546458	546528	548529	546505	546506	546484	530026
		12000/423.8	LR-...-D-MAXI-...	546465	546490	546492	546507	546508		530025
	12/174	3500/123.8	LR-...-D-MIDI-...	546424	546528	546529	546505	546506	546482	530026
		11000/388.5	LR-...-D-MAXI-...	546436	546490	546492	546507	546508		530025
1	7/102	12500/441.4		546465	546491	546493	546509	546510	546484	
	12/174	11500/406.1		546436					546482	

Step 2: If required, select the (optional) Wall Mounting Bracket Kit (Item 4).

	Item 4 (Not shown)
Product Type/ Description	Wall Mounting Bracket Kit (Optional) For more information on Mounting Brackets, see ➔ Internet hrs
LR-...-D-MINI-...	159 638
LR-...-D-MIDI-...	159 593
LR-...-D-MAXI-...	

Step3: Determine the appropriate quantity of each Item.

Ordering Example:

Required: ⅜ port size, 8 bar output pressure, 1600 l/min flow, BSP threads, gauge, wall mounting bracket kit and knurled nut.

	Item	Part No.	Qty	Description
Order:	1	546430	1	Main Unit
	2	546499	1	Left Port Block Kit
		546500		Right Port Block Kit
	3	546479	4	Gauge
	4	159638	1	Wall Mounting Bracket Kit
	5	530026	1	Knurled Nut (MIDI)

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