

# FRM Distributor Blocks – D Series, NPT

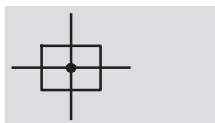
## Technical Data

Function

Flow rate

1,300 ... 20,000 l/min

Standard



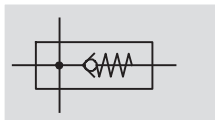
Temperature range

-10 ... +60 °C

Operating pressure

0 ... 16 bar

With integrated check valve



- Provides additional air connections for greater flexibility, i.e. for attachment of additional modules (pressure regulator, pressure switch, etc.)
- An optional integrated check valve prevents return flow of lubricated compressed air
- Can be used as an intermediate distributor for varying air qualities

General technical data								
Size	Mini			Midi			Maxi	
Pneumatic connection 1, 2 <sup>1)</sup>	1/8 NPT	1/4 NPT	3/8 NPT	3/8 NPT	1/2 NPT	3/4 NPT	3/4 NPT	1 NPT
Pneumatic connection 3	G3/4			G1/2			G3/4	
Pneumatic connection 4	G3/4							
Operating medium	Filtered compressed air							
Design	Branching module							
Type of mounting	Via accessories In-line installation							
Assembly position	Any							
Operating pressure [bar]								
Standard	0 ... 16							
With non-return function	0.15 ... 16			0.2 ... 16			0.25 ... 16	
With pressure switch	0 ... 12							

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

Standard nominal flow rate <sup>1)</sup> qnN [l/min]							
Port	Without port blocks	With port blocks					
		1/8 NPT	1/4 NPT	3/8 NPT	1/2 NPT	3/4 NPT	1 NPT
<b>Mini</b>							
Standard	3,300	1,500	3,300	3,300	–	–	–
With integrated check valve	2,000	1,300	2,000	2,100	–	–	–
With pressure switch	3,300	–	–	–	–	–	–
<b>Midi</b>							
Standard	8,200	–	–	7,000	8,200	8,800	–
With integrated check valve	5,600	–	–	5,500	5,600	5,500	–
With pressure switch	8,200	–	–	–	–	–	–
<b>Maxi</b>							
Standard	20,000	–	–	–	–	20,000	17,400
With integrated check valve	15,000	–	–	–	–	15,000	13,400
With pressure switch	20,000	–	–	–	–	–	–

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

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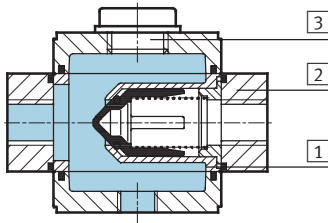
Technical Data

Ambient conditions		Mini	Midi	Maxi
Size				
Ambient temperature	[°C]	-10 ... +60		
Temperature of medium	[°C]	-10 ... +60		
Storage temperature	[°C]	-10 ... +60		
Corrosion resistance class	CRC <sup>2)</sup>	2		

Weights [g]							
Port	Without port blocks	With port blocks					
		1/8 NPT	1/4 NPT	3/8 NPT	1/2 NPT	3/4 NPT	1 NPT
<b>Mini</b>							
Without pressure switch	210	290	280	290	-	-	-
With pressure switch	590	-					
<b>Midi</b>							
Without pressure switch	520	-	770	760	740	710	-
With pressure switch	900	-					
<b>Maxi</b>							
Without pressure switch	900	-	-	-	1,160	1,120	1,230
With pressure switch	1,280	-					

## Materials

Sectional view



Branching module		
1	Housing	Die-cast zinc
2	Port blocks	Die-cast zinc
3	Cover plate	Galvanized steel
-	Seals	Nitrile rubber, polyvinyl chloride
Note on materials		Free of copper, PTFE and silicone

2) 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.

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Technical Data – Dimensional Drawings

Dimensions Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)

Mini/Midi/Maxi

With port blocks

Without port blocks

→ Flow direction

4 Threaded pin (exchangeable)

Type	B1	B2	B3	B4	B5	D1	D2	D3	D6	H1	H2	L1	L2	T1	T2
<b>Mini</b>															
FRM-1/8-D-MINI (NPT)	64	52	40	30	-	1/8 NPT	-	M4	G1/4	20	11	42	7	7	-
FRM-1/4-D-MINI (NPT)						1/4 NPT									
FRM-3/8-D-MINI (NPT)						3/8 NPT									
FRM-D-MINI	-	-	40	30	5.8	-	11	M4	G1/4	-	-	42	7	-	10
<b>Midi</b>															
FRM-3/8-D-MIDI (NPT)	85	70	55	43	-	3/8 NPT	-	M5	G1/2	32	22	59	8	8	-
FRM-1/2-D-MIDI (NPT)						1/2 NPT									
FRM-3/4-D-MIDI (NPT)						3/4 NPT									
FRM-D-MIDI	-	-	-	-	6.8	-	24	-	-	-	-	-	-	-	11
<b>Maxi</b>															
FRM-3/4-D-MAXI (NPT)	96	80	66	46	-	3/4 NPT	-	M5	G3/4	32	22	70	8	8	-
FRM-1-D-MAXI (NPT)	116	91				40									
FRM-D-MAXI	-	-				-				30					

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

## Dimensions – Pressure Switch PEV

Mini/Midi/Maxi

Pressure switch PEV-1/4-B-0D with adjustable pressure switching point, plug, square design to DIN EN 175 301, type A

Type	B6	B7	L3
FRM-Y-D-MINI	20	62	92.3
FRM-Y-D-MIDI	27.5	69.5	92.3
FRM-Y-D-MAXI	33	75	92.3

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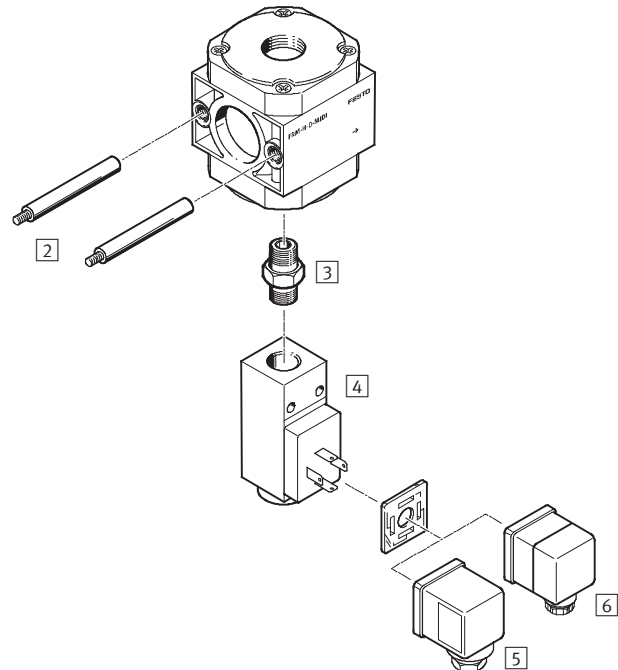
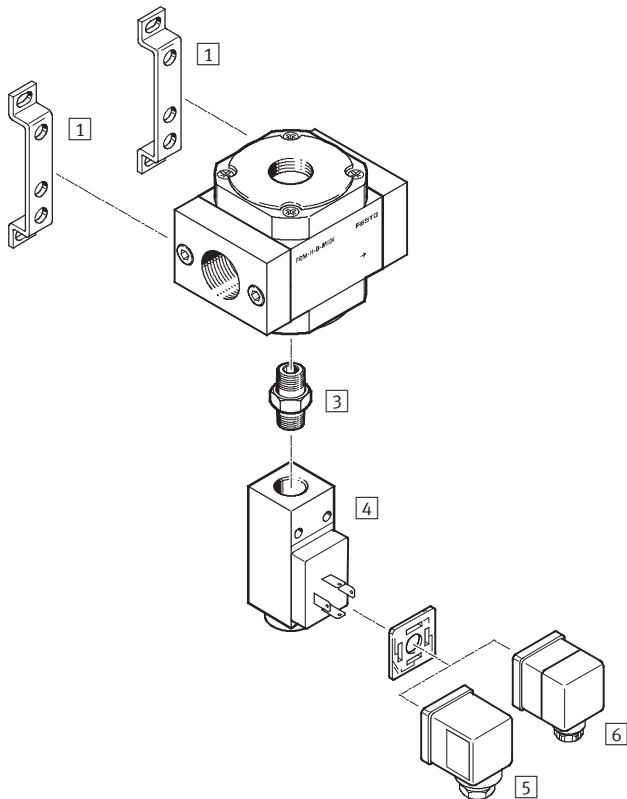
Accessories Overview

FESTO

## Mini/Midi/Maxi

Individual unit with port blocks

Individual unit without port blocks, for combination unit



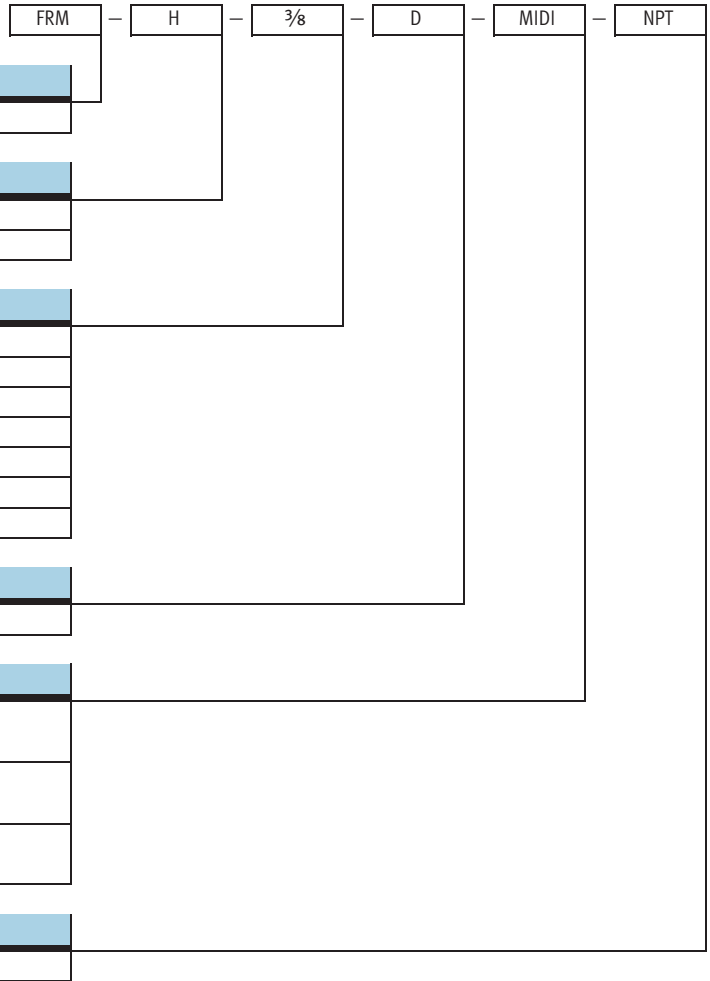
Mounting attachments and accessories					
	Individual unit		Combination		→ Page/Internet
	with port blocks	without port blocks	with port blocks	without port blocks	
1 Mounting bracket HFOE	■	–	■	–	hfoe
2 Threaded pin (included in scope of delivery) FRB	–	–	■	■	frb
3 Double nipple ESK	■	■	■	■	esk
4 Pressure switch PEV	■	■	■	■	pev
5 Plug socket MSSD-C	■	■	■	■	mssd
6 Angled plug socket PEV-...-WD-LED	■	■	■	■	pev

### Note

For Custom Combinations → FAST Program Selector Guide starting page 7

# FRM Distributor Block – D Series, NPT

Type Codes



# FRM Distribution Blocks – D Series, NPT



Ordering Data

Ordering data – Without port blocks						
Size	Standard		With integrated non-return function		With pressure switch PEV-1/4-B-0D	
	Part No.	Type	Part No.	Type	Part No.	Type
Mini	170684	FRM-D-MINI	170687	FRM-H-D-MINI	542184	FRM-Y-D-MINI
Midi	170685	FRM-D-MIDI	170688	FRM-H-D-MIDI	542185	FRM-Y-D-MIDI
Maxi	170686	FRM-D-MAXI	170689	FRM-H-D-MAXI	542186	FRM-Y-D-MAXI

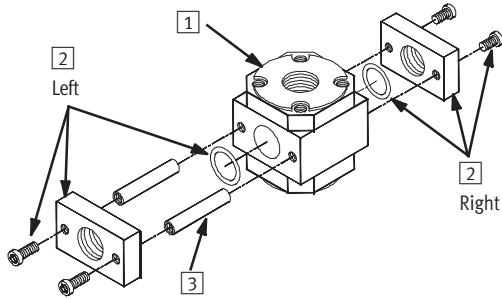
Ordering data – With port blocks						
Size	Connection	Standard		With integrated non-return function		
		Part No.	Type	Part No.	Type	
Mini	1/8 NPT	173924	FRM-1/8-D-MINI-NPT	173932	FRM-H-1/8-D-MINI-NPT	
	1/4 NPT	173925	FRM-1/4-D-MINI-NPT	173933	FRM-H-1/4-D-MINI-NPT	
	3/8 NPT	173926	FRM-3/8-D-MINI-NPT	173934	FRM-H-3/8-D-MINI-NPT	
Midi	3/8 NPT	173927	FRM-3/8-D-MIDI-NPT	173935	FRM-H-3/8-D-MIDI-NPT	
	1/2 NPT	173928	FRM-1/2-D-MIDI-NPT	173936	FRM-H-1/2-D-MIDI-NPT	
	3/4 NPT	173929	FRM-3/4-D-MIDI-NPT	173937	FRM-H-3/4-D-MIDI-NPT	
Maxi	3/4 NPT	173930	FRM-3/4-D-MAXI-NPT	173938	FRM-H-3/4-D-MAXI-NPT	
	1 NPT	173931	FRM-1-D-MAXI-NPT	173939	FRM-H-1-D-MAXI-NPT	

# FAST\* Program – FRM Distributor Block Selector Guide



FRM Distributor Blocks – 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 distributor 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	Single Unit Joining Rod	2
4	Mounting Bracket Kit (Not shown) (Optional)	1

**Step 1:** Based upon the required Port Size, Maximum Flow, and Thread Type, select the Main Unit (Item 1) and the Left and Right Port Block (Item 2).

			Item									
			1	2								
Port Size	Max. Flow (l/min/scfm)	Check Valve	Product Type / Description	Main Unit	NPT Thread		BSP Thread					
					Left Port Block Kit	Right Port Block Kit	Left Port Block Kit	Right Port Block Kit				
1/8	1500/52.9	No	FRM-...-D-MINI-...	170684	546520	546521	546495	546496				
	1300/45.9	Yes	FRM-H-...-D-MINI-...	170687								
1/4	3300/116.5	No	FRM-...-D-MINI-...	170684	546522	546523	546497	546498				
	2000/70.6	Yes	FRM-H-...-D-MINI-...	170687								
	3500/123.6	No	FRM-...-D-MIDI-...	170685					546536	546537	546532	546489
	3400/120.1	Yes	FRM-H-...-D-MIDI-...	170688								
3/8	3300/116.5	No	FRM-...-D-MINI-...	170684	546524	546525	546499	546500				
	2100/74.2	Yes	FRM-H-...-D-MINI-...	172687								
	7000/247.2	No	FRM-...-D-MIDI-...	170685					546530	546531	546501	546502
	5500/194.2	Yes	FRM-H-...-D-MIDI-...	170688								
1/2	8200/289.6	No	FRM-...-D-MIDI-...	170685	546526	546527	546503	546504				
	5600/197.8	Yes	FRM-H-...-D-MIDI-...	170688								
	11700/413.2	No	FRM-...-D-MAXI-...	170686					546538	546539	546534	546535
	9600/339.0	Yes	FRM_H-...-D-MAXI-...	170689								
3/4	8800/310.8	No	FRM-...-D-MIDI-...	170685	546528	546529	546505	546506				
	5500/194.2	Yes	FRM_H-...-D-MIDI-...	170688								
	20000/706.3	No	FRM-...-D-MAXI-...	170686					546490	546492	546507	546508
	15000/529.7	Yes	FRM-H-...-D-MAXI-...	170689								
1	17400/614.5	No	FRM-...-D-MAXI-...	170686	546491	546493	546509	546510				
	13400/473.2	Yes	FRM-H-...-D-MAXI-...	170689								

## FAST Program – FRM Distributor Block Selector Guide

FRM Distributor Blocks – D Series, NPT



**Step 2:** Based upon the Product Type/Description from Step 1, select the Joining Rods (Item 3) and the Mounting Bracket Kit (Item 4).

	Item <span style="border: 1px solid black; padding: 0 2px;">3</span>	<span style="border: 1px solid black; padding: 0 2px;">4</span> [Not shown]
Product Type/ Description	Single Unit Joining Rod	Mounting Bracket Kit (Optional)
FRM-...-D-MINI-...	359787	159638
FRM-H-...-D-MINI-...		
FRM-...-D-MIDI-...	369989	159593
FRM-H-...-D-MIDI-...		
FRM-...-D-MAXI-...	373059	
FRM-H-...-D-MAXI-...		

**Step3:** Determine the appropriate quantity of each Item.

**Ordering Example:**

**Required:** 3/8 port size, 5000 l/min flow, non-return flow check valve, BSP threads, and mounting bracket kit.

	Item	Part No.	Qty	Description
Order:	<span style="border: 1px solid black; padding: 0 2px;">1</span>	170688	1	Main Unit
	<span style="border: 1px solid black; padding: 0 2px;">2</span>	380297	1	Left Port Block Kit
		380299	1	Right Port Block Kit
	<span style="border: 1px solid black; padding: 0 2px;">3</span>	369989	2	Single Unit Joining Rod
	<span style="border: 1px solid black; padding: 0 2px;">4</span>	159593	1	Mounting Bracket Kit



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