Rotary distributors GF

Product range overview and type codes

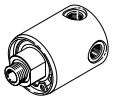
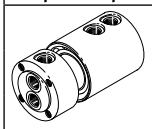
General

The rotary distributors GF with single or multiple rotary through-feed transmit media from stationary sources to rotating machine parts.

The compact and sturdy design with double ball bearing makes the rotary distributors a reliable means of protecting your media supply against mechanical loads.

The rotary distributors with multiple rotary through-feed provide a flexible way of supplying and returning the medium through the radial and axial inputs and outputs.

Product range overview

Design	Version	Type	Pneumatic connection		Max. rotational speed	→ Page/ Internet
			Input	Output	[rpm]	
Single rotary through-feed	**1 input, 4 outputs**					
		**GF**	G1/8	M5	3000	3
			G1/4	G1/8		
			G1/2	G1/4	2500	
Multiple rotary through-feed	**2 separate inputs and outputs**					
		**GF**	G1/8	G1/8	300	5
			G1/4	G1/4		
			G1/2	G1/2		

Type codes

001	Series	
GF	Rotary distributor	

002	Pneumatic connection	
1/8	Female thread G1/8	
1/4	Female thread G1/4	
3/8	Female thread G3/8	
1/2	Female thread G1/2	

003	Pneumatic connection 2	
	None	
M5	Male thread M5	
1/8	Male thread G1/8	
1/4	Male thread G1/4	

004	Number of air through-feeds	
2	Air through-feeds	

Datasheet – Single rotary through-feed

Single rotary through-feed
1 input, 4 outputs

Temperature range
–10 ... +80°C

Pressure
–0.95 ... +10 bar

General technical data				
Pneumatic connection 1		G1/8	G1/4	G1/2
Pneumatic connection 2		M5	G1/8	G1/4
Nominal width	[mm]	4.1	8	15
Mounting position		Any		
Max. rotational speed	[rpm]	3000	3000	2500
Max. radial force	[N]	150	150	250
Max. axial force	[N]	50	50	50
Nominal tightening torque	[Nm]	1.22 ±20%	1.65 ±20%	4.25 ±20%
Max. tightening torque	[Nm]	1.95	2.8	8

Note
When using rotational speeds above 1,000 rpm, only lubricated compressed air must be used.
If no lubricated compressed air is available, the depot lubrication must be replaced every 300 operating hours.

Operating and environmental conditions		
Operating pressure for full temperature range	[MPa]	–0.095 ... +1
	[bar]	–0.95 ... +10
	[psi]	–13.775 ... +145
Operating medium		Compressed air to ISO 8573-1:2010 [7:–:–]
		Water (liquid, ice-free)
Note on the operating/ pilot medium		Use 5 µm filter when operating with water
		Lubricated operation possible
Ambient temperature	[°C]	–10 ... +80
PWIS conformity		VDMA24364-B1/B2-L
Corrosion resistance class CRC[1)]		1

1) Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, or parts which are covered in the application (e.g. drive trunnions).

Note
Technical advice is required for applications below 0°C or when there is more than one parameter in the threshold range.
Please contact our Technical Department.

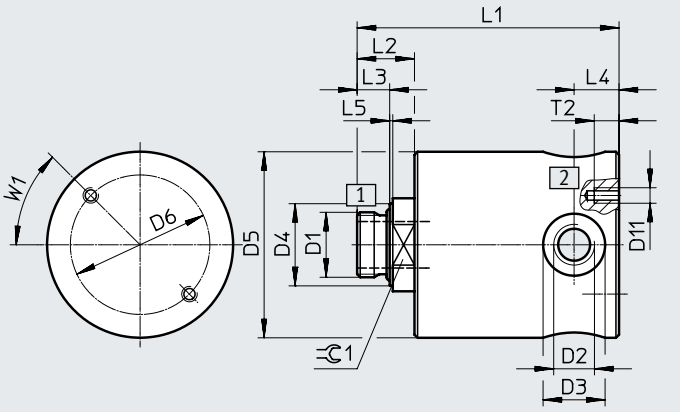
Note
The maximum temperature of +80°C must not be exceeded.
The frictional heat resulting from the rotation must be dissipated via the medium; sufficient media flow must therefore be ensured.

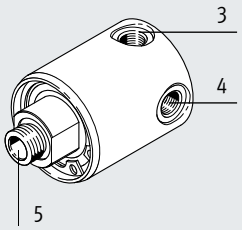
Note
In the event of rapid oscillating movements (changes in direction ‹ 2 seconds), the service life will be roughly halved.

Materials	
Housing	Nickel-plated brass
Shaft	High-alloy steel
Note on materials	RoHS-compliant

Datasheet – Single rotary through-feed

Dimensions Download CAD data ➔ www.festo.com





[1] Shaft mounting points
[2] Housing
[3] Output 2.1
[4] Output 2.4
[5] Input 1

Note

The rotary distributor should only be secured against twisting at the shaft [1] and housing [2] mounting points. The shaft and housing should not be tensioned against one other because this would overload the double ball bearing.

Type	Connection		D3 ø	D4 ø	D5 ø –1	D6 ø	D11	L1	L2	L3	L4	L5	T2	W1	⊂1
	D1	D2													
GF-1/8-M5	G1/8	M5	9	14.5	40	30	M5	64	15.5	6.5	7	1	8	45°	17
GF-1/4-1/8	G1/4	G1/8	16	17	40	30	M5	65.5	17	8	9.5	1.5	8	45°	17
GF-1/2-1/4	G1/2	G1/4	20	26.5	60	45	M5	90	24	10.5	14.5	1.5	8	45°	27

Ordering data

Pneumatic connection		Standard flow rate qn at 6 bar › 0 bar		Weight	Part no.	Type
		1 › 2.1	1 › 2.1 to 2.4 open			
1	2	[l/min]	[l/min]	[g]		
G1/8	M5	490	2250	400	**539290**	**GF-1/8-M5**
G1/4	G1/8	1730	4050	370	**539291**	**GF-1/4-1/8**
G1/2	G1/4	4050	14130	1190	**539292**	**GF-1/2-1/4**

Datasheet – Multiple rotary through-feed

Multiple rotary through-feed
2 separate inputs and outputs

Temperature range
–10 ... +80°C

Pressure
–0.95 ... +10 bar

General technical data				
Pneumatic connection 1		G1/8	G1/4	G1/2
Pneumatic connection 2		G1/8	G1/4	G1/2
Nominal width	[mm]	6	8	15
Mounting position		Any		
Max. rotational speed	[rpm]	300		
Max. radial force	[N]	250	300	400
Max. axial force	[N]	100	100	100

Operating and environmental conditions		
Operating pressure for full temperature range	[MPa]	–0.095 ... +1
	[bar]	–0.95 ... +10
	[psi]	–13.775 ... +145
Operating medium		Compressed air to ISO 8573-1:2010 [7:–:–]
		Water (liquid, ice-free)
Note on the operating/ pilot medium		Use 5 µm filter when operating with water
		Lubricated operation possible
Ambient temperature	[°C]	–10 ... +80
PWIS conformity		VDMA24364-B1/B2-L
Corrosion resistance class CRC[1)]		1

1) Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, or parts which are covered in the application (e.g. drive trunnions).

Note
Technical advice is required for applications below 0°C or when there is more than one parameter in the threshold range.
Please contact our Technical Department.

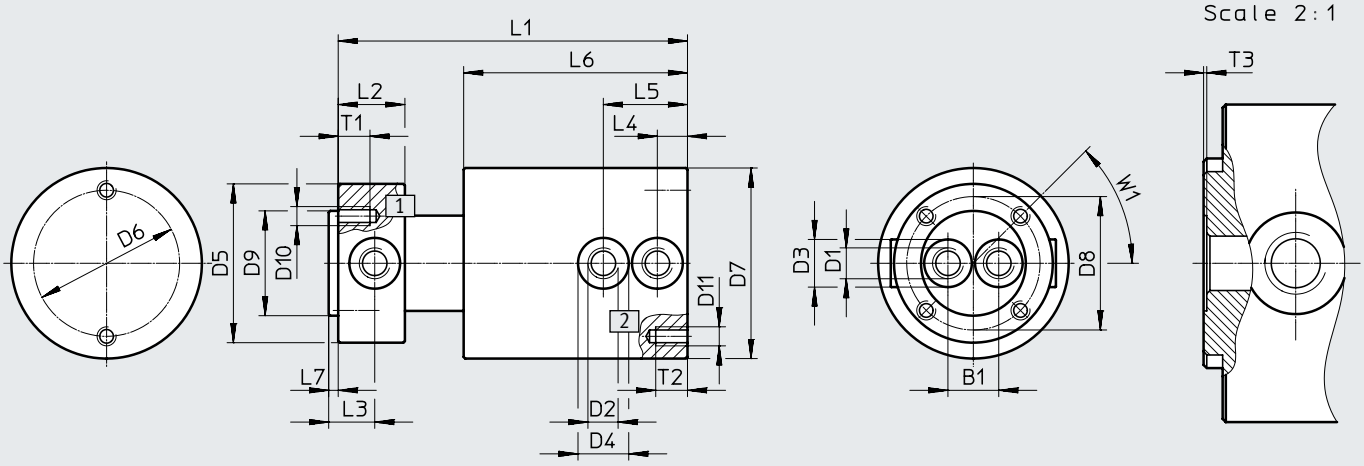
Note
The maximum temperature of +80°C must not be exceeded.
The frictional heat resulting from the rotation must be dissipated via the medium; sufficient media flow must therefore be ensured.

Note
In the event of rapid oscillating movements (changes in direction ‹ 2 seconds), the service life will be roughly halved.

Materials	
Housing	Nickel-plated brass
Shaft	High-alloy steel
Note on materials	RoHS-compliant

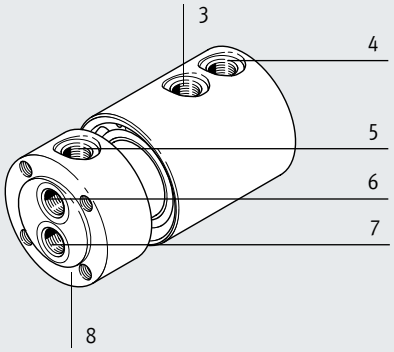
Datasheet – Multiple rotary through-feed

Dimensions Download CAD data ➔ www.festo.com



Note

The rotary distributor should only be secured against twisting at the shaft [1] and housing [2] mounting points. The shaft and housing should not be tensioned against one other because this would overload the double ball bearing.



[1] Shaft mounting points
[2] Housing
[3] Output 2.1
[4] Output 2.2
[5] Radial input 1.1
[6] Axial input 1.1
[7] Axial input 1.2
[8] Radial input 1.2

Type	Connection		B1	D3 ø	D4 ø	D5 ø	D6 ø	D7 ø –1	D8 ø	D9 ø f7	D10	D11
	D1	D2										
GF-1/8-2	G1/8	G1/8	16	15	16	50	46	60	42	33	M6	M6
GF-1/4-2	G1/4	G1/4	20	19	20	65	46	70	50	40	M6	M6
GF-1/2-2	G1/2	G1/2	30	28	28	90	65	95	78	65	M6	M6

Type	Connection		L1	L2	L3	L4	L5	L6	L7	T1	T2	T3 –0.2	W1
	D1	D2											
GF-1/8-2	G1/8	G1/8	110	21	14.5	9.5	26.5	70.5	3	10	10	0.5	45°
GF-1/4-2	G1/4	G1/4	128	28	19.5	13.5	34.5	81.5	3	10	10	0.5	45°
GF-1/2-2	G1/2	G1/2	171	39	25.5	17.5	49.5	112	3	10	10	0.5	45°

Ordering data

Pneumatic connection		Standard nominal flow rate qnN at 6 bar › 5 bar		Weight	Part no.	Type
		1.1 › 2.1	1.2 › 2.2			
1	2	[l/min]	[l/min]	[g]		
G1/8	G1/8	720	1050	1770	**539287**	**GF-1/8-2**
G1/4	G1/4	1250	2020	2950	**539288**	**GF-1/4-2**
G1/2	G1/2	4440	7380	7380	**539289**	**GF-1/2-2**