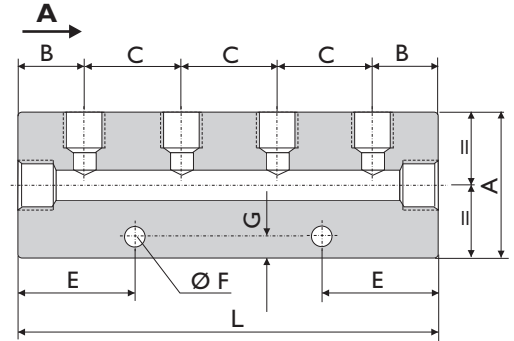


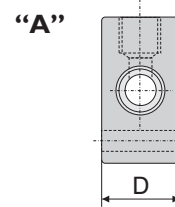
Für Vakuum und Druckluft / for vacuum and compressed air

Verteilerleisten, einseitig / Distributors one-sided

	Art. No.	Gewinde Eingang Thread Entrance	Gewinde Ausgang Thread Exit	L	A	B	C	D	E	ØF	G
2 Abgänge 2 Exits	VLE2.18M5	G 1/8"	M 5	45	20	15	15	15	22,5	4,2	3,5
	VLE2.1418	G 1/4"	G 1/8"	60	30	15	30	20	30,0	5,2	4,5
	VLE2.3818	G 3/8"	G 1/8"	66	40	18	30	20	33,0	5,2	4,5
	VLE2.3814	G 3/8"	G 1/4"	72	40	18	36	20	36,0	6,5	6,0
	VLE2.1214	G 1/2"	G 1/4"	80	40	22	36	28	40,0	6,5	5,8
4 Abgänge 4 Exits	VLE4.18M5	G 1/8"	M 5	75	20	15	15	15	22,5	4,2	3,5
	VLE4.1418	G 1/4"	G 1/8"	120	30	15	30	20	30,0	5,2	4,5
	VLE4.3818	G 3/8"	G 1/8"	126	30	18	30	20	33,0	5,2	4,5
	VLE4.3814	G 3/8"	G 1/4"	144	30	18	36	20	36,0	6,5	6,0
	VLE4.1214	G 1/2"	G 1/4"	152	40	22	36	28	40,0	6,5	5,8
6 Abgänge 6 Exits	VLE6.18M5	G 1/8"	M 5	105	20	15	15	15	22,5	4,2	3,5
	VLE6.1418	G 1/4"	G 1/8"	180	30	15	30	20	30,0	5,2	4,5
	VLE6.3818	G 3/8"	G 1/8"	186	30	18	30	20	33,0	5,2	4,5
	VLE6.3814	G 3/8"	G 1/4"	216	30	18	36	20	36,0	6,5	6,0
	VLE6.1214	G 1/2"	G 1/4"	224	40	22	36	28	40,0	6,5	5,8

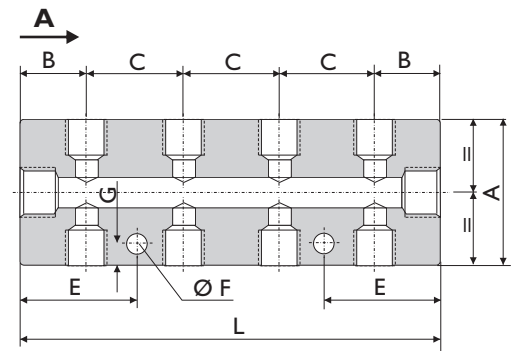


Material: Alu  
16 bar

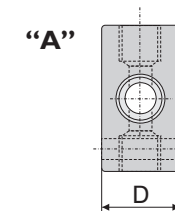


Verteilerleisten, doppelseitig / Distributors, both sides

	Art. No.	Gewinde Eingang Thread Entrance	Gewinde Ausgang Thread Exit	L	A	B	C	D	E	ØF	G
2x2 Abgänge 2x2 Exits	VLD2.18M5	G 1/8"	M 5	45	20	15	15	15	22,5	4,2	3,5
	VLD2.1418	G 1/4"	G 1/8"	60	30	15	30	20	30,0	5,2	4,5
	VLD2.3818	G 3/8"	G 1/8"	66	40	18	30	20	33,0	5,2	4,5
	VLD2.3814	G 3/8"	G 1/4"	72	40	18	36	20	36,0	6,5	6,0
	VLD2.1214	G 1/2"	G 1/4"	80	40	22	36	28	40,0	6,5	5,8
2x4 Abgänge 2x4 Exits	VLD4.18M5	G 1/8"	M 5	75	20	15	15	15	22,5	4,2	3,5
	VLD4.1418	G 1/4"	G 1/8"	120	30	15	30	20	30,0	5,2	4,5
	VLD4.3818	G 3/8"	G 1/8"	126	40	18	30	20	33,0	5,2	4,5
	VLD4.3814	G 3/8"	G 1/4"	144	40	18	36	20	36,0	6,5	6,0
	VLD4.1214	G 1/2"	G 1/4"	152	40	22	36	28	40,0	6,5	5,8
2x6 Abgänge 2x6 Exits	VLD6.18M5	G 1/8"	M 5	105	20	15	15	15	22,5	4,2	3,5
	VLD6.1418	G 1/4"	G 1/8"	180	30	15	30	20	30,0	5,2	4,5
	VLD6.3818	G 3/8"	G 1/8"	186	40	18	30	20	33,0	5,2	4,5
	VLD6.3814	G 3/8"	G 1/4"	216	40	18	36	20	36,0	6,5	6,0
	VLD6.1214	G 1/2"	G 1/4"	224	40	22	36	28	40,0	6,5	5,8



Material: Alu  
16 bar



Verschlusschrauben siehe Seite 5.056/  
 fastener screw with see page 5.056

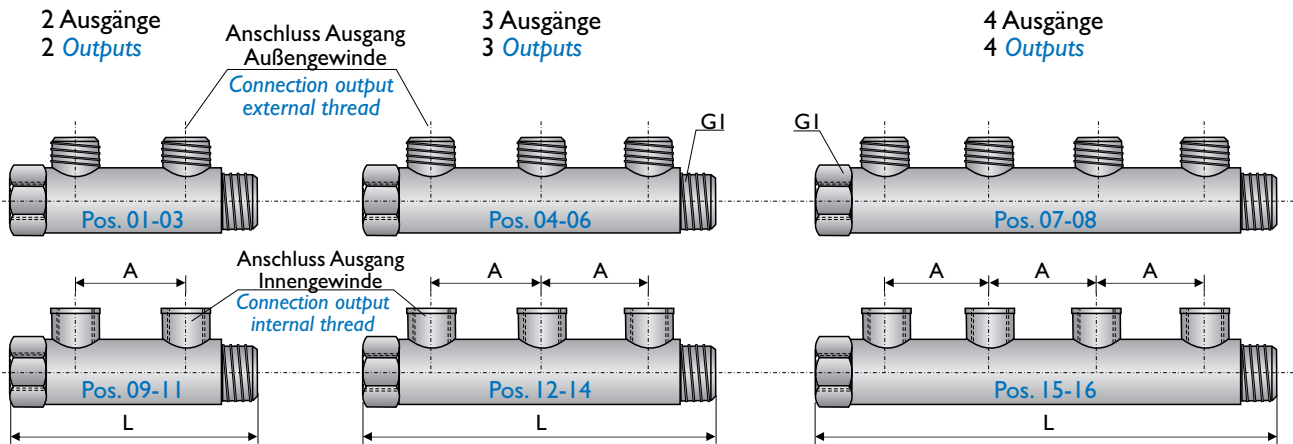
## Verteilerrohre + Verschlüsse

### Distributor Tubes + Closures

Für Vakuum und Druckluft / for vacuum and compressed air

Diese Verteilerrohre können beliebig verlängert werden, da sie über ein Innen- und Außengewinde verfügen.

These distributor tubes can be extended, because they have an internal and external thread.



Pos.	Art. No.	Eingang Input	Ausgang Output	L	A	Material
01	VLA2.03412.MSV	G 3/4"	2 x AG G 1/2"	87	38	MSV
02	VLA2.01012.MSV	G 1"	2 x AG G 1/2"	89	38	MSV
03	VLA2.11412.MS	G 1 1/4"	2 x AG G 1/2"	137	60	MS
04	VLA3.03412.MSV	G 3/4"	3 x AG G 1/2"	125	38	MSV
05	VLA3.01012.MSV	G 1"	3 x AG G 1/2"	127	38	MSV
06	VLA3.11412.MS	G 1 1/4"	3 x AG G 1/2"	197	60	MS
07	VLA4.03412.MSV	G 3/4"	4 x AG G 1/2"	163	38	MSV
08	VLA4.01012.MSV	G 1"	4 x AG G 1/2"	165	38	MSV
09	VLI2.03412.MSV	G 3/4"	2 x IG G 1/2"	87	38	MSV
10	VLI2.01012.MSV	G 1"	2 x IG G 1/2"	89	38	MSV
11	VLI1.412.MS	G 1 1/4"	2 x IG G 1/2"	137	60	MS
12	VLI3.03412.MSV	G 3/4"	3 x IG G 1/2"	125	38	MSV
13	VLI3.01012.MSV	G 1"	3 x IG G 1/2"	127	38	MSV
14	VLI3.11412.MS	G 1 1/4"	3 x IG G 1/2"	137	60	MS
15	VLI4.03412.MSV	G 3/4"	4 x IG G 1/2"	163	38	MSV
16	VLI4.01012.MSV	G 1"	4 x IG G 1/2"	165	38	MSV



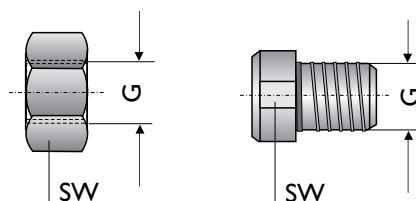
Materialhinweis:  
 MS = Messing blank  
 MSV = Messing vernickelt

Material note:  
 MS = Bare brass  
 MSV = Nickel-plated brass

Weitere Größen oder Sonderanfertigungen auf Anfrage/other sizes or special design on request

#### Verschlusskappen/Closing Cups

Pos.	Art. No.	Innengewinde Internal Thread G
1	VK.018.MSV	G 1/8"
2	VK.014.MSV	G 1/4"
3	VK.038.MSV	G 3/8"
4	VK.012.MSV	G 1/2"
5	VK.034.MSV	G 3/4"
6	VK.010.MSV	G 1"
7	VK.114.MSV	G 1 1/4"
8	VK.112.MSV	G 1 1/2"
9	VK.020.MSV	G 2"



#### Verschlusschrauben/Locking Screws

Pos.	Art. No.	Außengewinde External Thread G
1	VS.0M5.MSV	M 5
2	VS.018.MSV	G 1/8"
3	VS.014.MSV	G 1/4"
4	VS.038.MSV	G 3/8"
5	VS.012.MSV	G 1/2"
6	VS.034.MSV	G 3/4"
7	VS.010.MSV	G 1"
8	VS.114.MS	G 1 1/4"
9	VS.112.MS	G 1 1/2"
10	VS.020.MS	G 2"

Mit Vakuumdrucksperr in der Buchse/*with vacuum pressure lock in the socket*

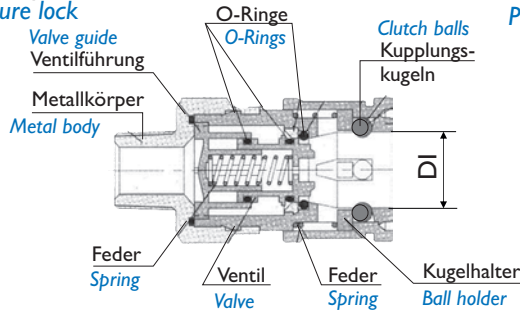
Kupplung bestehend aus:

- Buchse und Stecker, geeignet für Vakuum und Druck bis max. 9 bar
- Fördermedium: Luft,
- Betriebstemperatur: 0 - 60° C
- Standardfarbe: hellgrau (auf Wunsch: schwarz)

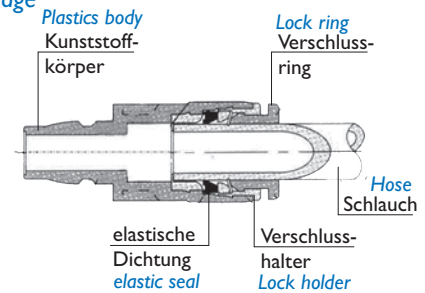
Clutch consisting of:

- Socket and plug suitable for vacuum and pressure to max. 9 bar
- Transportation medium: Air
- Working temperature: 0 - 60° C
- Standard color: light grey (on request: black)

Buchse mit Drucksperr  
*Socket with pressure lock*

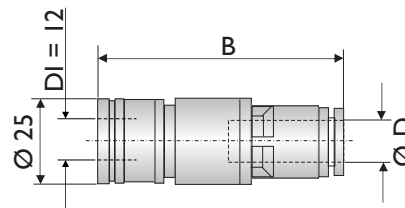


Stecker mit freiem Durchgang  
*Plug with free passage*



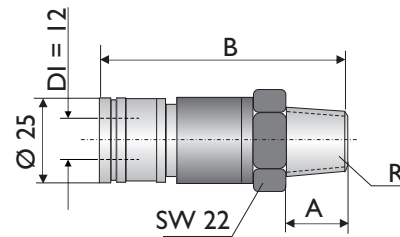
Buchse mit Steckanschluss/*Sockets with plug in*

Art. No.	Schlauch-Ø D/ Hose dia. D mm	B	Gewicht/ Weight g	eff. Fläche/ eff. Area mm <sup>2</sup>
45.001	6	55	23	11,5
45.002	8	55	23	19,8
45.003	10	60	28	22,6
45.004	12	60	29	23,0



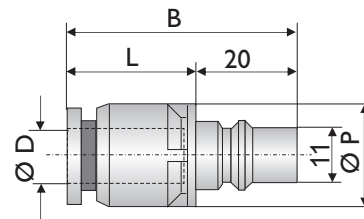
Buchse mit Gewindeanschluss/*Sockets with thread connection*

Art. No.	Gewinde- anschluss/ Thread connect	A	B	Gewicht/ Weight g	eff. Fläche/ eff. Area mm <sup>2</sup>
45.011	R 1/4"	11	50	41,0	22,9
45.012	R 3/8"	12	51	43,5	24,1
45.013	R 1/2"	13	54	53,3	24,2



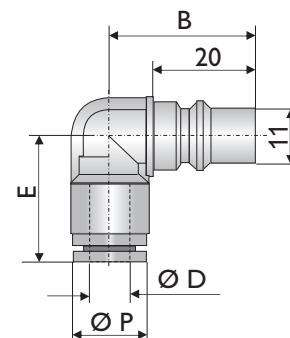
Stecker mit freiem Durchgang/*Plugs with free passage*

Art. No.	Schlauch-Ø D/ Hose dia. D mm	B	L	ØP	Gewicht/ Weight g	eff. Fläche/ eff. Area mm <sup>2</sup>
45.021	6	39,0	19,0	16	6,0	12,5
45.022	8	39,0	19,0	16	6,5	23,3
45.023	10	45,5	25,5	20	12,5	33,8
45.024	12	45,5	25,5	20	14,0	33,1



Winkelstecker mit freiem Durchgang/*Angle plugs with free passage*

Art. No.	Schlauch-Ø D/ Hose dia. D mm	B	ØP	E	Gewicht/ Weight g	eff. Fläche/ eff. Area mm <sup>2</sup>
45.031	6	28	14,5	24	7,5	10,7
45.032	8	28	14,5	24	7,5	17,5
45.033	10	31	21,0	30	15,0	26,3
45.034	12	31	21,0	30	16,0	29,0



## Rotationsverschraubungen Serie RGN + RWN

### Rotary Joints Series RGN + RWN

**Anwendung:**

Diese, mit einem Kugellager ausgestatteten Rotationsverschraubungen, werden dort eingesetzt, wo Anschlüsse schnelle Dreh- und Schwenkbewegungen ausführen müssen.

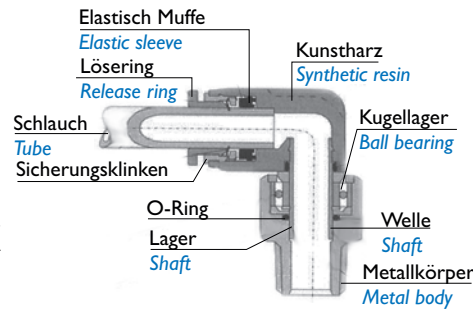
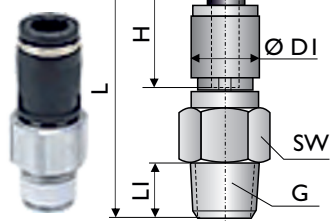
**Application:**

These rotary joints are equipped with ball bearings and are used for connections, which have to make fast rotating and swiveling movements.

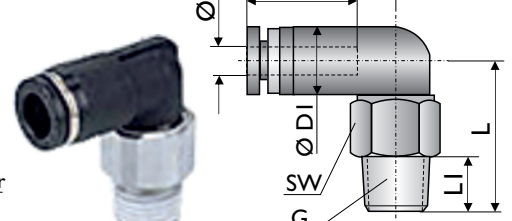
Einsatz bei/used with	Luft, Vakuum/Air, Vacuum
Betriebsdruck/ Operating Pressure	0 - 9 bar
Vakuum/Vacuum	-999,9 mbar
Betriebstemperatur/ Working Temperature	0° - 60°C

Art. No.	Schlauch-Ø Tube dia. Ø D	Abmessungen/Dimensions in mm						Gewicht/ Weight g	UPM (min <sup>-1</sup> )	Durchgangs- öffnung/ Through hole dia. Ø mm	eff. Fläche/ effective area mm <sup>2</sup>
		G	L	LI	H	Ø DI	SW				
RGN.04M5		M5x0,8	33	3				13		1,8	1,9
RGN.04M6	4	M6x1,0	34	4	16	10	12	13	500	2,5	4,2
RGN.0418		R1/8"	34	8				14		2,5	3,6
RGN.06M5		M5x0,8	36	3				19		2,5	3,6
RGN.06M6		M6x1,0	37	4				19		3	4,5
RGN.0618	6	R1/8"	37	8	17	12,5	14	18	500	4	9
RGN.0614		R1/4"	39	11				23		4	9
RGN.0818		R1/8"	46	8				34		6	
RGN.0814	8	R1/4"	45	11	19	14,5	17	32	400	6	20
RGN.0838		R3/8"	45	12				39		6	
RGN.1018		R1/8"	56	8				22	68	7	
RGN.1014		R1/4"	59	11				22	74	7	
RGN.1038	10	R3/8"	57	12	20	17,8	22	70	300	8	35
RGN.1012		R1/2"	59	15				22	86	8	
RGN.1214		R1/4"	62	11				94		7	
RGN.1238	12	R3/8"	62	12	24	20,8	24	95	250	9,5	50
RGN.1212		R1/2"	62	15				102		9,5	

Serie/Series RGN  
gerade Ausführung  
Straight type



Serie/Series RWN  
Winkelausführung  
Elbow type



Art. No.	Schlauch-Ø/ Tube dia. Ø D	Abmessungen/Dimensions in mm							Gewicht/ Weight g	UPM (min <sup>-1</sup> )	Durchgangs- öffnung/ Through hole dia. Ø mm	eff. Fläche/ effective area mm <sup>2</sup>
		G	L	LI	H	HI	Ø DI	SW				
RWN.04M5		M5x0,8	20,5	3					13		1,8	1,5
RWN.04M6	4	M6x1,0	21,5	4	15	20	10	12	14	500	2,5	4
RWN.0418		R1/8"	22	8					15		2,5	2,9
RWN.06M5		M5x0,8	23,5	3					20		2,5	2,9
RWN.06M6		M6x1,0	24,5	4					20		3	6,1
RWN.0618	6	R1/8"	24	8	17	23	12,5	14	19	500	4	7,5
RWN.0614		R1/4"	26	11					24		4	7,5
RWN.0818		R1/8"	31,5	8					35		6	
RWN.0814	8	R1/4"	30,5	11	18	26	14,5	17	33	400	6	16,5
RWN.0838		R3/8"	30,5	12					41		6	
RWN.1018		R1/8"	35	8					22	61	7	22
RWN.1014		R1/4"	38	11					22	67	7	21
RWN.1038	10	R3/8"	36	12	20	30	17,5	22	63	300	8	30
RWN.1012		R1/2"	38,5	15					22	79	8	24
RWN.1214		R1/4"	41	11					84		7	
RWN.1238	12	R3/8"	42	12	23,5	33	21	24	85	250	9,5	42,5
RWN.1212		R1/2"	42	15					91		9,5	

## High-Speed Rotationsverschraubungen Serie RGH + RWH

### High Speed Rotary Joints Series RGH + RWH

**Anwendung:**

Diese, mit zwei Kugellagern ausgestatteten High-Speed-Rotationsverschraubungen, werden dort eingesetzt, wo Anschlüsse schnelle Dreh- und Schwenkbewegungen ausführen müssen und normale Rotationsverschraubungen nicht ausreichen.

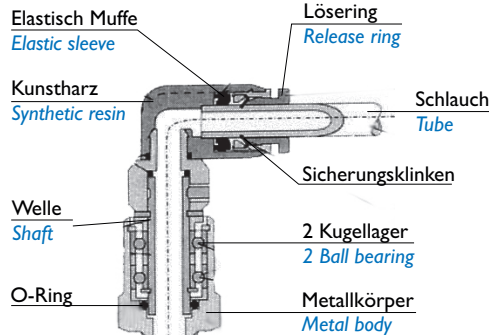
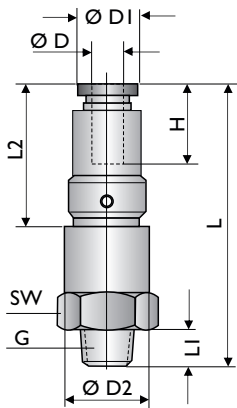
**Application:**

These rotary joints are equipped with 2 ball bearings and are used for connections, which have to make fast rotating and swiveling movements and where normal rotary joints are insufficient.

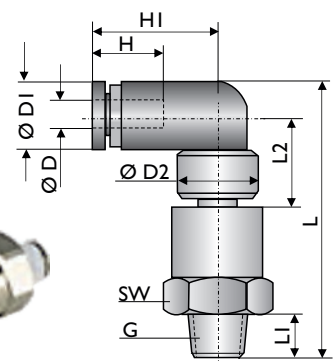
Einsatz bei/used with	Luft, Vakuum/Air, Vacuum
Betriebsdruck/ Operating Pressure	0 - 9 bar
Vakuum/Vacuum	-999,9 mbar
Betriebstemperatur/ Working Temperature	0° - 60°C

Art. No.	Schlauch-Ø Tube dia. Ø D	Abmessungen/Dimensions in mm									Gewicht/ Weight g	UPM (min <sup>-1</sup> )	Durchgangs- öffnung/ Through hole dia. Ø mm	eff. Fläche/ effective area mm <sup>2</sup>
		G	L	LI	L2	H	Ø D1	Ø D2	SW					
RGH.04M5		M5x0,8	43	3	23						26		1,8	2,2
RGH.04M6	4	M6x1,0	44	4	23	15	11	12	12		27	1500	3	3
RGH.0418		R1/8"	48	8	23						29		3	3,4
RGH.0618		R1/8"	54,5	8	27,5						50		4,6	12,8
RGH.0614	6	R1/4"	57,5	11	27,5	16,5	13	17	17		57	1200	4,6	12,2
RGH.0818		R1/8"	58	8	30						55		5	10,7
RGH.0814	8	R1/4"	61	11	30	17,5	15	17	17		60	1200	5	11,5
RGH.1038		R3/8"	68	12	31,5						122		7,5	41,5
RGH.1012	10	R1/2"	71	15	31,5	20	20	23,5	24		138	900	7,5	42,9
RGH.1238		R3/8"	70	12	35,5						126		9	51,2
RGH.1212	12	R1/2"	73,5	15	35,5	23	21	23,5	24		142	900	9	49,6

Serie/Series RGH  
gerade Ausführung  
Straight type



Serie/Series RWH  
Winkelausführung  
Elbow type



Art. No.	Schlauch-Ø/ Tube dia. Ø D	Abmessungen/Dimensions in mm									Gewicht/ Weight g	UPM (min <sup>-1</sup> )	Durchgangs- öffnung/ Through hole dia. Ø mm	eff. Fläche/ effective area mm <sup>2</sup>
		G	L	LI	L2	H	HI	Ø D1	Ø D2	SW				
RWH.04M5		M5x0,8	35	3							22		1,8	2,2
RWH.04M6	4	M6x1,0	36	4	13	15	19,5	10	11,5	12	23	1500	3	4,5
RWH.0418		R1/8"	38	8							27		3	4,1
RWH.0618		R1/8"	45	8							48		4,6	10
RWH.0614	6	R1/4"	48	11	17	16,5	22,5	13	16,5	17	53	1200	4,6	10,5
RWH.0818		R1/8"	46	8							50		5	11,5
RWH.0814	8	R1/4"	49	11	18	17,5	25	15	16,5	17	56	1200	5	13
RWH.1038		R3/8"	56,5	12							108		7,5	27,2
RWH.1012	10	R1/2"	59,5	15	21	20	28,5	18	23,5	24	126	900	7,5	27
RWH.1238		R3/8"	58,5	12							113		9	42,5
RWH.1212	12	R1/2"	61,5	15	23	23	32	21,5	23,5	24	130	900	9	41,6

## High-Speed Rotationsverschraubungen Serie RMFH + RMMH

### High Speed Rotary Joints Series RMFH + RMMH

#### Anwendung:

Diese, mit zwei Kugellagern ausgestatteten High-Speed-Rotationsverschraubungen, werden dort eingesetzt, wo Anschlüsse schnelle Dreh- und Schwenkbewegungen ausführen müssen und normale Rotationsverschraubungen nicht ausreichen.

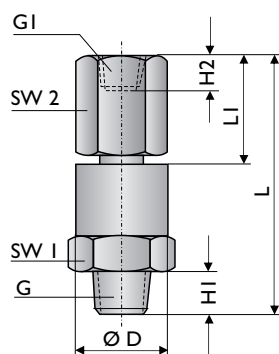
#### Application:

These rotary joints are equipped with 2 ball bearings and are used for connections, which have to make fast rotating and swiveling movements and where normal rotary joints are insufficient.

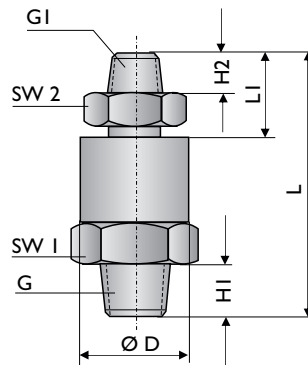
Einsatz bei/used with	Luft, Vakuum/Air, Vacuum
Betriebsdruck/ Operating Pressure	0 - 9 bar
Vakuum/Vacuum	-999,9 mbar
Betriebstemperatur/ Working Temperature	0° - 60°C

Art. No.	G	Abmessungen/Dimensions in mm								Gewicht/ Weight g	UPM (min <sup>-1</sup> )	Durchgangs- öffnung/ Through hole dia. Ø mm	eff. Fläche/ effective area mm <sup>2</sup>
		GI	HI	H2	L	LI	Ø D	SW1	SW2				
RMFH.1818	R1/8"	R1/8"		8	47	19			14	51			13,9
RMFH.1814	R1/8"	R1/4"	8	11	51	23	16,5	17	17	62	1200	5	11
RMFH.1418	R1/4"	R1/8"		8	50	19			14	56			14,8
RMFH.1414	R1/4"	R1/4"	11	11	54	23	16,5	17	17	68	1200	5	11,2
RMFH.3838	R3/8"	R3/8"		12	62	26,5			22	134			47,2
RMFH.3812	R3/8"	R1/2"	12	15	64	28	23,5	24	24	140	900	9	53,1
RMFH.1238	R1/2"	R3/8"		12	65	26,5			22	150			47,5
RMFH.1212	R1/2"	R1/2"	15	15	67	28	23,5	24	24	160	900	9	50,2

Serie/Series RMFH  
gerade Ausführung  
Straight type



Serie/Series RMMH  
gerade Ausführung  
Straight type



Art. No.	G	Abmessungen/Dimensions in mm								Gewicht/ Weight g	UPM (min <sup>-1</sup> )	Durchgangs- öffnung/ Through hole dia. Ø mm	eff. Fläche/ effective area mm <sup>2</sup>
		GI	HI	H2	L	LI	Ø D	SW1	SW2				
RMMH.1818	R1/8"	R1/8"		8	43,5	15,5				42			12,8
RMMH.1814	R1/8"	R1/4"	8	11	46	18	16,5	17	14	47	1200	5	12,2
RMMH.1418	R1/4"	R1/8"		8	46,5	15,5				48			11,1
RMMH.1414	R1/4"	R1/4"	11	11	49	18	16,5	17	14	53	1200	5	11,4
RMMH.3838	R3/8"	R3/8"		12	57	21,5				112			48,8
RMMH.3812	R3/8"	R1/2"	12	15	60	24,5	23,5	24	22	129	900	9	47,9
RMMH.1238	R1/2"	R3/8"		12	60	21,5				130			50,5
RMMH.1212	R1/2"	R1/2"	15	15	63	24,5	23,5	24	22	147	900	9	47,0