KĀDANT

FLUID HANDLING

Type G®
Rotary Unions

Machine Tools
Transfer Lines
Gun Drills
CNC Machines
Spindles
Grinding Machines
Drilling
Presses
Milling
Clutches
Rotary Index Tables

Coolant | MQL | Hydraulic Oil | Air | Dry Running

The G rotary union is a high performance, high precision rotary union for coolant, air, hydraulic and cutting oil applications. The G rotary unions are generally applied to the machine tool industry.

Based on decades of mechanical seal design and application expertise, the G rotary union line is built to perform under the most demanding conditions. A thorough understanding of seal load optimization, seal wear characteristics, and application knowledge means the G rotary union can provide years of reliable service for coolant, air, and hydraulic oil applications.

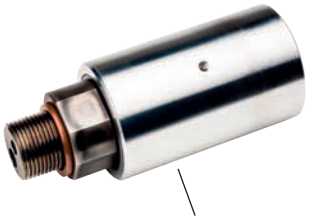
Full Range of Standard and Custom Solutions

Up to 6 passages

Bearingless for high speed

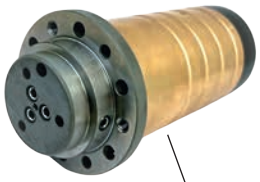
Bearingless compact design

Bearing-supported rotor-mounted



2 passages for high pressure

High pressure bearing supported bore-mounted



Multi-passage for high speed

All-in-one axial & radial inlet

Features

- High precision rotary union up to 42,000 rpm and 250 bar
- Standard and customized rotary unions
- Bearingless unions available
- Different combination of seal materials
- MQL application
- Optimized seal balance ratio for minimal friction
- Full flow area, minimal pressure drop
- High speed High pressure capability

Benefits

- Longer seal life (laser technology)
- Seals handle coolant and compressed air (8 bar at max speed)
- Mechanical seals always in contact: No leakage during commutation from coolant to dry running
- Low operational temperature to increase bearing life
- No leakage during tool change

Our Standard & Custom Solutions

Quick Select Chart

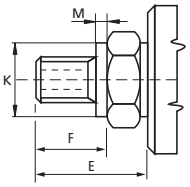
Type	Media				Pressure (Max.)		Temperature (Max.)		Speed (RPM)
	Coolant	Air	Oil	MQL	BAR	PSI	°C	°F	
GA					105	1.500	120	250	6.000
GAI					70	1.000	120	250	3.500
GFR / GFRA		(1)			80	1.160	90	195	10.000
GFL / GFLA		(1)			80	1.160	90	195	15.000
GFS / GFSA					80	1.160	90	195	20.000
GFP / GFPA					150	2.175	90	195	15.000
GHP / GHPA					140	2.030	90	195	32.000
GHR / GHRA					80	1.160	90	195	16.000
GHS / GHSA					80	1.160	90	195	42.000
G/50151					80	1.500	120	250	8.000
G2M/G4M/G5M		(1)			250	3.610	90	195	100
G5007					70	1.000	120	250	1500
Spindle Mounted		(1)			80	1.160	120	250	42.000 (1)

Recommended

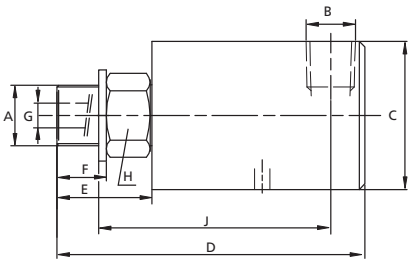
Acceptable

Contact us for more info

Type GA



Rotor with pilot



Type	A	B	C	D	E	F	G	H	J	K	M	Weight (Kg)
GA003002503	M10 X 1 RH	1/8" NPT	31	72	22	11	3,2	17	54	-	-	0,15
GA003002505	M10 X 1 RH	1/8" NPT	31	72	22	11	3,2	17	54	11 $^{0}_{-0,011}$	3	0,15
GA003002504	G 1/4" (BSP) RH	1/8" NPT	31	72	22	13	3,2	17	52	-	-	0,15
GA006015830	1/4" NPT RH	1/4" NPT	39	85	29	17	6,5	22	58	-	-	0,5
GA006000594	5/8"- 18 UNF RH	1/4" NPT	39	81	25	13	6,5	22	61	-	-	0,5
GA006003592	5/8"- 18 UNF LH	1/4" NPT	39	81	25	13	6,5	22	61	-	-	0,5
GA006002506	G 1/4" (BSP) RH	1/4" NPT	39	81	25	13	6,5	22	61	-	-	0,5
GA006002507	G 1/4" (BSP) LH	1/4" NPT	39	81	25	13	6,5	22	61	-	-	0,5
GA009015831	3/8" NPT RH	3/8" NPT	44	101	27	17	8,5	22	70,5	-	-	0,5
GA009002510	5/8"- 18 UNF RH	3/8" NPT	44	100	26	16	8,5	22	72,5	-	-	0,5
GA009003594	5/8"- 18 UNF LH	3/8" NPT	44	100	26	16	8,5	22	72,5	-	-	0,5
GA009000601	G 3/8" (BSP) RH	3/8" NPT	44	100	26	16	8,5	22	72,5	-	-	0,5
GA009003593	G 3/8" (BSP) LH	3/8" NPT	44	100	26	16	8,5	22	72,5	-	-	0,5
GA009001590	M16 X 2 RH	3/8" NPT	44	100	26	16	8,5	22	72,5	-	-	0,5
GA012015832	1/2" NPT RH	1/2" NPT	59	118	37	2	13	36	83	-	-	0,7
GA012001248	3/4"- 16 UNF RH	1/2" NPT	59	115	34	19	13	36	86	-	-	0,7
GA012003596	3/4"- 16 UNF LH	1/2" NPT	59	115	34	19	13	36	86	-	-	0,7
GA012002217	G 1/2" (BSP) RH	1/2" NPT	59	115	34	19	13	36	86	-	-	0,7
GA012003597	G 1/2" (BSP) LH	1/2" NPT	59	115	34	19	13	36	86	-	-	0,7
GA012002316	G 3/4" (BSP) RH	1/2" NPT	59	115	34	19	13	36	86	-	-	0,7
GA012003598	G 3/4" (BSP) LH	1/2" NPT	59	115	34	19	13	36	86	-	-	0,7
GA012003595	M20 X 1,5 RH	1/2" NPT	59	115	34	24	13	36	83	22 $^{-0,007}_{-0,020}$	5	0,7
GA012003599	M20 X 1,5 LH	1/2" NPT	59	115	34	24	13	36	83	22 $^{-0,007}_{-0,020}$	5	0,7
GA012002431	M22 X 1,5 RH	1/2" NPT	59	115	34	19	13	36	83	27 $^{-0,007}_{-0,020}$	3	0,7
GA012003600	M22 X 1,5 LH	1/2" NPT	59	115	34	19	13	36	83	27 $^{-0,007}_{-0,020}$	3	0,7

Consult factory for additional thread type.

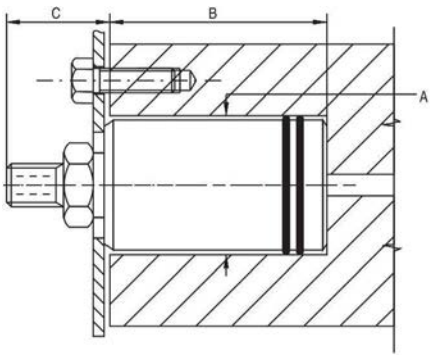
Fluid	Pressure (BAR)	Temperature (°C)	RPM	RPM (with pilot)
Air	10	120	1.500	1.500
Coolant	70	120	3.500	6.000
Hydraulic Oil	105	120	3.500	6.00

INSTALLATION INSTRUCTIONS

Overview

- Precision ball bearings lubricated for life
- Hardened stainless steel rotor
- Optimised seal balance ratio for minimal friction
- Smooth running, no vibration
- Body available in anodised aluminium or brass
- Stationary seal face available in carbon graphite, bronze seal face for hydraulic oil above 70 bar
- Possibility of customized tests on customers parameters
- Smooth running, no vibration
- No leakage during tool change

Type GAI



Type	Rotor		A+	B	C	Weight (Kg)
GAI003002516	M10 X 1	RH	31	48	24	0,15
GAI003002515	G 1/4" (BSP)	RH	31	48	24	0,15
GAI006001215	5/8" - 18 UNF	RH	39	54	27	0,5
GAI006003601	5/8" - 18 UNF	LH	39	54	27	0,5
GAI006002372	G 1/4" (BSP)	RH	39	54	27	0,5
GAI006003602	G 1/4" (BSP)	LH	39	54	27	0,5
GAI009002780	5/8" - 18 UNF	RH	44	72	28	0,5
GAI009003604	5/8" - 18 UNF	LH	44	72	28	0,5
GAI009000824	G 3/8" (BSP)	RH	44	72	28	0,5
GAI009003603	G 3/8" (BSP)	LH	44	72	28	0,5
GAI009001380	M16 X 2	RH	44	72	28	0,5
GAI012000640	3/4" - 16 UNF	RH	59	78	37	0,7
GAI012003605	3/4" - 16 UNF	LH	59	78	37	0,7
GAI012003477	G 1/2" (BSP)	RH	59	78	37	0,7
GAI012003607	G 1/2" (BSP)	LH	59	78	37	0,7
GAI012001419	G 3/4" (BSP)	RH	59	78	37	0,7
GAI012003606	G 3/4" (BSP)	LH	59	78	37	0,7

+ Dimension tolerance is +0,31 +0,4

Fluid	Pressure (BAR)	Temperature (°C)	RPM	RPM (with pilot)
Air	10	120	1.500	1.500
Coolant	70	120	3.500	6.000
Hydraulic Oil	105	120	3.500	6.00

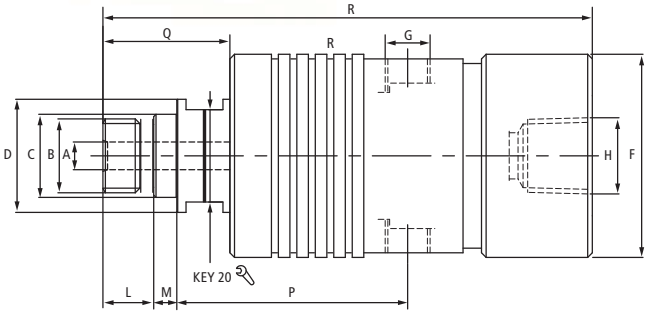
INSTALLATION INSTRUCTIONS

Overview

- Compact design mounted inside shaft
- Hardened stainless steel rotor
- Optimised seal balance ratio for minimal friction
- Available with non-contracting seal ring with hydrodynamic grooves
- Anodised aluminium body

Type GFR/GFRA

Fluid	Pressure (BAR)	Temperature (°C)	RPM
Coolant	80	90	10.000
MQL	10	90	10.000
Air	8	50	10.000
Dry Run	-	-	10.000



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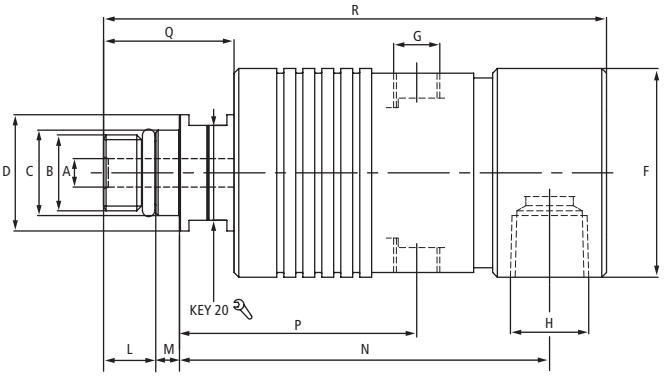
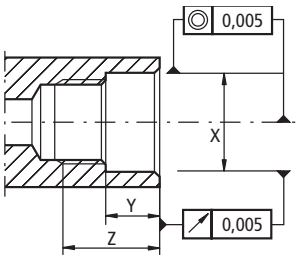


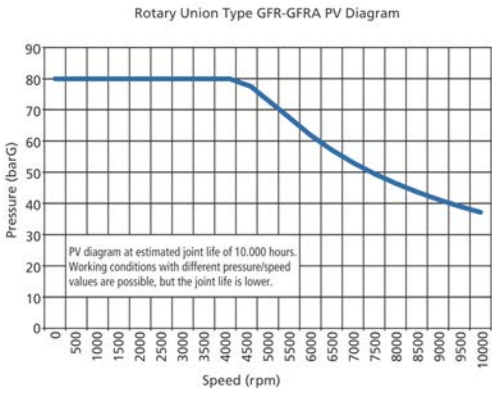
RADIAL INLET

Type	A	B	C	D	E	F	G	H	L	M	N	P	Q	R	S	T	Weight (Kg)
GFR009030110	6	M16X1,5 LH	18 g6	24,5	-	44	1/8" NPT	3/8" NPT	11	5	-	50,0	27,5	106	-	-	0,5
GFR009030111	6	5/8" 18 UNF LH	16,650/16,645	24,5	-	44	1/8" NPT	3/8" NPT	14	5	-	50,0	30	109	-	-	0,5
GFR009033369	6	M16X1,5 RH	18 g6	24,5	-	44	4 x 1/8" NPT	3/8" NPT	11	5	-	50,0	27,5	106	-	-	0,5
GFR009041492	6	M16X1,5 LH	16 g6	24,5	-	44	4 x 1/8" NPT	3/8" NPT	11	5	-	50,0	27,5	106	-	-	0,5

Type	A	B	C	D	E	F	G	H	L	M	N	P	Q	R	S	T	Weight (Kg)
GFRA009030120	6	M16X1,5 LH	18 g6	24,5	-	44	1/8" NPT	3/8" NPT	11	5	78	50,0	27,5	106	-	-	0,5
GFRA009030121	6	5/8" 18 UNF LH	16,650/16,645	24,5	-	44	1/8" NPT	3/8" NPT	14	5	78	50,0	30,0	109	-	-	0,5
GFRA009049004	6	M14X1,5 LH	15 g6	24,5	-	44	1/8" NPT	3/8" NPT	11	5	78	50,0	27,5	106	-	-	0,5
GFRA009029898	6	M12X1,25 LH	14 g6	24,5	-	44	1/8" NPT	3/8" NPT	11	5	78	50,0	27,5	106	-	-	0,5
GFRA009038688	6	M16X1,5 RH	18 g6	24,5	-	44	4 x 1/8" NPT	3/8" NPT	11	5	78	50,0	27,5	106	-	-	0,5



Spindle Detail
see pag. 17 for detail



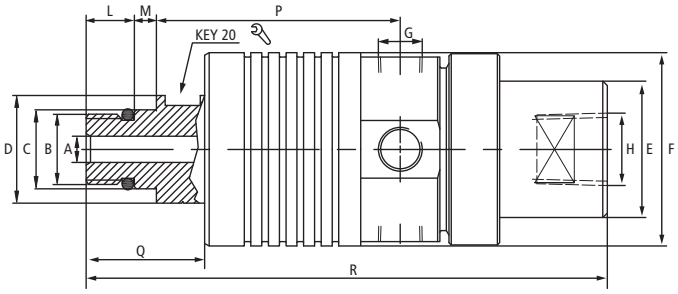
INSTALLATION INSTRUCTIONS

Overview

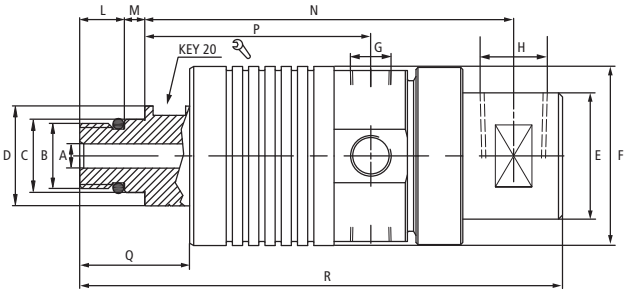
- Labyrinth seal and drain holes protect bearings
- Optimised seal balance ratio
- Silicon carbide seal faces resist wear and thermal shock
- Precision ball bearings eliminate vibration
- Anodised aluminium body
- Full flow area, minimal pressure drop
- Stainless steel spring located outside the flowu Stainless steel rotor resists corrosion

Type GFL/GFLA

Fluid	Pressure (BAR)	Temperature (°C)	RPM
Coolant	80	90	15.000
MQL	10	90	15.000
Air	8	50	15.000
Dry Run	-	-	15.000



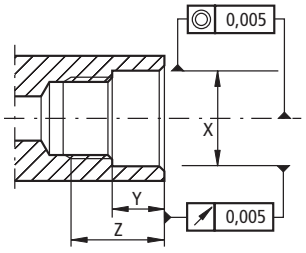
AXIAL INLET



RADIAL INLET

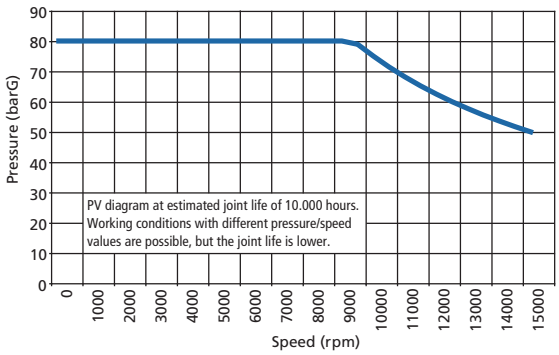
Type	A	B	C	D	E	F	G	H	L	M	N	P	Q	R	S	T	Weight (Kg)
GFL009028400	6	M16X1,5 LH	18 g6	24,5	31	44	1/8" NPT	3/8" NPT	11	5	-	55,5	27	118,6	-	-	0,5
GFL009028401	6	5/8" UNF LH	16,650/16,645	24,5	31	44	1/8" NPT	3/8" NPT	14	5	-	55,5	30	121,6	-	-	0,5
GFL009028402	6	M10X1,0 LH	11 h6	24,5	31	44	1/8" NPT	3/8" NPT	13	3	-	55,5	27	118,6	-	-	0,5
GFL009031846	6	M16X1,5 LH	16 g6	24,5	31	44	4 x 1/8" NPT	3/8" BSP	11	5	-	44,5	27	118,6	-	-	0,5
GFL009047324	6	M16X1,5 RH	18 g6	24,5	31	44	4 x 1/8" NPT	3/8" BSP	11	5	-	44,5	27	118,6	-	-	0,5

Type	A	B	C	D	E	F	G	H	L	M	N	P	Q	R	S	T	Weight (Kg)
GFLA009028405	6	M16X1,5 LH	18 g6	24,5	31	44	1/8" NPT	3/8" NPT	11	5	90,6	55,5	27	118,6	-	-	0,5
GFLA009028406	6	5/8" UNF LH	16,650/16,645	24,5	31	44	1/8" NPT	3/8" NPT	14	5	90,6	55,5	30	121,6	-	-	0,5
GFLA009028408	6	M16X1,5 LH	18 g6	24,5	31	44	1/8" NPT	3/8" NPT	11	5	90,6	55,0	27	118,6	-	-	0,5
GFLA009036875	6	M16X1,5 LH	16 g6	24,5	-	44	4 x 1/8" NPT	3/8" BSP	11	5	90,6	44,5	27	118,6	-	-	0,5
GFLA009028408	6	M16X1,5 RH	18 g6	24,5	-	44	4 x 1/8" NPT	3/8" BSP	11	5	90,6	44,5	27	118,6	-	-	0,5



Spindle Detail
see pag. 17 for detail

Rotary Union Type GFL-GFLA PV Diagram



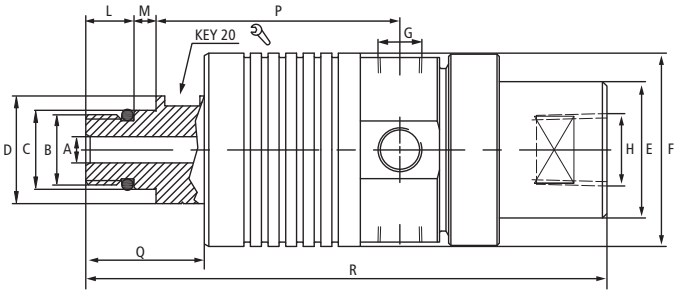
INSTALLATION INSTRUCTIONS

Overview

- Special seal design permits dry running
- Optimised seal balance ratio for minimal friction
- Precision angular contact bearings widely spaced to eliminate wobble and vibration
- Labyrinth seal and drain holes protect bearings
- Anodised aluminium body
- Reduced coolant misting for improved air quality
- Low heat generation in bearings and mechanical seal
- No leakage during tool change commutation
- Low vibration for precise machining
- Also available for rotation with compressed air
- Supplied with bearings run-in upon request
- Closing ring suitable for proximity sensing draw bar position

Type GFS/GFSA

Fluid	Pressure (BAR)	Temperature (°C)	RPM
Coolant	80	90	15.000
MQL	10	90	15.000
Air	8	50	15.000
Dry Run	-	-	15.000



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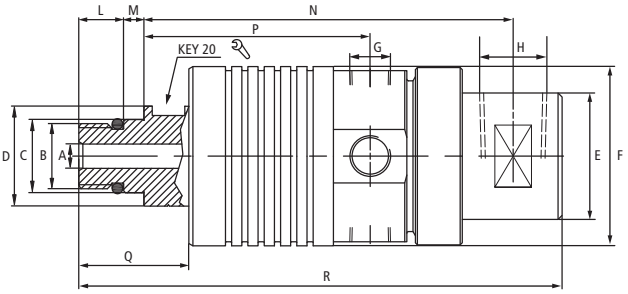
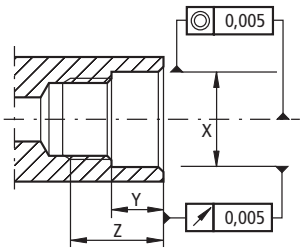


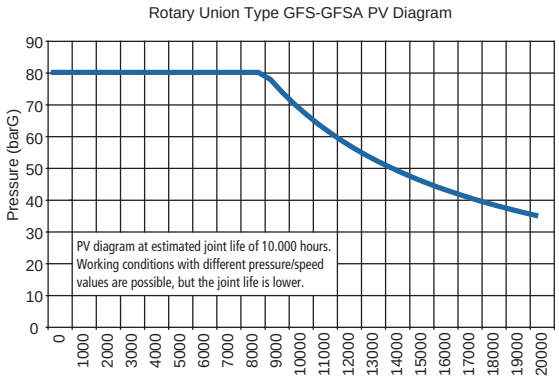
RADIAL INLET

Type	A	B	C	D	E	F	G	H	L	M	P	Q	R	Weight (Kg)
GFS009028410	6	M16 X 1,5 LH	18g6	24,5	31	44	1/8" NPT	3/8" BSP	11	5	55,5	27	118,6	0,50
GFS009028411	6	5/8" - UNF LH	16,650/16,645	24,5	31	44	1/8" NPT	3/8" BSP	14	5	55,5	30	121,1	0,50

Type	A	B	C	D	E	F	G	H	L	M	N	P	Q	R	Weight (Kg)
GFSA009028415	6	M16 X 1,5 LH	18g6	24,5	31	44	1/8" NPT	3/8" BSP	11	5	90,1	55,5	27	118,6	0,50
GFSA009028416	6	5/8" - UNF LH	16,650/16,645	24,5	31	44	1/8" NPT	3/8" BSP	14	5	90,1	55,5	30	121,1	0,50



Spindle Detail
see installation instructions



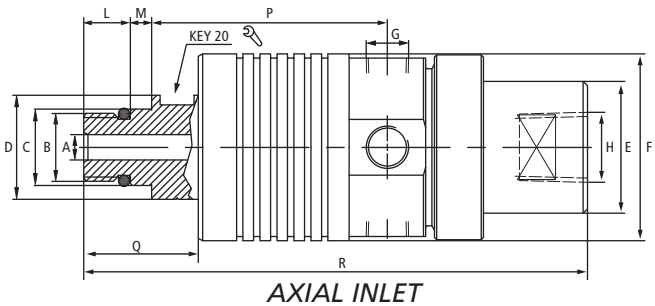
INSTALLATION INSTRUCTIONS

Overview

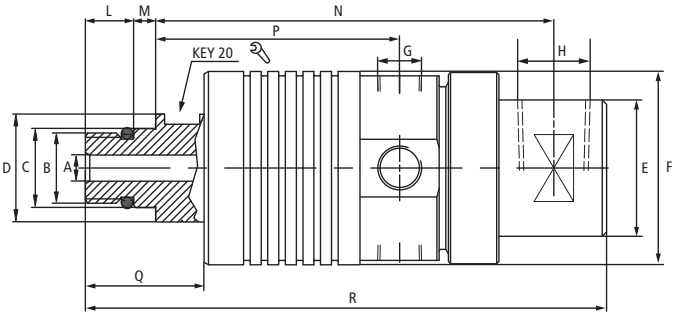
- Special seal design permits dry running
- Optimised seal balance ratio for minimal friction
- High precision angular contact bearings eliminate wobble and vibration
- Labyrinth seal and drain holes protect bearings
- Anodised aluminium body
- High speed, dry run applications
- Reduced coolant misting for improved air quality
- Low heat generation in bearings and mechanical seal
- No leakage during tool change commutation
- Low vibration for precise machining
- Also available for rotation with compressed air
- Supplied with bearings run-in upon request
- Closing ring suitable for proximity sensing draw bar position

Type GFP/GFPA

Fluid	Pressure (BAR)	Temperature (°C)	RPM
Coolant	150	90	15.000
MQL	10	90	15.000
Air	8	50	15.000
Dry Run	-	-	15.000



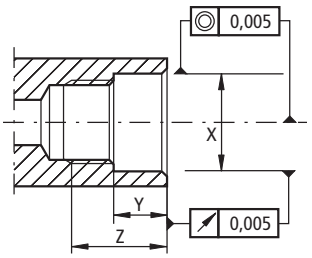
AXIAL INLET



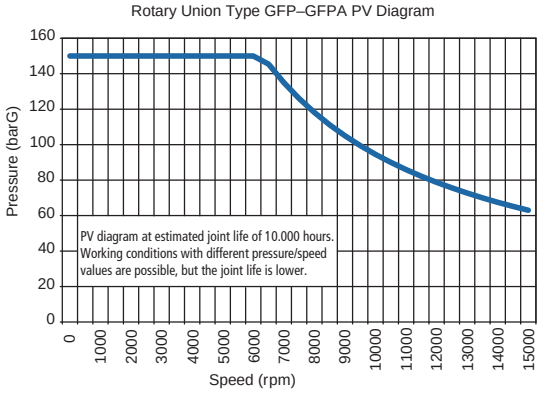
RADIAL INLET

Type	A	B	C	D	E	F	G	H	L	M	P	Q	R	Weight (Kg)
GFP009	6	M16 X 1,5 LH	18g6	24,5	31	44	1/8" NPT	3/8" BSP	11	5	55,5	27	118,6	0,50
GFP009047310	6	5/8" - UNF LH	16,650/16,645	24,5	31	44	1/8" NPT	3/8" BSP	14	5	55,5	30	121,6	0,50

Type	A	B	C	D	E	F	G	H	L	M	N	P	Q	R	Weight (Kg)
GFPA009033396	6	M16 X 1,5 LH	18g6	24,5	31	44	1/8" NPT	3/8" BSP	11	5	90,6	55,5	27	118,6	0,50
GFPA009031188	6	5/8" - UNF LH	16,650/16,645	24,5	31	44	1/8" NPT	3/8" BSP	14	5	90,6	55,5	30	121,6	0,50



Spindle Detail
see installation instructions



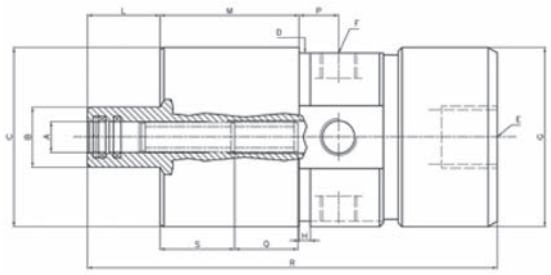
INSTALLATION INSTRUCTIONS

Overview

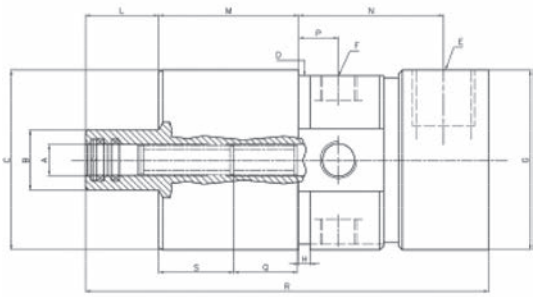
- Labyrinth seal and drain holes protect bearing
- Optimised seal balance ratio
- Silicon carbide seal faces resist wear and thermal shock
- Angular ball bearing design resists side loading
- Low vibration for precise machining
- Anodised aluminium body
- Full flow area, minimal pressure drop
- Multiple stainless steel springs located outside the flow
- Stainless steel rotor resists corrosion
- Closing ring suitable for proximity sensing draw bar position

Type GHR/GHRA

Fluid	Pressure (BAR)	Temperature (°C)	RPM
Coolant	80	90	16.000
MQL	10	90	16.000
Air	8	50	16.000
Dry Run	-	-	16.000



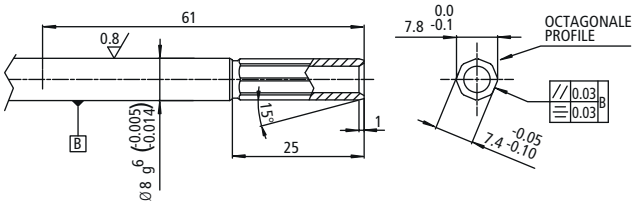
AXIAL INLET

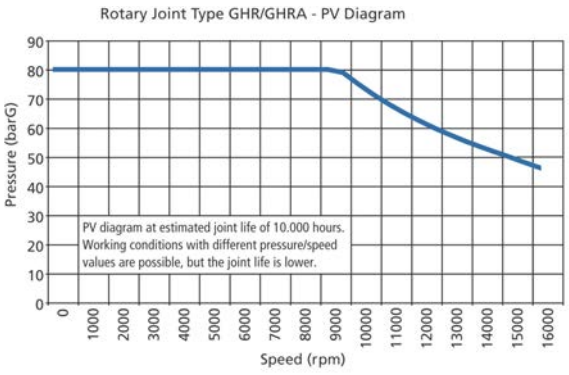


RADIAL INLET

Type	A	B	C	D	E	F	G	H	L	M	P	Q	R	S	Weight (Kg)
GHR009038611	8g6	16	48/h7	45	3/8" BSP	1/8" NPT	48	3	19,5	37,3	10,9	17	107,4	20	0,6

Type	A	B	C	D	E	F	G	H	L	M	P	Q	R	S	Weight (Kg)
GHRA009036867	8g6	16	48/h7	45	3/8" NPT	1/8" NPT	48	3	19,5	37,3	10,9	17	107,4	20	0,6





INSTALLATION INSTRUCTIONS

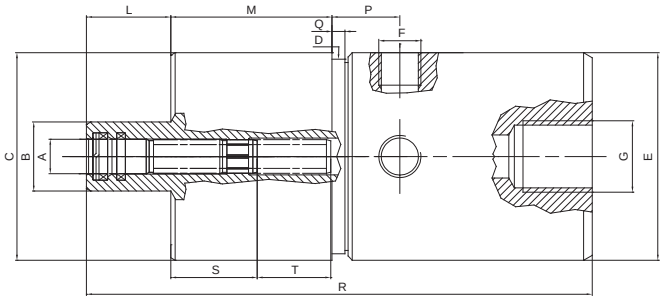
Overview

- Special seal design permits dry running
- Labyrinth seal and drain holes protect bearings
- Optimize seal balance ratio for minimal friction
- Anodized aluminium body
- Full flow area, minimal pressure drop
- Stainless steel rotor resist corrosion
- Long drawbar stroke for maximum flexibility
- No leakage during tool change commutation
- Large drain holes to evacuate coolant from the union
- Supplied with bearings run-in upon request
- Stainless steel springs located outside the flow

Type GHS/GHSA

Fluid	Pressure (BAR)	Temperature (°C)	RPM
Coolant	80	90	32/42 000*
MQL	10	90	32/42 000*
Air	8	50	32/42 000*
Dry Run	-	-	32/42 000*

** with Ceramic Bearings*



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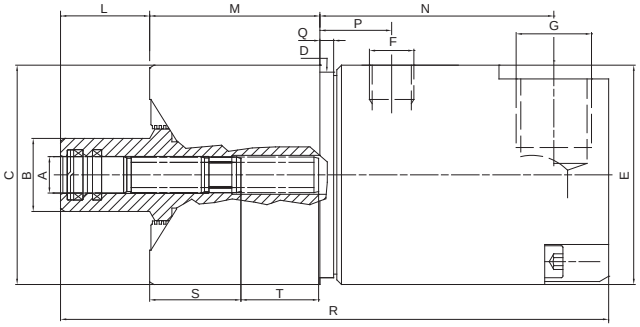
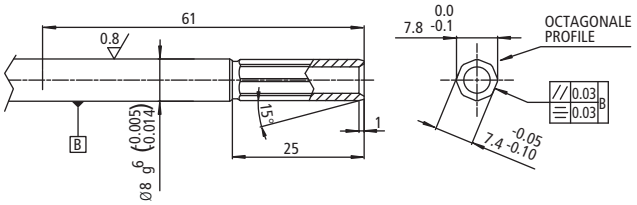


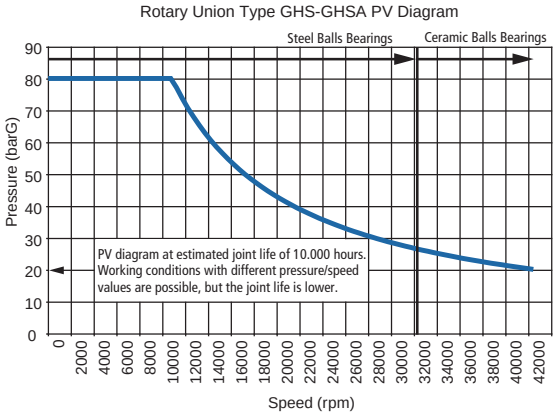
RADIAL INLET

Type	A	B	C	D	E	F	G	L	M	P	Q	R	S	T	Weight (Kg)
GHS009039625	8g6	16	48/h7	45	48	1/8" BSP	1/4" BSP	19,5	37,3	15,7	3	117	20	17	0,60

Type	A	B	C	D	E	F	G	L	M	P	Q	R	S	T	Weight (Kg)
GHSA009039626	8g6	16	48/h7	45	48	1/8" BSP	1/4" BSP	19,5	37,3	15,7	3	117	20	17	0,60



INSTALLATION INSTRUCTIONS



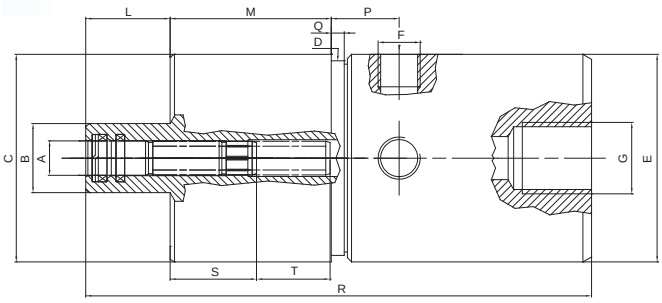
Overview

- Special seal design permits dry running
- Labyrinthseal and drain holes protect bearings
- Optimised seal balance ratio
- High precision angular contact bearings for high speeds
- Anodised aluminium bodyuFull flow area, minimal pressure drop
- Long drawbar stroke for maximum flexibility
- Seal to protect bearings for air pressure in rotor area
- Low heat generation in bearings and mechanical seal
- No leakage during tool change commutation
- Large drain holes to evacuate coolant from the union
- Supplied with bearings run-in upon request

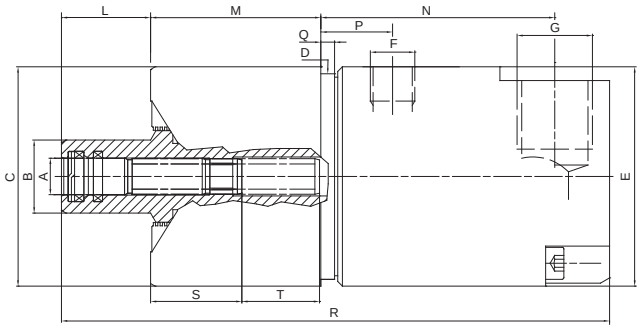
Type GHP/GHPA

Fluid	Pressure (BAR)	Temperature (°C)	RPM
Coolant	150	90	24/32 000*
MQL	10	90	24/32 000*
Air	8	50	24/32 000*
Dry Run	-	-	24/32 000*

** with Ceramic Bearings*



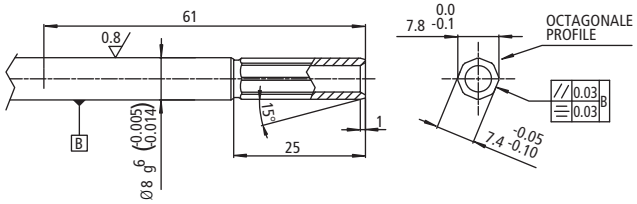
AXIAL INLET



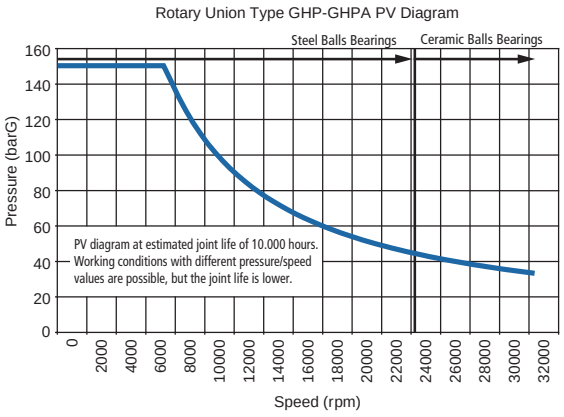
RADIAL INLET

Type	A	B	C	D	E	F	G	L	M	P	Q	R	S	T	Weight (Kg)
GHP009033365	8g6	16	48/h7	45	48	1/8" BSP	3/8" BSP	19,5	37,3	15,7	3	117	20	17	0,60

Type	A	B	C	D	E	F	G	L	M	P	Q	R	S	T	Weight (Kg)
GHPA009042838	8g6	16	48/h7	45	48	1/8" BSP	3/8" BSP	19,5	37,3	15,7	3	117	20	17	0,60



INSTALLATION INSTRUCTIONS

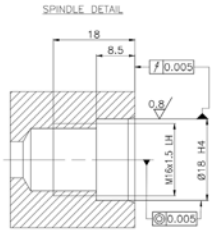


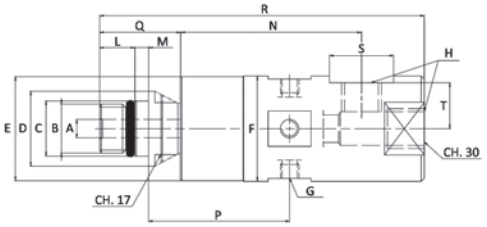
Overview

- Special seal design permits dry running
- Labyrinth seal and drain holes protect bearings
- Optimised seal balance ratio
- High precision angular contact bearings for high speeds
- Anodised aluminium body
- Full flow area, minimal pressure drop
- Long drawbar stroke for maximum flexibility
- Low heat generation in bearings and mechanical seal
- No leakage during tool change commutation
- Large drain holes to evacuate coolant from the union
- Supplied with bearings run-in upon request

Custom Rotary Joints G/50551

Fluid	Pressure (BAR)	Temperature (°C)	RPM
Coolant	100	70	15.000
MQL	10	70	15.000
Air	8	70	15.000
Dry Run	-	-	15.000





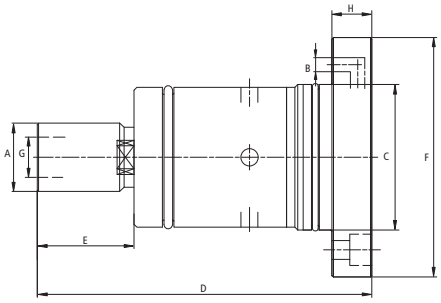
Type	A	B	C	D	E	F	G	H	L	M	N	P	Q	R	S	T	Weight (Kg)
G/50551/0000	6	M16X1,5 LH	18 g6	24,5	34	34,4	M x M6	1/4" BSP	11,5	4,5	69,5	46	26,3	106	21	15	0,4

Overview

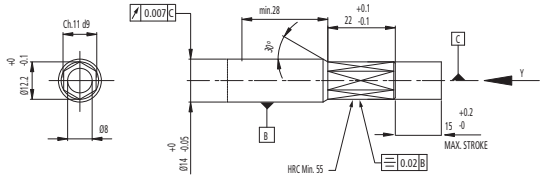
- Available size: m16x1.5 Lh
- Low heat generation in bearings and mechanical seal
- Optimised seal balance ratio to minimise friction
- No losses during tool changeover
- Low vibration for precise machining
- Special seal design enables dry running
- Labyrinth seal and drain holes protect the bearings
- Also available for rotation with compressed air
- Anodised aluminium housing
- Supplied with sealed bearings on request
- Radial and axial input on the same coupling

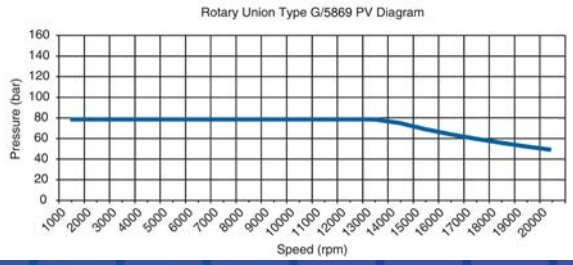
G/5869 Spindle Mounted

Type	Pressure (BAR)	Temperature (°C)	RPM
G/5869	80	90	20.000



Type	A	B	C	D	E	F	G	H
G/5869	24	5	51 f7	117,5	34	84	14,1 H7	14



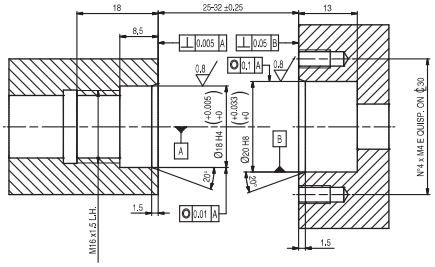


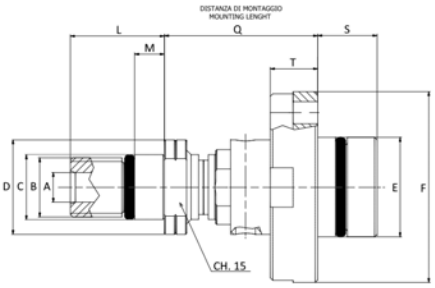
Overview

- Auto-Off™ seal device permits dry running
- Precision bearing for long lifetime
- Tungsten carbide seal faces resist wear and thermal shock
- Drawbar stroke 15 mm
- Coolant connection in flange for reduced hose load
- Anodised aluminium body

Custom Rotary Joints G/50318

Fluid	Pressure (BAR)	Temperature (°C)	RPM
Coolant	150	90	15.000
MQL	10	90	15.000
Air	8	50	15.000
Dry Run	-	-	15.000





Type	A	B	C	D	E	F	G	H	L	M	P	Q	R	S	T	Weight (Kg)
G/50318/0000	6	M16X1,5 LH	18 g4	23	20 e8	38,5	-	-	17,5	5	-	24-31 +0,25/-0,25	-	12	9,6	0,3
G/50317/0000	6	M12X1,25 LH	13 g4	19	20 e8	38,5	-	-	19	6	-	24-31 +0,25/-0,25	-	12	9,6	0,3

Overview

- High-speed bearingless coolant union
- External spindle supported
- Laser lift technology
- Silicon carbide/carbon grafite seals
- Stub rotor mounted directly onto the spindle end compact, precision design for installation flexibility
- Seal faces alway in contact to avoid leakage during change of operations. Better protection for the spindle motor

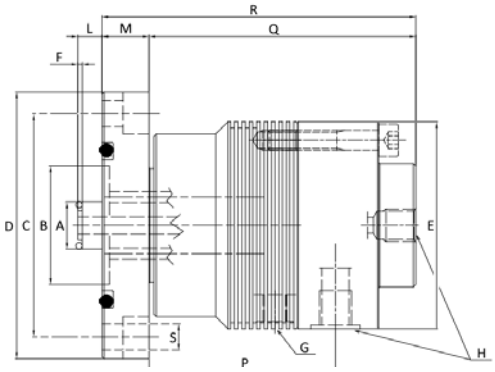
Custom Rotary Joints G/5007

Fluid	Pressure (BAR)	Temperature (°C)	RPM
Air	10	90	15.00
Hydraulic Oil	70	120	1.500

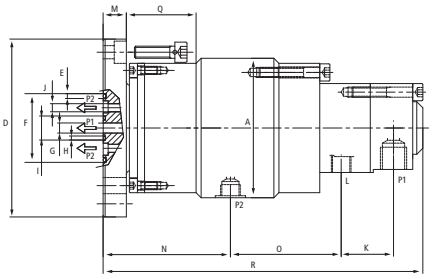
Type	A	B	C	D	E	F	G	H	L	M	P	Q	R	S	Weight (Kg)
G//5007/0004	19 0/-0,05	48	90,5	108 f8	84	1,8 0/-0,05	3 x 1/8" BSP	2 x 1/4" BSP	9,8 +0,05/0	19	94,5	108	127	4 x 10.5	-

Overview

- Unique seal design prevents "accidental" leakage when both passages are pressurised
- Mechanical seal provides long life and positive sealing
- High precision ball bearings are lubricated for life
- Heat-treated (hardened) stainless steel rotor
- Drain holes can be connected to a drain line



Custom Rotary Joints G/50151



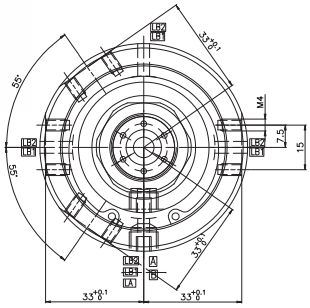
		P1			P2		
	Maximum RPM	Media	Maximum Pressure (bar)	Filtering (micron)	Media	Maximum Pressure (bar)	Filtering (micron)
G/50151/0000	8000	Coolant	20	60	Coolant	20	60
		Hydraulic Oil	80	10	Hydraulic Oil	80	10
G/50151/0001	8000	Coolant	20	60	Air	10	20
		Hydraulic Oil	80	10			
		Air	10	20			

A	D	E	F	G	H	I	J	K	L	M	N	O	P1	P2	Q	R
69	88g6	2,4	34	5	2	11,9	4	25,9	1/8" BSP	11,5	63	54,8	1/4" BSP	1/8" BSP	34,5	161,2

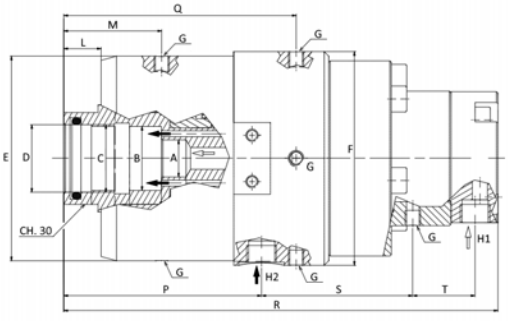
Overview

- Two channel rotary union
- High-speed for specific machine tool applications
- Dry running capable (consult factory)
- Aluminium body
- Stainless steel rotor
- Flanged connection for stable operation and long life
- Drain connection between passages for separation of media
- Also available for rotation with compressed air

Custom Rotary Joints G/50356



Fluid	Pressure (BAR)	Temperature (°C)	RPM
Air	5	70	8.000
Hydraulic Oil	80	70	8.000



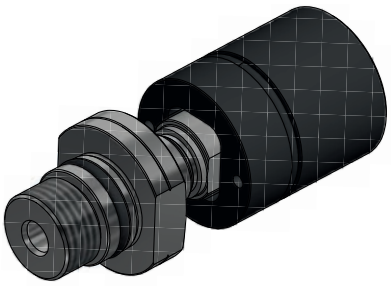
Type	A	B	C	D	E	F	G	H	L	M	N	P	Q	R	S	T	Weight (Kg)
G/50356/0002	12H7	20,8 H7	M22X1	22H6	67	70	9 x M5	2 x 1/8" BSP	12,2	32	-	64,7	76	142	49,3	21	1,2

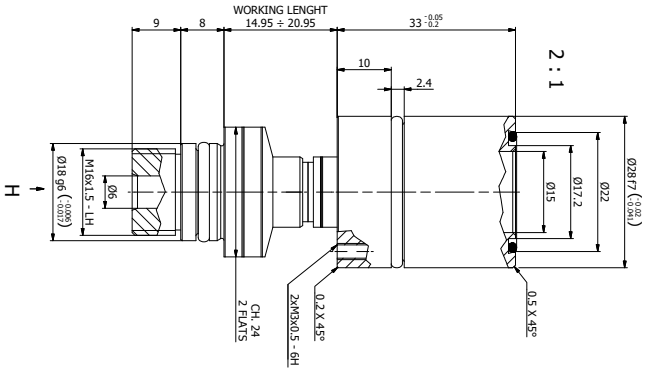
Overview

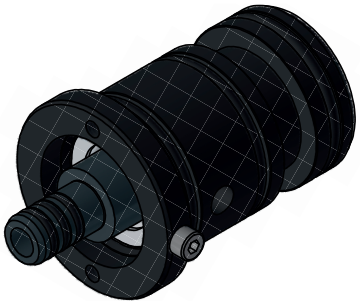
- Low heat generation in bearings and mechanical seal
- Optimised seal balance ratio to minimise friction
- No losses during tool changeover
- Low vibration for precise machining
- Special seal design enables dry running
- Labyrinth seal and drain holes protect the bearings
- Also available for rotation with compressed air
- Anodised aluminium housing
- Supplied with sealed bearings on request
- Radial and axial input on the same coupling

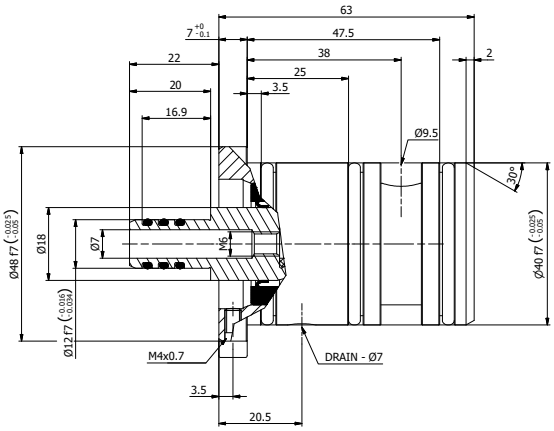
Discover Our Custom Rotary Joints

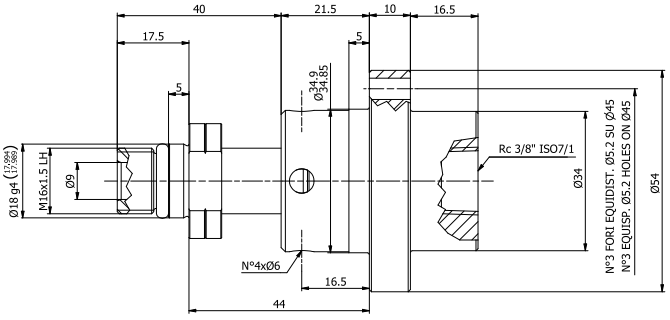
Custom designed unions from Johnson-Fluiten are available in both housing-less and housed versions. When the rotary union you require is not shown in the catalogue, Johnson-Fluiten's team of engineers are ready to design and manufacture a custom union for your specific application.

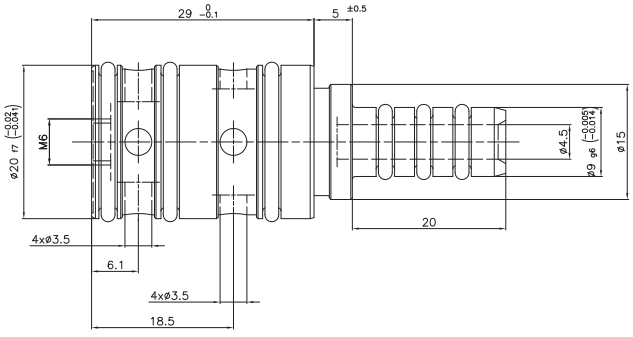








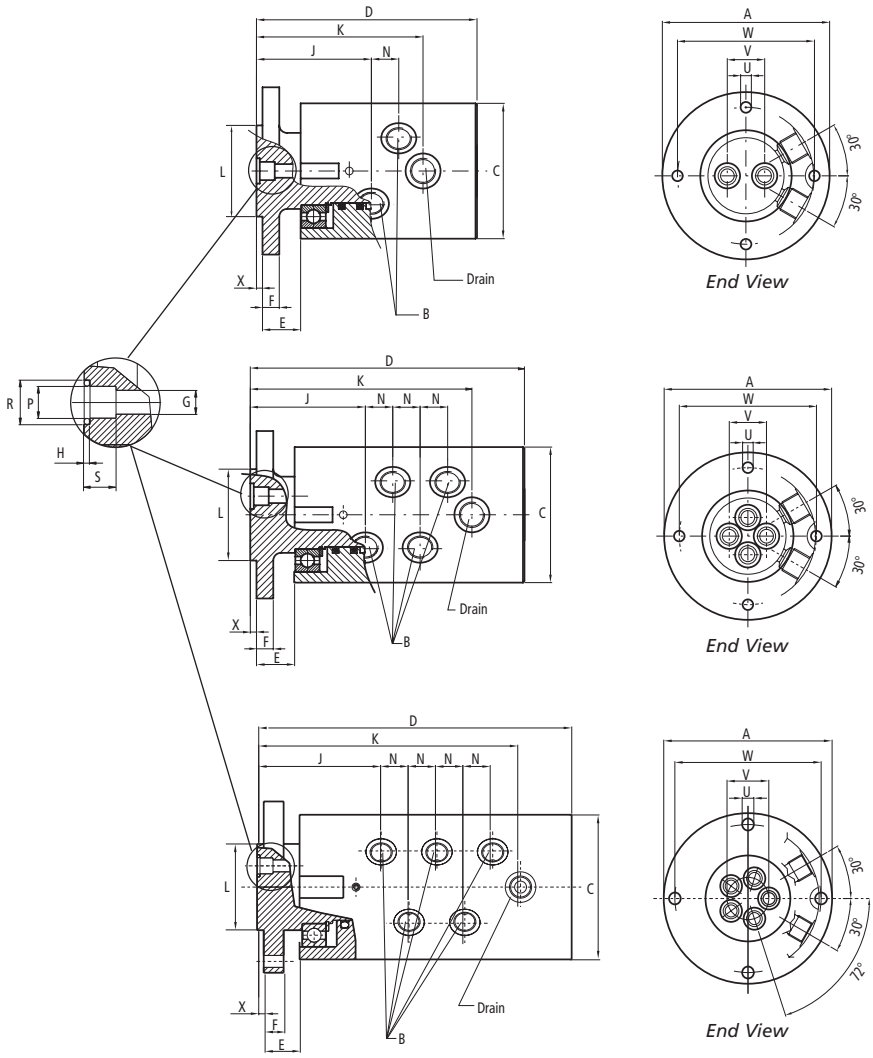




Multi-Passage Rotary Joints

INSTALLATION INSTRUCTIONS

Fluid	Pressure (BAR)	Temperature (°C)	RPM
Air	10	90	100
Hydraulic Oil	60	90	100
	250	90	10



Type	A	B	C	D	E	F	G	H	J	K	L*	N	P	R	S	U	V	W	X
G2M0090001494	110	3/8" BSP	89	145	25	11	9	2	76	110	60	18	12	17	12	7	25	90	4
G2M012002385	130	1/2" BSP	108	158	25	14	12	2	81	123	75	23	15	20	15	9	29	110	4
G4M0090001454	110	3/8" BSP	89	180	25	11	9	2	76	146	60	18	12	17	12	7	25	90	4
G4M012003608	130	1/2" BSP	108	202	25	14	12	2	81	169	75	23	15	20	15	9	29	110	4
G5M0090015044	129	3/8" BSP	109	237	27	15	9	2	94	199	65	21	12	17	12	9	32	112	5

*Inter-passage leakage may occur, check compatibility different fluids. *L tolerance = h6*

Overview

- Multi-passage rotary unions for air and oil
- Precision ball bearings are lubricated for life
- Proprietary "slide" seal provides long life and dry-running
- Heat-treated (hardened) stainless steel rotor
- Drain holes can be connected to a drain line
- Designed for multi-station index tables

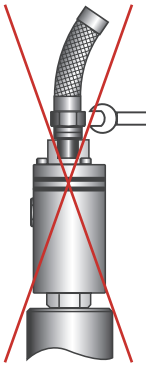
Recommendations

Installation and operation recommendations
G rotary unions are high-precision components that provide smooth running operation at high speeds. Due to the precise manufacturing tolerances, these unions require care during installation and maintenance.

Installation instructions are available online at www.coolantunion.com or from your local Kadant Johnson sales office.

Flexible hose
To ensure free movement of the union and elimination of side loading, the proper installation, type, and length of flexible hoses hould be used. Kadant Johnson recommends SAE 100R1 Type AT single-braid hose. The minimum length of hose is 300 mm for a one-piece installation.

Hose should be a minimum of 300 mm long.



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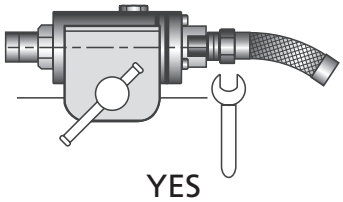

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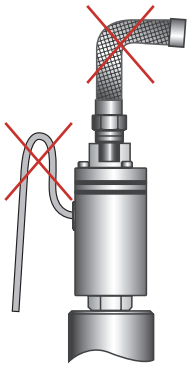

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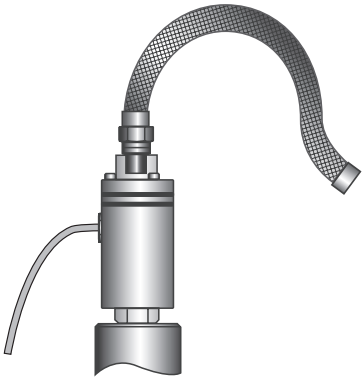

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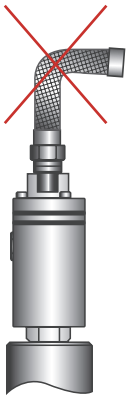

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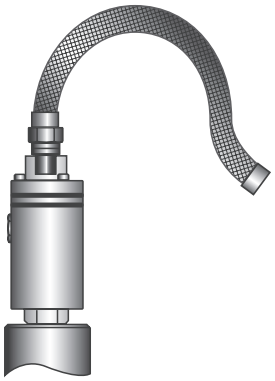

YES

Rotor dimension			Spindle connection		
Rotor	Pilot	C	X	Y	Z
M16 X 1,5	18	17,994/17,983	18,007/17,997	8,5	17
M16 X 1,5	16	15,994/15,983	16,007/15,997	8,5	17
M14 X 1,5	15	14,994/14,983	15,007/14,997	8,5	23
M12 X 1,25	14	13,994/13,989	14,005/14,000	8,5	17
M10 X 1	11	10,994/10,989	11,008/11,000	5,5	15

Lubrication
The seal faces in all G rotary unions are lubricated by the media (coolant, hydraulic oil, etc.) passing through the union. All ball bearings are lubricated for life and require no additional lubrication.

Filtration
The service life of the seal and the perfect operation of the rotating union is largely determined by filter quality: we recommend a filtering of 50 µm and a media purity of ISO 4406 – 17/15/12.

Guarantee
G unions are tested prior to shipment and are warranted against manufacturing defects for 12 months. Kadant Johnson's global sales and service network stands behind its products and provides support to more than 150 countries worldwide.

Discover our Solutions

Oil Water Steam Air

R/RH ROTARY UNION

The R rotary union connects stationary piping to a rotating device. The fluid is sealed by precision, micro-lapped seals that provide a uniform, full-flow design. The union is supported by two widely-spaced anti-friction bearings and is available with a bearing isolation system for added bearing protection. The R union is capable of intermittent dry running and features a carbon graphite seal inserted in stainless steel and silicon carbide counterseat.

The product utilises corrosion-resistant materials such as stainless steel and brass. The full-flow design allows for maximum flow rates with minimal restrictions.

This line of ball bearing unions is designed for tough applications where other rotary unions fail to perform.

R/RH STAINLESS STEEL ROTARY UNION

Johnson-Fluiten's type R/RH can be made also of stainless steel 316 for specific applications. Johnson-Fluiten can offer many different seal materials to seal fluids with abrasive materials, glycol, fluids with crystallizing sugars or materials that require FDA or ATEX approved designs. The stainless steel unions are supplied in a AISI 316 made of casting or, when required, in machined surfaces for special cleaning requirements.

The R unions are available in sizes from 9mm to 150mm in both single and dual flow configurations.

The repair kit can be replaced without dismounting the joint from its application, having faster maintenance operations and possibility to quickly adapt the joint to fluids requiring different sealing materials.

Oil High Temperature

Z ROTARY UNION

Type Z rotary unions are designed for thermal oil applications. The union is supported by two internal carbon guides (bearings) and can run up to 500 RPM and 300°C.

The proprietary antimony impregnated carbon seal ring is in compression sealing against the stainless steel nipple and seal plate. This seal package combination provides for a long-lasting and low maintenance rotary union.
The type Z rotary union is available in sizes from 3/4" to 21/2"with both flanged and threaded connections.

Water

BCI ROTARY UNION

The Bearing Cover Inserted (BCI) rotary union is applied to continuous casting steel segment rolls on water service.

It is self-centering and mounted inside the bearing cover to protect the rotary union from breakouts and eliminates side loading caused by external flexible hoses. The ability to handle misalignment, the large flow area, and simple design make this rotary union a preferred design for all new and rebuilt continuous casting roll segments. Field tests have proven the BCI rotary union capable of operating for multiple campaigns without requiring repair.

All materials of the BCI are corrosion-resistant stainless steel or bronze and the internal bearing surface is permanently lubricated. Because of its ability to tolerate dirty water with varying pH levels, the BCI outperforms all the other rotary unions on the market today.

GLOBAL SUPPORT

Many suppliers have made a commitment to the international market. But few have taken that commitment as far as Kadant. To ensure products are available where they are needed, Kadant's critical and high-value components are manufactured in North America, Europe, South America, and Asia.

Because expert advice and prompt service are as important as the products, Kadant has authorized representatives around the world. So wherever you are, Kadant products, service and support are close at hand.

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