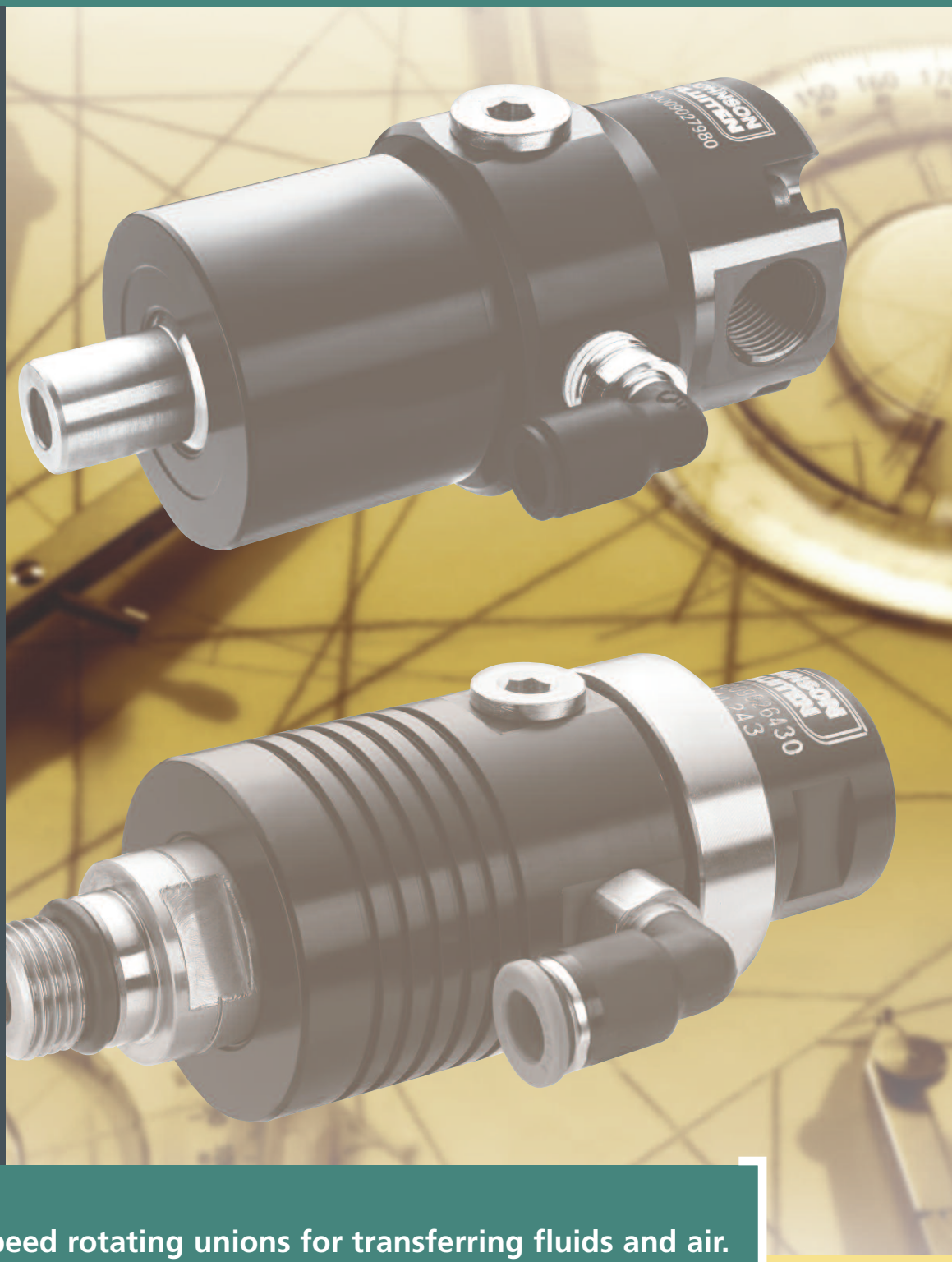
G™ Rotary Unions

For coolant, water, oil, and air service

KADANT
AN ACCENT ON INNOVATION

Precision rotary unions for more effective cooling and lubrication.



High speed rotating unions for transferring fluids and air.

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Quick Select Chart

Type	Media			Pressure (Max.)		Temperature (Max.)		Speed (RPM)
	Coolant	Air	Oil	BAR	PSI	°C	°F	
GA	🟡	🟢	🟢	105	1,500	120	250	6,000
GAI	🟡	🟢	🟢	70	1,000	120	250	3,500
GB	🟢	🔴	🟢	400	5,800	90	195	1,500
GFR/GFRA	🟢	🟡 (1)	🟢	80	1,160	90	195	10,000
GFP/GFPA	🟢	🟢 (1)	🟢	150	2,175	90	195	15,000
GFL/GFLA	🟢	🟢	🟢	80	1,160	90	195	15,000
GFS/GFSA	🟢	🟢	🟢	80	1,160	90	195	20,000
GHP/GHPA	🟢	🟢	🟢	140	2,030	90	195	32,000
GHS/GHSA	🟢	🟢	🟢	80	1,160	90	195	42,000
G/5485	🟢	🔴	🟢	105	1,500	120	250	8,000
G2M/G4M/G5M	🔴	🟢	🟢	250	3,610	90	195	100
G2M019003818	🔴	🟢	🟢	250	3,610	90	195	100
G5007	🟢	🟢	🟢	70	1,000	120	250	1,500
Bracket Mounted	🟢	🟡 (1)	🟢	80	1,160	120	250	24,000

- 🟢 Recommended
- 🟡 Acceptable
- 🔴 Not Recommended

1. Consult Kadant Johnson for specific details.
2. For specific application parameters, see catalog page. Higher speed and pressure available on request.
3. Do not operate rotary unions at a combination maximum values of pressure, temperature, and speed.

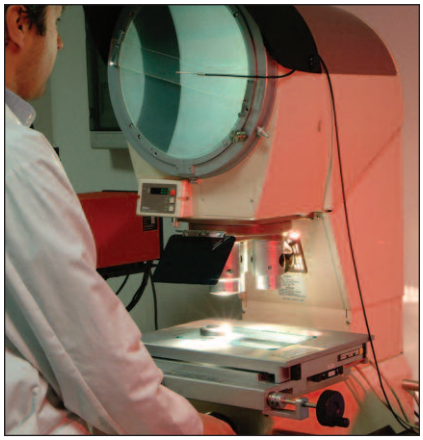
Overview

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

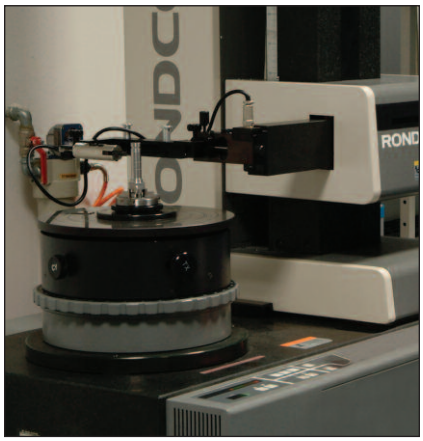
- Transfer lines
- Gun drills
- Spindles
- Drilling
- Milling
- Rotary index tables
- Machine tools
- CNC machines
- Grinding machines
- Presses
- Clutches

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, water, air, and hydraulic oil applications.

Precision rotary unions designed for smooth running, high speed coolant, air, and hydraulic oil applications.



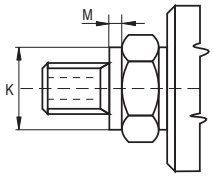
Measuring and controlling seal design ensures leak-free operation.



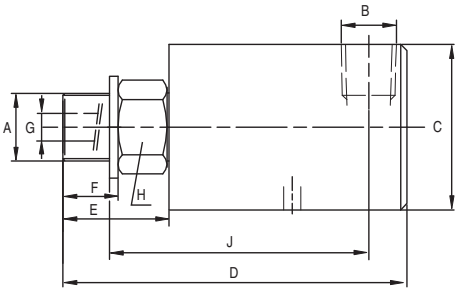
Rotor concentricity is measured to allow vibration-free operation.

Laser etched hydrodynamic grooves provide improved seal performance.

GA



Rotor with pilot



Type	A	B	C	D	E	F	G	H	J	K (mm)	M	Weight (lb)
GA003002503	M10 X 1 RH	1/8" NPT	1.22	2.83	0.87	0.43	0.13	0.67	2.13	–	–	0.3
GA003002505	M10 X 1 RH	1/8" NPT	1.22	2.83	0.87	0.43	0.13	0.67	2.13	11 $^{0}_{-0.011}$	0.12	0.3
GA003002504	G 1/4" (BSP) RH	1/8" NPT	1.22	2.83	0.87	0.51	0.13	0.67	2.05	–	–	0.3
GA006015830	1/4" NPT RH	1/4" NPT	1.54	3.23	1.02	0.67	0.25	0.87	2.28	–	–	1.1
GA006000594	5/8" - 18 UNF RH	1/4" NPT	1.54	3.19	0.98	0.63	0.25	0.87	2.28	–	–	1.1
GA006003592	5/8" - 18 UNF LH	1/4" NPT	1.54	3.19	0.98	0.63	0.25	0.87	2.28	–	–	1.1
GA006002506	G 1/4" (BSP) RH	1/4" NPT	1.54	3.19	0.98	0.51	0.25	0.87	2.40	–	–	1.1
GA006002507	G 1/4" (BSP) LH	1/4" NPT	1.54	3.19	0.98	0.51	0.25	0.87	2.40	–	–	1.1
GA009015831	3/8" NPT RH	3/8" NPT	1.73	3.98	1.06	0.67	0.33	0.87	2.85	–	–	1.1
GA009002510	5/8" - 18 UNF RH	3/8" NPT	1.73	3.94	1.02	0.63	0.33	0.87	2.85	–	–	1.1
GA009003594	5/8" - 18 UNF LH	3/8" NPT	1.73	3.94	1.02	0.63	0.33	0.87	2.85	–	–	1.1
GA009000601	G 3/8" (BSP) RH	3/8" NPT	1.73	3.94	1.02	0.63	0.33	0.87	2.85	–	–	1.1
GA009003593	G 3/8" (BSP) LH	3/8" NPT	1.73	3.94	1.02	0.63	0.33	0.87	2.85	–	–	1.1
GA009001590	M16 X 2 RH	3/8" NPT	1.73	3.94	1.02	0.63	0.33	0.87	2.85	–	–	1.1
GA012015832	1/2" NPT RH	1/2" NPT	2.32	4.65	1.46	0.87	0.51	1.42	3.39	–	–	1.5
GA012001248	3/4" - 16 UNF RH	1/2" NPT	2.32	4.53	1.34	0.75	0.51	1.42	3.39	–	–	1.5
GA012003596	3/4" - 16 UNF LH	1/2" NPT	2.32	4.53	1.34	0.75	0.51	1.42	3.39	–	–	1.5
GA012002217	G 1/2" (BSP) RH	1/2" NPT	2.32	4.53	1.34	0.75	0.51	1.42	3.39	–	–	1.5
GA012003597	G 1/2" (BSP) LH	1/2" NPT	2.32	4.53	1.34	0.75	0.51	1.42	3.39	–	–	1.5
GA012002316	G 3/4" (BSP) RH	1/2" NPT	2.32	4.53	1.34	0.75	0.51	1.42	3.39	–	–	1.5
GA012003598	G 3/4" (BSP) LH	1/2" NPT	2.32	4.53	1.34	0.75	0.51	1.42	3.39	–	–	1.5
GA012003595	M20 X 1.5 RH	1/2" NPT	2.32	4.53	1.34	0.75	0.51	1.42	3.39	22 $^{-0.007}_{-0.020}$	0.20	1.5
GA012003599	M20 X 1.5 LH	1/2" NPT	2.32	4.53	1.34	0.75	0.51	1.42	3.39	22 $^{-0.007}_{-0.020}$	0.20	1.5
GA012002431	M22 X 1.5 RH	1/2" NPT	2.32	4.53	1.34	0.75	0.51	1.42	3.39	27 $^{-0.007}_{-0.020}$	0.12	1.5
GA012003600	M22 X 1.5 LH	1/2" NPT	2.32	4.53	1.34	0.75	0.51	1.42	3.39	27 $^{-0.007}_{-0.020}$	0.12	1.5

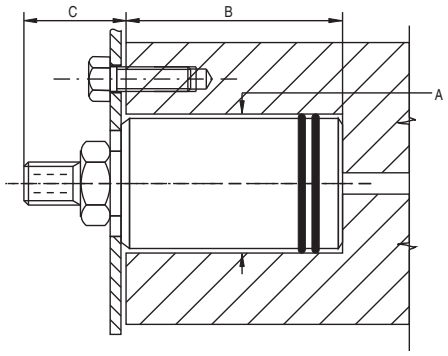
Consult factory for additional thread type

Fluid	Pressure (PSI)	Temperature (°F)	RPM	RPM (with pilot)
Air	150	250	1,500	1,500
Coolant	1,000	250	3,500	6,000
Hydraulic Oil	1,500	250	3,500	6,000

Features and Benefits

- Precision ball bearings lubricated for life
- Hardened stainless steel rotor
- Optimized seal balance ratio for minimal friction
- Smooth running, no vibration
- Body available in anodized aluminum or brass
- Stationary seal face available in carbon graphite, bronze seal face for hydraulic oil above 1,000 psi

GAI



Type	Rotor	A+	B	C	Weight (lb)
GAI003002516	M10 X 1 RH	1.22	1.89	0.94	0.3
GAI003002515	G 1/4" (BSP) RH	1.22	1.89	0.94	0.3
GAI006001215	5/8" - 18 UNF RH	1.54	2.13	1.06	1.1
GAI006003601	5/8" - 18 UNF LH	1.54	2.13	1.06	1.1
GAI006002372	G 1/4" (BSP) RH	1.54	2.13	1.06	1.1
GAI006003602	G 1/4" (BSP) LH	1.54	2.13	1.06	1.1
GAI009002780	5/8" - 18 UNF RH	1.73	2.83	1.10	1.1
GAI009003604	5/8" - 18 UNF LH	1.73	2.83	1.10	1.1
GAI009000824	G 3/8" (BSP) RH	1.73	2.83	1.10	1.1
GAI009003603	G 3/8" (BSP) LH	1.73	2.83	1.10	1.1
GAI009001380	M16 X 2 RH	1.73	2.83	1.10	1.1
GAI012000640	3/4" - 16 UNF RH	2.32	3.07	1.46	1.5
GAI012003605	3/4" - 16 UNF LH	2.32	3.07	1.46	1.5
GAI012003477	G 1/2" (BSP) RH	2.32	3.07	1.46	1.5
GAI012003607	G 1/2" (BSP) LH	2.32	3.07	1.46	1.5
GAI012001419	G 3/4" (BSP) RH	2.32	3.07	1.46	1.5
GAI012003606	G 3/4" (BSP) LH	2.32	3.07	1.46	1.5

+ Dimension tolerance is +0.012˝, +0.016˝

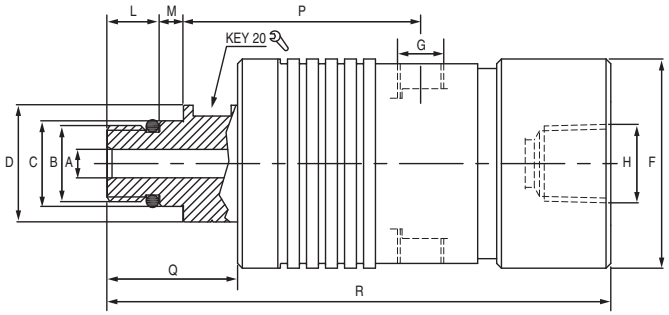
Fluid	Pressure (PSI)	Temperature (°F)	RPM
Air	150	250	1,500
Coolant	1,000	250	3,500
Hydraulic Oil	1,000	250	3,500

Features and Benefits

- Compact design mounted inside shaft
- Hardened stainless steel rotor
- Optimized seal balance ratio for minimal friction
- Available with non-contacting seal ring with hydrodynamic grooves
- Anodized aluminum body

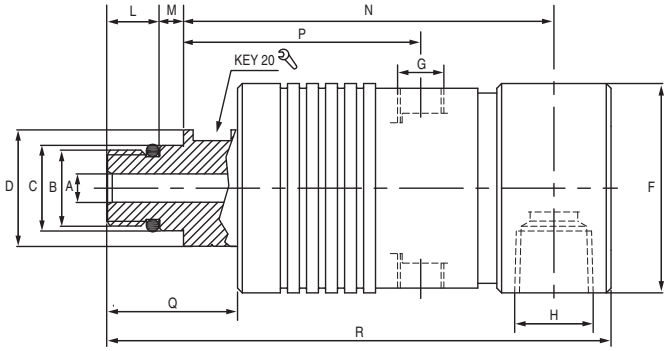
GFR/GFRA

Dry running



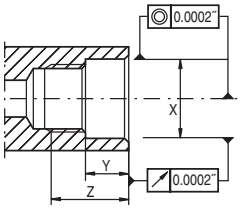
Type	A	B	C*	D	F	G	H	L	M	P	Q	R	X*	Y	Z	Weight
GFR009030110	0.24	M16 X 1.5 LH	17.994/17.983	0.96	1.73	1/8" BSP	3/8" BSP	0.43	0.20	2.19	1.06	4.17	18.007/17.997	0.33	0.67	1.1 lb
GFR009030111	0.24	5/8" 18 UNF LH	0.6555/0.6553	0.96	1.73	1/8" BSP	3/8" NPT	0.55	0.20	2.19	1.18	4.79	0.6560/0.6556	0.33	0.79	1.1 lb

**C and X in mm for metric threads*



Type	A	B	C*	D	F	G	H	L	M	N	P	Q	R	X*	Y	Z	Weight
GFRA009030120	0.24	M16 X 1.5 LH	17.994/17.983	0.96	1.73	1/8" NPT	3/8" NPT	0.43	0.20	2.76	1.97	1.08	4.17	18.007/17.997	0.33	0.67	1.1 lb
GFRA009030121	0.24	5/8" 18 UNF LH	0.6555/0.6553	0.96	1.73	1/8" NPT	3/8" NPT	0.55	0.20	2.76	1.97	1.18	4.79	0.6560/0.6556	0.33	0.79	1.1 lb
GFRA009030668	0.24	M14 X 1.5 LH	14.994/14.983	0.87	1.73	1/8" NPT	3/8" NPT	0.67	0.20	3.92	2.81	2.17	5.26	15.007/14.997	0.33	0.91	1.1 lb
GFRA009029898	0.24	M12 X 1.25 LH	13.994/13.989	0.96	1.73	1/8" NPT	3/8" NPT	0.43	0.20	2.76	1.97	1.08	4.17	14.005/14.000	0.33	0.67	1.1 lb

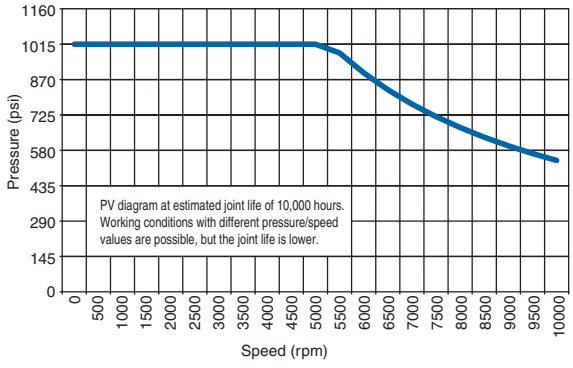
**C and X in mm for metric threads*



Spindle Detail

Fluid	Pressure (PSI)	Temperature (°F)	RPM
Coolant	1,160	195	10,000

Rotary Union Type GFR-GFRA PV Diagram

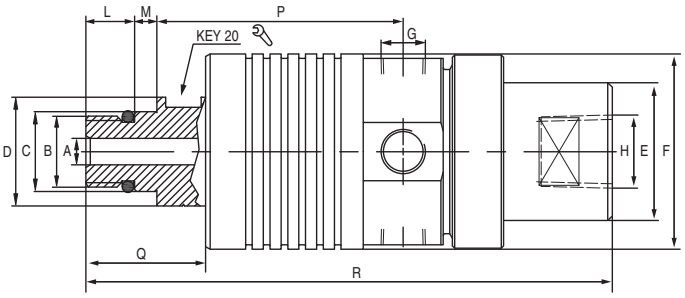


Features and Benefits

- Special seal design permits dry running
- Labyrinth seal and drain holes protect bearings
- Optimized seal balance ratio
- Silicon carbide seal faces resist wear and thermal shock
- Precision ball bearings eliminate vibration
- Anodized aluminum body
- Full flow area, minimal pressure drop
- Stainless steel springs located outside the flow
- Stainless steel rotor resists corrosion
- No leakage during tool change

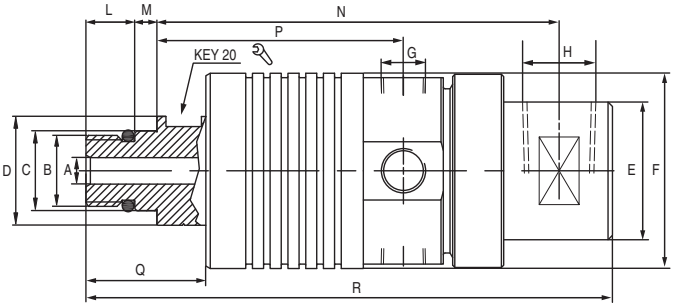
GFL/GFLA

Dry running



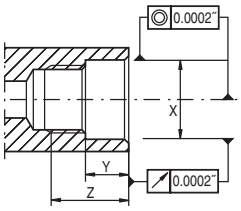
Type	A	B	C*	D	E	F	G	H	L	M	P	Q	R	X*	Y	Z	Weight
GFL009028400	0.24	M16 X 1.5 LH	17.994/17.983	0.96	1.22	1.73	1/8" BSP	3/8" BSP	0.43	0.20	2.19	1.06	4.67	18.007/17.997	0.33	0.67	1.1 lb
GFL009028401	0.24	5/8˝ - 18 UNF LH	0.6555/0.6553	0.96	1.22	1.73	1/8" BSP	3/8" NPT	0.55	0.20	2.19	1.18	4.79	0.6560/0.6556	0.33	0.79	1.1 lb
GFL009028402	0.24	M10 X 1.0 LH	10.994/10.989	0.96	1.22	1.73	1/8" BSP	3/8" NPT	0.51	0.12	2.19	1.06	4.67	11.008/11.000	0.22	0.59	1.1 lb

**C and X in mm for metric threads*



Type	A	B	C*	D	E	F	G	H	L	M	N	P	Q	R	X*	Y	Z	Weight
GFLA009028405	0.24	M16 X 1.5 LH	17.994/17.983	0.96	1.22	1.73	1/8" BSP	3/8" BSP	0.43	0.20	3.57	2.19	1.06	4.67	18.007/17.997	0.33	0.67	1.1 lb
GFLA009028407	0.24	5/8˝ - 18 UNF LH	0.6555/0.6553	0.96	1.22	1.73	1/8" BSP	3/8" NPT	0.55	0.20	3.57	2.19	1.18	4.79	0.6560/0.6556	0.33	0.79	1.1 lb
GFLA009028408	0.24	M16 X 1.5 RH	17.994/17.983	0.96	1.22	1.73	1/8" BSP	3/8" BSP	0.43	0.20	3.57	2.17	1.06	4.67	18.007/17.997	0.33	0.67	1.1 lb

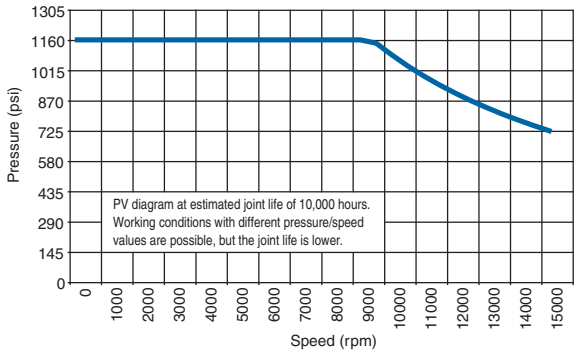
**C and X in mm for metric threads*



Spindle Detail

Fluid	Pressure (PSI)	Temperature (°F)	RPM
Coolant	1,160	195	15,000
Air	75	195	10,000

Rotary Union Type GFL-GFLA PV Diagram

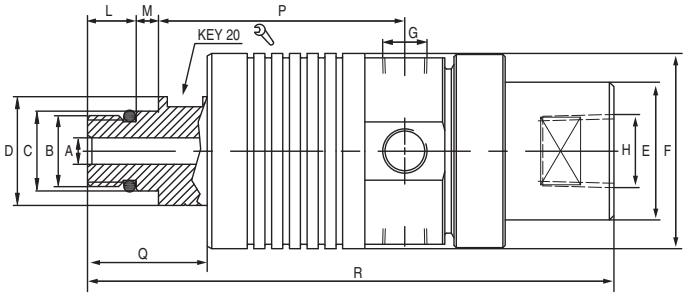


Features and Benefits

- Special seal design permits dry running
- Optimized seal balance ratio for minimal friction
- Precision angular contact bearings widely spaced to eliminate wobble and vibration
- Labyrinth seal and drain holes protect bearings
- Anodized aluminum 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 drawbar position

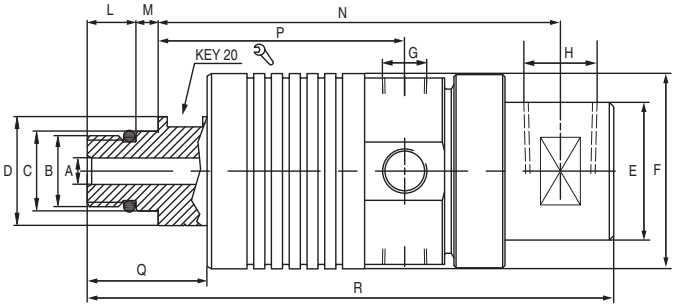
GFS/GFSA

Dry running



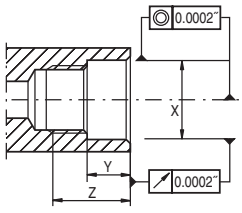
Type	A	B	C*	D	E	F	G	H	L	M	P	Q	R	X*	Y	Z	Weight
GFS009028410	0.24	M16 X 1.5 LH	17.994/17.983	0.96	1.22	1.73	1/8" BSP	3/8" BSP	0.43	0.20	2.19	1.06	4.65	18.007/17.997	0.33	0.67	1.1 lb
GFS009028411	0.24	5/8˝ - 18 UNF LH	0.6555/0.6553	0.96	1.22	1.73	1/8" BSP	3/8" NPT	0.55	0.20	2.19	1.18	4.77	0.6560/0.6556	0.33	0.79	1.1 lb

**C and X in mm for metric threads*



Type	A	B	C*	D	E	F	G	H	L	M	N	P	Q	R	X*	Y	Z	Weight
GFSA009028415	0.24	M16 X 1.5 LH	17.994/17.983	0.96	1.22	1.73	1/8" BSP	3/8" BSP	0.43	0.20	3.55	2.19	1.06	4.65	18.007/17.997	0.33	0.67	1.1 lb
GFSA009028416	0.24	5/8˝ - 18 UNF LH	0.6555/0.6553	0.96	1.22	1.73	1/8" BSP	3/8" NPT	0.55	0.20	3.55	2.19	1.18	4.77	0.6560/0.6556	0.33	0.79	1.1 lb

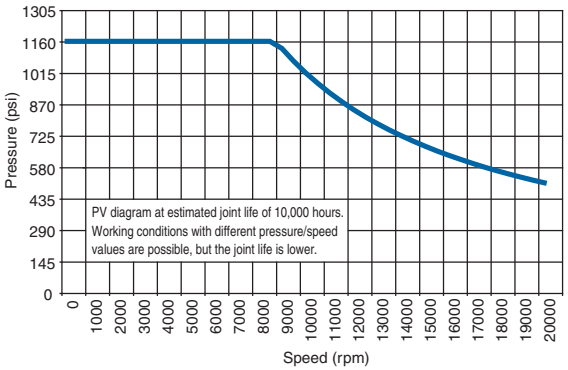
**C and X in mm for metric threads*



Spindle Detail

Fluid	Pressure (PSI)	Temperature (°F)	RPM
Coolant	1,160	195	20,000
Air	75	195	10,000

Rotary Union Type GFS-GFSA PV Diagram

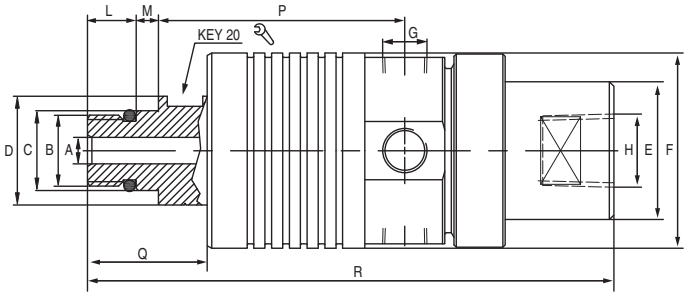


Features and Benefits

- Special seal design permits dry running
- Optimized seal balance ratio for minimal friction
- High precision angular contact bearings eliminate wobble and vibration
- Labyrinth seal and drain holes protect bearings
- Anodized aluminum 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 drawbar position

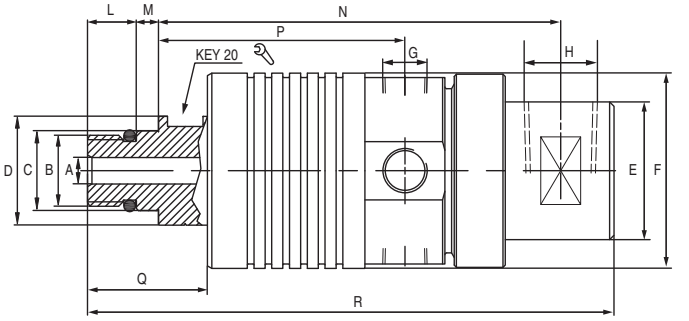
GFP/GFPA

Dry running



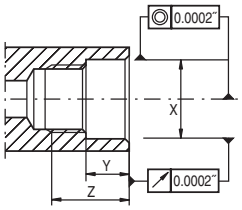
Type	A	B	C*	D	E	F	G	H	L	M	P	Q	R	X*	Y	Z	Weight
GFP	0.24	M16 X 1.5 LH	17.994/17.983	0.96	1.22	1.73	1/8" BSP	3/8" BSP	0.43	0.20	2.19	1.06	4.67	18.007/17.997	0.33	0.67	1.1 lb
GFP	0.24	5/8˝ - UNF LH	0.6555/0.6553	0.96	1.22	1.73	1/8" BSP	3/8" NPT	0.55	0.20	2.19	1.18	4.79	0.6560/0.6556	0.33	0.79	1.1 lb

**C and X in mm for metric threads*



Type	A	B	C*	D	E	F	G	H	L	M	N	P	Q	R	X*	Y	Z	Weight
GFPA	0.24	M16 X 1.5 LH	17.994/17.983	0.96	1.22	1.73	1/8" BSP	3/8" BSP	0.43	0.20	3.57	2.19	1.06	4.67	18.007/17.997	0.33	0.67	1.1 lb
GFPA	0.24	5/8˝ - UNF LH	0.6555/0.6553	0.96	1.22	1.73	1/8" BSP	3/8" NPT	0.55	0.20	3.57	2.19	1.18	4.79	0.6560/0.6556	0.33	0.79	1.1 lb

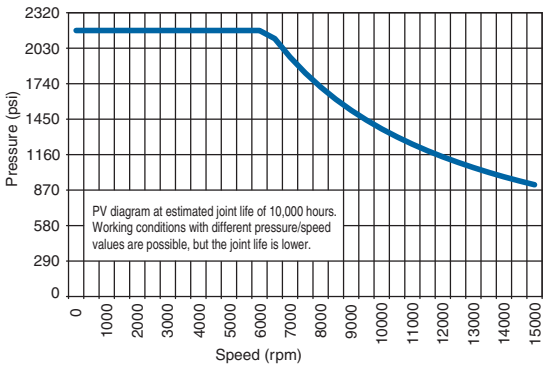
**C and X in mm for metric threads*



Spindle Detail

Fluid	Pressure (PSI)	Temperature (°F)	RPM
Coolant	2,175	195	15,000
Air	75	195	10,000

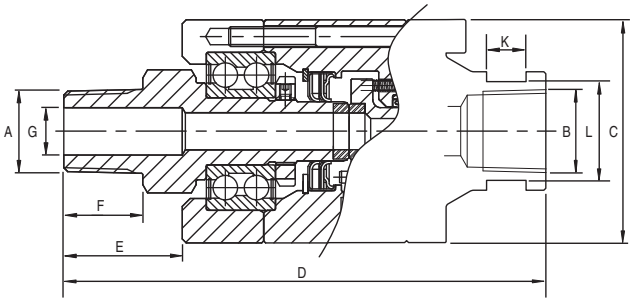
Rotary Union Type GFP–GFPA PV Diagram



Features and Benefits

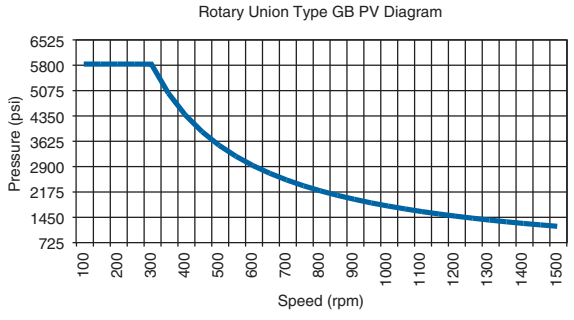
- Labyrinth seal and drain holes protect bearings
- Optimized seal balance ratio
- Silicon carbide seal faces resist wear and thermal shock
- Angular ball bearing design resists side loading
- Low vibration for precise machining
- Anodized aluminum body
- Full flow area, minimal pressure drop
- Multiple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

GB



Type	A	B	C	D	E	F	G	K	L	Weight (lb)
GB006018350	1/4" NPT RH	1/4" NPT	2.24	4.61	0.98	0.59	0.28	0.39	0.98	2.0
GB006018351	1/4" NPT LH	1/4" NPT	2.24	4.61	0.98	0.59	0.28	0.39	0.98	2.0
GB006018352	1/4" BSP RH	1/4" BSP	2.24	4.61	0.98	0.59	0.28	0.39	0.98	2.0
GB006018353	1/4" BSP LH	1/4" BSP	2.24	4.61	0.98	0.59	0.28	0.39	0.98	2.0
GB009018354	3/8" NPT RH	3/8" NPT	2.24	4.61	0.98	0.59	0.39	0.39	0.98	2.0
GB009018355	3/8" NPT LH	3/8" NPT	2.24	4.61	0.98	0.59	0.39	0.39	0.98	2.0
GB009018356	3/8" BSP RH	3/8" BSP	2.24	4.61	0.98	0.59	0.39	0.39	0.98	2.0
GB009018357	3/8" BSP LH	3/8" BSP	2.24	4.61	0.98	0.59	0.39	0.39	0.98	2.0
GB012018358	1/2" NPT RH	1/2" NPT	2.24	4.80	1.18	0.79	0.47	0.39	0.98	2.0
GB012018359	1/2" NPT LH	1/2" NPT	2.24	4.80	1.18	0.79	0.47	0.39	0.98	2.0
GB012018360	1/2" BSP RH	1/2" BSP	2.24	4.80	1.18	0.79	0.47	0.39	0.98	2.0
GB012018361	1/2" BSP LH	1/2" BSP	2.24	4.80	1.18	0.79	0.47	0.39	0.98	2.0

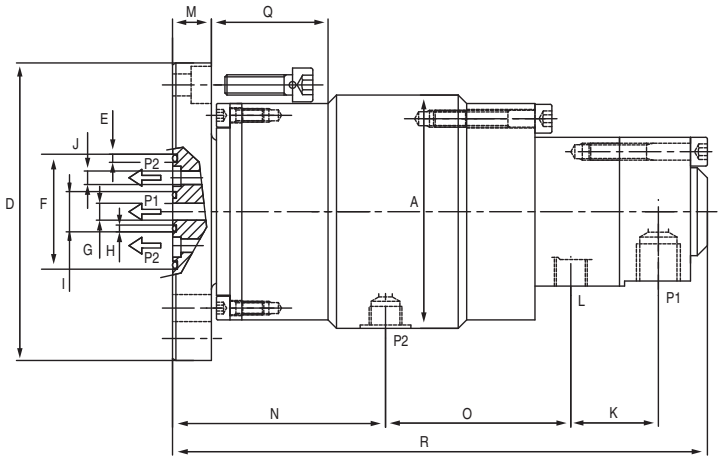
Fluid	Pressure (PSI)	Temperature (°F)	RPM
Water	5,800	195	1,500
Hydraulic Oil	5,800	195	1,500



Features and Benefits

- Stainless steel rotor
- Labyrinth seal between bearing and mechanical seals for longer lifetime and safety
- Rigid bearing installation for safety
- Optimized seal balance for minimal friction
- Stainless steel and aluminum body
- All materials in contact with medium are non-corrosive
- Stainless steel springs located outside the flow

G/5485



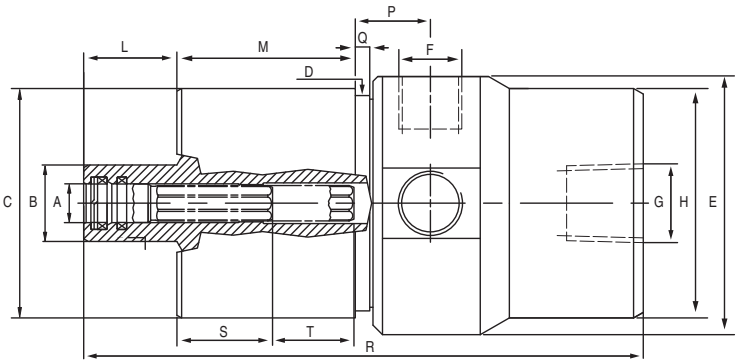
A	D	E	F	G	H	I	J	K	L	M	N	O	P1	P2	Q	R
2.72	3.50	0.09	1.34	0.20	0.08	0.47	0.16	1.02	1/8" BSP	0.45	2.48	2.16	1/4" BSP	1/8" BSP	1.36	6.23

		P1			P2			L1
Type	Maximum RPM	Media	Maximum Pressure (psi)	Filtering (micron)	Media	Maximum Pressure (psi)	Filtering (micron)	Maximum Flow (gpm)
G/5485/0000	8,000	Coolant	290	60	Air	145	20	0.05
		Hydraulic Oil	1,160	10				0.05
		Air	145	20				–
G/5485/0001	8,000	Coolant	290	60	Coolant	290	60	0.05
		Hydraulic Oil	1,160	10	Hydraulic Oil	1,160	10	0.05

Features and Benefits

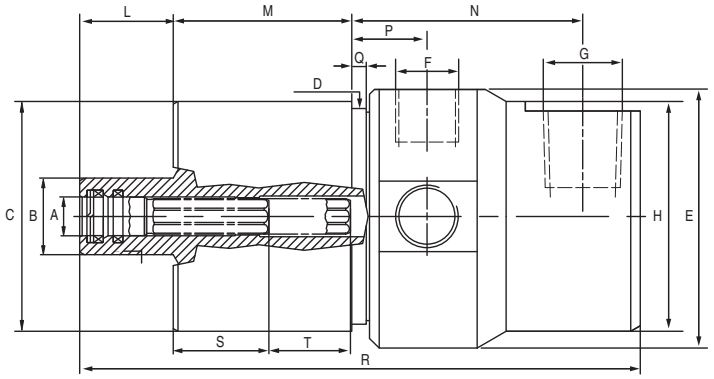
- Two channel rotary union
- High speed for specific machine tool applications
- Dry running capable (consult factory)
- Aluminum body
- Stainless steel rotor
- Flanged connection for stable operation and long life
- Drain connection between passages for separation of media
- Also available for rotation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

GHP/GHPA



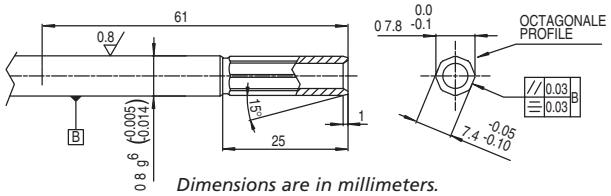
Type	A*	B	C*	D	E	F	G	H	L	M	P	Q	R	S	T	Weight (lb)
GHP009	7.995/7.986	0.63	48.000/47.975	1.77	2.17	1/4″ BSP	3/8″ BSP	1.89	0.77	1.47	0.62	0.12	4.61	0.79	0.67	1.3

**A and C in mm for metric threads*

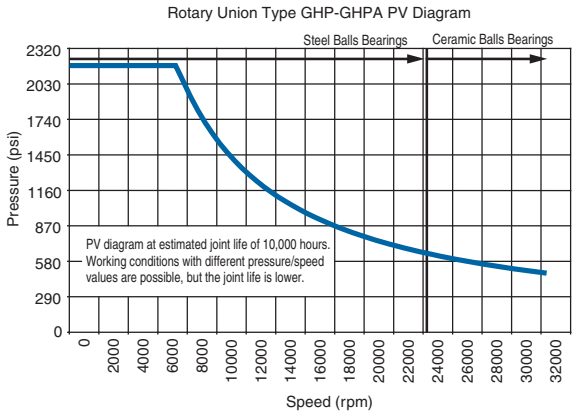


Type	A*	B	C*	D	E	F	G	H	L	M	N	P	Q	R	S	T	Weight (lb)
GHPA009027981	7.995/7.986	0.63	48.000/47.975	1.77	2.17	1/4″ BSP	3/8″ BSP	1.89	0.77	1.47	1.90	0.62	0.12	4.61	0.79	0.67	1.3

**A and C in mm for metric threads*



Dimensions are in millimeters.



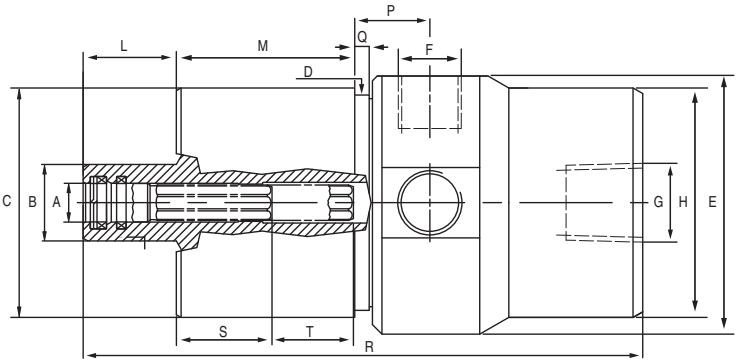
Type	Pressure (PSI)	Temperature (°F)	RPM
GHP/GHPA	2,175	195	24,000
High Speed	2,175	195	32,000

Fluid	Pressure (PSI)	Temperature (°F)	RPM
Air	75	195	10,000

Features and Benefits

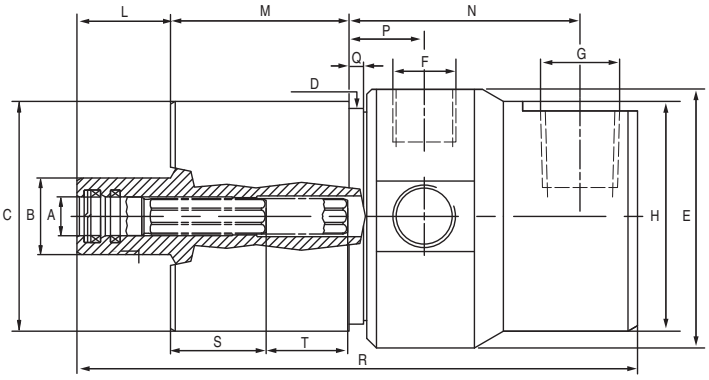
- Special seal design permits dry running
- Labyrinth seal and drain holes protect bearings
- Optimized seal balance ratio
- High precision angular contact bearings for high speeds
- Anodized aluminum body
- Full flow area, minimal pressure drop
- Long drawbar stroke for maximum flexibility
- Low heat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

GHS/GHSA



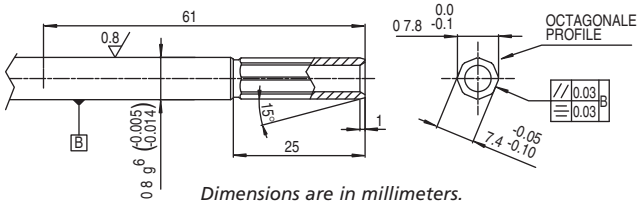
Type	A*	B	C*	D	E	F	G	H	L	M	P	Q	R	S	T	Weight (lb)
GHS009	7.995/7.986	0.63	48.000/47.975	1.77	2.17	1/4″ BSP	3/8″ BSP	1.89	0.77	1.47	0.62	0.12	4.61	0.79	0.67	1.3

**A and C in mm for metric threads*

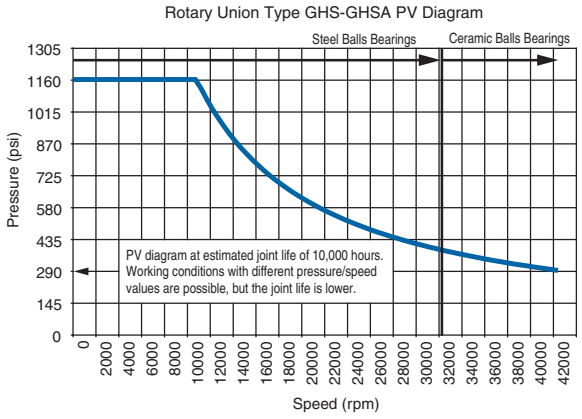


Type	A*	B	C*	D	E	F	G	H	L	M	N	P	Q	R	S	T	Weight (lb)
GHSA009027980	7.995/7.986	0.63	48.000/47.975	1.77	2.17	1/4″ BSP	3/8″ BSP	1.89	0.77	1.47	1.90	0.62	0.12	4.61	0.79	0.67	1.3

**A and C in mm for metric threads*



Dimensions are in millimeters.



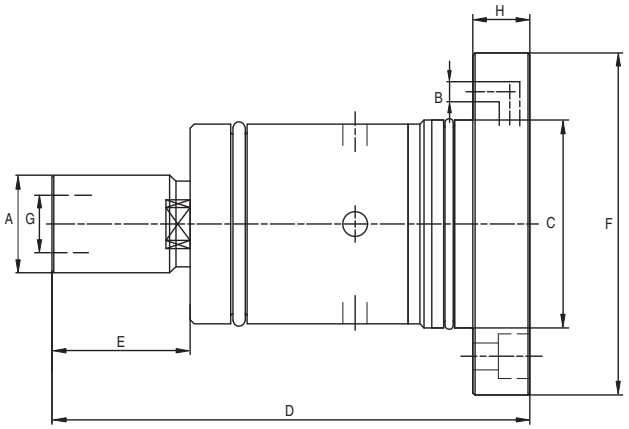
Type	Pressure (PSI)	Temperature (°F)	RPM
GHS/GHSA	1,160	195	32,000
High Speed	1,160	195	42,000

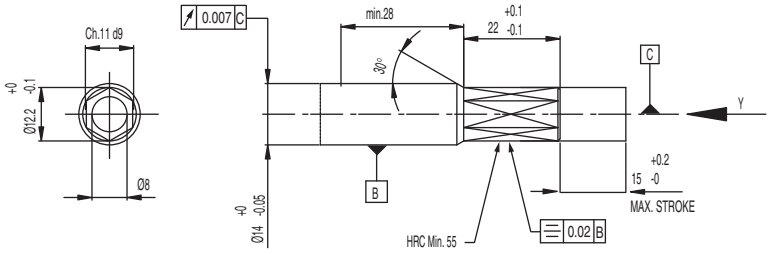
Fluid	Pressure (PSI)	Temperature (°F)	RPM
Air	75	195	10,000

Features and Benefits

- Special seal design permits dry running
- Labyrinth seal and drain holes protect bearings
- Optimized seal balance ratio
- High precision angular contact bearings for high speeds
- Anodized aluminum body
- Full 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 rotary union
- Supplied with bearings run-in upon request

Bracket Mounted

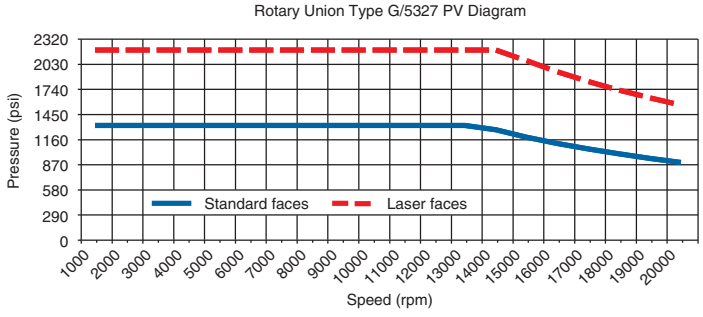




Dimensions are in millimeters.

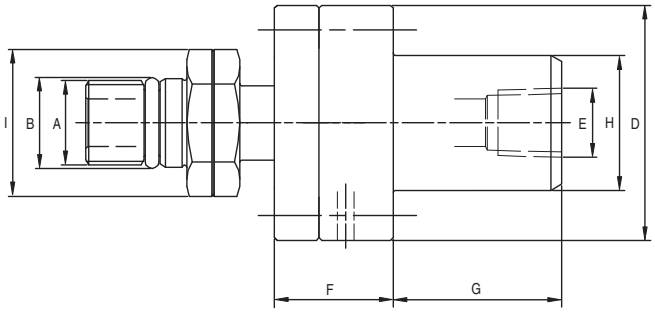
Type	A	B	C	D	E	F	G	H
G/5327	0.94	0.20	2.01	4.63	1.34	3.31	0.56	0.55

Type	Pressure (PSI)	Temperature (°F)	RPM
G/5327	1,000	158	18,000



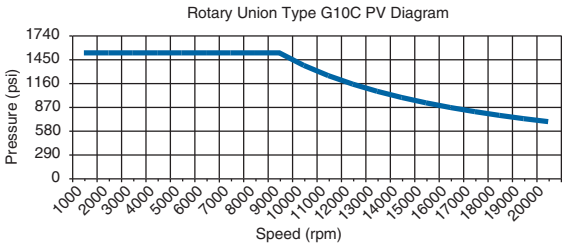
Features and Benefits

- Auto-Off™ seal device permits dry running
- Precision bearing for long lifetime
- Tungsten carbide seal faces resist wear and thermal shock
- Drawbar stroke 0.59″
- Coolant connection in flange for reduced hose load
- Anodized aluminum body



Type – without lip-seal	Type – with lip-seal	A	B	D	E	F	G	H	I
G10C006018362	G10C006018382	5/8″ - 18 LH	0.63	1.74	1/4″ NPT	0.88	1.25	1.38	0.91
G10C006018363	G10C006018383	5/8″ - 18 RH	0.63	1.74	1/4″ NPT	0.88	1.25	1.38	0.91
G10C006018364	G10C006018384	3/8″ - 24 LH	0.39	1.74	1/4″ NPT	0.88	1.25	1.38	0.91
G10C006018365	G10C006018385	3/8″ - 24 RH	0.39	1.74	1/4″ NPT	0.88	1.25	1.38	0.91
G10C006018366	G10C006018386	1/2″ - 20 LH	0.51	1.74	1/4″ NPT	0.88	1.25	1.38	0.91
G10C006018367	G10C006018387	1/2″ - 20 RH	0.51	1.74	1/4″ NPT	0.88	1.25	1.38	0.91
G10C006018368	G10C006018388	M16″ X 1.5 LH	0.71	1.74	1/4″ NPT	0.88	1.25	1.38	0.91
G10C006018369	G10C006018389	M16″ X 1.5 RH	0.71	1.74	1/4″ NPT	0.88	1.25	1.38	0.91
G10C006018370	G10C006018390	M10″ X 1 LH	0.43	1.74	1/4″ NPT	0.88	1.25	1.38	0.91
G10C006018371	G10C006018391	M10″ X 1 RH	0.43	1.74	1/4″ NPT	0.88	1.25	1.38	0.91
G10C006018372	G10C006018392	M12″ X 1.25 LH	0.51	1.74	1/4″ NPT	0.88	1.25	1.38	0.91
G10C006018373	G10C006018393	M12″ X 1.25 RH	0.51	1.74	1/4″ NPT	0.88	1.25	1.38	0.91

Type	Pressure (PSI)	Temperature (°F)	RPM
G10C	1,500	158	20,000



Features and Benefits

- High-pressure, bearingless coolant rotary union
- External bracket mounted
- Stub rotor mounted directly onto spindle end
- Compact, precision design for installation flexibility
- Tungsten carbide seal faces resist wear and thermal shock
- Optional lipseal for added spindle protection

Custom Unions

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

Figure 1

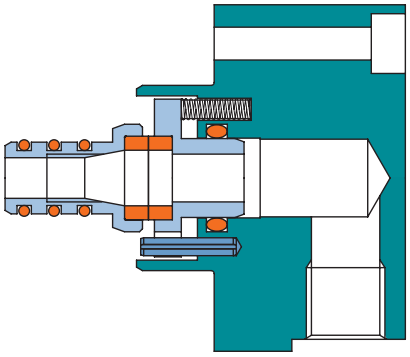


Figure 2

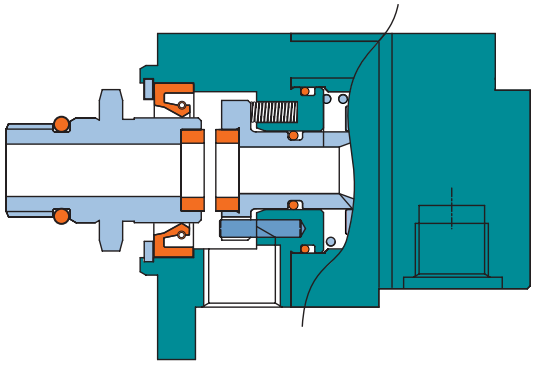


Figure 3

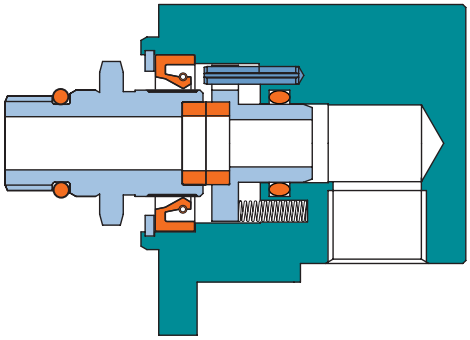


Figure 4

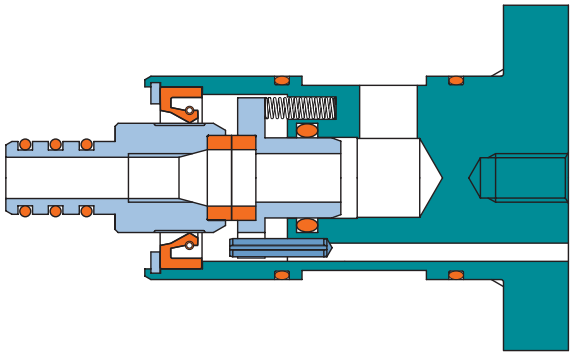


Figure 5

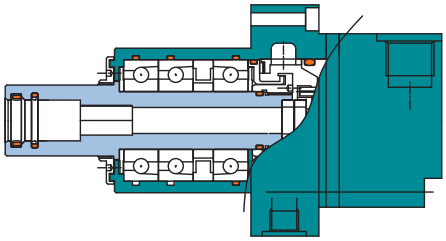
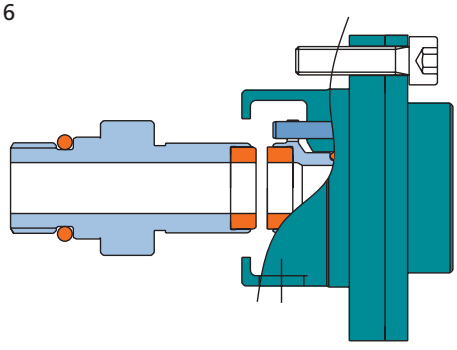


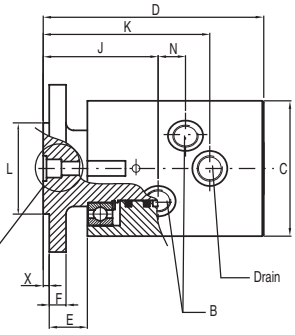
Figure 6

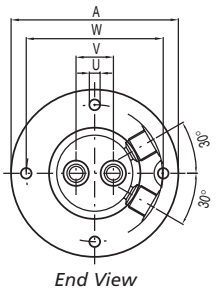


Custom-designed precision rotary unions are available with laser-etched hydrodynamic grooves to provide improved seal life.

Multi-Passage

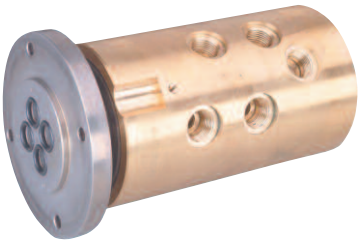
G2M

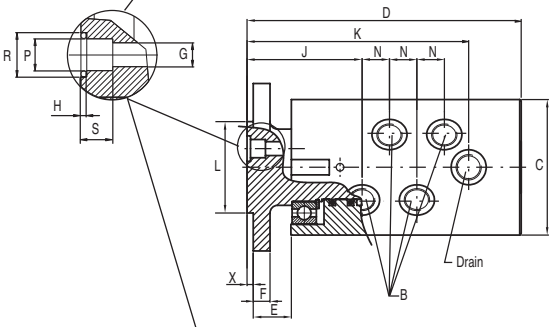


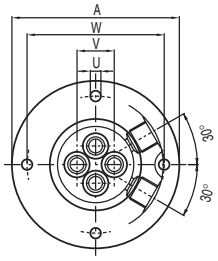


End View

G4M

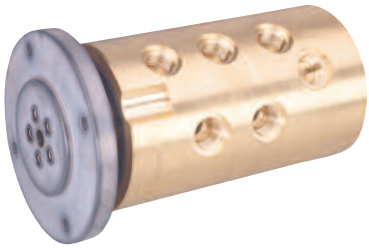


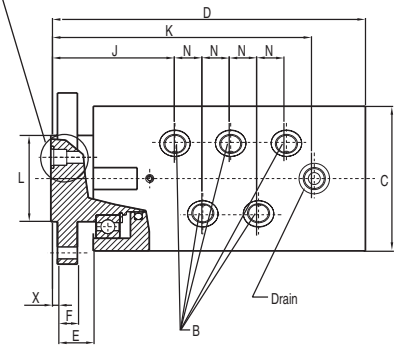


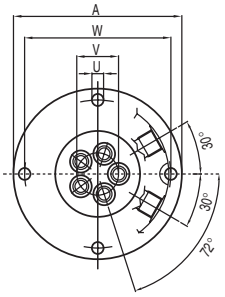


End View

G5M







End View

Type	A	B	C	D	E	F	G	H	J	K	L	N	P	R	S	U	V	W	X
G2M009001494	4.33	3/8″ BSP	3.50	5.71	0.98	0.43	0.35	0.08	2.99	4.33	2.36	0.71	0.47	0.67	0.47	0.28	0.98	3.54	0.16
G2M012002385	5.12	1/2″ BSP	4.25	6.22	0.98	0.55	0.47	0.08	3.19	4.84	2.95	0.91	0.59	0.79	0.59	0.35	1.14	4.33	0.16
G4M009001454	4.33	3/8″ BSP	3.50	7.09	0.98	0.43	0.35	0.08	2.99	5.75	2.36	0.71	0.47	0.67	0.47	0.28	0.98	3.54	0.16
G4M012003608	5.12	1/2″ BSP	4.25	7.95	0.98	0.55	0.47	0.08	3.19	6.65	2.95	0.91	0.59	0.79	0.59	0.35	1.14	4.33	0.16
G5M009015044	5.12	3/8″ BSP	4.29	9.33	1.06	0.59	0.35	0.08	3.70	7.83	2.56	0.83	0.47	0.67	0.47	0.35	1.26	4.41	0.20

Inter-passage leakage may occur, check compatibility of different fluids.

Fluid	Pressure (PSI)	Temperature (°F)	RPM
Air	150	195	100
Hydraulic Oil	880	195	100
	3,570	195	10

Features and Benefits

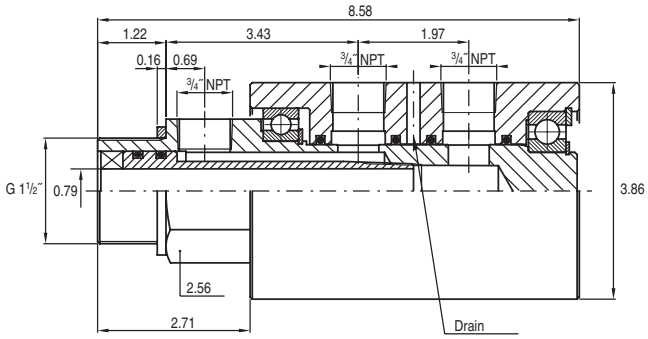
- Multi-passage rotary unions for air and oil
- Precision ball bearings are lubricated for life
- Proprietary “slide” seal provides long life and dry-running
- Heat-treated (hardened) stainless steel rotor
- Drain holes can be connected to a drain line
- Designed for multi-station index tables

Multi-Purpose

G2M019003818

Fluid	Pressure (PSI)	Temperature (°F)	RPM
Air	150	195	100
Hydraulic Oil	880	195	100
	3,570	195	10

Inter-passage leakage may occur, check compatibility of different fluids.

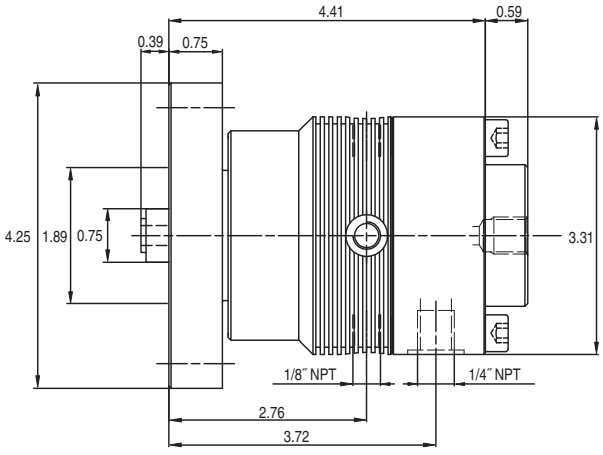


Features and Benefits

- Two-passage rotary union for air and oil
- Precision ball bearings are lubricated for life
- Heat-treated (hardened) stainless steel rotor
- Drain holes can be connected to a drain line
- Anodized aluminum body

G/5007/0004

Fluid	Pressure (PSI)	Temperature (°F)	RPM
Air	150	250	1,500
Hydraulic Oil	1,000	250	1,500



Features and Benefits

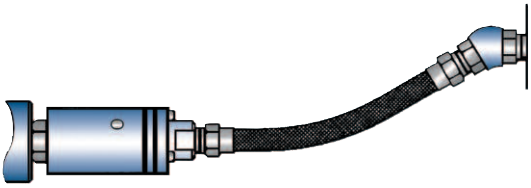
- High-speed, two-passage rotary union for air, hydraulic oil, and coolant
- Unique seal design prevents "accidental" leakage when both passages are pressurized
- Mechanical seal provides long life and positive sealing
- High precision ball bearings are lubricated for life
- Heat-treated (hardened) stainless steel rotor
- Drain holes can be connected to a drain line

Recommendations

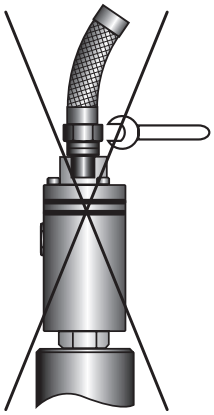
Installation and operation recommendations
G rotary unions are high-precision components that provide smooth running operation at high speeds. Due to the precise manufacturing tolerances, these rotary unions require care during installation and maintenance.

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 rotary union and elimination of side loading, the proper installation, type, and length of flexible hose should be used. Kadant Johnson recommends SAE 100R1 type AT single-braid hose. The minimum length of hose is 12˝ for a one-piece installation.



Hose should be a minimum of 12˝ long.



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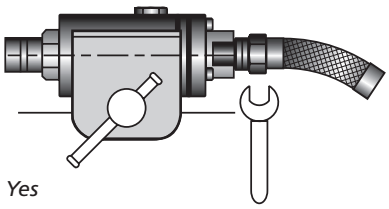

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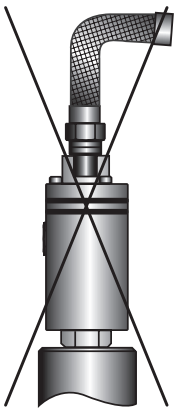

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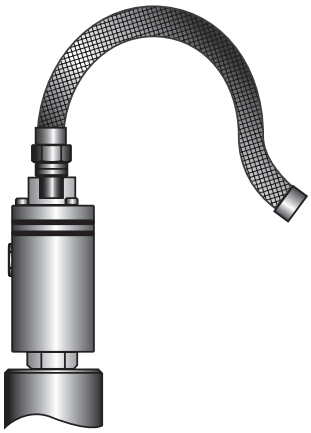

Yes

Lubrication
The seal faces in all G rotary unions are lubricated by the media (coolant, hydraulic oil, etc.) passing through the rotary union. The Auto-Off™ seal device found in select rotary unions permits dry running. All ball bearings are lubricated for life and require no additional lubrication.

Filtration
It is important to follow the filtration requirements recommended by the machinery OEM. The G rotary unions do not require additional filtration other than what is recommended for the coolant pumping system.

Guarantee
G rotary 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.

Other Rotary Unions

Type RX for water, thermal oil, and air (⅜" to 6")

The RX® rotary union features a balanced seal and carbon-to-tungsten carbide seal package that makes the RX more robust and able to run longer than other ball bearing designs. The RX rotary union is supported by two widely-spaced anti-friction bearings, capable of intermittent dry running, and has the balanced seal-loading springs located outside the flow area to minimize potential for fouling. The RX is rated up to 500°F (260°C), 150 psi (10 bar), and 3,000 RPM.

Type SX for steam and thermal oil (¾" to 5")

The SX® rotary union is designed for steam and thermal oil applications with a stationary supply pipe. Its two internal carbon-graphite bearings permit self-alignment and long operating life – even on cylinders that are not concentric. The convex seal ring and optimized seal diameter provide extended seal life and reduced maintenance for the SX rotary union. The SX rotary union line is available in sizes from ¾" to 5" and can be used in single or dual flow applications. The union is rated up to 650°F (343°C), 300 psi (20 bar), and 550 RPM.

Type ELS for steam and thermal oil service (2" to 16")

The ELS™ rotary union features two carbon-graphite bearings to provide internal support for the rotary union and maintain alignment. The ELS rotary union is available in sizes 2" to 16" and is rated up to 650°F (343°C), 300 psig (20 bar), and 200 RPM.

Type Over-the-Shaft for water, hydraulic oil, and air service

The Over-the-Shaft™ rotary union is applied to various types of rolls that require cooling through the driven roll journal. The OTS features a design for both high-speed and lower-speed applications and is rated up to 200°F (93°C) and 150 psig (10 bar).

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