

POWER TRANSMISSION PARTS

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Universal Joints





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UNIVERSAL JOINT

STANDARD

The Mario Ferri universal joint is a very versatile universal joint with a maximum speed of 1000RPM and a maximum angle 45° with the E type and 90° with the ED type. Also available in Stainless Steel

	Max Bore	Max Bore	Maximum
Part No.	& Key	No Key	Speed
			(RPM)
GU01E/ED	10.0	10.0	1000
GU02E/ED	10.0	10.0	1000
GU03E/ED	12.0	12.0	1000
GU04E/ED	16.0	16.0	1000
GU05E/ED	16.0	16.0	1000
GU1E/ED	20.0	20.0	1000
GU2E/ED	20.0	20.0	1000
GU3E/ED	25.0	25.0	1000
GU4E/ED	25.0	25.0	1000
GU5E/ED	30.0	30.0	1000
GU6E/ED	35.0	35.0	1000
GU6E1/ED1	35.0	35.0	1000
GU7E/ED	40.0	40.0	1000
GU8E/ED	45.0	45.0	1000
GU9E/ED	55.0	55.0	1000

Step 1 Determine the speed of the application.

Step 2 Divide the Kw by the correction factor according to the chart.

Step 3 Refer to the running curves that apply to the desired U-Joint E and ED. The required universal joint size can be determined by establishing the point of intersection of the RPM on the horizontal scale and the kW on the vertical scale. Size is stated against the curve immediately above this point.

Working angle	5°	10°	15°	20°	25°	30°	35°	40°	45°
Correction factor	1.25	1.00	0.80	0.65	0.55	0.45	0.38	0.30	0.25

		Bore					
Part No.		Max	Max	А	В	B1	С
	Std	& Key	No Key				
GU01E/ED	6.0	10.0	10.0	16.0	34.0	56.0	8.0
GU02E/ED	8.0	10.0	10.0	16.0	40.0	62.0	11.0
GU03E/ED	10.0	12.0	12.0	22.0	48.0	74.0	12.0
GU04E/ED	12.0	16.0	16.0	25.0	56.0	86.0	13.0
GU05E/ED	14.0	16.0	16.0	28.0	60.0	96.0	14.0
GU1E/ED	16.0	20.0	20.0	32.0	68.0	104.0	16.0
GU2E/ED	18.0	20.0	20.0	36.0	74.0	114.0	17.0
GU3E/ED	20.0	25.0	25.0	42.0	82.0	128.0	18.0
GU4E/ED	22.0	25.0	25.0	45.0	95.0	145.0	22.0
GU5E/ED	25.0	30.0	30.0	50.0	108.0	163.0	26.0
GU6E/ED	30.0	35.0	35.0	58.0	122.0	190.0	29.0
GU6E1/ED1	32.0	35.0	35.0	58.0	130.0	198.0	33.0
GU7E/ED	35.0	40.0	40.0	70.0	140.0	212.0	35.0
GU8E/ED	40.0	45.0	45.0	80.0	160.0	245.0	39.0
GU9E/ED	50.0	55.0	55.0	95.0	190.0	290.0	46.0

NOTE: These universals are available with no bore (solid) unassembled and std bore assembled.







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NEEDLE BEARING UNIVERSAL JOINT

NEEDLE BEARING

The Mario Ferri universal joint is a very versatile universal joint with a maximum speed of 4000RPM and a maximum angle 45° with the H type and 90° with the HD type.

	Max Bore	Max Bore	Maximum
Part No.	& Key	No Key	Speed
			(RPM)
GU03H/HD	12.0	12.0	4000
GU04H/HD	16.0	16.0	4000
GU05H/HD	16.0	16.0	4000
GU1H/HD	20.0	20.0	4000
GU2H/HD	20.0	20.0	4000
GU3H/HD	25.0	25.0	4000
GU4H/HD	25.0	25.0	4000
GU5H/HD	30.0	30.0	4000
GU6H/HD	35.0	35.0	4000
GU6H1/HD1	35.0	35.0	4000
GU7H/HD	40.0	40.0	4000
GU8H/HD	45.0	45.0	4000
GU9H/HD	55.0	55.0	4000





PERFORMANCE DATA

Step 1 Determine the speed of the application.

Step 2 Divide the Kw by the correction factor according to the chart.

Step 3 Refer to the running curves that apply to the desired U-Joint H and HD. The required universal joint size can be determined by establishing the point of intersection of the RPM on the horizontal scale and the Kw on the vertical scale. Size is stated against the curve immediately above this point.

Working angle	5°	10°	15°	20°	25°	30°	35°	40°	45°	
Correction factor	1.25	1.00	0.90	0.80	0.70	0.50	0.40	0.30	0.25	

		Bore					
Part No.		Max	Max	А	В	B1	С
	Std	& Key	No Key				
GU03H/HD	10.0	12.0	12.0	22.0	48.0	74.0	12.0
GU04H/HD	12.0	16.0	16.0	25.0	56.0	86.0	13.0
GU05H/HD	14.0	16.0	16.0	28.0	60.0	96.0	14.0
GU1H/HD	16.0	20.0	20.0	32.0	68.0	104.0	16.0
GU2H/HD	18.0	20.0	20.0	36.0	74.0	114.0	17.0
GU3H/HD	20.0	25.0	25.0	42.0	82.0	128.0	18.0
GU4H/HD	22.0	25.0	25.0	45.0	95.0	145.0	22.0
GU5H/HD	25.0	30.0	30.0	50.0	108.0	163.0	26.0
GU6H/HD	30.0	35.0	25.0	58.0	122.0	190.0	29.0
GU6H1/HD1	32.0	35.0	25.0	58.0	130.0	198.0	33.0
GU7H/HD	35.0	40.0	30.0	70.0	140.0	212.0	35.0
GU8H/HD	40.0	45.0	45.0	80.0	160.0	245.0	39.0
GU9H/HD	50.0	55.0	55.0	95.0	190.0	290.0	46.0

NOTE: These universals are available with no bore (solid) unassembled and std bore assembled.

DIMENSIONAL DATA



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UNIVERSAL JOINT

UNIVERSAL JOINT

'D' TYPE

A standard industrial type universal joint with pin and block design, the 'D' type is ideal for applications with up to 25° angular misalignment and speeds up to 1750 RPM. It is available unassembled with no bore, or assembled with a std bore. Boot retaining grooves are standard.

'HD' TYPE

The 'HD' Type is a high quality universal joint made to exacting tolerances, perfect for your toughest high angle, high RPM applications. Precision machining, hardened yokes and matched fitting of all components means that it normally provides at least twice the life of a standard industrial type universal joint. It is available unassembled with no bore, or assembled with a std bore. Boot retaining grooves are standard.

Part No.	Max Bore & Key	Max Bore No Key	Normal Maximum Speed
-			(RPM)
D/HD-1	-	6.4	1750
D/HD-2	-	9.7	1750
D/HD-3	6.4	12.7	1750
D/HD-4	11.2	15.7	1750
D/HD-5	12.7	17.5	1750
D/HD-6	14.2	19.1	1750
D/HD-7	15.7	22.4	1750
D/HD-8	19.1	25.4	1750
D/HD10	22.4	28.4	1750
D/HD11	25.4	31.8	1750
D/HD12	30.2	38.1	1750
D/HD13	38.1	44.5	1750
D/HD14	46.0	50.8	1750
D/HD15	63.5	63.5	1750

NOTE: These universals are available with no bore (solid) unassembled and std bore assembled.

		Bore				
Part No.		Max	Max	А	В	С
	Std	& Key	No Key			
D/HD-1	4.8	-	6.4	9.7	44.5	14.2
D/HD-2	6.4	-	9.7	12.7	50.8	15.7
D/HD-3	7.9	6.4	12.7	15.7	57.2	17.3
D/HD-4	9.7	11.2	15.7	19.1	68.1	22.4
D/HD-5	11.2	12.7	17.5	22.4	76.2	22.4
D/HD-6	12.7	14.2	19.1	25.4	85.9	25.4
D/HD-7	14.2	15.7	22.4	28.4	88.9	25.4
D/HD-8	15.7	19.1	25.4	31.8	95.3	26.9
D/HD10	19.1	22.4	28.4	38.1	108.0	30.0
D/HD11	22.4	25.4	31.8	44.5	127.0	35.1
D/HD12	25.4	30.2	38.1	50.8	138.2	38.1
D/HD13	31.8	38.1	44.5	63.5	177.8	50.8
D/HD14	38.1	46.0	50.8	76.2	230.1	69.9
D/HD15	50.8	63.5	63.5	101.6	269.7	76.2

Standard bore sizes are in inches

PERFORMANCE DATA





DIMENSIONAL DATA



Steps in Selecting a Universal Joint Step 1 Multiply RPM by the working angle Step 2 Determine the nominal torque of your application in Nm

- Step 3 Multiply the calculated torque by the desired service factor
- **Step 4** Refer to the running curves that apply to the desired U-Joint. D and HD. The required universal joint size can be determined by establishing the point of intersection of the RPM X Working angle figure on the horizontal scale and the service factor torque on the vertical scale. Size is stated against the curve





UNIVERSAL JOINT NEEDLE BEARING

NEEDLE BEARING TYPE

Designed with high quality, pre-lubricated and sealed needle bearings, this universal joint provides the reliability necessary for speeds up to 6000 RPM, and operating angles up to 25°

Needle bearing universal joints also ensure the precision required for robotics, instrumentation, control equipment, and many other demanding applications. It is available assembled with both no bore or with a std bore. Boot retaining grooves are standard.

Part No.	Max Bore & Key	Max Bore No Key	Normal Maximum Speed (RPM)
NB-6	14.2	19.1	6000
NB-8	19.1	25.4	6000
NB10	22.4	28.4	6000
NB12	30.2	38.1	6000

NOTE: These universals are available with no bore (solid) assembled and std bore assembled.







DIMENSIONAL DATA



		Bore				
Part No.		Max	Max	А	В	С
	Std	& Key	No Key			
NB-6	12.7	14.2	19.1	25.4	85.9	25.4
NB-8	15.7	19.1	25.4	31.8	95.3	26.9
NB10	19.1	22.4	28.4	38.1	108.0	30.0
NB12	25.4	30.2	38.1	50.8	138.2	38.1

Standard bore sizes are in inches

Steps in Selecting a Universal Joint

Step 1 Multiply RPM by the working angleStep 2 Determine the nominal torque of your application in Nm

- Step 3 Multiply the calculated torque by the desired service factor
- **Step 4** Refer to the running curves that apply to the desired U-Joint. NB. The required universal joint size can be determined by establishing the point of intersection of the RPM X Working angle figure on the horizontal scale and the service factor torque on the vertical scale. Size is stated against the curve immediately above this point.





UNIVERSAL JOINT 303 STAINLESS STEEL

PERFORMANCE DATA

STAINLESS STEEL

'D' Type universal joints are available in stainless steel. For use when contact with corrosive chemicals, exposure to corrosive atmosphere, or sanitation requirements are a factor. It is available unassembled with no bore, or assembled with a std bore. Boot retaining grooves are standard. To select a stainless steel universal joint use the D & HD chart on page 68

Part No.	Max Bore & Key	Max Bore No Key	Normal Maximum Speed (RPM)
D-4SS	11.2	15.7	1750
D-6SS	14.2	19.1	1750
D-8SS	19.1	25.4	1750
D10SS	22.4	28.4	1750
D12SS	30.2	38.1	1750

NOTE: These universals are available with no bore (solid) unassembled and std bore assembled.



С

Steps in Selecting a Universal Joint Step 1 Multiply RPM by the working angle Step 2 Determine the nominal torque of your

		Bore				
Part No.		Max	Max	А	В	С
	Std	& Key	No Key			
D-4SS	9.7	11.2	15.7	19.1	68.1	22.4
D-6SS	12.7	14.2	19.1	25.4	85.9	25.4
D-8SS	15.7	19.1	25.4	31.8	95.3	26.9
D10SS	19.1	22.4	28.4	38.1	108.0	30.0
D12SS	25.4	30.2	38.1	50.8	138.2	38.1

Standard bore sizes are in inches

application in Nm **Step 3** Multiply the calculated torque by the desired service factor **Step 4** Refer to the running curves that apply to the desired U-Joint. D and HD. The

В

required universal joint size can be determined by establishing the point of intersection of the RPM X Working angle figure on the horizontal scale and the service factor torque on the vertical scale. Size is stated against the curve

