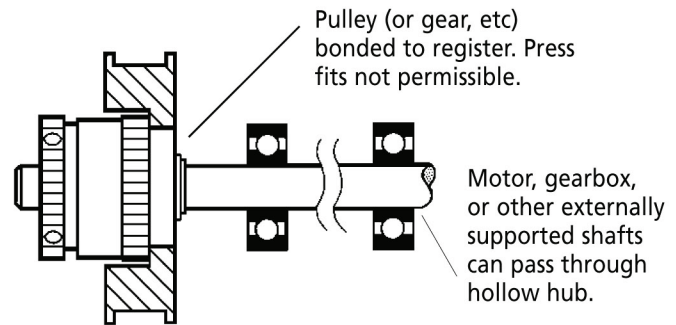
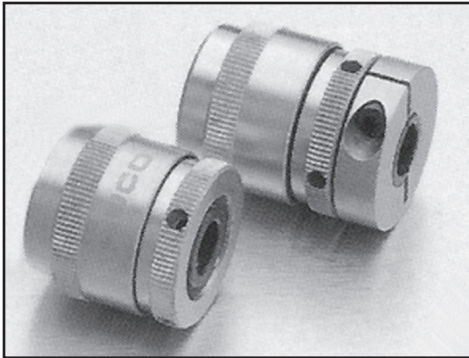


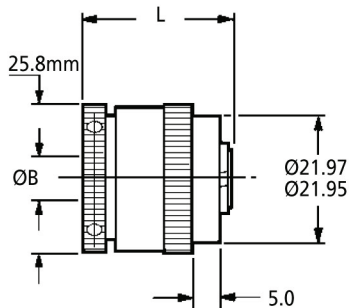
271
279

Adjustable Friction Clutches

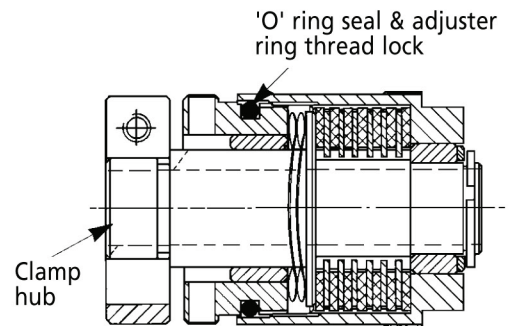
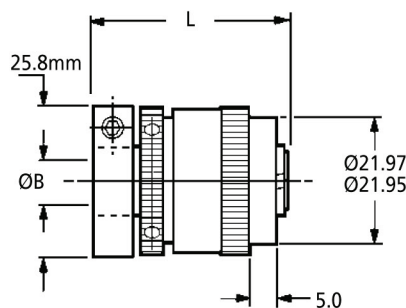
Vari-tork® Adjustable Friction Clutches



Set Screw Hub



Clamp Hub



Sectional view of 6-plate VT4. Shafts are secured by a split hub and ring clamp method which does not score the shafts.

PULLEY TYPE

Series Part No.	Max Drag Torque (in.lb.)	Watts @50 RPM	A Outside Dia.	Overall Length L	Max Shaft Penetration L1	Max Shaft Penetration L2	B1+.0012 Bore Dia.	Pulley Mount Dia.	Weight Grams
271.25	4.69	2.8	1.02	1.04	0.98	0.34	.250 to .313	0.86	37
271.25	4.69	2.8	1.02	1.04	0.98	0.34	6mm to 8mm	0.86	37
279.25	11.69	6.9	1.02	1.28	1.22	0.34	.250 to .313	0.86	48
279.25	11.69	6.9	1.02	1.28	1.22	0.34	6mm to 8mm	0.86	48
279.48	26.57	15.7	1.89	2.56	2.56	0.66	.375 to .625	1.46	278
279.48	26.57	15.7	1.89	2.56	2.56	0.66	8m to 16mm	1.46	278

Clamp hub on special order only

Material

Hub & Clutch Plates: Heat treated Steel Housing **Adjuster Ring & Adaptor:** Aluminum Alloy 2011T8/T3 **Bearings:** Bronze

Performance

Max Slipping Speed: 1000 Rpm. **Max Backlash:** 2° **Operating Temp. Range:** -10 °C to +80 °C **Power Dissipation at 20 °C**

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Technical Notes

Calculating for Power Dissipation

Given the slipping speed in rpm and the drag torque in inch-lbs, the following equation can be used for calculating the power dissipation in watts (W)

$$W = \frac{(\text{torque})(\text{rpm})}{84.08}$$

Breakaway torque

After a period during which no slipping has taken place, the breakaway torque can be up to 2-1/2 times the set value.

Torque Decay

There is an inverse relationship between clutch temperature and slipping torque. The slipping torque reduces from the set value as the power being dissipated causes the clutch temperature to rise. When slipping continuously, torque settles at approximately 70% of the value set on a new clutch and approximately 80% of the value set on a used clutch. This characteristic is not speed dependent.

Speed Related Torque Fluctuations

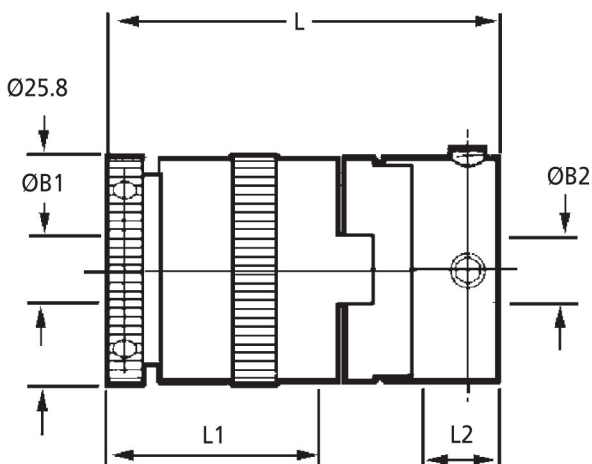
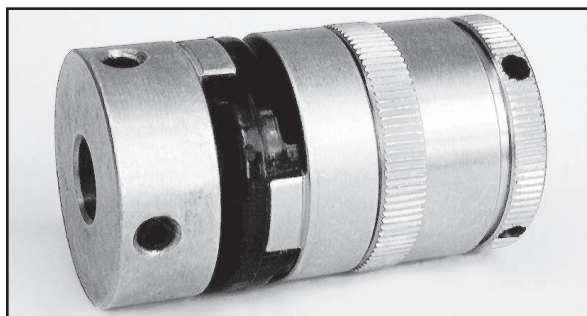
Variations in slipping speed cause a momentary increase in the prevailing output torque. The clutches behave more consistently at high speed/low torque than low speed/high torque. High Speed in this instance starts at about 500 rpm.

When applications call for sustained slipping, the housing temperature should be maintained below 80°C. Clutches mounted concentrically within pulleys, gear wheels, etc, will be more effective at dissipating heat generated during slipping.

277
285

Adjustable Friction Couplings

Vari-tork® Adjustable Friction Couplings



OB1 Max Bores: 8	OB2 Max Bores: 10
OB1 Screw Sizes: M3	OB2 Screw Sizes: M4
OB1 Key Size: 1.5	OB2 Key Size: 2.0

COUPLING TYPE

Series Part No.	Max Drag Torque (in.lb.)	Watts @50 RPM	A Outside Dia.	Overall Length L	Max Shaft Penetration L1	Max Shaft Penetration L2	B1+.0012 Bore Dia.	B2+.0012 Bore Dia.	Weight Grams
311.16	0.04	0.03	0.63	1.02	0.20	0.28	4mm	4mm	14
277.25	4.69	2.8	1.02	1.83	0.98	0.34	.250 to .313	.250 to .375	58
277.25	4.69	2.8	1.02	1.83	0.98	0.34	6mm to 8mm	6mm to 10mm	58
285.25	11.69	6.9	1.02	2.10	1.22	0.34	.250 to .313	.250 to .375	69
285.25	11.69	6.9	1.02	2.10	1.22	0.34	6mm to 8mm	6mm to 10mm	69
285.48	26.57	15.7	1.89	4.02	2.56	0.66	.375 to .625	.375 to .75	390
285.48	26.57	15.7	1.89	4.02	2.56	0.66	8mm to 16mm	10mm to 20mm	390

Material

Housings: Alloy 2011 T3/T8 **Oldham:** Alloy 2011 T3/T8 **Input Hub:** Stell Oldham **Disc:** Black Acetal

Performance

Max Permissible Surface Temperature: 80°C Rpm. **Max Slipping Speed:** 1000 Rpm. **Max Backlash:** 2°

Other Info

Waxed Washers: Two waxed washers are fitted to these clutches. in some instances better torque control may result from removing one of them.

Ordering: Select a bore for OB1, and for OB2 where relevant. The corresponding bores represent the part number. Adjustable without special tools

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Adjustable Friction Couplings

Vari-tork® Adjustable Friction Couplings

Technical Notes

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