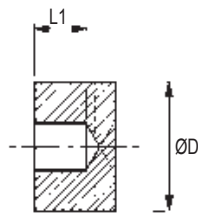
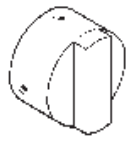


**Blind hubs**



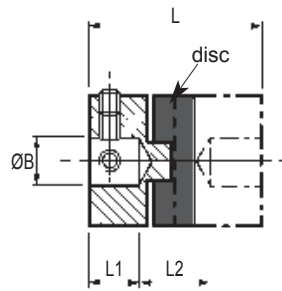
Controlled bore depth L1 provides a register when pre-assembling hubs to shafts



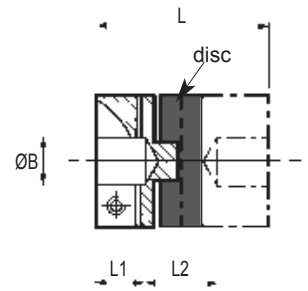
Set screw style



Clamp style

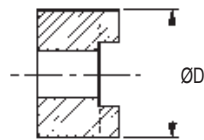


Refs. 232, 243  
Set screw style



Refs. 234, 235, 245  
Clamp style

**Thro' hubs**



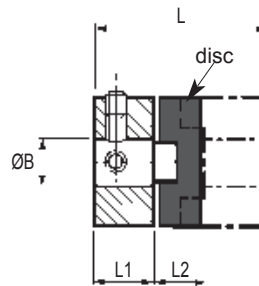
Thro' bores allow disc replacement without disturbing shaft alignment



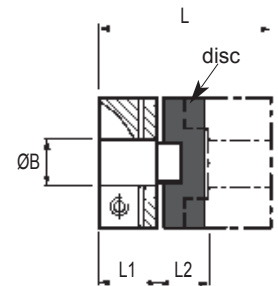
Set screw style



Clamp style

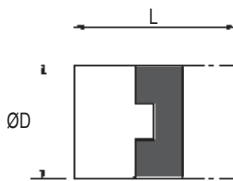


Refs. 450, 454  
Set screw style



Refs. 452, 453, 456  
Clamp style

**Blank hubs**



User-adaptable for special needs, e.g. fitting within tubes. Blank hubs are supplied centred with no provision for fastening. External dimensions identical with blind hubs.

Coupler size	Complete hub ref.	ØD	L
06	231.06.00	6.4	12.7
09	231.09.00	9.5	12.7
13	231.13.00	12.7	15.9
19	231.19.00	19.1	22.0
25	231.25.00	25.4	28.4
33	230.33.00	33.3	48.0
41	231.41.00	41.3	50.8

**Standard discs** (larger sizes are webbed)



Acetal – High torsional stiffness, good bearing properties, long backlash-free life.

Nylon 11 – Resilient, isolates noise & vibration. Performance approximately 25% that of acetal disc.

**Thro' bored discs**



Thro' bored discs allow shafts to near-butt, standard thro' hole diameter = ØD x 0.5. To order, add suffix 'T' to order code, eg., **236.25T**

Other thro' hole diameters are manufactured to order. Specify the disc ref. and thro' hole diameter. This should equal the larger shaft diameter + 2 x max radial error.

*Note that thro' bored discs reduce torsional stiffness.*

**HOW TO ORDER**

Combine the HUB REF in the Main Table with the BORE REF in the Standard Bores Table, e.g.

**452H25.28**

Hub ref. \_\_\_\_\_  
Bore ref. \_\_\_\_\_

Order discs separately from the Main Table, e.g.

**236.25**

Disc ref. \_\_\_\_\_

**ORDER 2 HUBS + 1 DISC PER COUPLER**

**HOW TO INSTALL**

Correct installation is important for optimum operation. See page 18 for details.

## MAIN TABLE - DIMENSIONS & ORDER CODES

Coupler Type & Size	Set Screw Style	Clamp Style	ØD	L	L1	L2	ØB1 max	Fasteners			4 Moment of inertia kgm <sup>2</sup> x 10 <sup>-8</sup>	4 Mass kg x 10 <sup>-3</sup>	Acetal (black) standard	Nylon 11 (natural)	
								Screw	3 Torque Nm	Wrench mm					
HUB REF			DISC REF												
Blind Hubs	06	232.06	-	6.4	12.7	3.8	5.1	3.18	M3	0.94	1.5	6	2.5	236.06	238.06
	09	232.09	-	9.5	12.7	3.8	5.1	5	M3	0.94	1.5	18	4	236.09	238.09
	13	232.13	-	12.7	15.9	4.3	7.3	6.35	M3	0.94	1.5	26	11	236.13	238.13
	19	232.19	-	19.1	22.0	6.3	9.4	8	M3	0.94	1.5	67	12	236.19	238.19
		-	235.19						4-40	2.33	2.0				
	25	232.25	-	25.4	28.4	8.6	11.2	12	M4	2.27	2.0	252	31	236.25	238.25
		-	234.25						M3	2.43	2.5				
	33	243.33	-	33.3	48.0	13.0	22.0	16	M4	2.27	2.0	1278	86	236.33	238.33
		-	245.33						M4	5.66	3.0				
	41	232.41	-	41.3	50.8	16.7	17.4	20	M5	4.62	2.5	3327	148	236.41	238.41
-		234.41	M4						5.66	3.0					
Thro' Hubs	19	450H19	-	19.1	26.0	9.4	7.2	8	M4	2.27	2.0	59	13	236.19	238.19
		-	453H19						4-40	2.33	2.0				
	25	450H25	-	25.4	32.4	11.6	9.2	12	M5	4.62	2.5	252	31	236.25	238.25
		-	452H25						M3	2.43	2.5				
	33	454H33	-	33.3	48.0	15.0	18.0	16	M6	7.61	3.0	1133	74	236.33	238.33
		-	456H33						M4	5.66	3.0				
	41	450H41	-	41.3	50.8	17.8	15.3	20	M6	7.61	3.0	3177	142	236.41	238.41
		-	452H41						M4	5.66	3.0				
	50	450H50	-	50.0	59.6	20.6	18.4	25.4	M8	18.36	4.0	7550	208	236.50	-
		-	452H50						M5	11.40	4.0				
57	450H57	-	57.1	78.0	28.4	21.2	30	M8	18.36	4.0	12410	361	236.57	-	
	-	452H57						M6	19.34	5.0					

### Materials & Finishes

#### Hub sizes 06 to 13:

Brass BS 2874 CZ121  
Chromate & passivate finish

#### Hub sizes 19 to 57:

Al. Alloy 2011T3 and 2011T8  
BS 4300/5 FC1

#### Fasteners:

Alloy steel, black oiled

#### Blind & blank hubs:

Alocrom finish

#### Thro' hubs:

Clear anodised finish

#### Torque discs:

Types 236 - Acetal (black)  
Types 238 - Nylon 11 (natural)

#### Temperature Range

-20°C to +60°C

## SERVICE FACTORS

Duty	Factor
Momentary	1
1 hr per day	2
3 hrs per day	4
6 hrs per day	6
12 hrs per day	8

(see note page 14)

## PERFORMANCE (AT 20°C WITH STANDARD ACETAL DISC)

Coupler Size	5 Peak torque Nm	6 Max compensation @ 3000 r.p.m.			7 Torsional		Static break torque Nm
		Angular ± deg	Radial ± mm	Axial ± mm	Rate deg / Nm	Stiffness Nm / rad	
06	0.06	0.5	0.1	0.05	5.7	10	0.7
09	0.21		0.1	0.05	1.9	30	2
13	0.5		0.1	0.05	0.88	65	4
19	1.7		0.2	0.1	0.50	115	10
25	4		0.2	0.1	0.28	205	13
33	9		0.2	0.15	0.093	615	53
41	17		0.25	0.15	0.048	1200	57
50	30		0.25	0.2	0.042	1375	95
57	44	0.25	0.2	0.022	2610	150	

- Blind hubs:** Length of parallel bore  $\pm 0.2$ . Bores may terminate in 118° incl. angle.  
**Thro' hubs:** Max permissible hub penetration.
- Blind hubs:** Nominal distance between unchamfered shafts bottomed out to L1.  
**Thro' hubs:** Nominal distance between shafts with standard (unbored) disc.
- Maximum recommended tightening torque (see also next page under 'Clamp hubs')
- Values apply to complete couplers with max bores.
- Peak torque.** Select a size where Peak Torque exceeds the application torque x service factor.
- Couplers can provide up to  $\pm (\text{ØD} \times 0.1)$  radial compensation in extreme cases. Observe given values for maximum backlash-free life. Axial compensation is set on installation. See next page for details. Electrical isolation between shafts > 3kV.
- Values apply at 50% peak torque with no misalignment, measured shaft-to-shaft with largest standard bores.
- Thro' hubs can be provided with keyways or 'D' bores. See page 4 for details.

## STANDARD BORES<sup>8</sup>

Coupler Size	ØB +0.03/-0mm																							
	2	3	3.175	4	4.763	5	6	6.350	8	9.525	10	12	12.700	14	15	15.875	16	18	19	19.050	20	24	25	30
06	●	●	●																					
09		●	●	●	●	●																		
13		●	●	●	●	●	●																	
19				●	●	●	●	●																
25							●	●	●	●	●													
33								●	●	●	●	●	●	●	●	●	●							
41									●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
50										●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
57											●	●	●	●	●	●	●	●	●	●	●	●	●	●
Bore ref.	11	14	16	18	19	20	22	24	28	31	32	35	36	38	40	41	42	45	46	47	48	51	52	56