

# General Purpose Motion Control Couplings

- Sliding Disc (Oldham)
- Universal Lateral (Uni-Lat)

- **Backlash-free up to $10^8$ turns**
- **Can tolerate large misalignments**
- **Slight damping characteristics**
- **Flex-free mechanical action - non-progressive bearing loads**
- **Non-magnetic (with special screws)**
- **Electrically isolating**
- **Low inertia**

Uni-Lats are widely used for pulse generator drives while Oldhams are very popular for stepper driven positioning stages.

A unique property of Uni-Lats is resistance to axial motion. This makes them suitable for light push/pull duties and for anchoring axially unrestricted shafts.




Oldhams are 3-part couplings consisting of 2 hubs + 1 torque disc. The hubs determine the method of installation and shaft attachment, the discs determine the quality of motion.

The 4 hub styles and 2 disc materials that comprise the range are fully interchangeable within each of the 9 sizes available. To take advantage of this flexibility, hubs and discs are specified and supplied separately.

The discs are the sacrificial elements and are replaceable at low cost in the event of wear or breakage.

# Lateral Offset Couplings



## General Performance Criteria

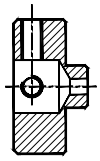
### Temperature Range

-4ºF to +140ºF (–20°C to +60°C)

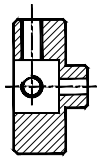
### Maximum Rotational Speed

3000 rev/min

① **Blind hubs:** Length of parallel bore ±0.2. Bores may terminate in 118° incl. angle or flat bottomed.
**Thro' hubs:** Max permissible hub penetration.



**118º Included Angle**



**Flat Bottomed**

② **Blind hubs:** Nominal distance between unchamfered shafts bottomed out to L1.
**Thro' hubs:** Nominal distance between shafts with standard (unbored) disc.

③ Maximum recommended tightening torque.

④ Values apply to complete couplings with max bores.

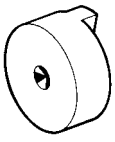
⑤ **Peak torque**. Select a size where Peak Torque exceeds the application torque x service factor.

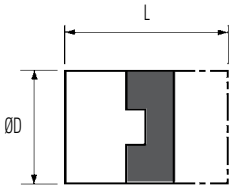
⑥ Couplings can provide up to (ØD x 0.1) radial compensation in extreme cases.
Observe given values for maximum backlash-free life.
Axial compensation is set on installation.
Electrical isolation between shafts > 3kV.

⑦ Values apply at 50% peak torque with no misalignment, measured shaft-to-shaft with largest standard bores.

⑧ Thro' hubs can be provided with keyways.

## 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.

| Coupling size | Complete hub ref. | ØD | L |
|---|---|---|---|
| 06 | 231.06.00 | 0.25 (6.4) | 0.50 (12.7) |
| 09 | 231.09.00 | 0.37 (9.5) | 0.50 (12.7) |
| 13 | 231.13.00 | 0.50 (12.7) | 0.63 (15.9) |
| 19 | 231.19.00 | 0.75 (19.1) | 0.87 (22.0) |
| 25 | 231.25.00 | 1.00 (25.4) | 1.12 (28.4) |
| 33 | 231.33.00 | 1.31 (33.3) | 1.65 (42.0) |
| 41 | 231.41.00 | 1.63 (41.3) | 2.00 (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

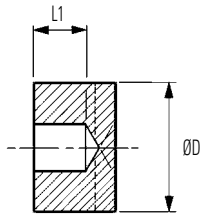


Thro' bored discs allow shafts to near-butt, standard thro' hole diameter = ØD x 0.5. To order, add suffix 'T' to order code, eg., **236.25T**

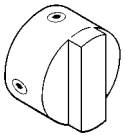
Other thro' hole diameters are manufactured to order. Specify the disc ref. and thro' hole diameter. This should equal the larger shaft diameter + 2 x max radial error.

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

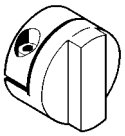
# Brass / Aluminium Blind Hubs



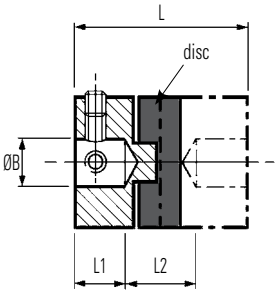

Controlled bore depth L1 provides a register when pre-assembling hubs to shafts



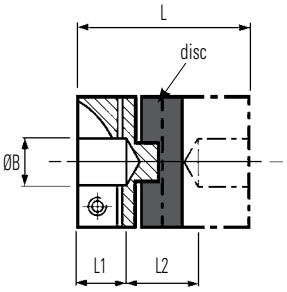
Set screw style



Clamp style




**Refs. 232**
Set screw style




**Refs. 234**
Clamp style

## DIMENSIONS & ORDER CODES

| Coupling Type and Size | | Hub Ref | | Dimensions | | | | | | | Fasteners | | | Disc Ref | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Set Screw Style | Clamp Style | ØD in. (mm) | L in. (mm) | ① L1 in. (mm) | ② L2 in. (mm) | ØB1 Max in. (mm) | ④ Moment of Inertia kgm2 x10-8 | ④ Mass kg x10-3 | Size | ③ Torque lb.-in (Nm) | Wrench in. (mm) | Acetal (black) Std. | Nylon 11 (Natural) |
| Blind Hubs | 06 | 232.06 | - | .25 (6.4) | 0.5 (12.7) | 0.15 (3.8) | 0.20 (5.1) | 0.13 (3.18) | 6 | 2.5 | M3 | 8.3 (0.9) | 0.06 (1.5) | 236.06 | 238.06 |
| | 09 | 232.09 | - | .37 (9.50 | 0.5 (12.7) | 0.15 (3.8) | 0.20 (5.1) | 0.20 (5) | 18 | 4 | M3 | 8.3 (0.9) | 0.06 (1.5) | 236.09 | 238.09 |
| | 13 | 232.13 | - | 0.5 (12.7) | 0.63 (15.9) | 0.17 (4.3) | 0.29 (7.3) | 0.25 (6.35) | 26 | 11 | M3 | 8.3 (0.9) | 0.06 (1.5) | 236.13 | 238.13 |
| | 19 | 232.19<br>- | -<br>234.19 | .75 (19.1) | 0.87 (22.0) | 0.25 (6.3) | 0.37 (9.4) | 0.31 (8) | 67 | 12 | M3<br>M2.5 | 8.3 (0.9)<br>11.6 (1.3) | 0.06 (1.5)<br>0.08 (2.0) | 236.19 | 238.19 |
| | 25 | 232.25<br>- | -<br>234.25 | 1.0 (25.4) | 1.12 (28.4) | 0.34 (8.6) | 0.44 (11.2) | 0.47 (12) | 252 | 31 | M4<br>M3 | 20.1 (2.2)<br>21.5 (2.4) | 0.08 (2.0)<br>0.10 (2.5) | 236.25 | 238.25 |
| | 33 | 232.33<br>- | -<br>234.33 | 1.31 (33.3) | 1.65 (42.0) | 0.51 (13.0) | 0.63 (16.0) | 0.63 (16) | 1074 | 72 | M5<br>M4 | 40.9 (4.6)<br>20.6 (2.3) | 0.06 (1.5)<br>0.08 (2.0) | 836.33 | 838.33 |
| | 41 | 232.41<br>- | -<br>234.41 | 1.62 (41.3) | 2. 0 (50.8) | 0.66 (16.7) | 0.69 (17.4) | 0.79 (20) | 3327 | 148 | M5<br>M4 | 40.1 (4.6)<br>50.1 (5.6) | 0.10 (2.5)<br>0.12 (3.0) | 236.41 | 238.41 |

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

| Coupling Size | ⑤ Peak torque lbs.-in. (Nm) | ⑥ Max compensation @ 3000 rpm | | | ⑦ Torsional | | Static break torque lbs.-in. (Nm) |
|---|---|---|---|---|---|---|---|
| | | Angular deg | Radial in. (mm) | Axial in. (± mm) | Rate deg / Nm | Stiffness Nm / rad | |
| 06 | 0.53 (0.06) | 0.5 | .004 (0.1) | .002 (0.05) | 5.7 | 10 | 6.2 (0.7) |
| 09 | 1.90n (0.21) | | .004 (0.1) | .002 (0.05) | 1.9 | 30 | 17.8 (2) |
| 13 | 4.43 (0.5) | | .004 (0.1) | .002 (0.05) | 0.88 | 65 | 35.4 (4) |
| 19 | 15.0 (1.7) | | .008 (0.2) | .004 (0.1) | 0.50 | 115 | 70.1 (8) |
| 25 | 35.4 (4) | | .008 (0.2) | .004 (0.1) | 0.28 | 205 | 115 (13) |
| 33 | 79.7 (9) | | .008 (0.2) | .006 (0.15) | 0.093 | 615 | 469 (53) |
| 41 | 151 (17) | | .01 (0.25) | .006 (0.15) | 0.048 | 1200 | 504 (57) |

## Materials & Finishes

**Hubs sizes 06 to 13 :** Brass Cu Zn 21 Si 3P [Lead Free]
**Hub sizes 19 to 41:** Al Alloy 2014 T6 or 6026 LF
**Fasteners:** Alloy steel, black oiled
**Hub sizes 19 to 41:** Irridite NCP finish

**IMPORTANT**

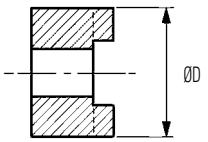
Load capacity depends on application conditions:
***see page 4*** for details

## STANDARD BORES FOR ALL TYPES

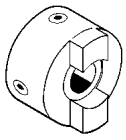
Sizes indicated in parenthesis are metric (mm).

| Coupling Size | ØB1, ØB2 +0.0012/ -0 (+0.03mm/-0mm) | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (2) | (3) | 1/8" | (4) | 3/16" | (5) | (6) | 1/4" | (8) | 3/8" | (10) | (12) | 1/2" | (14) | (15) | 5/8" | (16) | (18) | (19) | 3/4" | (20) | (24) | (25) | (30) |
| 06 | • | • | • | | | | | | | | | | | | | | | | | | | | | |
| 09 | | • | • | • | • | • | | | | | | | | | | | | | | | | | | |
| 13 | | • | • | • | • | • | • | • | | | | | | | | | | | | | | | | |
| 19 | | | | • | • | • | • | • | • | | | | | | | | | | | | | | | |
| 25 | | | | | | | • | • | • | • | • | • | | | | | | | | | | | | |
| 33 | | | | | | | | | • | • | • | • | • | • | • | • | • | | | | | | | |
| 41 | | | | | | | | | | • | • | • | • | • | • | • | • | • | • | • | • | | | |
| 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 |

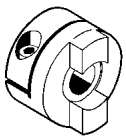
# Aluminium Thro' Hubs



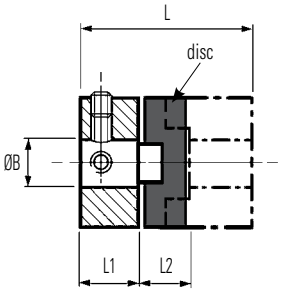

Thro' bores allow disc replacement without disturbing shaft alignment



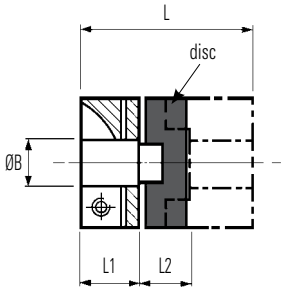
Set screw style



Clamp style




**Refs. 450**
Set screw style




**Refs. 452**
Clamp style

## DIMENSIONS & ORDER CODES

| Coupling Type and Size | | Hub Ref | | Dimensions | | | | | | | Fasteners | | | Disc Ref | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Set Screw Style | Clamp Style | ØD in. (mm) | L in. (mm) | ① L1 in. (mm) | ② L2 in. (mm) | ØB1 Max in. (mm) | ④ Moment of Inertia kgm2 x10-8 | ④ Mass kg x10-3 | Size | ③ Torque lb.-in (Nm) | Wrench in. (mm) | Acetal (black) Std. | Nylon 11 (Natural) |
| Thro' Hubs | 13 | 450H13 | - | 0.5 (12.7) | 0.63 (15.9) | 0.21 (5.5) | 0.08 (1.7) | 0.25 (6.35) | 20 | 10 | M3 | 8.3 (0.9) | 0.06 (1.5) | 236.13 | 238.13 |
| | 19 | 450H19<br>- | -<br>452H19 | .75 (19.1) | 1.02 (26.0) | 0.37 (9.4) | 0.28 (7.2) | 0.31 (8) | 59 | 13 | M4<br>M2.5 | 20 (2.2)<br>11.6 (1.3) | 0.08 (2.0)<br>0.08 (2.0) | 236.19 | 238.19 |
| | 25 | 450H25<br>- | -<br>452H25 | 1.0 (25.4) | 1.28 (32.4) | 0.46 (11.6) | 0.36 (9.2) | 0.47 (12) | 252 | 31 | M5<br>M3 | 40.9 (4.6)<br>21.5 (2.4) | 0.10 (2.5)<br>0.10 (2.5) | 236.25 | 238.25 |
| | 33 | 450H33<br>- | -<br>452H33 | 1.31 (33.3) | 1.65 (42.0) | 0.59 (15.0) | 0.47 (12.0) | 0.63 (16) | 1080 | 67 | M6<br>M4 | 67.4 (7.6)<br>50.1 (5.6) | 0.12 (3.0)<br>0.12 (3.0) | 836.33 | 838.33 |
| | 41 | 450H41<br>- | -<br>452H41 | 1.62 (41.3) | 2.0 (50.8) | 0.70 (17.8) | 0.60 (15.3) | 0.79 (20) | 3177 | 142 | M6<br>M4 | 67.4 (7.6)<br>50.1 (5.6) | 0.12 (3.0)<br>0.12 (3.0) | 236.41 | 238.41 |
| | 50 | 450H50<br>- | -<br>452H50 | 1.97 (50.0) | 2.35 (59.6) | 0.81 (20.6) | 0.72 (18.4) | 1.0 (25.4) | 7550 | 208 | M8<br>M5 | 162 (18.3)<br>101 (11.4) | 0.16 (4.0)<br>0.16 (4.0) | 236.50 | - |
| | 57 | 450H57<br>- | -<br>452H57 | 2.25 (57.1) | 3.07 (78.0) | 1.12 (28.4) | 0.83 (21.2) | 1.18 (30) | 12410 | 361 | M8<br>M6 | 162 (18.3)<br>171 (19.3) | 0.16 (4.0)<br>0.20 (5.0) | 236.57 | - |

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

| Coupling Size | ⑤ Peak torque lbs.-in. (Nm) | ⑥ Max compensation @ 3000 rpm | | | ⑦ Torsional | | Static break torque lbs.-in. (Nm) |
|---|---|---|---|---|---|---|---|
| | | Angular deg | Radial in. (mm) | Axial in. (± mm) | Rate deg / Nm | Stiffness Nm / rad | |
| 13 | 4.43 (0.5) | 0.5 | .004 (0.1) | .002 (0.05) | 0.88 | 65 | 35.4 (4) |
| 19 | 15.0 (1.7) | | .008 (0.2) | .004 (0.1) | 0.50 | 115 | 70.1 (8) |
| 25 | 35.4 (4) | | .008 (0.2) | .004 (0.1) | 0.28 | 205 | 115 (13) |
| 33 | 79.7 (9) | | .008 (0.2) | .006 (0.15) | 0.093 | 615 | 469 (53) |
| 41 | 151 (17) | | .01 (0.25) | .006 (0.15) | 0.048 | 1200 | 504 (57) |
| 50 | 266 (30) | | .01 (0.25) | .008 (0.2) | 0.042 | 1375 | 841 (95) |
| 57 | 389 (44) | | .01 (0.25) | .008 (0.2) | 0.022 | 2610 | 1328 (150) |

## Materials Finishes

**Hub sizes 13 to 57 :** Al Alloy 2014A T6 or 6026 LF

**Fasteners:** Alloy steel, black oiled

**Hubs:** Clear anodised finish

**IMPORTANT**

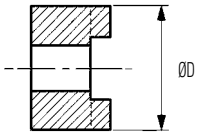
Load capacity depends on application conditions:
***see page 4*** for details

## STANDARD BORES®FOR ALL TYPES

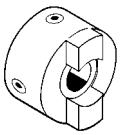
Sizes indicated in parenthesis are metric (mm).

| Coupling Size | ØB1, ØB2 +0.0012/ -0 (+0.03mm/-0mm) | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (2) | (3) | 1/8" | (4) | 3/16" | (5) | (6) | 1/4" | (8) | 3/8" | (10) | (12) | 1/2" | (14) | (15) | 5/8" | (16) | (18) | (19) | 3/4" | (20) | (24) | (25) | (30) |
| 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 |

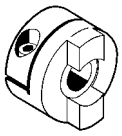
# Stainless Steel Thro' Hubs



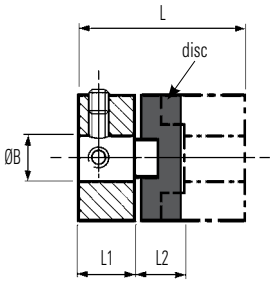

Thro' bores allow disc replacement without disturbing shaft alignment



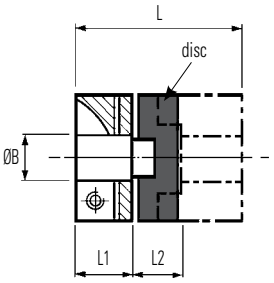
Set screw style



Clamp style




**Ref. 850**
Set screw style




**Ref. 852**
Clamp style

## DIMENSIONS & ORDER CODES

| Size | Hub Ref | | Dimensions | | | | | | | Fasteners | | | Disc Ref | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Set Screw Style | Clamp Style | ØD in. (mm) | L in. (mm) | L1 in. (mm) | L2 in. (mm) | ØB1 Max in. (mm) | Moment of Inertia kgm2 x10-8 | Mass kg x10-3 | Size | Torque lbs.-in. (Nm) | A/F in. (mm) | Acetal (black) Std. | Nylon 11 (Nat) |
| 13 | 850.13 | - | 0.5 (12.7) | 0.63 (15.9) | 0.21 (5.5) | 0.08 (1.7) | 0.25 (6.35) | 26 | 14 | M3 | 2.8 (0.3) | 0.06 (1.5) | 236.13 | 238.13 |
| 19 | 850.19<br>- | -<br>852.19 | 0.75 (19.1) | 1.02 (26.0) | 0.37 (9.4) | 0.28 (7.2) | 0.31 (8.0) | 220 | 45 | M4<br>M2.5 | 9.3 (1.0)<br>6.0 (0.6) | 0.08 (2.0)<br>0.08 (2.0) | 236.19 | 238.19 |
| 25 | 850.25<br>- | -<br>852.25 | 1.0 (25.4) | 1.28 (32.4) | 0.46 (11.6) | 0.36 (9.2) | 0.47 (12.0) | 587 | 76 | M5<br>M3 | 18.6 (2.1)<br>10.6 (1.2) | 0.10 (2.5)<br>0.10 (2.5) | 236.25 | 238.25 |
| 33 | 850.33<br>- | -<br>852.33 | 1.31 (33.3) | 1.65 (42.0) | 0.60 (15.0) | 0.36 (12.0) | 0.63 (16.0) | 2091 | 165 | M6<br>M4 | 33.6 (3.8)<br>25.7 (2.9) | 0.12 (3.0)<br>0.12 (3.0) | 836.33 | 838.33 |
| 41 | 850.41<br>- | -<br>852.41 | 1.63 (41.3) | 2.0 (50.8) | 0.70 (17.8) | 0.6 (15.3) | 0.79 (20.0) | 6822 | 305 | M6<br>M5 | 33.6 (3.8)<br>52.2 (5.9) | 0.12 (3.0)<br>0.16 (4.0) | 236.41 | 238.41 |
| 50 | 850.50<br>- | -<br>852.50 | 1.97 (50.0) | 2.35 (59.6) | 0.81 (20.6) | 0.81 (20.6) | 1.0 (25.4) | 17368 | 510 | M8<br>M6 | 79.7 (9.0)<br>86.7 (9.8) | 0.16 (4.0)<br>0.20 (5.0) | 236.50 | N/A |

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

| Coupling Size | ⑤ Peak torque lbs.-in. (Nm) | ⑥ Max compensation @ 3000 rpm | | | ⑦ Torsional | | Static break torque lbs.-in. (Nm) |
|---|---|---|---|---|---|---|---|
| | | Angular deg | Radial in. (mm) | Axial in. (± mm) | Rate deg / Nm | Stiffness Nm / rad | |
| 13 | 4.43 (0.5) | 0.5 | .004 (0.1) | .002 (0.05) | 0.88 | 65 | 35.4 (4) |
| 19 | 15.0 (1.7) | | .008 (0.2) | .004 (0.1) | 0.50 | 115 | 70.1 (8) |
| 25 | 35.4 (4) | | .008 (0.2) | .004 (0.1) | 0.28 | 205 | 115 (13) |
| 33 | 79.7 (9) | | .008 (0.2) | .006 (0.15) | 0.093 | 615 | 469 (53) |
| 41 | 151 (17) | | .01 (0.25) | .006 (0.15) | 0.048 | 1200 | 504 (57) |
| 50 | 266 (30) | | .01 (0.25) | .008 (0.2) | 0.042 | 1375 | 841 (95) |

## Materials Finishes

**Hubs:** Stainless Steel 303 S31 - Natural Finish

**Fasteners:** Stainless Steel

**IMPORTANT**

Load capacity depends on application conditions: ***see page 4*** for details

## STANDARD BORES® FOR ALL TYPES

Sizes indicated in parenthesis are metric (mm).

| Coupling Size | ØB1, ØB2 +0.0012/ -0 (+0.03mm/-0mm) | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (2) | (3) | 1/8" | (4) | 3/16" | (5) | (6) | 1/4" | (8) | 3/8" | (10) | (12) | 1/2" | (14) | (15) | 5/8" | (16) | (18) | (19) | 3/4" | (20) | (24) | (25) | (30) |
| 13 | | • | • | • | • | • | • | • | | | | | | | | | | | | | | | | |
| 19 | | | | • | • | • | • | • | • | | | | | | | | | | | | | | | |
| 25 | | | | | | | • | • | • | • | • | • | | | | | | | | | | | | |
| 33 | | | | | | | | | • | • | • | • | • | • | • | • | • | | | | | | | |
| 41 | | | | | | | | | | • | • | • | • | • | • | • | • | • | • | • | • | | | |
| 50 | | | | | | | | | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | |
| **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 |

# Universal / Lateral Offset Couplings



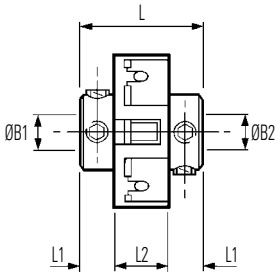

## Materials & Finishes

| | |
|---|---|
| **Hub sizes 18 & 27:** | Brass Cu Zn 21 Si 3P (Lead Free) |
| **Hub sizes 34, 41 & 70:** | Al. Alloy 2014 T6 or 6026 LF<br>Irridite NCP |
| **Fasteners:** | Alloy steel, black oiled |
| **Clamp rings (sizes 18 & 27):** | Al. Alloy 2014 T6 or 6026 LF<br>Irridite NCP |
| **Torque rings, all sizes:** | Acetal (black) |

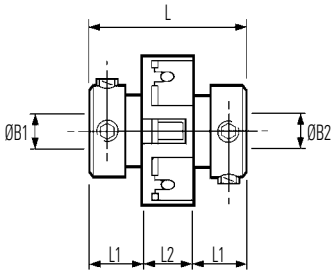
## Temperature Range

-4°F to +140°F (–20°C to +60°C)

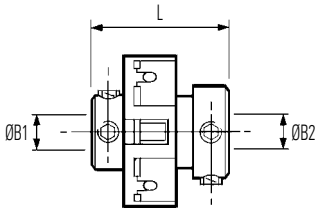
## Set screw hubs




**Ref. 201**
Small bores



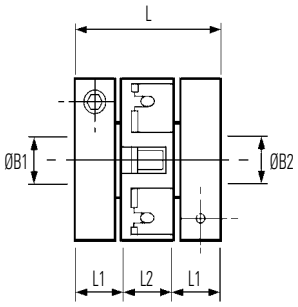

**Ref. 203**
Large bores



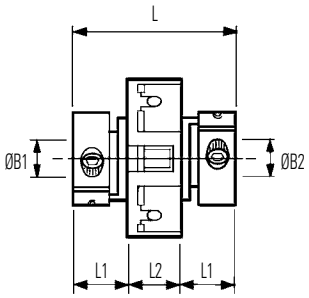

**Ref. 221** (not listed in main table).
Combines large & small bores.
See explanatory note on facing page

| Coupling ref. 221 | |
|---|---|
| Size | L in. (mm) |
| 18 | 0.66 (16.7) |
| 27 | 0.88 (22.3) |
| 34 | 1.10 (28.0) |
| 41 | 1.31 (33.3) |

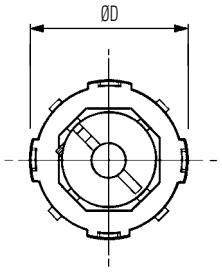
## Clamp hubs




**Ref. 207**
Collet hub & ring clamp

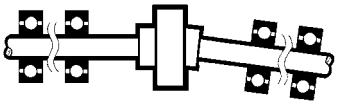



**Ref. 205**
Integral leaf clamp



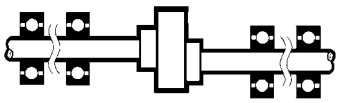

Typical

## Installation



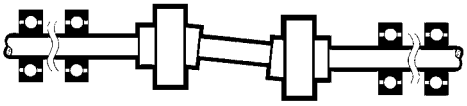
**right**

Up to 10° angular offset,
depending on type



**right**

Up to 1mm radial offset for
extreme misalignments



**wrong**

Standard Uni-Lats cannot be used in pairs.
Special versions are available for use in this mode.
Please enquire.

# Universal / Lateral Offset Couplings

## DIMENSIONS & ORDER CODES

| Coupling Size | Set Screw Hubs | Clamp Hubs | ØD in. (mm) | L in. (mm) | ①L1 in. (mm) | ②L2 in. (mm) | ØB1, ØB2 max in. (mm) | Fasteners | | | ④ Moment of inertia kgm2 x 10–8 | ④ Mass kg x 10–3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | COUPLING REF | | | | | | | Screw | ③Torque lb.-in. (Nm) | Wrench in. (mm) | | |
| 18 | 201.18 | – | .71 (18.0) | .56 (14.2) | .18 (4.6) | 0.20 (5.1) | 0.20 (5) | M3 | 8.3 (0.9) | 0.06 (1.5) | 20 | 7 |
| | 203.18 | – | | .75 (19.1) | 0.28 (7.0) | | 0.25 (6.35) | | | | | |
| | – | 207.18 ‡ 218 | 0.75 (19.1) | | | | | M2.5 | 11.6 (1.3) | 0.08 (2.0) | 55 | 11 |
| 27 | 201.27 | – | 1.10 (28.0) | .75 (19.1) | 0.24 (6.1) | 0.27 (6.9) | 0.31 (8) | M3 | 8.3 (0.9) | 0.06 (1.5) | 91 | 16 |
| | 203.27 | – | | 1.0 (25.4) | 0.37 (9.3) | | 0.39 (10) | | | | | |
| | – | 207.27 ‡ 218 | | | | | | M3 | 21.5 (2.4) | 0.10 (2.5) | 220 | 26 |
| 34 | 201.34 | – | 1.33 (33.7) | .99 (25.2) | 0.32 (8.1) | 0.35 (8.9) | 0.38 (10) | M4 | 20.1 (2.2) | .08 (2.0) | 165 | 17 |
| | 203.34 | – | | 1.21 (30.7) | 0.43 (10.9) | | 0.5 (12.7) | | | | | |
| | – | 205.34 | | | | | 0.38 (10) | M2.5 | 11.6 (1.3) | | 183 | 20 |
| 41 | 201.41 | – | 1.63 (41.4) | 1.12 (28.4) | 0.34 (8.6) | 0.44 (11.2) | 0.5 (12.7) | M4 | 20.1 (2.2) | 0.08 (2.0) | 476 | 30 |
| | 203.41 | – | | 1.5 (38.1) | 0.53 (13.5) | | 0.63 (16) | M5 | 40.9 (4.6) | 0.10 (2.5) | | |
| | – | 205.41 | | | | | 0.5 (12.7) | M4 | 50.1 (5.6) | 0.12 (3.0) | 550 | 40 |
| 70 | 203.70 | – | 1.14 (69.0) | 2.91 (74.0) | 1.12 (28.5) | 0.67 (17.0) | 0.87 (22) | M6 | 67 (7.6) | 0.12 (3.0) | 7315 | 189 |
| | – | 205.70 | | | | | 0.87 (22) | M6 | 170 (19.3) | 0.20 (5.0) | 7315 | 189 |

① Length of supported thro' bore. Shafts must not penetrate beyond L1 when in operation.

② Nominal distance between shafts inserted to L1.

③ Maximum recommended tightening torque.

④ Values apply with max bores.

⑤ *Peak torque.* Select a size where Peak Torque exceeds the application torque x service factor. (***see page 4***)

⑥ Couplings can provide up to 1mm radial and 10° angular compensation (5° for ref. 207) when required. Observe given values for maximum backlash-free life. Electrical isolation between shafts > 3kV for all models when offset ≤5°.

⑦ Values apply at 50% peak torque with no misalignment, measured shaft-to-shaft with largest standard bores.

‡ *Ref. 207 only.* Insert both bore codes in place of ‡.

## PERFORMANCE AT 20°C

| Coupling Size | ⑤ Peak torque lb.-in. (Nm) | ⑥ Max compensation @ 3000 rpm | | ⑦ Torsional | | Axial | | Static break torque lb.-in. (Nm) |
|---|---|---|---|---|---|---|---|---|
| | | Angular deg | Radial in. (mm) | Rate deg / Nm | Stiffness Nm / rad | Max loading ±N | Stiffness N / mm | |
| 18 | 2.66 (0.3) | 2 | .008 (0.2) | 2.3 | 25 | 19 | 155 | 7.97 (0.9) |
| 27 | 15.1 (1.7) | | .008 (0.2) | 0.6 | 92 | 31 | 350 | 44.3 (5.0) |
| 34 | 22.1 (2.5) | | .010 (0.25) | 0.4 | 146 | 34 | 300 | 66.4 (7.5) |
| 41 | 31.0 (3.5) | | .010 (0.25) | 0.19 | 299 | 39 | 250 | 92.9 (10.5) |
| 70 | 106 (12.)0 | | .010 (0.25) | 0.19 | 1300 | 75 | 540 | 602 (68) |

*Coupling ref. 221*

By specifying ref. 221 (not listed in tables, see diagram previous page) you can combine the bores coded for ref. 201 with those coded for ref. 203,

eg., 221.27.2432 specifies Size 27 with Ø6.35 x 10 bores.

**IMPORTANT**

Load capacity depends on application conditions: ***see page 4*** for details

## STANDARD BORES

Sizes indicated in parenthesis are metric (mm).

| Coupling | | ØB1, ØB2 +0.0012/ -0 (+0.03mm/-0mm) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| size | ref. | (3) | 1/8" | (4) | 3/16" | (5) | (6) | 1/4" | 5/16" | (8) | 3/8" | (10) | (12) | 1/2" | (14) | 5/8" | (16) | (18) | (19) | 3/4" | (20) |
| 18 | 201.18 | • | • | • | • | • | | | | | | | | | | | | | | | |
| | 203.18 | | | | | | • | • | | | | | | | | | | | | | |
| | 207.18 | • | • | • | • | • | • | • | | | | | | | | | | | | | |
| 27 | 201.27 | • | • | • | • | • | • | • | • | • | | | | | | | | | | | |
| | 203.27 | | | | | | | | | | • | • | | | | | | | | | |
| | 207.27 | | | | | • | • | • | | • | • | • | | | | | | | | | |
| 34 | 201.34 | | | | | | • | • | | • | • | • | | | | | | | | | |
| | 203.34 | | | | | | | | | | | | • | • | | | | | | | |
| | 205.34 | | | | | | • | • | • | • | • | • | | | | | | | | | |
| 41 | 201.41 | | | | | | • | • | | • | • | • | • | • | | | | | | | |
| | 203.41 | | | | | | | | | | | | | | • | • | • | | | | |
| | 205.41 | | | | | | • | • | | • | • | • | • | • | | | | | | | |
| 70 | 203.70 | | | | | | | | | | | | • | • | • | • | • | • | • | • | • |
| | 205.70 | | | | | | | | | | | | • | • | • | • | • | • | • | • | • |
| Bore ref. | | 14 | 16 | 18 | 19 | 20 | 22 | 24 | 27 | 28 | 31 | 32 | 35 | 36 | 38 | 41 | 42 | 45 | 46 | 47 | 48 |
| Corresponding bore adaptor | | | | | | 251 | | 253 | | 254* 255 | | 257 | | 259 | | | 260 | | | | 261 |

Diameters for which a bore adaptor is shown can be adapted to smaller shaft sizes. See page 58 for details.

**Note that adaptor 254 is dedicated to coupling ref. 201.27. Use adaptor 255 for all other 8mm diameters.*