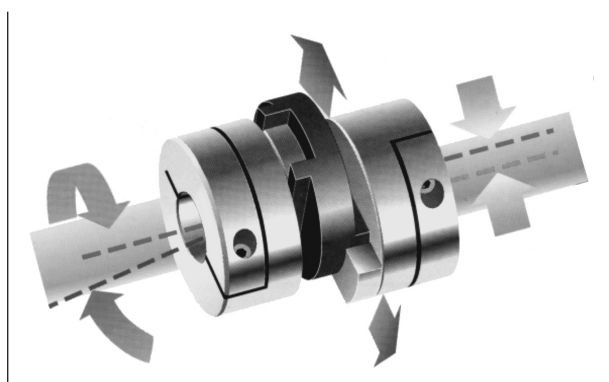


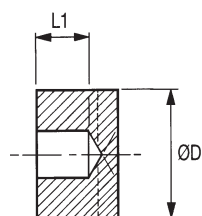


Oldham coupling, function

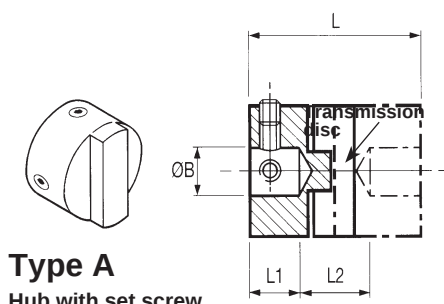
Features

- ▷ Robust 3-part coupling for torsionally stiff transmission of rotary motion
- ▷ Compensation of large shaft misalignment
- ▷ Backlash-free up to 10^8 revolutions
- ▷ Axial and angular misalignment should be kept small
- ▷ Each coupling consists of 2 coupling halves and one torque disc
- ▷ To make full use of this choice, coupling halves and transmission discs are ordered individually
- ▷ Bore diameter 2 - 30 mm
- ▷ Shock torque 0.06 - 44 Nm

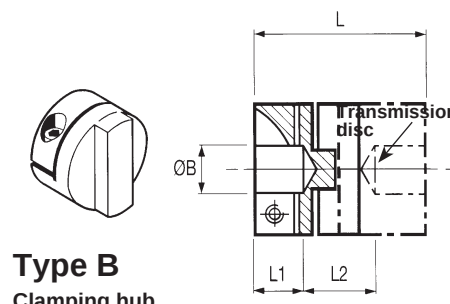
OS hubs with blind bores



The machined bore depth L1 can serve as a guide during pre-assembly



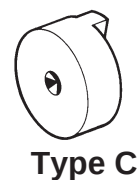
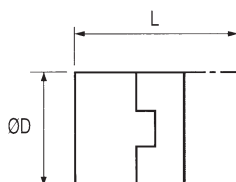
Type A
Hub with set screw



Type B
Clamping hub

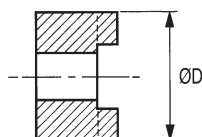
OS undrilled hubs

Hubs adaptable by the user for special applications, e.g. installation in tubes. Undrilled hubs are centred and no fastening is provided for the shaft-hub connection. The outer dimensions are identical to the hubs with blind bores.

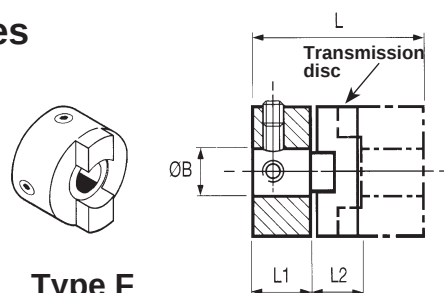


Type C

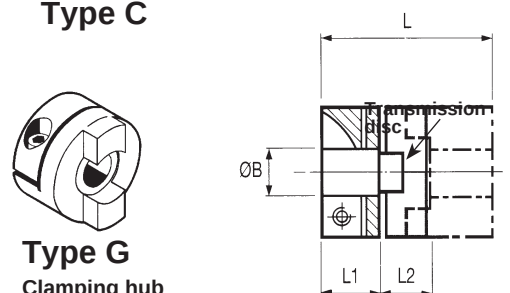
OX hubs with through bores



Through bores allow the transmission disc to be replaced without changing the shaft alignment



Type F
Hub with set screw



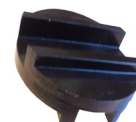
Type G
Clamping hub

Type D [acetal]
Type DE [Nylon 11]

Up to size D19

Standard transmission discs [T = -20°C to +60°C]

Acetal: high stiffness, good emergency running properties, long backlash-free service life. Nylon 11: elastic material, insulates noise and vibration, performance data approx. 25 % of acetal.



From size D25

Sizes, dimensions and technical data [Md, stiffness, J valid for acetal only] OX hubs with through bore

Order no. Hubs Type + size	Discs Type + size D DE	Bore B		R D	L	L ₁	L ₂	Screws M _A		Shock M _d	Breakl. M _d	Tors. spring stiffn. Nm/rad	J kgm ² x 10 ⁻⁸	Wt. g	Max. misalignme		
		min.	max.					R	Nm						Radial ±mm	Axial ±mm	An- gle ±°
OS6A	D6 DE6	2.000	3.18	6.4	12.7	3.8	5.1	M3	0.94	0.06	0.7	10	6	2.5	0.10	0.05	0.5
OS6C	D6 DE6	—	3.18	6.4	12.7	3.8	5.1	—	—	0.06	0.7	10	6	2.5	0.10	0.05	0.5
OS9 A	D9 DE9	3.000	5.00	9.5	12.7	3.8	5.1	M3	0.94	0.21	2.0	30	18	4.0	0.10	0.05	0.5
OS9 C	D9 DE9	—	5.00	9.5	12.7	3.8	5.1	—	—	0.21	2.0	30	18	4.0	0.10	0.05	0.5
OS13A	D13 DE13	3.000	6.35	12.7	15.9	4.3	7.3	M3	0.94	0.50	4.0	65	26	11.0	0.10	0.05	0.5
OS13C	D13 DE13	—	6.35	12.7	15.9	4.3	7.3	—	—	0.50	4.0	65	26	11.0	0.10	0.05	0.5
OS19A	D19 DE19	4.000	8.00	19.1	22.0	6.3	9.4	M3	0.94	1.70	10.0	115	67	12.0	0.20	0.10	0.5
OS19B	D19 DE19	4.000	8.00	19.1	22.0	6.3	9.4	M4	2.33	1.70	10.0	115	67	12.0	0.20	0.10	0.5
OS19C	D19 DE19	—	8.00	19.1	22.0	6.3	9.4	—	—	1.70	10.0	115	67	12.0	0.20	0.10	0.5
OS25A	D25 DE25	6.000	12.00	25.4	28.4	8.6	11.2	M4	2.27	4.00	13.0	205	252	31.0	0.20	0.10	0.5
OS25B	D25 DE25	6.000	12.00	25.4	28.4	8.6	11.2	M3	2.43	4.00	13.0	205	252	31.0	0.20	0.10	0.5
OS25C	D25 DE25	—	12.00	25.4	28.4	8.6	11.2	—	—	4.00	13.0	205	252	31.0	0.20	0.10	0.5
OS33A	D33 DE33	8.000	16.00	33.3	48.0	13.0	22.0	M4	2.27	9.00	53.0	615	1278	86.0	0.20	0.15	0.5
OS33B	D33 DE33	8.000	16.00	33.3	48.0	13.0	22.0	M3	2.43	9.00	53.0	615	1278	86.0	0.20	0.15	0.5
OS33C	D33 DE33	—	16.00	33.3	48.0	13.0	22.0	—	—	9.00	53.0	615	1278	86.0	0.20	0.15	0.5
OS41A	D41 DE41	9.525	20.00	41.3	50.8	16.7	17.4	M5	4.62	17.00	57.0	1200	3327	148.0	0.25	0.15	0.5
OS41B	D41 DE41	9.525	20.00	41.3	50.8	16.7	17.4	M4	5.66	17.00	57.0	1200	3327	148.0	0.25	0.15	0.5
OS41C	D41 DE41	—	20.00	41.3	50.8	16.7	17.4	—	—	17.00	57.0	1200	3327	148.0	0.25	0.15	0.5

Sizes, dimensions and technical data [Md, stiffness, J valid for acetal only] OX hubs with through bore

Order no. Hubs Type + size	Discs Type + size D DE	Bore B		R D	L	L ₁	L ₂	Screws M _A		Shock M _d	Breakl. M _d	Tors. spring stiffn. Nm/rad	J kgm ² x 10 ⁻⁸	Wt. g	Max. misalignme		
		min.	max.					R	Nm						Radial ±mm	Axial ±mm	An- gle ±°
OX19F	D19 DE19	4.000	8.00	19.1	26.0	9.4	7.2	M4	2.27	1.70	10.0	115	59	13	0.20	0.10	0.5
OX19G	D19 DE19	4.000	8.00	19.1	26.0	9.4	7.2	M4	2.33	1.70	10.0	115	59	13	0.20	0.10	0.5
OX25F	D25 DE25	6.000	12.00	25.4	32.4	11.6	9.2	M5	4.62	4.00	13.0	205	252	31	0.20	0.10	0.5
OX25G	D25 DE25	6.000	12.00	25.4	32.4	11.6	9.2	M3	2.43	4.00	13.0	205	252	31	0.20	0.10	0.5
OX33F	D33 DE33	8.000	16.00	33.3	48.0	15.0	18.0	M6	7.61	9.00	53.0	615	1133	74	0.20	0.15	0.5
OX33G	D33 DE33	8.000	16.00	33.3	48.0	15.0	18.0	M3	2.43	9.00	53.0	615	1133	74	0.20	0.15	0.5
OX41F	D41 DE41	9.525	20.00	41.3	50.8	17.8	15.3	M6	7.61	17.00	57.0	1200	3177	142	0.25	0.15	0.5
OX41G	D41 DE41	9.525	20.00	41.3	50.8	17.8	15.3	M4	5.66	17.00	57.0	1200	3177	142	0.25	0.15	0.5
OX50F	D50 —	9.525	25.40	50.0	59.6	20.6	18.4	M8	18.36	30.00	95.0	1375	7550	208	0.25	0.20	0.5
OX50G	D50 —	9.525	25.40	50.0	59.6	20.6	18.4	M5	11.40	30.00	95.0	1375	7550	208	0.25	0.20	0.5
OX57F	D57 —	12.000	30.00	57.1	78.0	28.4	21.2	M8	18.36	44.00	150.0	2610	12410	361	0.25	0.20	0.5
OX57G	D57 —	12.000	30.00	57.1	78.0	28.4	21.2	M6	19.34	44.00	150.0	2610	12410	361	0.25	0.20	0.5

Standard bores B = +0.03 / ±0.00

Size	2.00	3.00	3.18	4.00	4.76	5.00	6.00	6.35	8.00	9.53	10.00	11.00	12.00	12.70	14.00	15.00	15.88	16.00	18.00	19.00	19.05	20.00	24.00	25.00	25.40	30.00
6	■	■	■																							
9		■	■	■	■	■																				
13		■	■	■	■	■	■	■																		
19				■	■	■	■	■	■																	
25							■	■	■	■	■	■	■													
33									■	■	■	■	■	■	■	■	■	■								
41									■	■	■	■	■	■	■	■	■	■	■	■						
50									■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
57													■	■	■	■	■	■	■	■	■	■	■	■	■	■

Materials

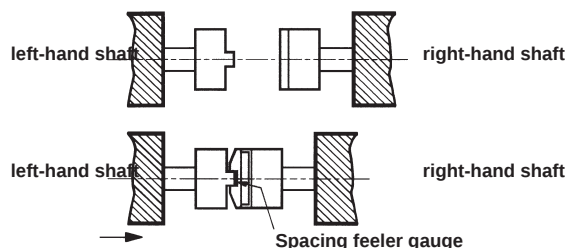
- ▶ Hubs can be supplied with keyways at extra cost
- ▶ If required, Ø B can be reduced using reducing bushes [see page K42]

Hub	Size 6 - 13 chromated brass Size 19 - 57 aluminium alloy
Discs	D - acetal DE - Nylon 11

Couplings

with blind-bored hubs OS

- Slide the hubs fully onto both shafts and tighten the set screws.
- Fix and secure the right-hand shaft.
- Push the transmission disc fully onto the right-hand hub.
- Insert a feeler gauge flat into the groove base of the transmission disc and slide the left-hand hub fully into the transmission disc by moving the left-hand shaft.
- Align the shafts within the permissible misalignments and fasten the left-hand hub.
- Check the shaft alignment and correct it if necessary.
- Remove the feeler gauge.



To fit a new transmission disc, pull back the left-hand shaft of the mounted hub and remove the old disc. Then repeat steps c) to g).

Spacing gauges

for all hub types

The gaps are set to accommodate thermal expansion and axial misalignment. The gaps can also be increased, but the total axial movement should not exceed the values given in the operating data table under "axial misalignment".

Coupling size	Spacing gauge
6, 9, 13	0.05 mm
19, 25	0.10 mm
33, 41	0.15 mm
50, 57	0.20 mm

Radial support

The shafts must be adequately supported by 2 bearings. Oldham couplings cannot be used in pairs.

Correct



Incorrect



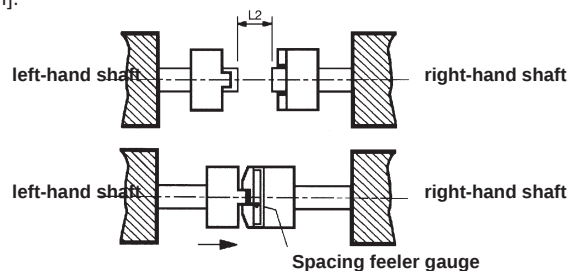
Order example

1 pc. OLDHAM coupling	Size 19	1 pc. OLDHAM coupling half	OS19A-6
	Bore 6 and 8 mm	1 pc. OLDHAM coupling half	OS19A-8
with acetal torque disc		1 pc. torque disc	D19

Couplings

with through-bored hubs OX

- Slide the hubs onto both shafts.
- Align the shafts within the permissible misalignments and position them so that a minimum distance L2 remains between the shaft ends. Secure both shafts, check the alignment and correct if necessary.
- Position the right-hand hub with its inner face flush with the shaft end and tighten the screws.
- Slide the transmission disc radially onto the tenon of the right-hand hub. Make sure it is fully engaged.
- Insert a feeler gauge flat into the groove base of the transmission disc and slide the left-hand hub fully into the transmission disc by moving the left-hand shaft.
- Tighten the fastening screws and remove the spacing gauge. To fit a new transmission disc, loosen the set screws in the hub and pull back the left-hand shaft. Slide the old disc out radially and replace it with a new one. Repeat steps d) to f).



To maintain the angular position of the shafts, pull back the left-hand shaft and repeat steps c) to g) as for the blind-bore version.

Operating factors

Maximum torques refer to drives without misalignment and, in the case of Oldham couplings, without misalignment or axial movement. Multiply the load torques by the operating factors as explained, e.g.

Load torque of the application = 1 Nm

Operating factor = 2

Required torque = 2 Nm

Select a coupling whose maximum torque is greater than 2 Nm.

Please note that the factors refer to the actual cumulative load times and not to the machine's switch-on times.

Load duration	Operating factor
short-term load	1
1 hour per day	2
3 hours per day	4
6 hours per day	6
12 hours per day	8