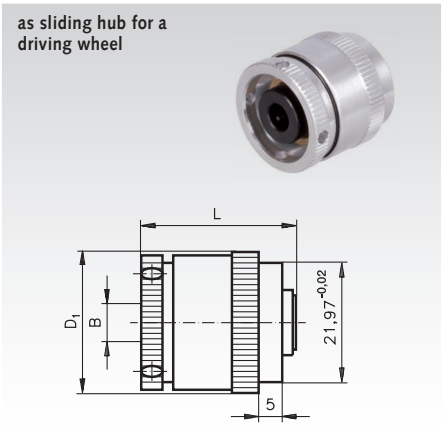
Slip Clutches R2 and R6

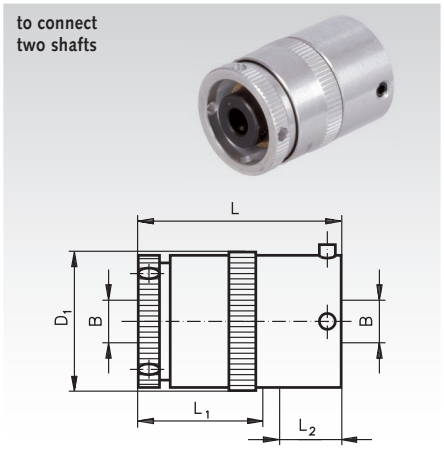
Type A - Concentric Arrangement

as sliding hub for a driving wheel



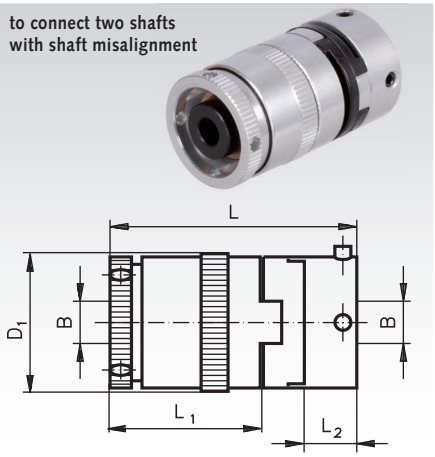
Type B - Axial Arrangement

to connect two shafts



Type C - Axial Arrangement

to connect two shafts with shaft misalignment

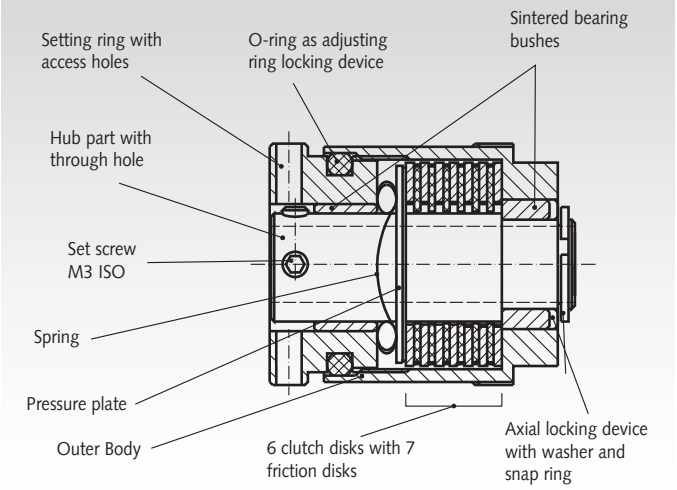


Material: Housing made of aluminium alloy with iridite NCP finish. Inner Hub made of steel. Max. slip-speed 1,000 min^{-1}. Torsional backlash of the coupling below 2°.

Ordering Details: e.g.: Product No. 610 403 00, Friction Clutch, Type A, 6 mm Bore

Product No.	Type	Number of Friction Plates Pieces	L mm	L_1 mm	L_2 mm	D_1 mm	Bore $B^{+0.03}$ mm	Set Screw Size and Arrangement	Weight g	Product No. Spare Part Insert	Weight g
610 403 00	A	2	26,4		-	25,8	6	M 3x3,	37	-	-
610 404 00	A	2	26,4		-	25,8	8	2x90°	37	-	-
610 408 00	A	6	32,4		-	25,8	6	only	48	-	-
610 409 00	A	6	32,4		-	25,8	8	at 1 Side	48	-	-
610 423 00	B	2	36	25	9	25,8	6	M 3x3, 2x90°	50	-	-
610 424 00	B	2	36	25	9	25,8	8	at Side 1	50	-	-
610 428 00	B	6	42,5	31	9	25,8	6	M 4x4, 2x90°	61	-	-
610 429 00	B	6	42,5	31	9	25,8	8	at Side 2	61	-	-
610 443 00	C	2	46,5	25	8,6	25,8	6	M 3x3, 2x90°	57	**601 244 00**	2,7
610 444 00	C	2	46,5	25	8,6	25,8	8	at Side 1	57	**601 244 00**	2,7
610 448 00	C	6	53,4	31	8,6	25,8	6	M 4x4, 2x90°	83	**601 244 00**	2,7
610 449 00	C	6	53,4	31	8,6	25,8	8	at Side 2	83	**601 244 00**	2,7

Sectional drawing of a slip clutch with 6 clutch plates



Torque range with 2 friction plates 2.4 Ncm to 53.8 Ncm. Dissipation at 20°C ambient temperature up to 7 watts. **Torque range with 6 friction plates 7.8 Ncm to 132.4 Ncm.** Dissipation at 20°C ambient temperature up to 8.6 Watt. Maximum permissible temperature at the surface for all sizes during operation 80°C.

An adjusting ring - screwed to the outer body - serves to adjust the torque. This ring acts via a disk spring onto the clutch or friction disks. Two sintered bearing sleeves serve as bearing housing to inner component. An O-Ring seals the hub off against dirt and with its friction force it also makes sure that the adjusting ring is not moved unintentionally. **The power can be connected to either the hub or the housing.**

Depending on the specific application, the friction clutch can be employed as torque limiter, as overrunning clutch or as brake. As the generation of heat is basically a function including the slip torque and the employed torque, the following formula was derived:

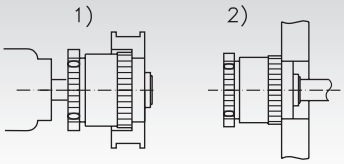
$$\frac{\text{Slippage (min}^{-1}\text{) x Torque (Ncm)}}{955} = \text{Heat Dissipation in Watts}$$

As the connected components (shafts, gears, etc.) support the heat dissipation, in case of doubt please calculate the effective surface temperature under adverse operating conditions. The permissible temperatures are stated above.

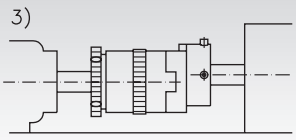
Special designs: the modular-design principle used in slip clutches leads to many different designs and possible connecting parts, e.g., special flanges and other components, according to drawings.

ATTENTION: the adjusting screws can damage the adjusting ring if they are loosened too far. 3/4 to 1 turn is sufficient.

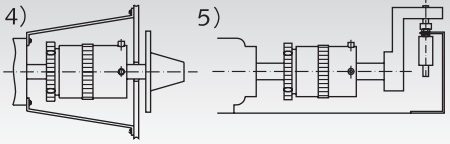
Concentric mounting (type A)



Axial arrangement, both shafts outside (type C)



Axial arrangement, one shaft outside (type B)



1) Pulley or sprocket (bondage recommend), shaft also used as bearing.
2) Mounted to the housing as permanent brake and shaft bearing.
3) Connection electronic engine and gear box, with assembly-related shaft misalignment.

4) Shaft of a multi-turn potentiometer divided with slip clutches. No overrevving.
5) Protecting a lever key from damage using a slip clutch.