6.2.2 Couplings and connecting shafts

Parallel arranged Linear Axis can be linked via a connecting shaft (Figure 6.25). The necessary drive torque is distributed evenly across all axis. As connecting shafts galvanized hollow shafts are used. The use of couplings with clampimg hub on the connecting shaft allows precise adjustment of the Linear Axis. In addition a later installation and removal assembly is possible with Linear Axis of the AXC series. A complete axis connection consists of a coupling kit (Table 6.16) and the connecting shaft with flexible selectable length.

For the adaptation of drives are couplings with clamping hub for drives with feather key shaft and couplings with clamping ring hub for drives with smooth shaft available.

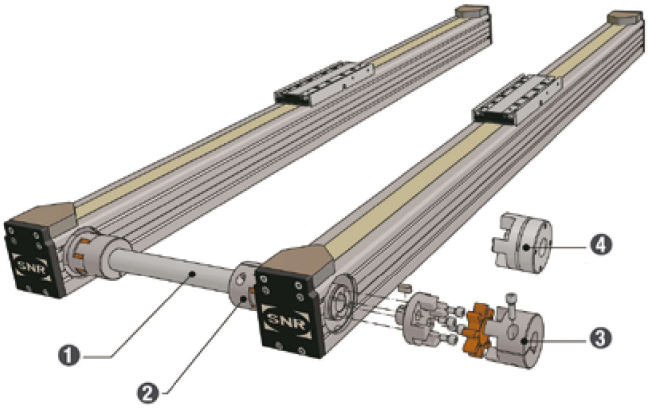


Figure 6.25 — Arrangement couplings and connecting shaft

1. Connecting shaft
2. Coupling with half-shell clamping hub
3. Coupling with clamping hub fordrives with feather key shaft (drive abaption code F, position 13 in the type code)
4. Coupling with clamping ring hub for drives with smooth shaft (drive abaption code S, position 13 in the type code)

The dimensions of the couplimgs and connecting shafts are shown in Figure 6.26 and Table 6.16.

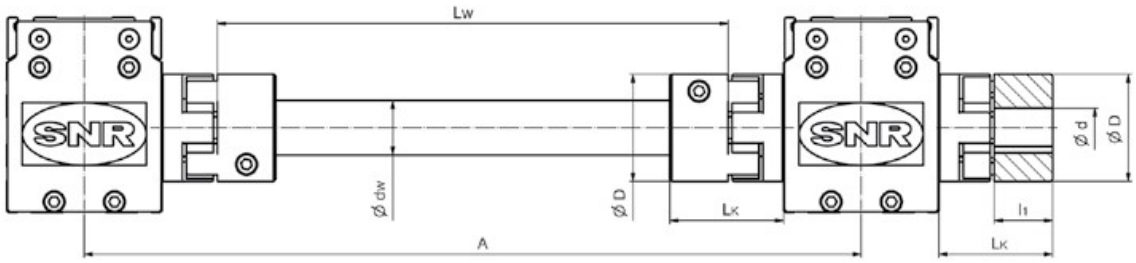


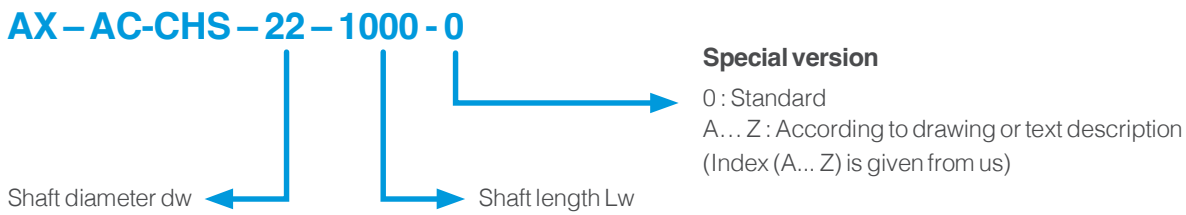
Figure 6.26 — Dimensions couplings and connecting shaft

Table 6.16 — Dimensions connecting shaft

Type	D	LK	l[1]	Clamping hub (F)			Tension ring hub (S)			Connecting shaft						
				d min.	d max.	TA[2]	d min.	d max.	TA[2]	Type code	ID number	dw	(wall thickness)	Lw	A min.[1]	TA[2]
		[mm]	[mm]	[mm]	[mm]	[Nm]	[mm]	[mm]	[Nm]	Coupling kit		[mm]	[mm]	[mm]	[mm]	[Nm]
AXC40_K	30	31,0	11,0	8	16	1,34				AX-AC-40Z-COU-CHS-14	156301	14	2,0	A - 79	125	1,34
		38,0	19,0				10	14	1,34							
AXC60_K	40	50,0	25,0	12	24	10,0	10	20	3,00	AX-AC-60Z-COU-CHS-22	292876	22	2,0	A - 125	160	6,00
AXC80_K	55	59,0	30,0	12	25	10,0	15	28	6,00	AX-AC-80Z-COU-CHS-28	239998	28	2,5	A - 153	198	10,0
AXC100_K-B AXC100_K-C AXC100_K-L	65	61,0	35,0	20	38	25,0	18,0	38,0	6,00	AX-AC-100Z-COU-CHS-38	156303	38	4,0	A - 172	222	25,0
AXC100_K-D		59,0														
AXC100_P_K-B AXC100_P_K-C AXC100_P_K-L		55,0												A - 166	216	
AXC120_K	65	65,0	35,0	20	38	25,0	18	38	6,00	AX-AC-120Z-COU-CHS-38	156303	38	4,0	A - 200	250	
AXC120_P_K		25,0												A - 160	210	
AXDL110	55	32,5	30,0	12	25	10,0	15	28	6,00	not applicable						
AXDL160	65	22,5	35,0	20	38	25,0	18	38	6,00	not applicable						
AXDL240	65	10,0	35,0	20	38	25,0	18	38	6,00	not applicable						

[1] - *Minimum dimension, which allows the removal assembly without disassembly of the Linear Axis*
[2] - *Tightening torque*

Example type code of a connecting shaft:



In application with high velocity and great length of the connecting shaft, the critical speed is taken into account. The diagram in Figure 6.27 shows the maximum speed depending on the center distance of the Linear Axis. The basis of the limits here are 50% of the critical speed. If there are higher requirements, please contact our application engineers.

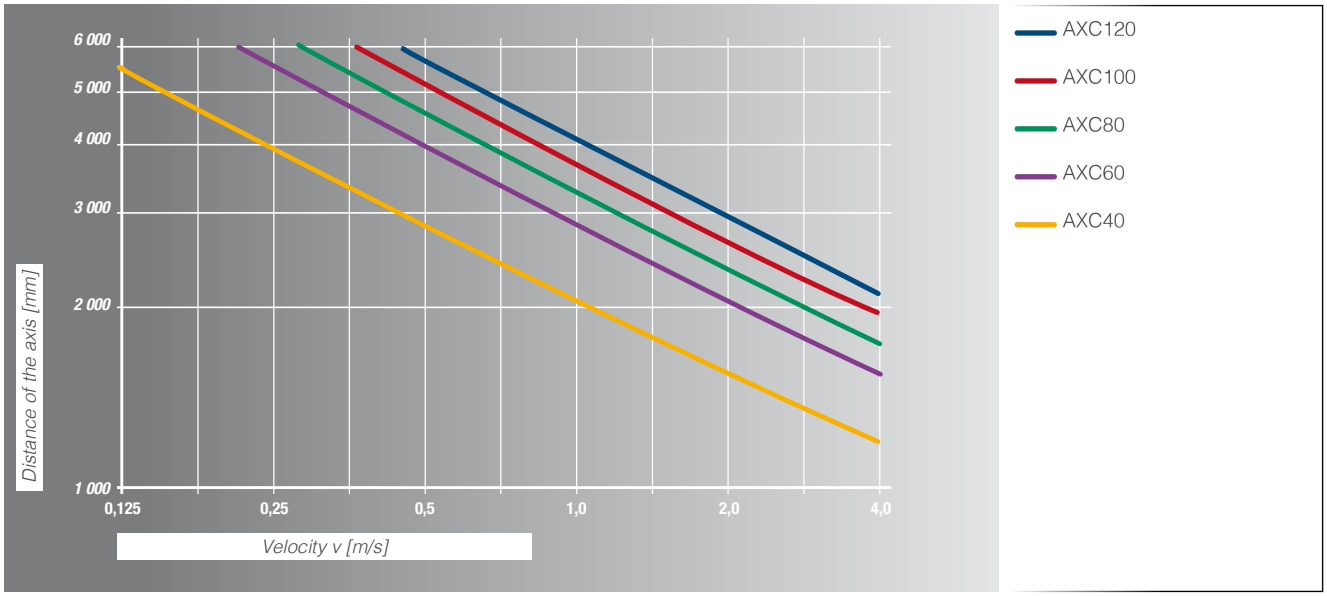


Figure 6.27 — Dynamic limits for connecting shafts