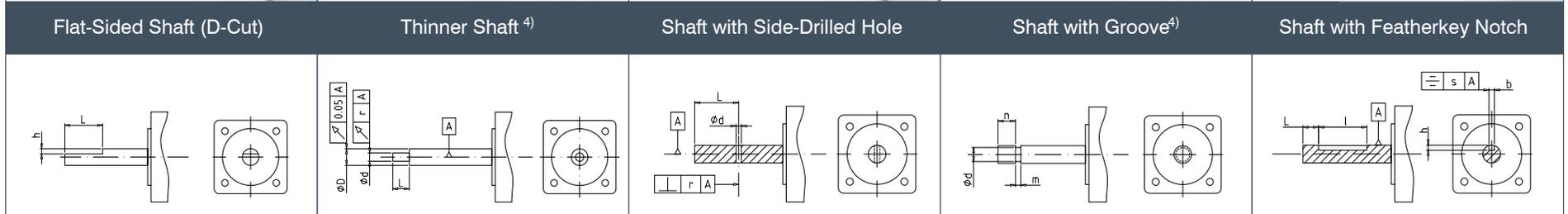


Tolerance Table / Shaft Modification

The standard tolerances for shaft machining of custom-build motors are stated in the table below. In some cases and only for orders > 500 pc. we might be able to reduce this tolerances further. All tolerance values mentioned in the table are valid for custom-build motors only. By subsequent shaft-machining of standard motors these tolerances cannot be achieved. Please note: All measures and tolerances need to be defined from the shaft's end ("Wellenende"). If the measures and tolerances are defined from the mounting flange instead, the tolerances of the stator-plates have to be taken into account. Therefore please add +/-0.5mm (front shaft) or +/-1mm (rear shaft).

Motor Size: 20-35 = ST20-28-35 / DB 22-28-35, 39-42 = SC41 / ST39-41-42 / DB42, 59-60 = SC60 / ST59-60 / DB57-59, 89-100 = ST89-110 / DB87



Motor Size	Flat-Sided Shaft (D-Cut)		Thinner Shaft ⁴⁾				Shaft with Side-Drilled Hole			Shaft with Groove ⁴⁾			Shaft with Featherkey Notch				
	L	h	L	L	d	r	L	d	r	n	m	d	L	l	h	b	s
20-35	±0.2	±0.1	±0.1 (<20)	±0.15 (>20)	-0.012	<0.02	±0.1	+0.1	0.1	±0.2	±0.2	±0.2	-	-	-	-	-
39-42	±0.2	±0.1	±0.1 (<20)	±0.15 (>20)	-0.012	<0.05	±0.15	+0.1 ¹⁾	0.2	±0.2	2)	3)	-	-	-	-	-
59-60	±0.25	±0.15	±0.1 (<20)	±0.15 (20-50)	-0.012	<0.05	±0.2	+0.1	0.1	±0.25	±0.15	±0.1	±0.25	±0.2	+0.1	-0.006/ -0.031	0.1
89-110	±0.5	±0.2	±0.5 (<20)	±0.5 (20-50)	-0.012 (d≥4 L<20)	<0.02 (L<20)	±0.5	+0.2	0.1	±0.5	±0.2	-0.022	±0.25	+0.2	±0.1	-0.012/ -0.042	0.1

1) dependent on d 2) dependent on m 3) dependent on d 4) only Motors with B-shaft

The size of the keyway depends on the shaft diameter:

- 6,35 mm shaft diameter: DIN 6885-A-2x2x12 P9
- 8 mm shaft diameter: DIN 6885-A-2x2x12 P9
- 14 mm shaft diameter: DIN 6885-A-5x5x 25 P9