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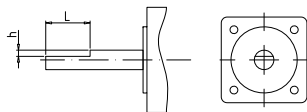
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CUSTOM MACHINING

Nanotec also supplies shafts with customer-specific designs for all motors of the ST and DB series as well as IP motors. The tolerances specified below are standard for large order quantities. Please note that these cannot always be adhered to when post-machining bearing motors in small numbers. In addition, when a shaft is subsequently machined, a minimum distance of 3 mm must always be maintained to the surface of the centering flange.

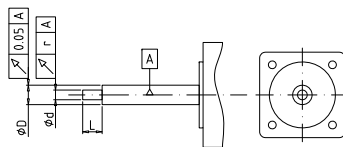
D-CUT



Motor size	L	h
20-35	±0.2	±0.1
39-42	±0.2	±0.1
59-60	±0.25	±0.15
89-110	±0.5	±0.2

In addition to D-cut, 90° and triangular flattening, we also produce shafts with flat surfaces for setting screws, relief grooves for lock rings and threaded blind holes according to customer specifications. The shaft is flattened to enable simple and form-fitting fixation and to effectively prevent the load from rotating.

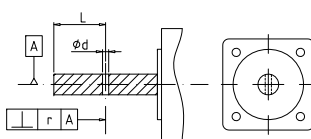
MACHINED SHAFT/THINNER SHAFT



Motor size	L	L	d	r
20-35	±0.1 (<20)	±0.15 (<20)	-0.012	<0.02
39-42	±0.1 (<20)	±0.15 (<20)	-0.012	<0.05
59-60	±0.1 (20-50)	±0.15 (20-50)	-0.012	<0.05
89-110	±0.5 (<20)	±0.5 (20-50)	-0.012 (d≥4)	<0.02 (L<20)

Machined shafts are used primarily to attach transmission elements with smaller bore diameters directly onto the motor shaft. Additional machining is possible even if only a small number of pieces is ordered.

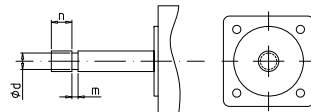
SIDE-DRILLED HOLE



Motor size	L	d	r
20-35	±0.1	+0.1	0.1
39-42	±0.15	+0.1 ¹⁾	0.2
59-60	±0.2	+0.1	0.1
89-110	±0.5	+0.2	0.1

Side-drilled holes can be used to securely attach clamping pins in order to meet the high directional and load change requirements of transmission elements.

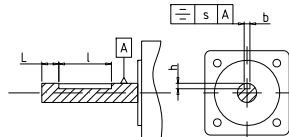
GROOVE



Motor size	n	m	d
20-35	±0.2	±0.2	±0.2
39-42	±0.2	2)	3)
59-60	±0.25	±0.15	±0.1
89-110	±0.5	±0.2	-0.022

Shaft grooves on motors are used for comfortably attaching safety disks that axially fix timing pulleys, spur gears, etc.

KEYWAY



Motor size	n	m	d
20-35	±0.2	±0.2	±0.2
39-42	±0.2	2)	3)
59-60	±0.25	±0.15	±0.1
89-110	±0.5	±0.2	-0.022

Systems that are subject to high load and directional changes benefit from shafts with keyways that provide reliable rotation protection.

ACCESSORIES/GEAR WHEELS

TIMING PULLEY



Nanotec supplies synchronous pulleys in metric and imperial dimensions, with and without a hub or tapered adapter sleeve, and with a variety of tooth profiles, forms and pitches.

SHAFT WITH METRIC THREAD



Shafts with a metric thread are an ideal solution for rotating elements and linear low-speed positioning drives.

TOOTHED SHAFT



Motors with toothed shafts are used for easy mounting on existing reduction ratios, gears, etc.

CLAMPING BOLT



Clamping bolts enable secure clamping with a relatively large displacement path and high clamping force. When space is restricted, they can also be used for automatic adjustment.

BRASS OR STEEL INPUT PINION



Motors with a pinion on the motor shaft are used for mounting directly on existing reduction ratios.

WORM GEARS



Motors with a mounted worm gear can be installed at a 90° angle to the load and thus provide a large reduction ratio in a very limited space. Their efficiency is between 30 and 70%, depending on the reduction ratio.

MODIFICATIONS IN QUANTITY

Nanotec offers machining for all motors of the ST and DB series as well as motors with protection class and Plug & Drive motors. Depending on the complexity of the machining a minimum order quantity between 100 and 1000 pcs is required.

LARGER SHAFT



Larger or thicker shafts are primarily used for high radial forces.

SPECIAL SHAFT FORMS



With square or hexagonal shafts, systems can be easily and quickly adapted to various tools and other equipment during manual or motorized adjustments.

HOLLOW SHAFT



Hollow shafts make it possible to pass cables, hoses, screws and laser beams through them.

TIMING BELT



Shafts with timing belts are very smooth running while exhibiting low belt tension and low bearing load.

CABLE ASSEMBLY OPTION

Customer-specific connectors and cables allow simple and fast connection to existing machines. For orders with a minimum quantity of 100 pcs Nanotec offers connector and cable assemblies ex works.



CABLE ASSEMBLY



INTEGRATED PLUG



Notes section with horizontal lines for writing.