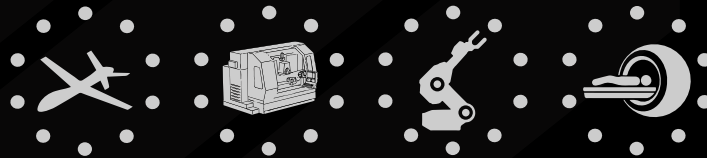




DriveSpin DS/DSH/DSM 050

The high precision DriveSpin DS 050 actuators represent the smallest serially produced member of the DriveSpin product range, meeting even the most demanding requirements of customers from all industries. With their optimal price/performance ratio, they reliably provide parameters such as high accuracy and precision, high tilting and torsional stiffness, low weight, compactness, low vibrations, and a wide range of suitable technical solutions.



- LOW LOST MOTION,
- LOW MOMENT OF INERTIA,
- HIGH REDUCTION RATIO,
- HIGH KINEMATIC ACCURACY,
- HIGH MOMENT OVERLOAD CAPACITY,
- HIGH CAPACITY OF THE INTEGRATED RADIAL-AXIAL OUTPUT BEARINGS,
- HIGH DYNAMIC PERFORMANCE.

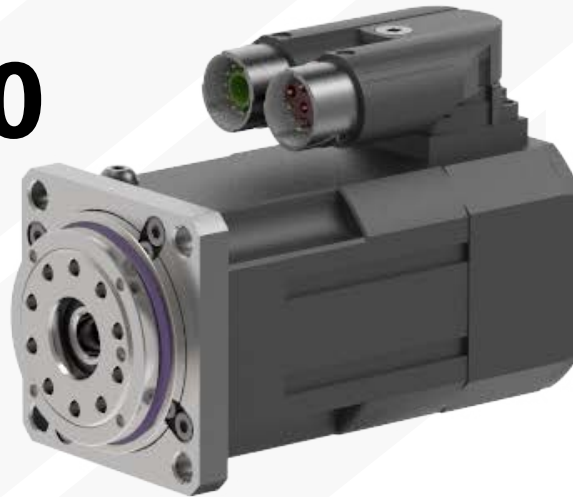


01-abcde-f-yy	6	50	7	Weight (kg)	50,000-A034-	50,000-A034-	ARTIKEL	Position	Parts List-No	Undimensioned Edges = 0.3x45°	Scale	STN ISO 2768-mk
				Model	1/1							N
				Drawing	A-034	P00	#00-3					
				Sheet/Sheets								
				Drawing-No								

DS 050



DSH 050



New

DSM 050



DS - DriveSpin Standard

The DriveSpin electric rotary actuators, as the basic type of actuators, provide rotary motion and the transfer of output torque with a high radial-axial load capacity and are the most accurate and precise solution in their category. The DS actuators are characterized by high dynamics, guaranteed by an AC servomotor, and high robustness and overload capacity of their reduction gears. The voltage and feedback variability will widely satisfy all of customers' requirements.

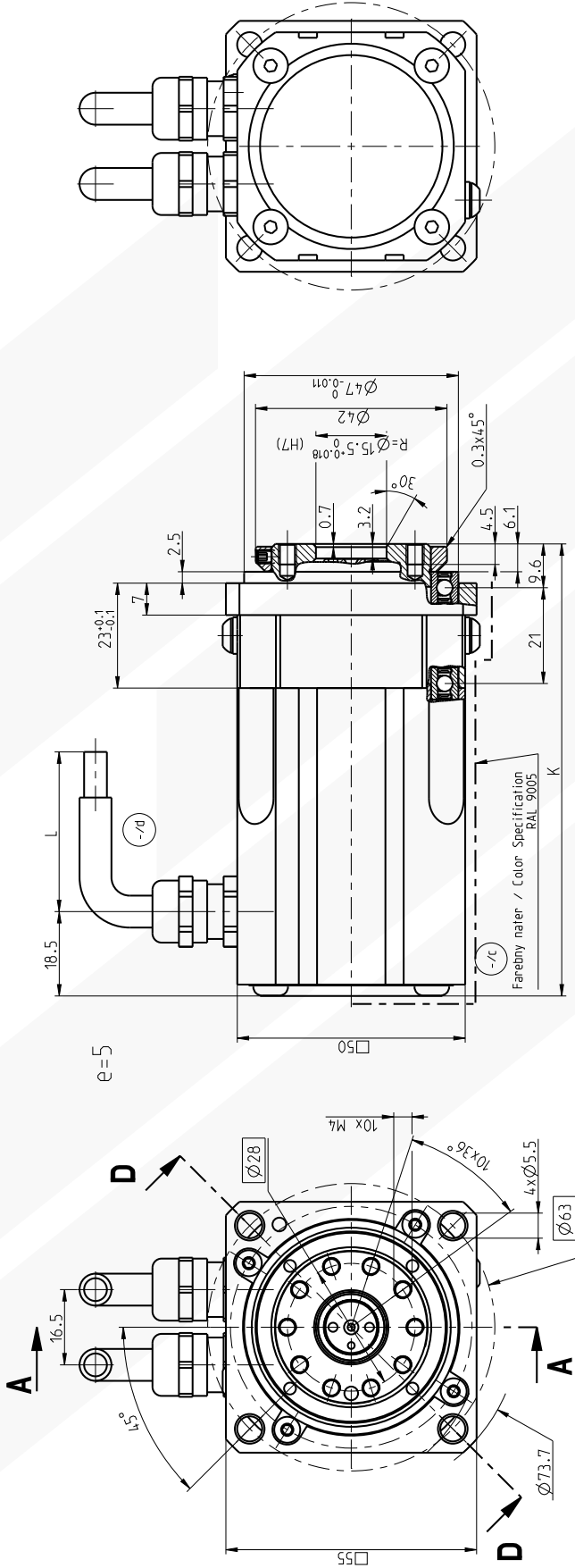
DSH - DriveSpin Hollowshaft

The DSH electric actuators are characterized by the possibility to use a through hole for routing cables, pipes, and drive shafts while maintaining the radial-axial and torque load capacity and the characteristic high overload capacity of the reduction gear and of the AC servomotor, featuring high dynamics. The voltage and feedback variability will widely satisfy all of customers' requirements.

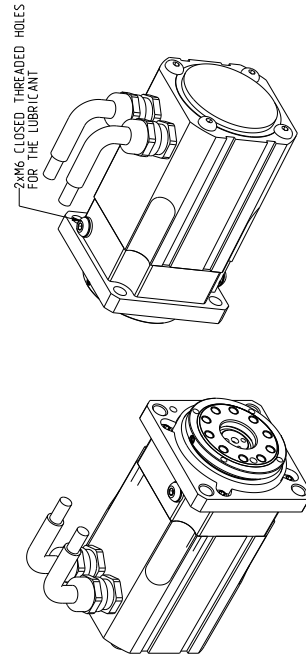
DSM - DriveSpin Modular

The DSM modular rotary positioning modules provide controlled rotary motion and transfer of torque with a high positioning accuracy and precision. The output flange of the module allows to capture both radial and axial forces. The modules feature a special design of the case, which allows versatile connections, also without additional devices. The good design integration ability and small dimensions allow to create kinematic assemblies from DSM modules for end effectors, but also for additional devices and positioners. The selection of a module size depends on the required load-carrying capacity and the number of degrees of freedom of the motion axis.

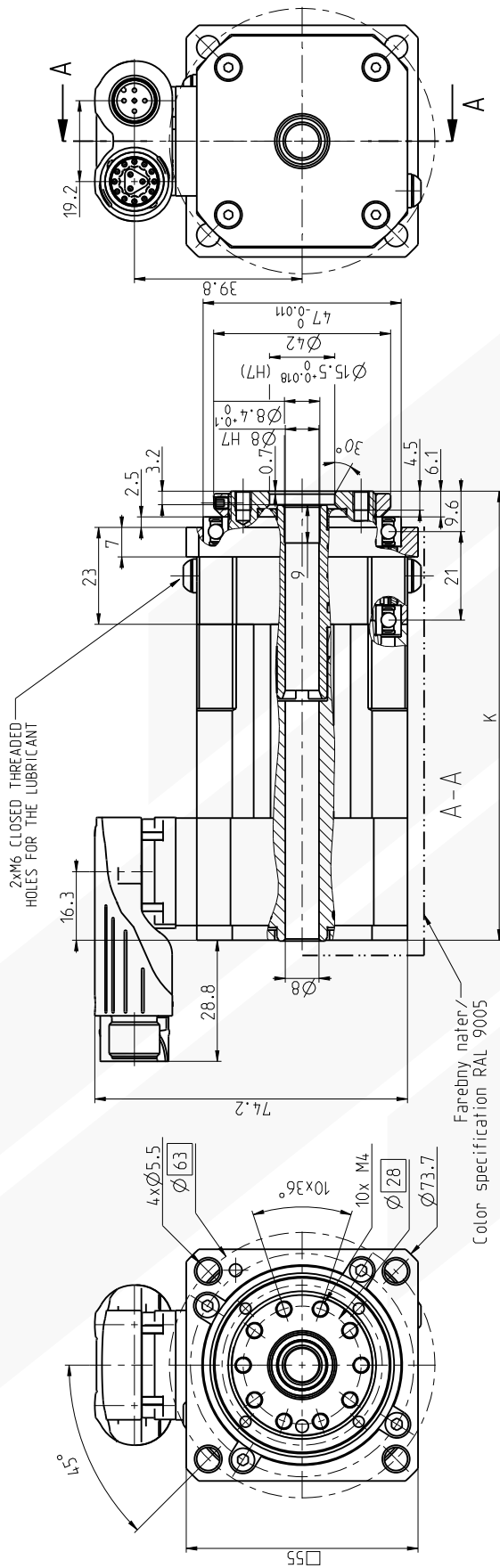
DS 050



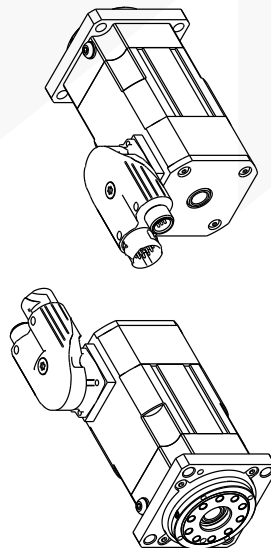
Dimension K	Without brake	With brake
Resolver	99 mm	136 mm
HIPERFACE	100.5 mm	139.1 mm
EnDat ₍₁₎	109.1 mm	135.1 mm



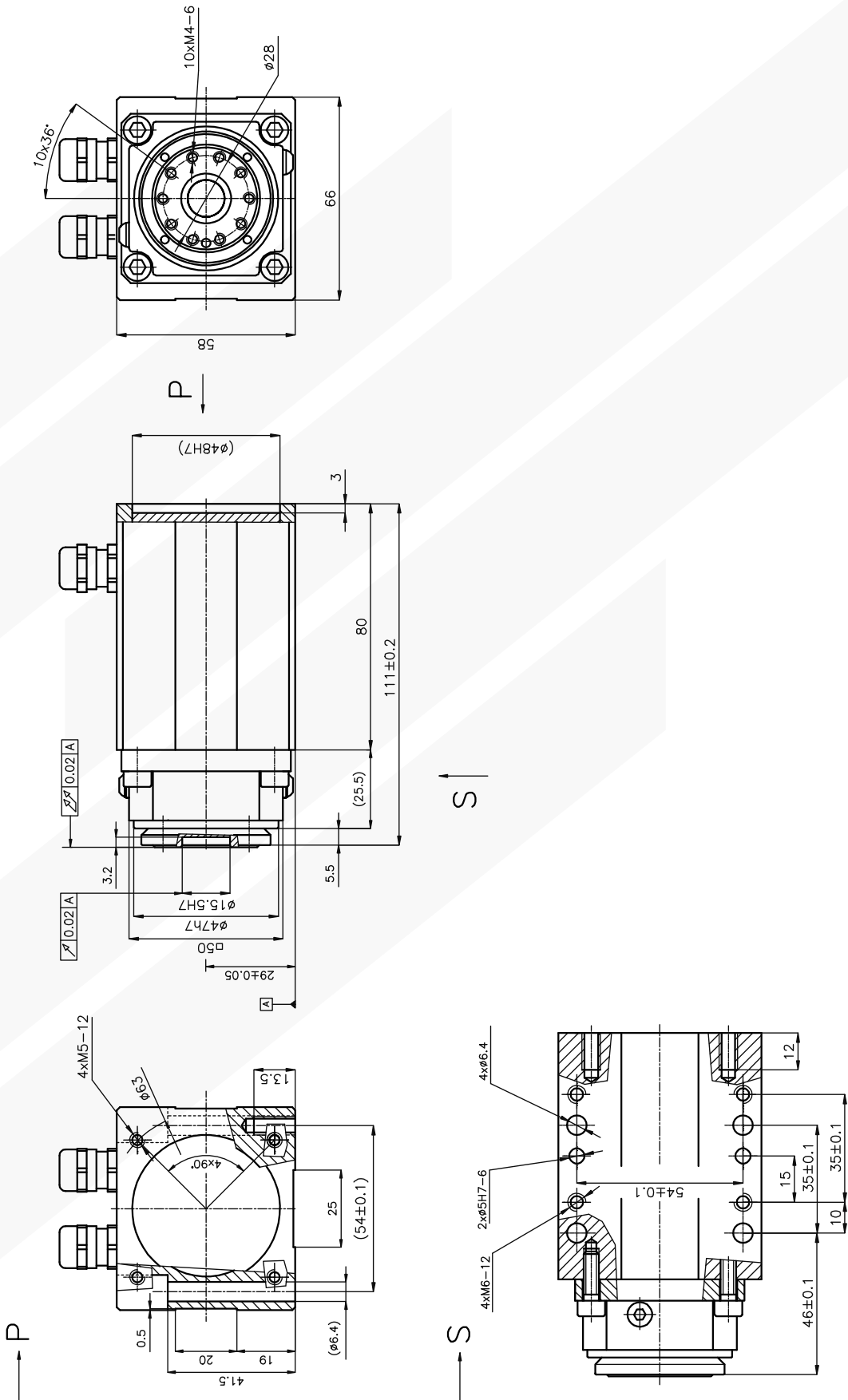
DSH 050

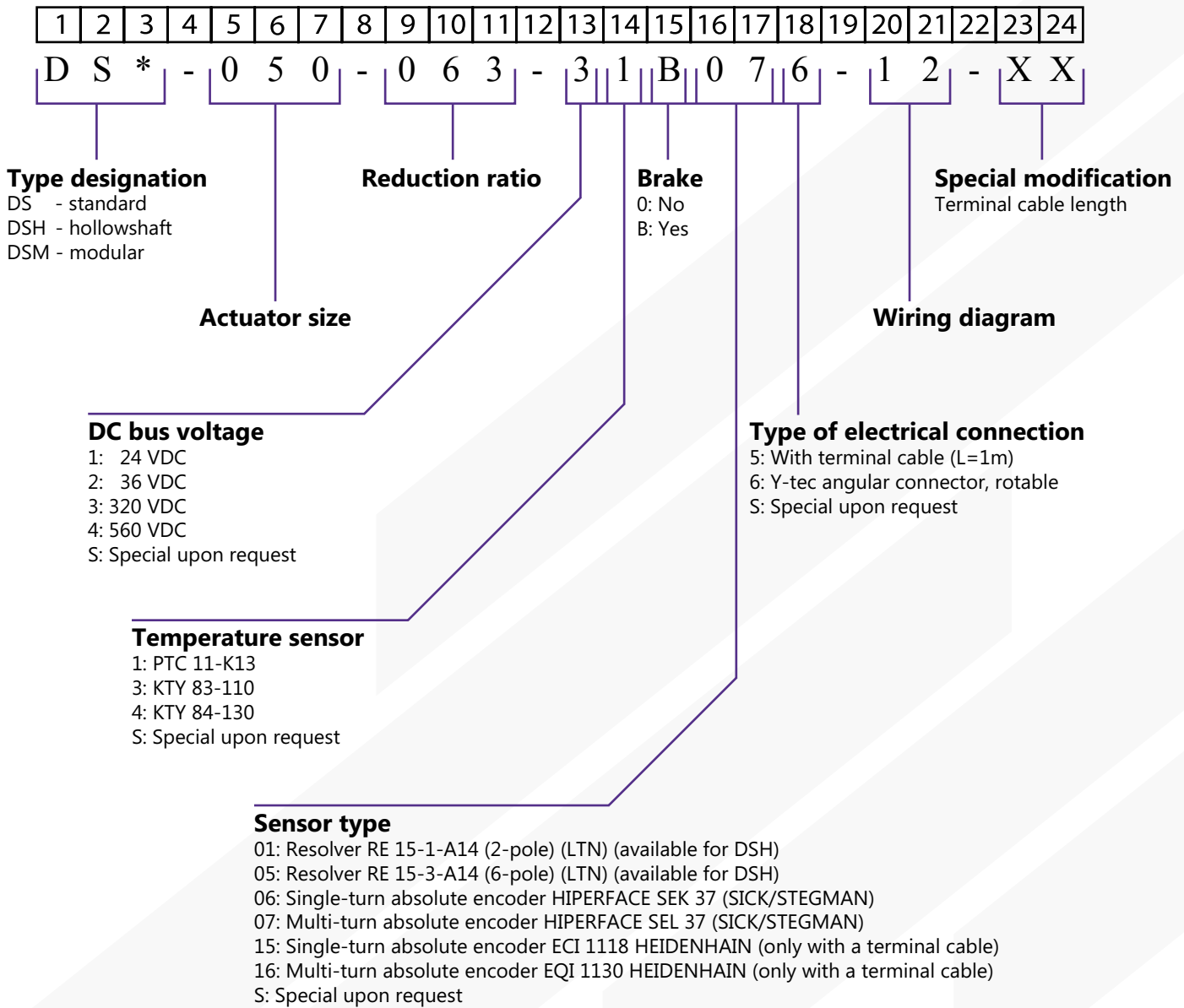


Dimension K	Without brake	With brake
Resolver	106.6 mm	-



DSM 050

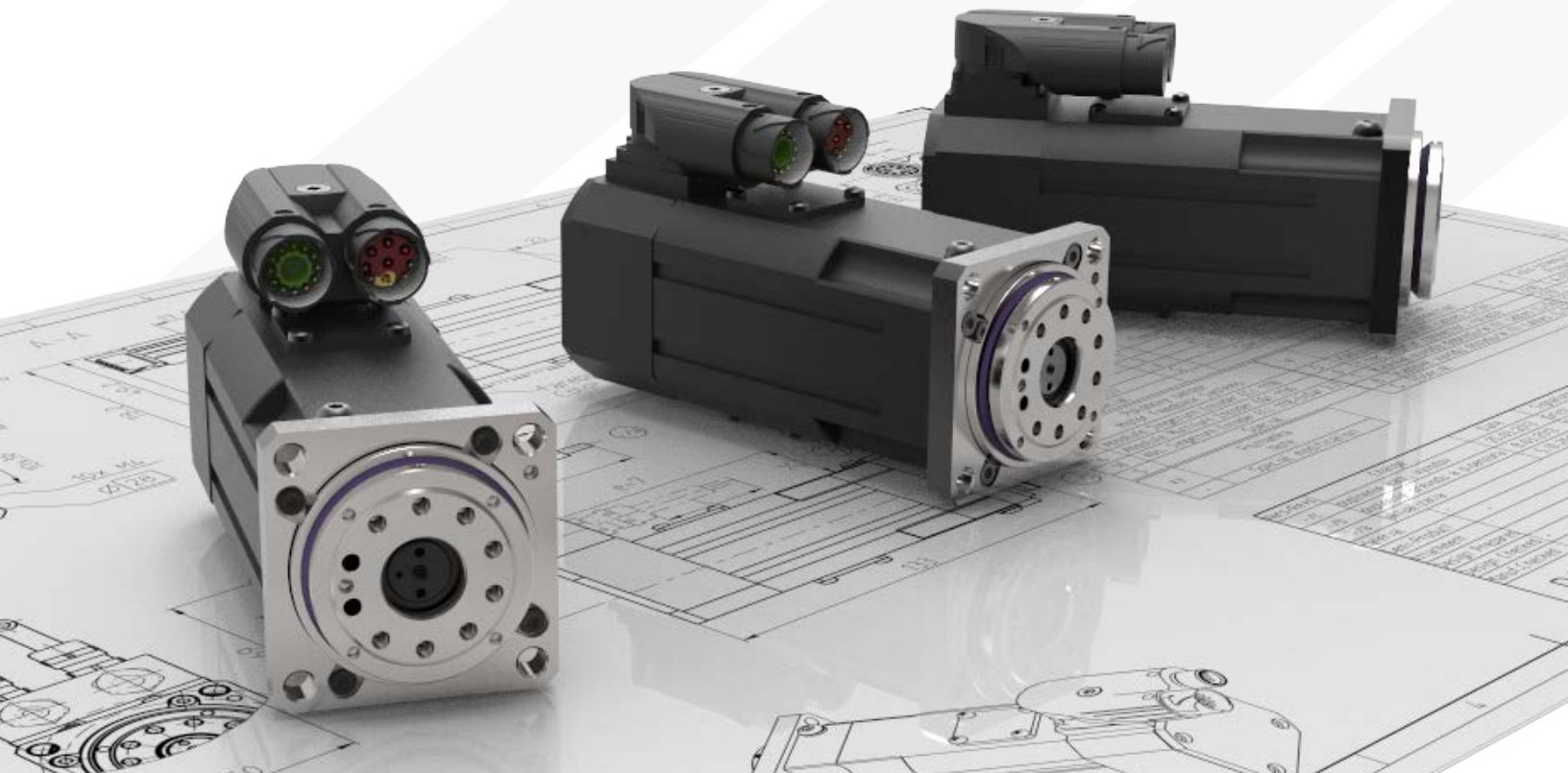
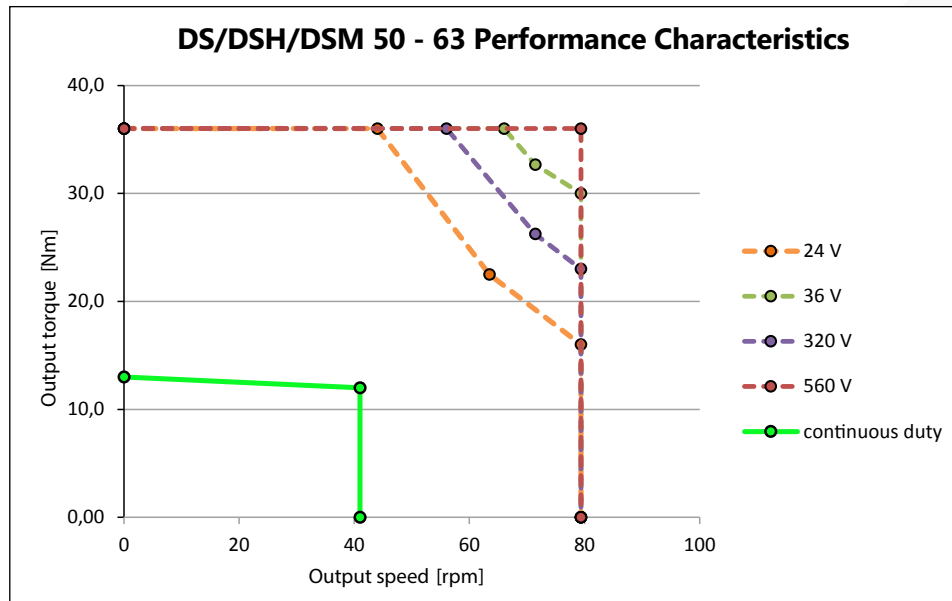




DS Actuator			DS 050/DSH 050/DSM 050			
Reduction ratio	I		63			
Rated output torque	T_r	Nm	18			
Acceleration/braking output torque	T_{max}	Nm	36			
Rated input speed of the reduction gear	n_r	min^{-1}	2000			
Maximum continuous input speed	n_{cmax}	min^{-1}	3000			
Maximum allowed input speed of the reduction gear	n_{max}	min^{-1}	5000			
Tilting stiffness	1) 5) M_t	Nm/arcmin	4			
Torsional stiffness	1) 6) k_t	Nm/arcmin	2.5			
Maximum lost motion	LM	arcmin	<1.5			
Hysteresis	H	arcmin	<1.5			
Maximum tilting moment	2) 3) M_{cmax}	Nm	44			
Rated radial force	2) F_{rR}	kN	1.44			
Maximum axial force	2) 4) F_{amax}	kN	1.9			
Allowed temperature range		$^{\circ}\text{C}$	-10 $^{\circ}\text{C}$ to +40 $^{\circ}\text{C}$			
Reduction gear maximum allowed temperature		$^{\circ}\text{C}$	65 $^{\circ}\text{C}$			
Servo inverter DC bus voltage	U_{dc}	V	24	36	320	560
Servomotor rated speed	n_n	min^{-1}	4000	4500	4500	4500
Servomotor rated output torque	M_n	Nm	0.24	0.24	0.24	0.24
Servomotor rated current	I_n	A	7.8	7.3	0.68	0.68
Servomotor brake holding torque	M_o	Nm	0.26	0.26	0.26	0.26
Servomotor brake holding current	I_o	A	7.9	7.5	0.7	0.7
Servomotor maximum torque	M_{max}	Nm	1	1	1	1
Servomotor maximum current	I_{max}	A	33	31	2.9	2.9
Servomotor EMF constant	K_E	V/1000	2	36	21	21
Servomotor torque constant	K_T	Nm/A	0.03	0.03	0.37	0.37
Terminal resistance	R_{2ph}	Ω	0.29	0.37	36.8	35
Terminal inductance	L_{2ph}	mH	0.5	0.6	62	62
Number of poles	2p	pol	6	6	6	6
Electrical time constant	T_{el}	ms	1.7	1.6	1.7	1.8
Mechanical time constant	T_{mech}	ms	2.8	3.2	3.2	3
Thermal time constant	T_{th}	min	13			
Nominal brake voltage		V	24			
Electromagnetic brake braking torque		Nm	4.5			
Protection class			IP64 as standard			
Lubricant			Grease Castrol Optitemp TT1			
Paint			black RAL 9005			
Insulation class			F			

SUBJECT TO CHANGES WITHOUT PRIOR NOTICE

- 1) Mean statistical value. For further information, see Chapter 9, Tilting Stiffness and Torsional Stiffness.
- 2) Load at output speed 15 rpm.
- 3) Tilting moment M_{cmax} value at $F_a=0$. If $F_a \neq 0$ see Chapter 9, Tilting Moment, of this document.
- 4) Axial force F_{amax} value at $M_c=0$. If $M_c \neq 0$ see Chapter 9, Tilting Moment, of this document.
- 5) The parameter depends on the high precision reduction gear model.
- 6) The parameter depends on the high precision reduction gear model, reduction ratio, and lost motion value.
- 7) Moment of inertia and Weight. For further information, see Chapter 9, Moment of inertia and Weight, of this document.



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