INFRANOR

Spindle Technical Specifications

Spindle Model	DGZX-15042/10-KFHWQVJLS	**Order No.**	

Items	**Standard**	**Note**
Motor Type	Asynchronous	
Poles	4	
Voltage	350 V	
Power（S1-100%）	10 kW	
Torque（S1-100%）	4.6 Nm	
Current（S1-100%）	24.3 A	
Power（S6-60%）	11.5 kW	t_{ED}=10 min
Torque（S6-60%）	5.3 Nm	t_{ED}=10 min
Current（S6-60%）	27.9 A	t_{ED}=10 min
Power（S6-40%）	12 kW	t_{ED}=10 min
Torque（S6-40%）	5.5 Nm	t_{ED}=10 min
Current（S6-40%）	29.2 A	t_{ED}=10 min
Rated Speed	20,715 rpm	
Max. Speed	42,000 rpm	
Isolation Resistance	≥500 MΩ	
Grounding Check	≤1.0 Ω	
Insulation Class	F	
Thermistor in Motor Coil	KTY84-130 , PTC	
Tool Holder	HSK-E40	DIN 69893
Clamping Power	≥6,800 N	
Tool Pushed Out Distance	0.5±0.1 mm	

Spindle Model	DGZX-15042/10-KFHWQVJLS	**Order No.**	

Items	**Standard**	**Note**
Unclamping Pressure	50 -80 bar	TO
Clamping Pressure	4 - 60 bar	TI
Cone Radial Run-out	≤0.002 mm	
Axial Run-out	≤0.002 mm	
Testing Stick Radial Run-out	≤0.002 mm	t1 @ 30 mm
Testing Stick Radial Run-out	≤0.005 mm	t2 @ 160 mm
End Surface Run-out	≤0.001 mm	
Sealing Air	2-3 bar	AS
Bearings Lubrication	Oil-air	4×
Axial Stiffness	100 N/μm	
Radial Stiffness	80 N/μm	
Vibration	≤0.8 mm/s (RMS)	LV1
Vibration	≤0.8 mm/s (RMS)	LV2
Spindle Coolant	Water	
Cooling Demand	≥2.0 kW	
Coolant Flow	≥6 L/min	ΔT≤3 ℃
Tool Inner Coolant	≤10 bar	Oil mist
Tool Inner Coolant	1-140 bar	Cutting Fluid
Encode	Sin/cos,1Vpp,Z=200	LENORD + BAUER
Tool Clamping Monitoring	Proximity Switch (24V, PNP, Normally Open)	BALLUFF
Spindle Weight	44.6±5 kg	

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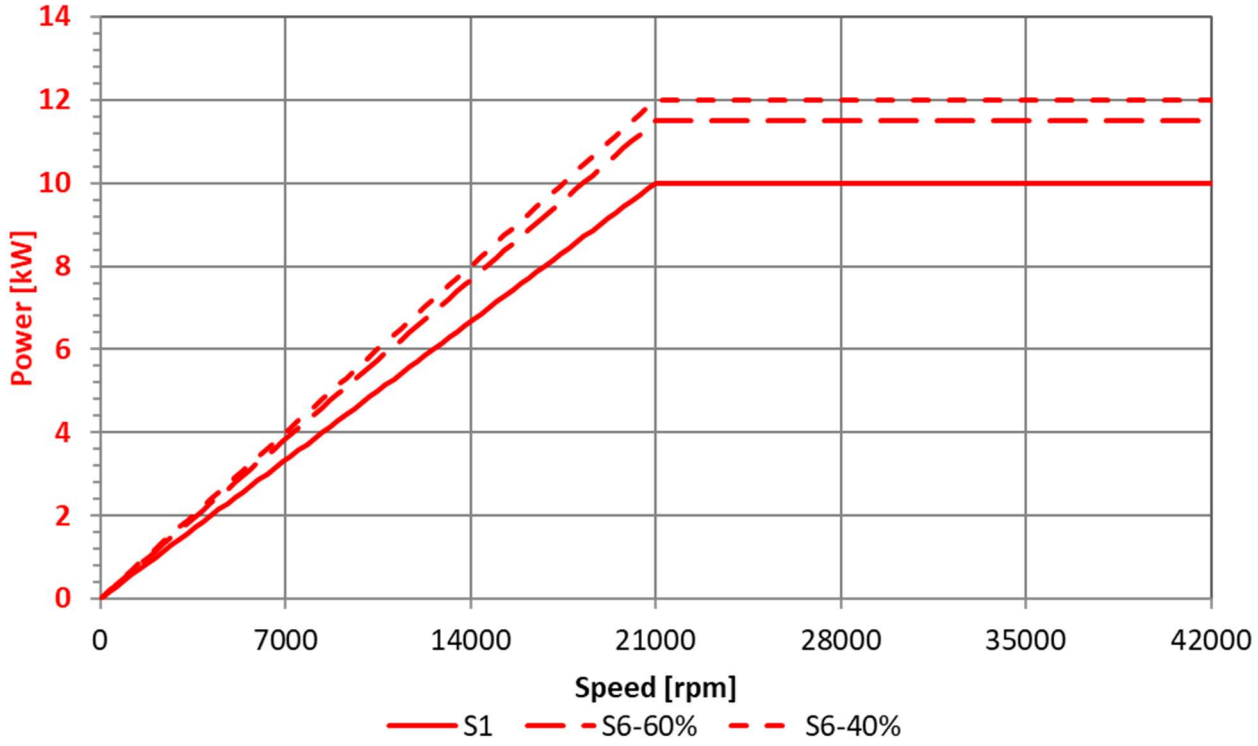
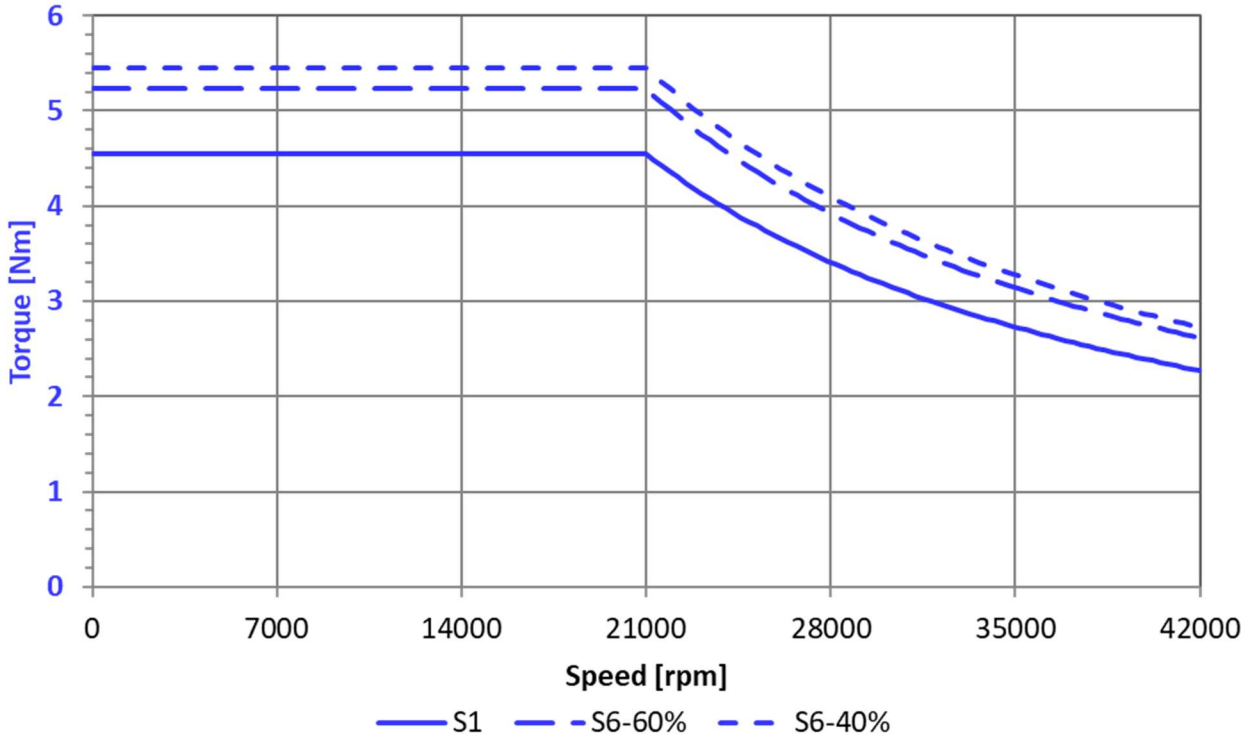
Power and Torque Diagram

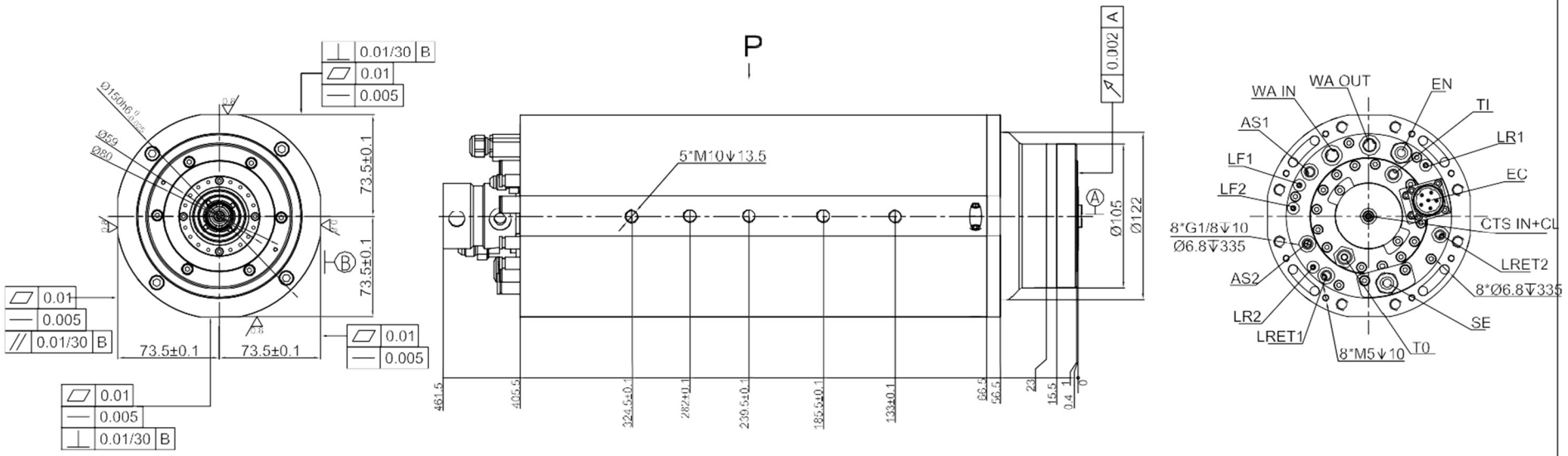
Model : DGZX-15042/10-KFHWQVJLS

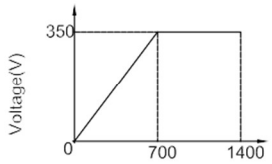
Power Diagram(Cycle time:10 min)

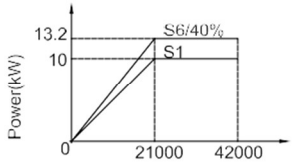


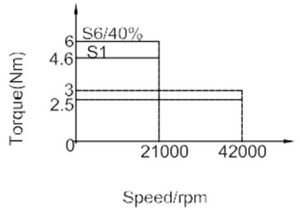
Torque Diagram(Cycle time:10 min)







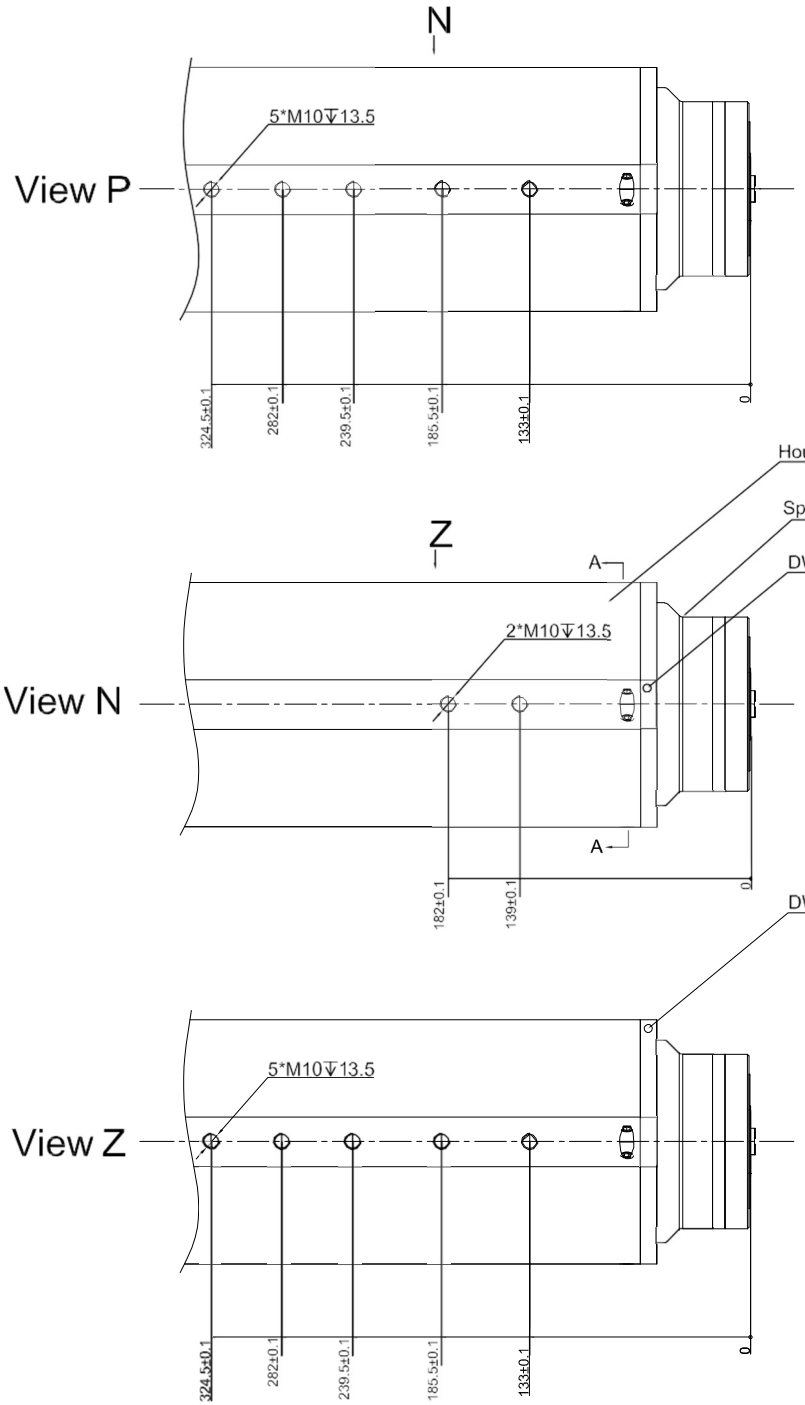


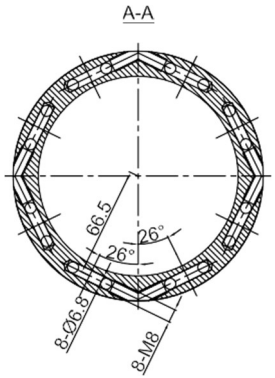


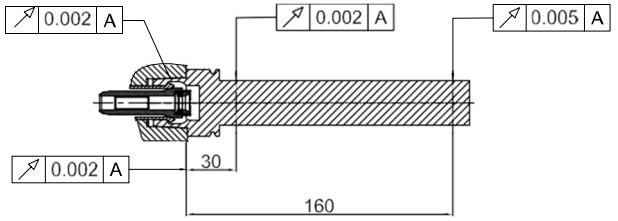
Motor Type	Asynchronous/3phase
Poles	4
Rated Voltage	350V
Power/S1	10kW
Torque/S1	4.6Nm
Speed Max.	42.000rpm
Tool Hoder	HSK-E40 DIN 69893-1
Clamping Force	≥6.800N
Bearing Lubrication	Oil-Air
Vibration	0.8mm/s (RMS)
Cooling System	Water/Oil
Tool Unclamping Unit	Oil pressure:50-80bar
Tool Clamping Unit	Oil pressure:4-60bar
Front & Rear Sealing	Air:2-3bar
Encoder	L&B GEL244-,Z=200
Position Sensors	PNP,24V.normally open
Termistor in Coil	PTC and KTY

WA IN	Coolant inlet	G1/4,tube:Ø10
WA OUT	Coolant outlet	G1/4,tube:Ø10
AS1/AS2	Air for front&rear sealing	G1/8,tube:Ø8
LR1	Oil-Air for bearing 1	M5,tube:Ø4
LR2	Oil-Air for bearing 2	M5,tube:Ø4
LF1	Oil-Air for bearing 3	M5,tube:Ø4
LF2	Oil-Air for bearing 4	M5,tube:Ø4
LRET1/LRET2	Oil-Air return	G1/8,tube:Ø8
EC	Power and ground	6pin,M23,connector
EN	Encoder Termistor in Coil	17pin,M23,connector
SE	Tool Clamping Sensor No Tool Sensor Tool Unclamping Sensor PTC and KTY	12pin,M23,connector
TO	Tool Unclamping	37°Flare7/16-20 Fitting tube:Ø8
TI	Tool Clamping	37°Flare7/16-20 Fitting tube:Ø8
CTS IN+CL	Inner coolant inlet Cone Cleaning	37°Flare7/16-20 Fitting hole:G1/4
DWS1	Tool inner coolant bleecing	hole:Ø4
DWS2	Tool inner coolant bleecing	hole:Ø4

INFRANOR			DGZX-15042/10-KFHWQVJLS	GZX321-000	
Approved			Spindle Drawing	Stage	
Checked				Scale	1:3
Standardized				Weight	44.6Kg
Proofread			page 1 in 2 pages	Date	April 12,2025
Designed					







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Approved			Spindle Drawing	Stage	
Checked				Scale	1:3
Standardized				Weight	44.6Kg
Proofread			page 2 in 2 pages	Date	April 12,2025
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