

Direct Driven Spindle

High-Speed Direct Drive Series



SPINDLES
HIGH SPEED
FOR PRECISION MACHINING

High-Speed B-Series for Machining Centers

D30-120 M

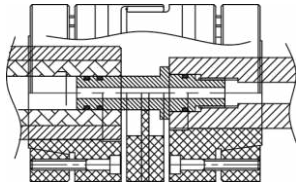
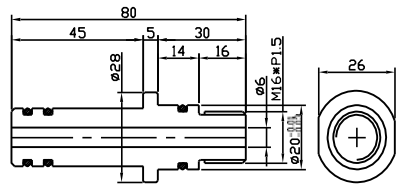
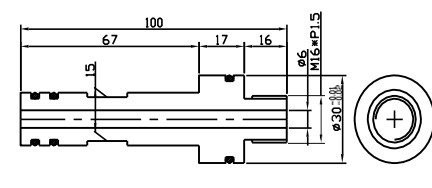


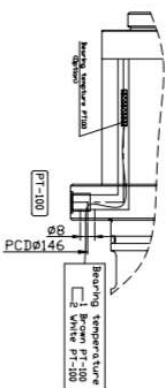
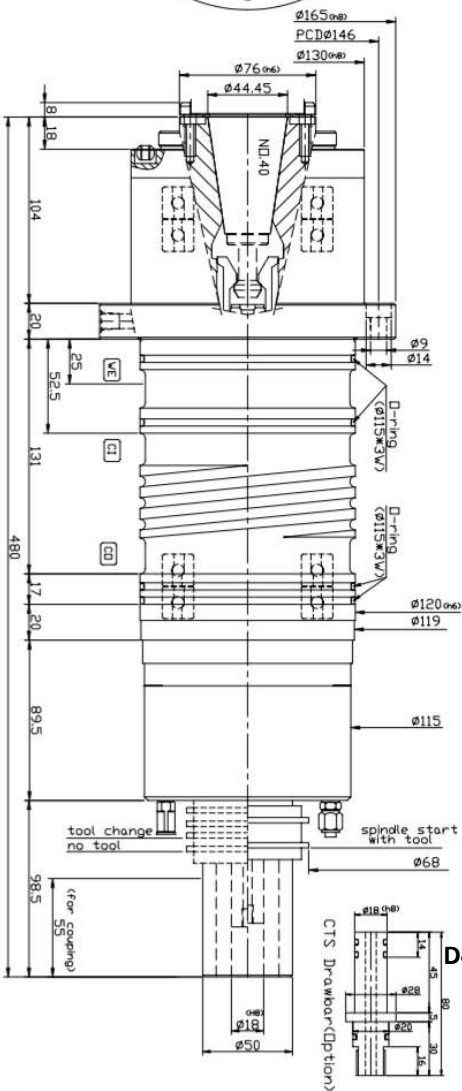
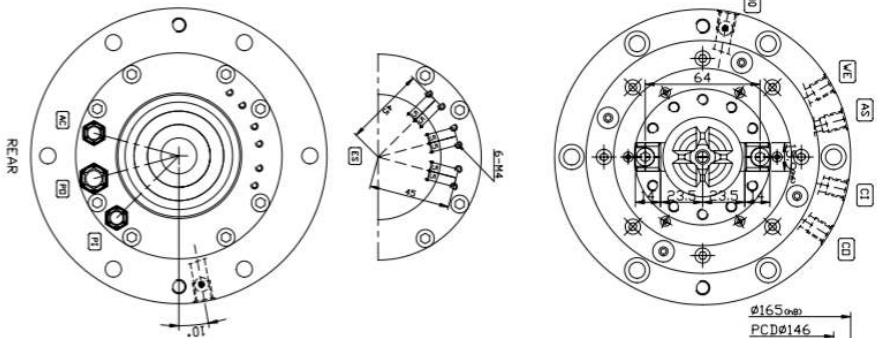
Type	D30-120	D40-120	D40-150	D50-190
Housing Diameter (mm)	ø120	ø120	ø150	Ø190
Max. speed (rpm)	10,000	10,000	10,000	6,000
	12,000	12,000	12,000	8,000
	15,000	15,000	15,000	10,000
	20,000	20,000	20,000	12,000
Bearing (mm)	ø55	ø60	ø70	Ø100
Lubrication	Grease	Grease	Grease	Grease
Pull-force (N)	4,000 (#30)	6,000 (#40)	8,000 (#40)	18,000 (#50)
	11,000 (HSK-A50 /E50)	18,000 (HSK-A63)	18,000 (HSK-A63)	45,000 (HSK-A100)
Coupling Diameter	ø50	ø50	ø50	ø50
Tool interface	SK / CAT / BT ISO / HSK	SK / CAT / BT ISO / HSK	SK / CAT / BT ISO / HSK	SK / CAT / BT ISO / HSK
Power (KW)	Customer	Customer	Customer	Customer

Standard functions

©Application			
Housing	Cartridge With flange mounted		
Tool adapter	DIN 69871/69872 ISO 7388/1/1 Type A		
	ANSI B5.50-78	ISO 7388/1/2 Type B	
	MAS	403-1982-BT/PT-2 (30°)	
	MAS	403-1982-BT/PT-1 (45°)	
DIN 69893-1	ISO 12164-1		
Direction of rotation	Clockwise and Counter-clockwise		
Operating position	Horizontal/vertical		
Maximum speed	Refer to the characteristic data sheet		
Bearing lubrication	Grease lubricate		
Bearing seal at front	Purge air Labyrinths		
Medium connections	Cooling x 2	PT 1/8	ϕ 8mm diameter
	External Coolant x 1	PT 1/8	ϕ 12mm diameter
	Purge air x 1	PT 1/8	ϕ 6mm diameter
	Taper cleaning air x 1	PT 1/8	ϕ 8mm diameter
	*Caution: through rotator union when with CTS		
	Pneumatic cylinder-oil x 1	PT 1/8	(1/4*1W-Oil pipe)
Pneumatic cylinder-air x 1	PT 1/8	ϕ 8mm diameter	
©Tool clamping device			
Gripper	SK/CAT/BT/ISO	Spring type	
		HSK	OTT
Release using pneumatic cylinder	D30-	50-80 bar / Mini 60 C.C.	
	120		
	D40-		
	120		
	D40-		
150	50-80 bar / Mini 90 C.C.		
D50-190			

Technical specifications

©Spindle cooling	
Cooling medium	Cooling capacity > 1 kW, Adjust coolant temperature (+2°C)
Cooling With oil Pressure	ISO VG10~22 3~5 bar
Flow rate	8 l/min
Filter size	100 µm
©Tool Taper cleaning	
Pressure	>5 bar
Filter size	50 µm
©Purge air	
Pressure	1~1.5 bar
Filter size	8 µm
Flow	1.0 ... 1.5 Nm ³ /h
©CTS (Option C)	
<p>Spindle Motor</p> 	
40#CTS Drawbar	50#CTS Drawbar
	



RPM	Bearing	Preload	Lubrication	Pull-force(N)	Tool	Number
T 10,000	B7012E				BT/BRT or ISD CAT SK	09S12B010AEO
Y 12,000	HS7012E	Spring	Grease	6,000		09S12B012AEO
P 15,000	HC7012E					09S12B015AEO
E 20,000	HC7012E					09S12B020AEO

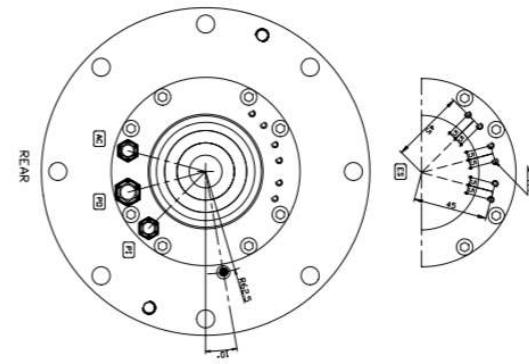
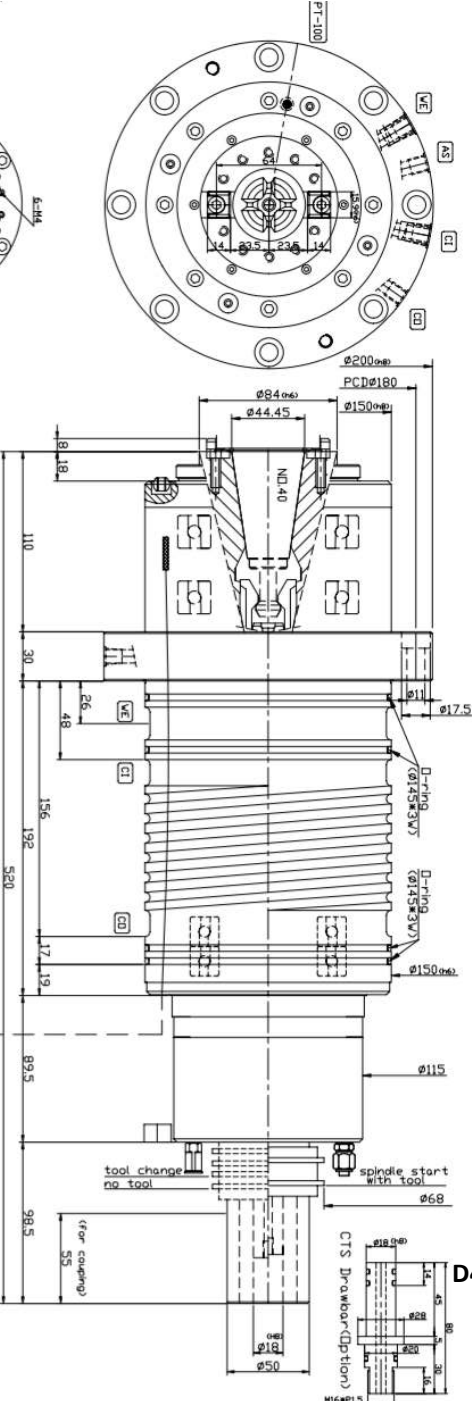
Tool holder standard
Balance ISO 1940 part 1
Tool type DM85871/69872/ISD 7388/1/1 TypeA
MS4403-198E-B7/PT 63307
MS4403-198E-B7/PT 1K457

Grippers type spring 40
Static pull force 6,000 N

PT-100	Bearing temperature (Option-2 lines) sensor for 270C	CTS Drawbar	Option 11
PT-100	Bearing temperature sensor for 270C	CTS Drawbar	Option 11

DA0-120E

D40-120E



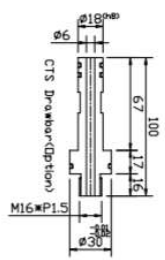
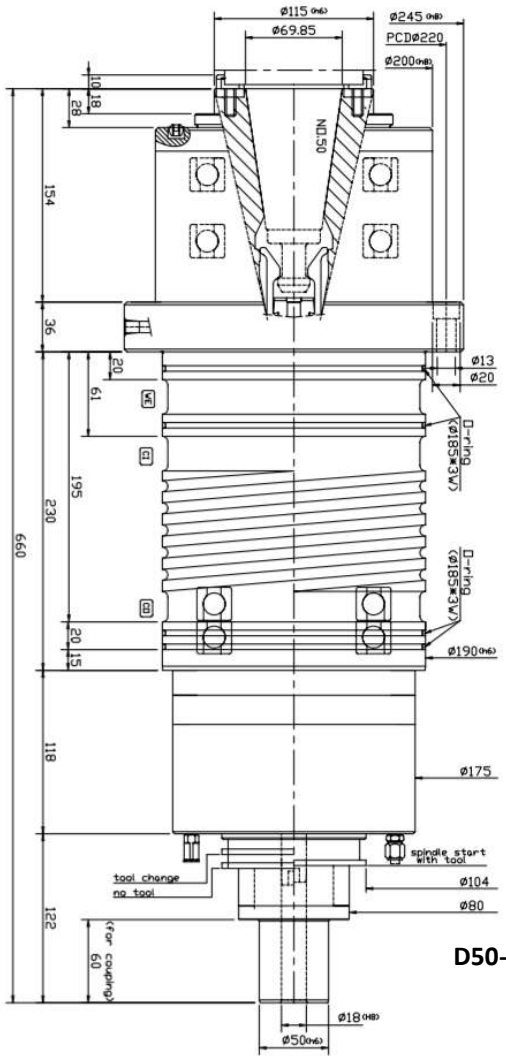
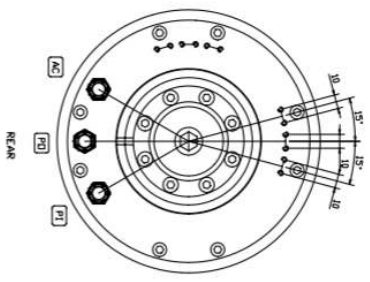
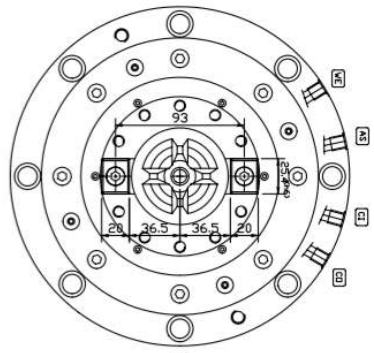
Bearing temperature
 1 White PT-100
 2 White PT-100
 3 Red PT-100

RPM	Bearing	Preload	Lubrication	Tool	Number
T	HS7014E	Spring	Grease	BT/BBT	095148.012.DC0
Y	HS7012E			or	ISD
P	HC7014E	Grease	8.000	CAT	095148.020.DC0
E	HC7012E			SK	

Tool holder standard
 Balance ISD 1940 part 1
 Tool type D16K9871/69872 ISD 7388/1/1 TypA
 MAS403-1982-BT/SD 7388/1/2 TypB
 MAS403-1982-BT/PT 1457)
 Grippers type spring 40
 Static pull force 8.000 N

- [C1] Motor Cooling in <Sbear PT1/8 &8mm
- [C2] Motor Cooling return PT1/8 &8mm
- [VE] EX coolant <2bear PT1/8 &12mm
- [AS] purge air <2bear PT1/8 &6mm
- [AC] Taper clean >Sbear PT1/8 &8mm
Caution: through rotor under when with CTS.
- [PD] Draw-bar release 1/4ALV-DI pipe
- [P1] Draw-bar clamped 50-80bar 60°C; PT1/8
PT1/8 &8mm
3>Sbear
- [ES] Draw-bar position Sensors

Property	Symbol	Quantity	Approved by	Revision	Change description	Date
PT-100 Bearing temperature sensor						
PT-100 Drawing					Depiction 3 (rev)	
PT-100 Drawing					Depiction 3 (rev)	
PT-100 Drawing					Depiction 3 (rev)	
PT-100 Drawing					Depiction 3 (rev)	
PT-100 Drawing					Depiction 3 (rev)	
PT-100 Drawing					Depiction 3 (rev)	



	RPM	Bearing	Pre-load	Lubrication	Pull-force(N)	Tool	Number
T	6,000	B7020E B7018E				BT/BBT or ISD	09S208.006.AEO
Y	8,000	HS7020E HS7018E	Spring	Grease	18,000		09S208.008.AEO
P	10,000	HC7020E HC7018E				CAT	09S208.010.AEO
E	12,000	HC7020C HC7018E				SK	09S208.012.AEO

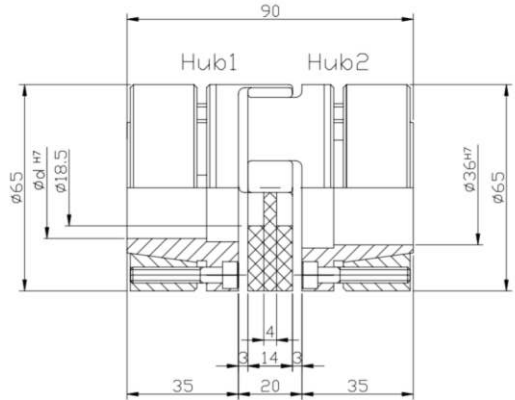
CI	Motor Cooling in SGear	PT1/8 &math>\phi</math>8mm
CO	Motor Cooling return	PT1/8 &math>\phi</math>8mm
VE	EX coolant ϕ20mm	PT1/8 &math>\phi</math>2mm
AS	purge air ϕ20mm	PT1/8 &math>\phi</math>8mm
AC	Taper clean >3&math>\mu</math>	PT1/8 &math>\phi</math>8mm
PD	Draw-bar release 1/4x1V-DIN pipe 50-80&math>\mu</math>	90&math>\mu</math>C, PT1/8
PT	Draw-bar position sensor	5-9&math>\mu</math>

Tool holder's standard
 Tool type: D106 90/1.698/21SD 7388/1/1 Type4
 MAS403-198E-BT/PT 2307
 MAS403-198E-BT/PT 1&math>K</math>457
 Grippers: S type Spring 50
 Static pull force 18,000 N

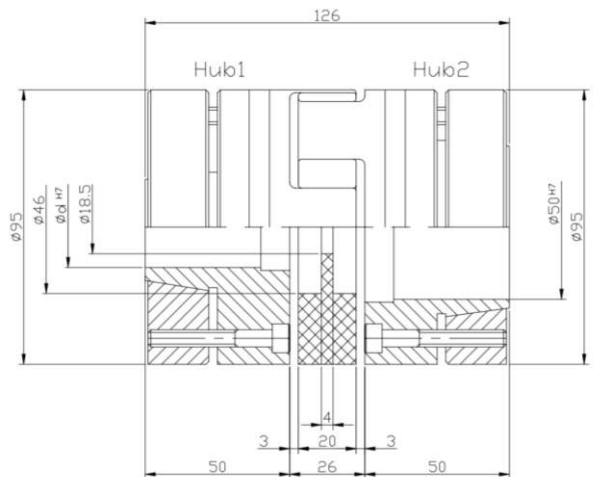
Model	09S208.012.AEO
Year	100-190E

D50-190E

Motor-end		Spindle-end	
Hub1 (mm)	Torque (N.m)	Hub2 (mm)	Torque (N.m)
Ø28	445.0	Ø50	858.0
Ø32	525.0	Ø50	858.0
Ø42	647.0	Ø50	858.0
Ø42	647.0	Ø50	858.0



Motor-end		Spindle-end	
Hub1 (mm)	Torque (N.m)	Hub2 (mm)	Torque (N.m)
Ø28	445.0	Ø50	858.0
Ø32	525.0	Ø50	858.0
Ø42	647.0	Ø50	858.0
Ø48	836.0	Ø50	858.0
Ø50	858.0	Ø50	858.0
Ø55	858.0	Ø50	858.0





Kuvam's CSR Initiative:

Kuvam Technologies will donate some of its profits to poor farmers in the form of fruit bearing plants. This will be our small contribution to help the nation to fight global warming and to increase the formers income.



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