



# FUKA PRECISION SPINDLE

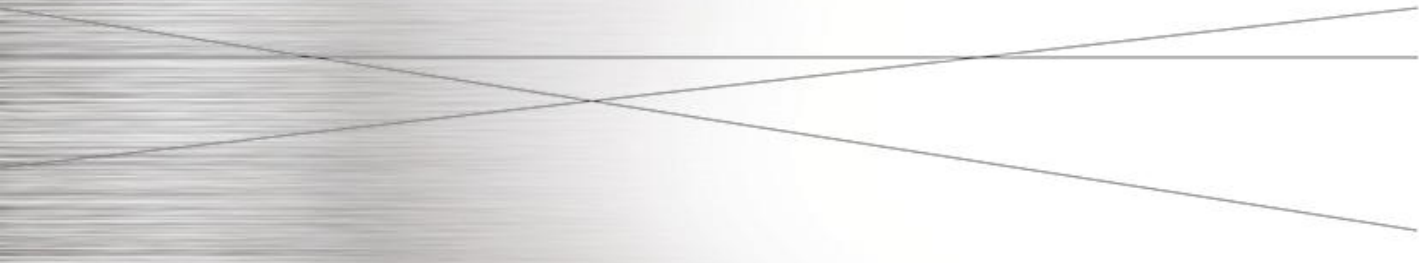






In recent years, with the rapid development of the whole production field, machine tool industry has undergone continuous development and innovation to meet higher level of demand.

By analyzing the market, we develop product with the aim of "try our utmost to meet the customers' requirements". Customers are provided with a variety of specifications to choose the spindles that they require. Parameter selection is attached. Please fill in your requirements





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# FUKA BUILT IN MOTOR SPINDLE

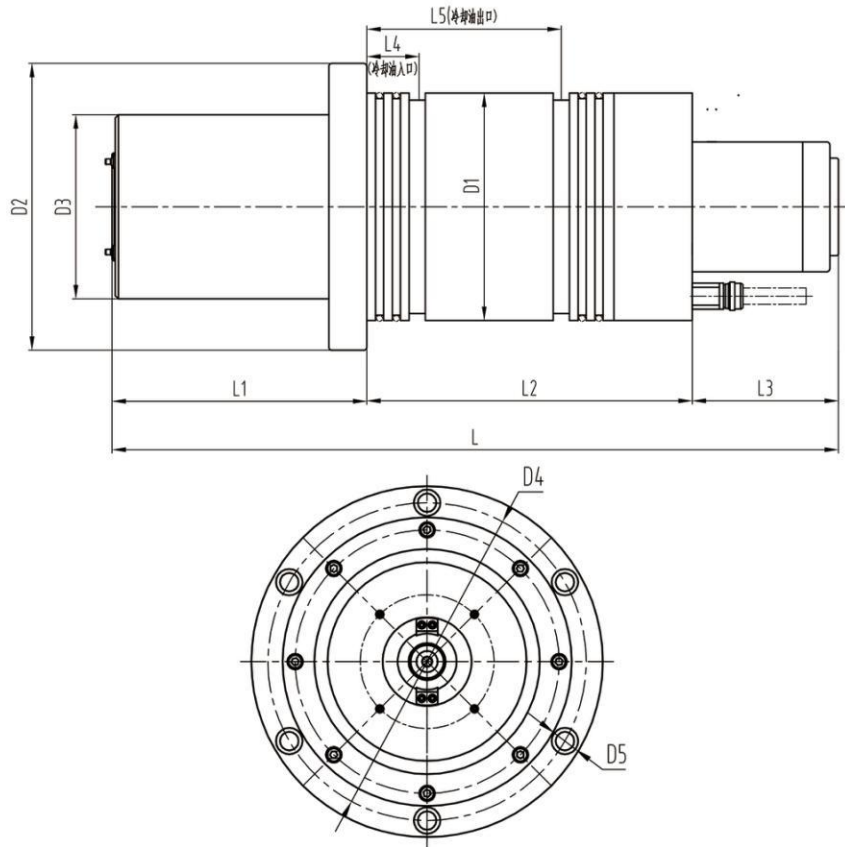


FUKA high performance motor spindle used in CNC



## Characteristics

- 1.** High performance motor spindle (BBT40, HSK-A63)
- 2.** Built-in high speed, high output motor
- 3.** Precision angular contact bearings are combined in 4-6 sets to provide the best rigidity
- 4.** Can be used vertically and horizontally
- 5.** Four-stage waterproofing structure
- 6.** Wear resistance is increased a lot due to special Japanese material (Hardness Max HRC65)
- 7.** Configurations
  - ① Ring-shape water spray cooling
  - ② Air seal (strengthened waterproofing function)
  - ③ Built-in tool changing system ( can be used with ATC)  
BBT/HSK tool holder            MAS 1 retention knob
  - ④ Water through is applicable
- 8.** External supply (ring shape water spray cooling, air blow, bearing and housing cooling) is provided by the flange outside surface and end surface



		External dimensions			
Item		Model			
		FKS5301	FKS5302	FKS5303	FKS5304
Model	Bearing I.D ( mm )	65	70	70	70
	Max. Speed ( rpm )	16000	15000	20000	24000
	Taper	BBT40	BBT40	BBT40/HSK-A63	HSK-A63
	Lubrication	Grease	Grease	Grease	Oil-air
	Motor output ( KW)	18.5/26	18.5 /25	20/25	20/25
Key dimensions	D1(mm )	155	210	150	150
	D2(mm )	195	260	202	202
	D3(mm )	132	150	160	160
	D4(mm )	175	232	180	180
	D5	M8 bolt	M8 bolt	M10 bolt	M10 bolt
	L(mm )	505	793	570	570
	L1(mm )	78	190	140	140
	L2(mm )	338	440	350	350
	L3(mm )	89	163	100	100
	L4(mm )	48	63	30	30
L5(mm )	248	370	158	158	

Drawing could be provided as per requirement

## FUKA direct drive spindle is used in CNC and milling machine

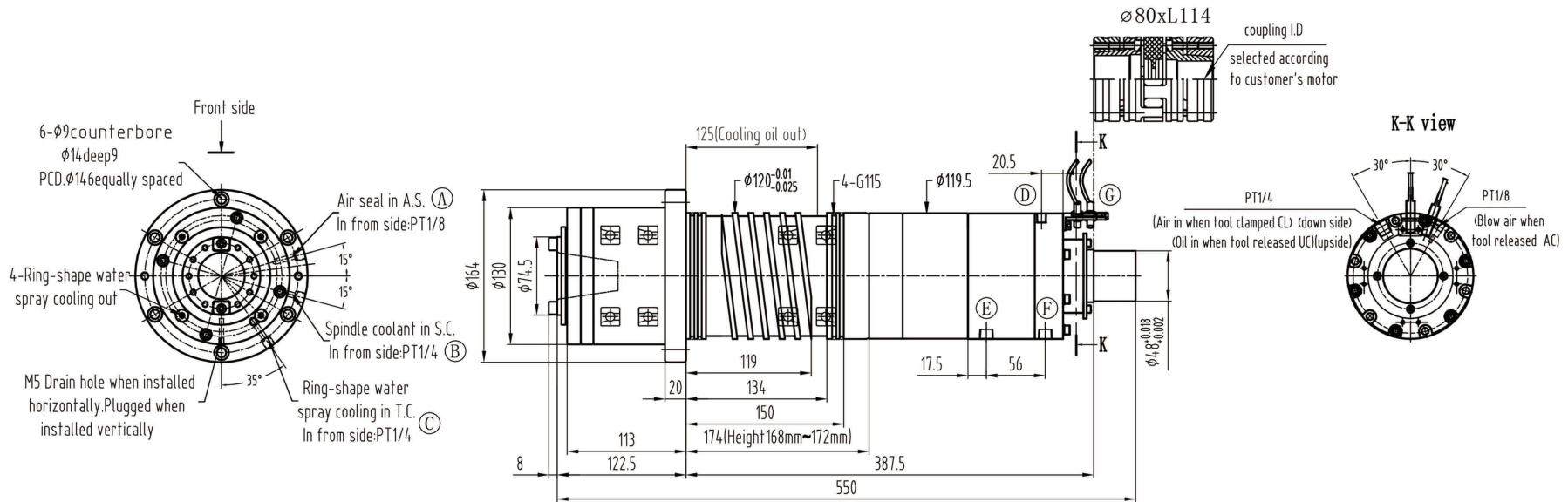


Connected directly to the motor



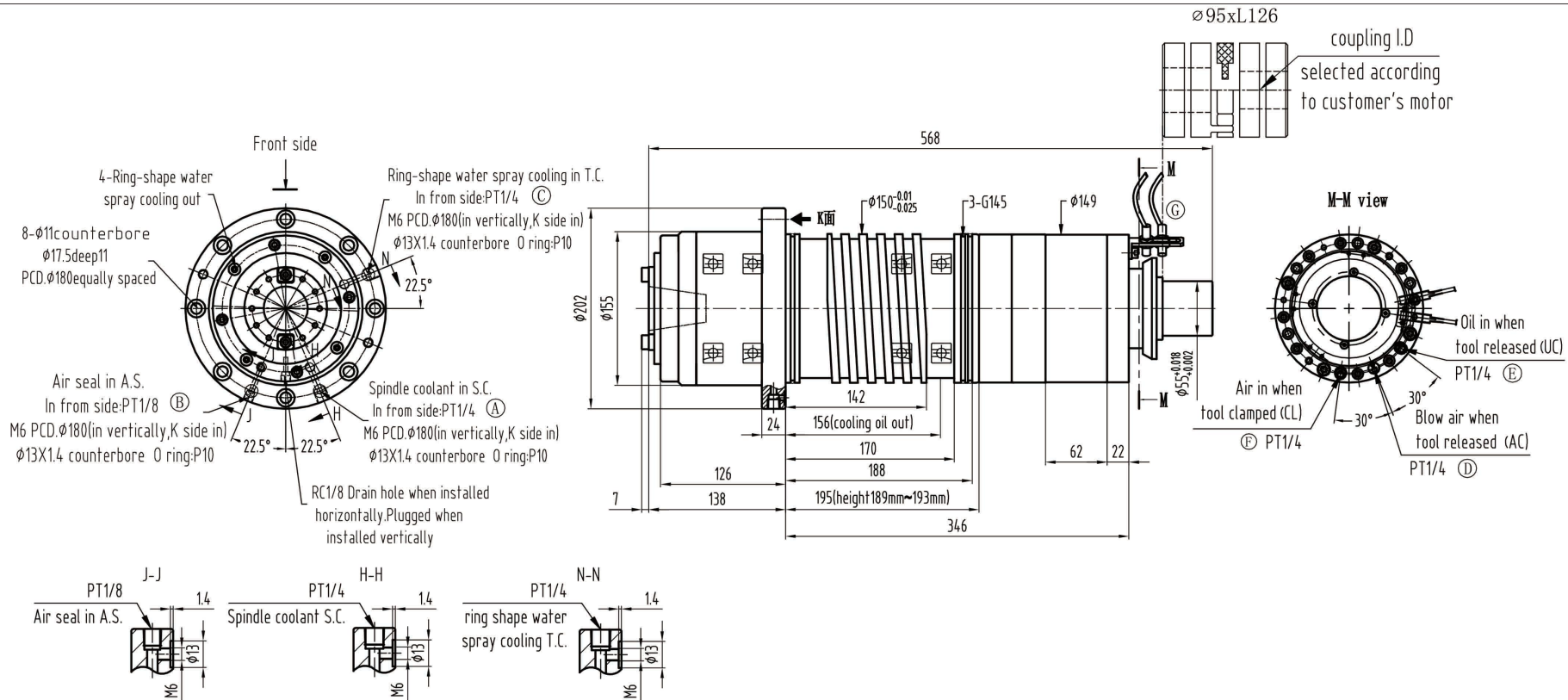
### Charateristics

- 1.** Connected directly to the motor
- 2.** Precision angle contact bearings are combined in 4–6 sets to provide the best rigidity
- 3.** Can be used vertically and horizontally
- 4.** Four–stage waterproofing structure
- 5.** Configurations
  - ① Ring–shap water spray
  - ② Air seal (strengthened waterproofing function)
  - ③ Built–in tool changing system ( can be used with ATC)  
MAS BT tool holder      MAS 1 retention knob
  - ④ The outside of bearings and spindle housing are cooled (same cooling return)
- 6.** Flange provides the external supply (ring shape water spray, air seal, bearings and housing cooling)

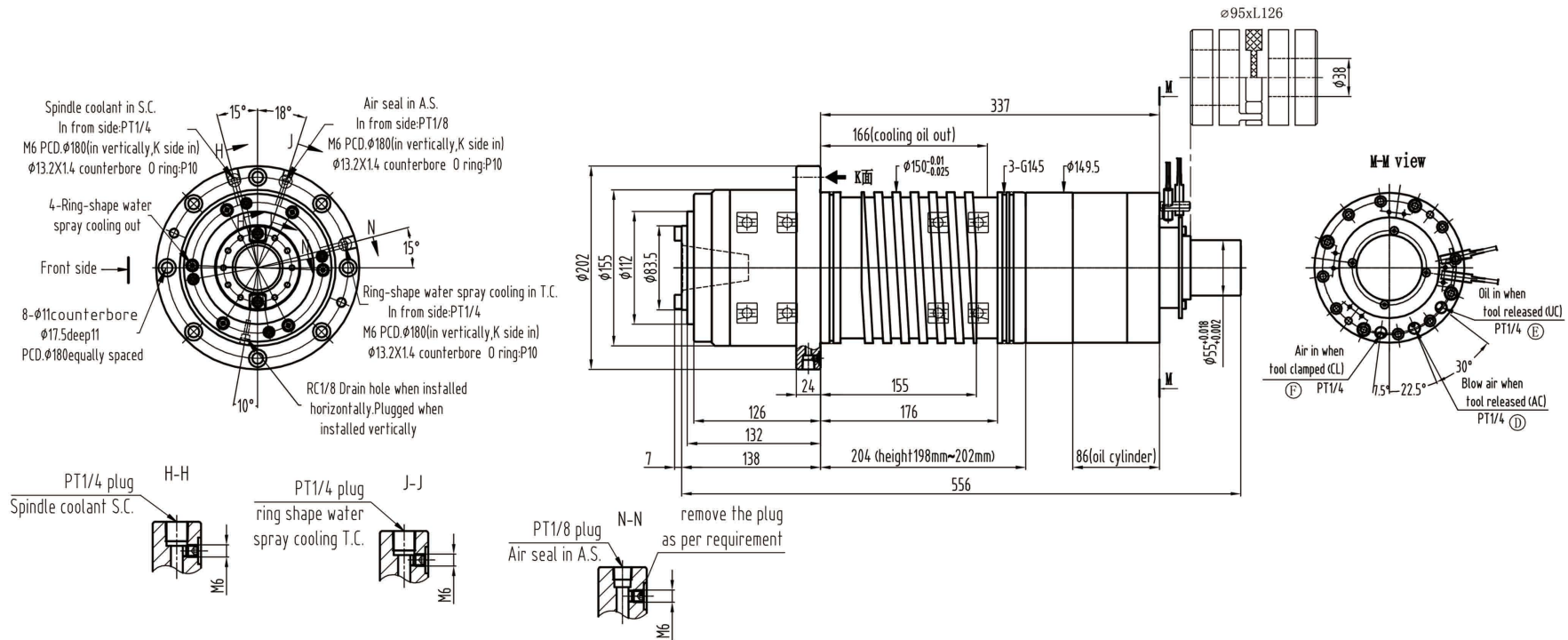


Model	Speed (rpm)	Spindle taper	I.D of front bearings	Outer diameter	Rotation accuracy ( MM )		Clamping method	Clamping force	Dynamic balancing	Temperature rise	Water through
					Spindle nose runout	runout at 300mm test bar					
FKS1203	8000~12000	BT40	$\phi 60$	$\phi 120$	0.003	0.008	gripper	7000~7500N	G1	15°C	optional

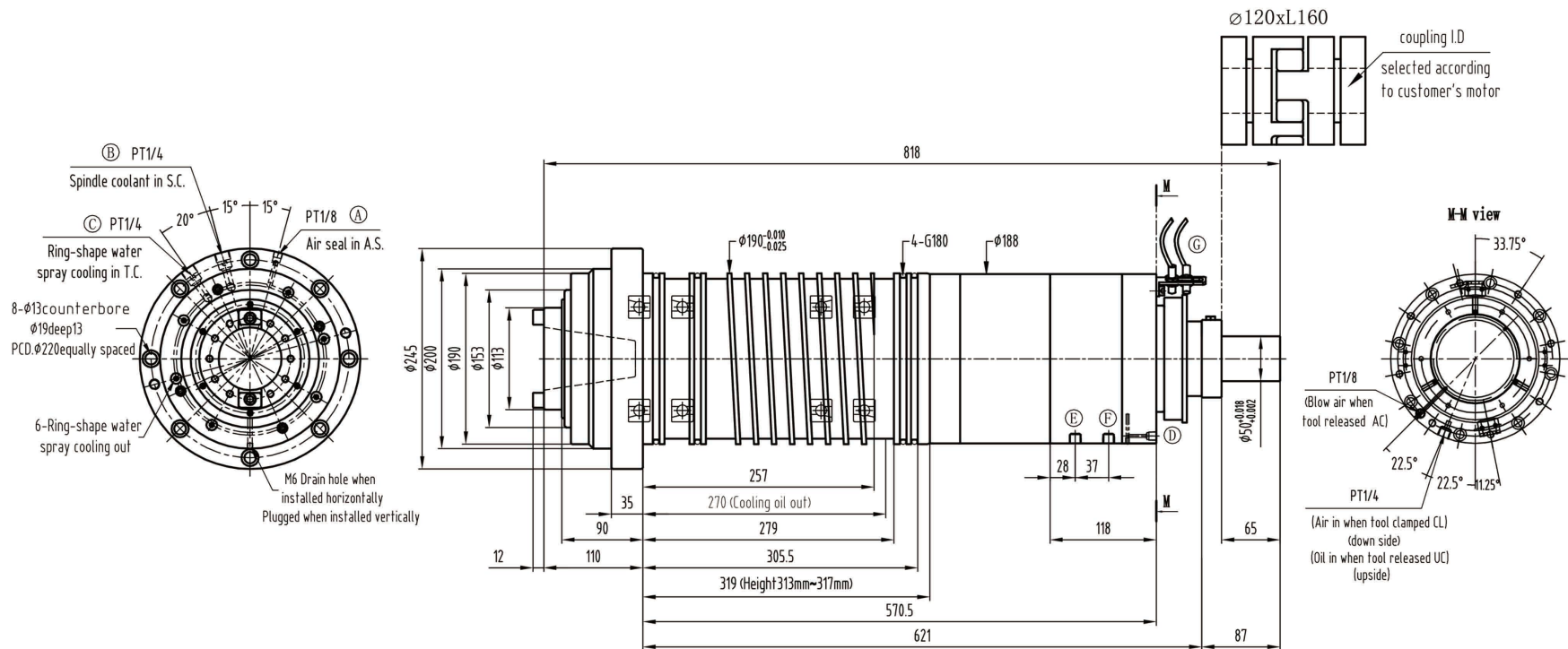




Model	Speed (rpm)	Spindle taper	I.D of front bearings	Outer diameter	Rotation accuracy ( MM )		Clamping method	Clamping force	Dynamic balancing	Temperature rise	Water through
					Spindle nose runout	runout at 300mm test bar					
FKS1205	8000~12000	BT40	$\phi 70$	$\phi 150$	0.003	0.008	gripper	10000 $\pm$ 500N	G1	15°C	optional



Model	Speed (rpm)	Spindle taper	I.D of front bearings	Housing diameter	Rotation accuracy ( MM )		Clamping method	Clamping force	Dynamic balancing	Temperat ure rise	Water through
					Spindle nose runout	runout at 300mm test bar					
FKS1208	12000	BBT40	φ70	φ150	0.003	0.008	gripper	10000±500N	G1	15°C	optional



Model	Speed (rpm)	Spindle taper	I.D of front bearings	Housing diameter	Rotation accuracy ( MM )		Clamping method	Clamping force	Dynamic balancing	Temperature rise	Water through
					Spindle nose runout	runout at 300mm test bar					
FKS1303	6000	BT50	φ90	φ190	0.003	0.008	gripper	18000N	G1	15°C	optional

## Fuka Belt drive spindle

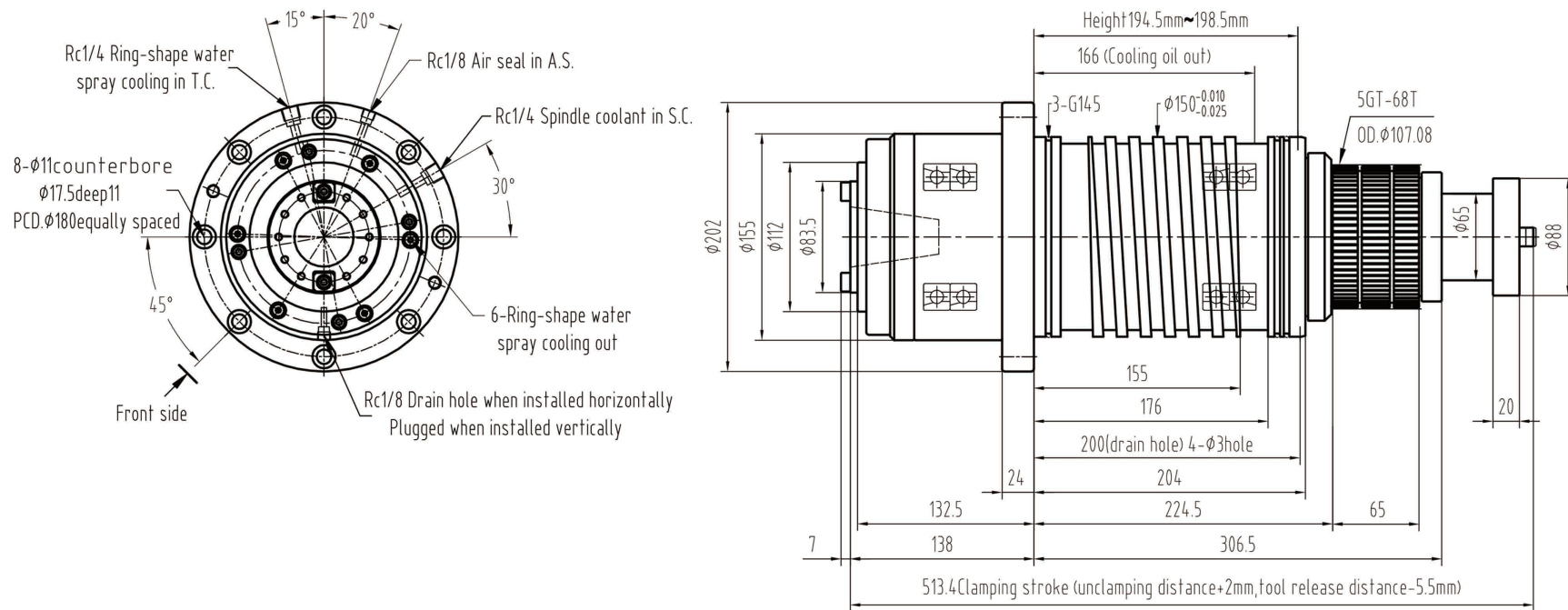


Belt drive spindle is used in CNC and milling machine  
Covers standard model, high load model and high rigidity model

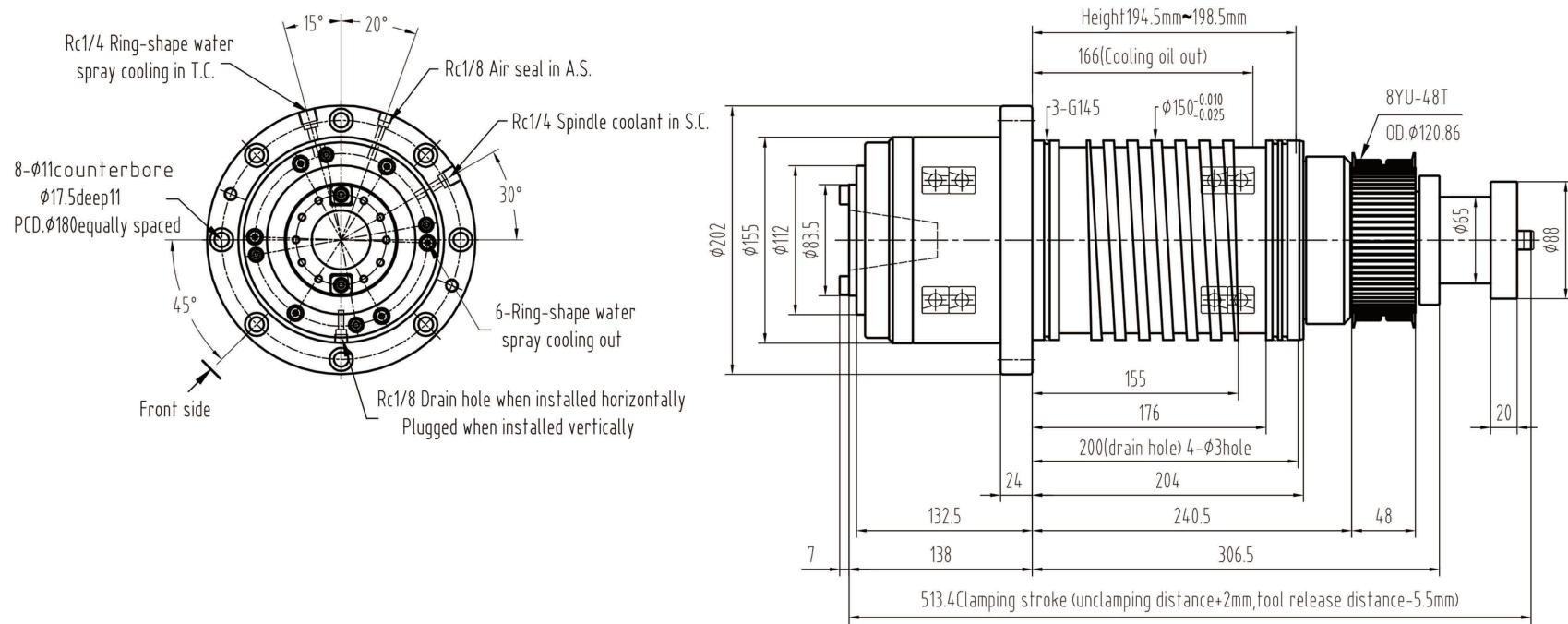


### Charateristics

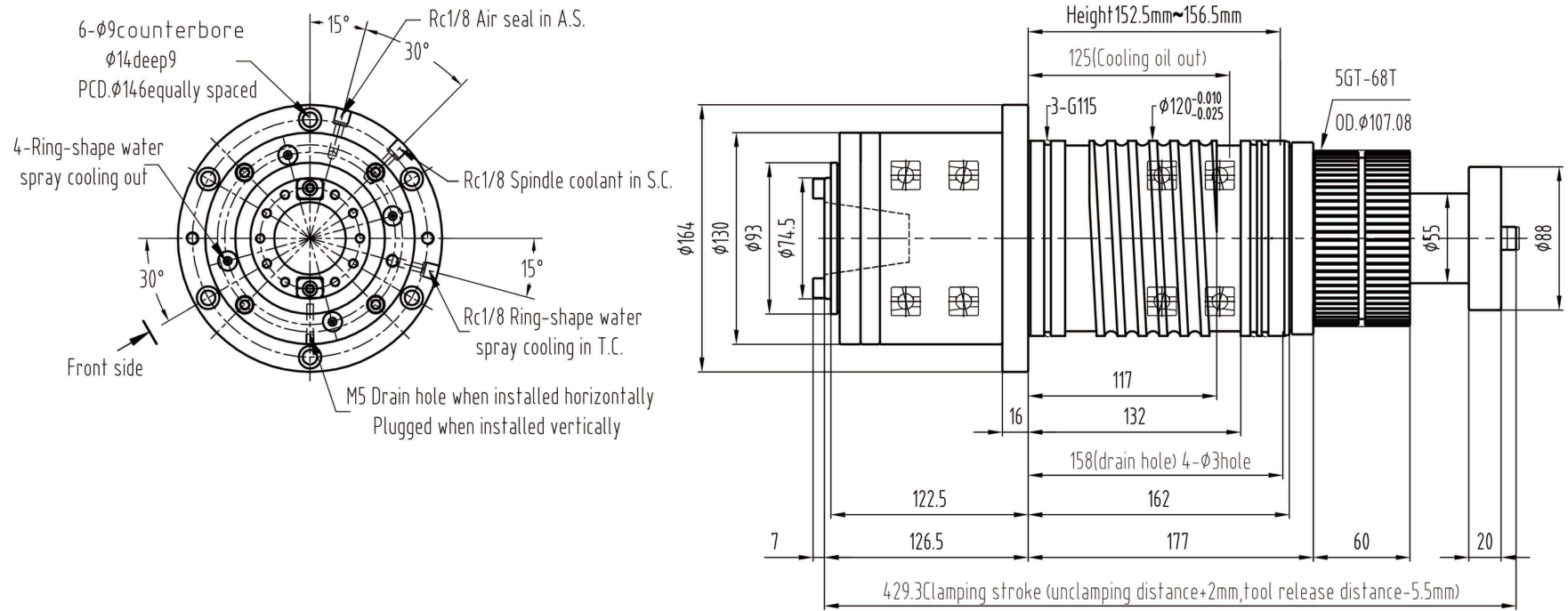
- 1.** Covers standard model, heavy load model and high rigidity model
- 2.** Precision angular contact bearings are combined in 4-6 sets to provide the best rigidity
- 3.** Can be used vertically and horizontally
- 4.** Four-stage waterproofing structure
- 5.** Configurations
  - ① Ring shap water spray cooling
  - ② Air seal (strengthened waterproofing function)
  - ③ Built-in tool changing system ( can be used with ATC)  
MAS BT tool holder      MAS 1 retention knob
  - ④ The outside of bearings and spindle housing are cooled  
(same cooling return)
- 6.** Flange provides the external supply (ring shape water spray, air seal, bearings and housing cooling)



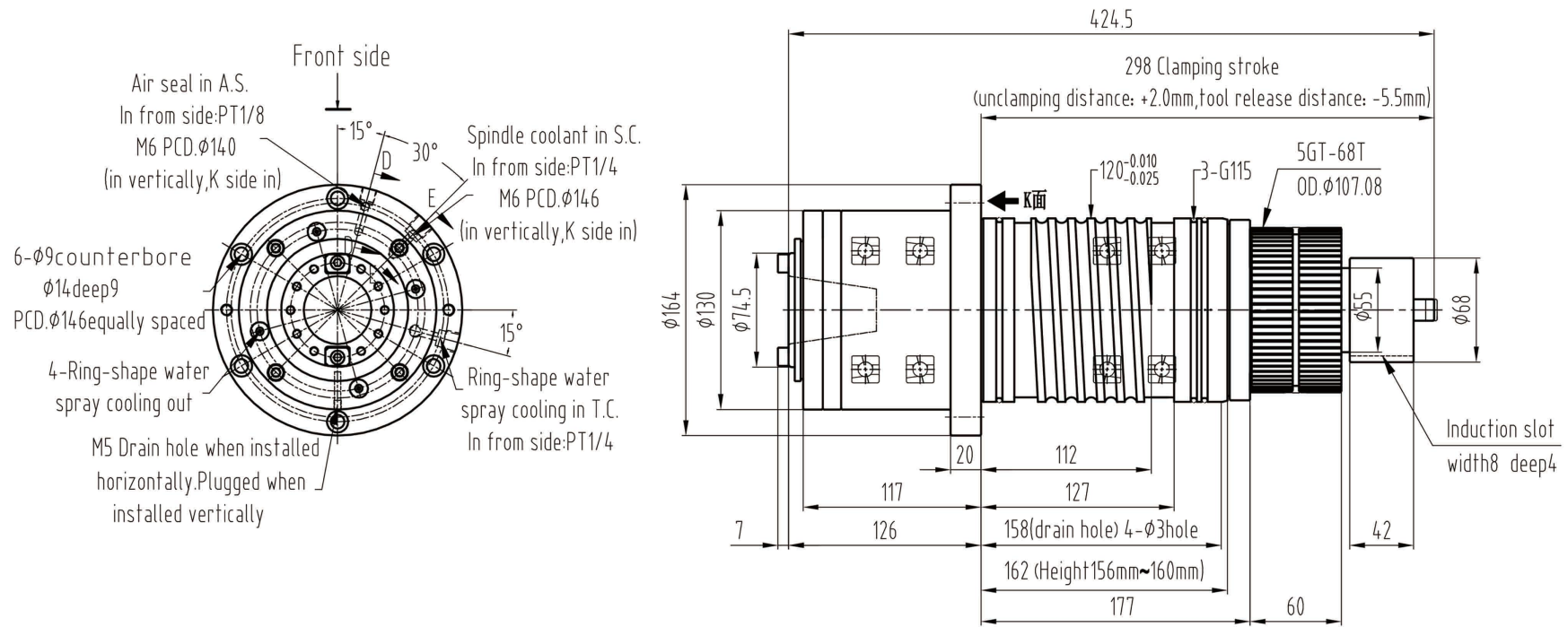
Model	Speed (rpm)	Spindle taper	I.D of front bearings	Housing diameter	Rotation accuracy ( MM )		Clamping method	Clamping force	Dynamic balancing	Temperature rise	Transmission belt	Water through
					Spindle nose runout	runout at 300mm test bar						
FKS1201-A	8000~12000	BT40	$\phi 70$	$\phi 150$	0.003	0.008	gripper	10000 $\pm$ 500N	G1	15°C	5GT-68T	optional



Model	Speed (rpm)	Spindle taper	I.D of front bearings	Housing diameter	Rotation accuracy ( MM )		Clamping method	Clamping force	Dynamic balancing	Temperature rise	Transmission belt	Water through
					Spindle nose runout	runout at 300mm test bar						
FKS1201-B	8000~12000	BT40	φ70	φ150	0.003	0.008	gripper	10000±500N	G1	15°C	8YU-48T	optional

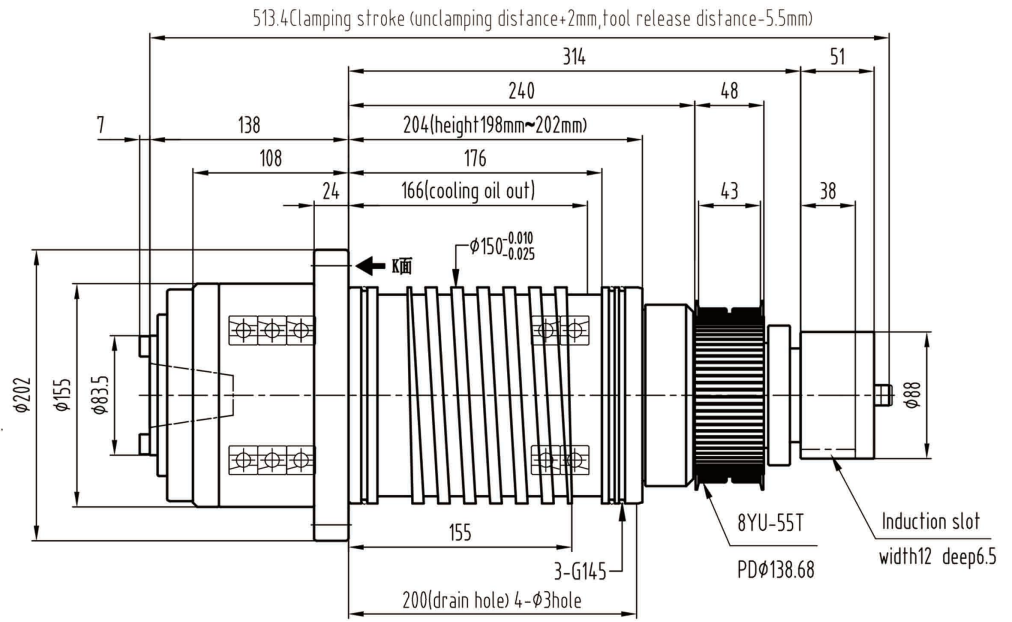
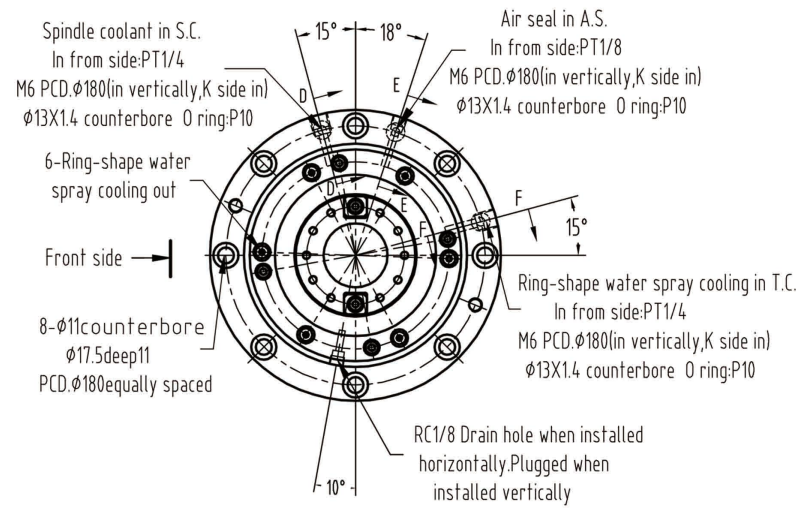


Model	Speed (rpm)	Spindle taper	I.D of front bearings	Housing diameter	Rotation accuracy ( MM )		Clamping method	Clamping force	Dynamic balancing	Temperature rise	Transmission belt	Water through
					Spindle nose runout	runout at 300mm test bar						
FKS1202	8000~12000	BT40	$\phi 60$	$\phi 120$	0.003	0.008	gripper	7000~7500N	G1	15°C	5GT-68T	optional

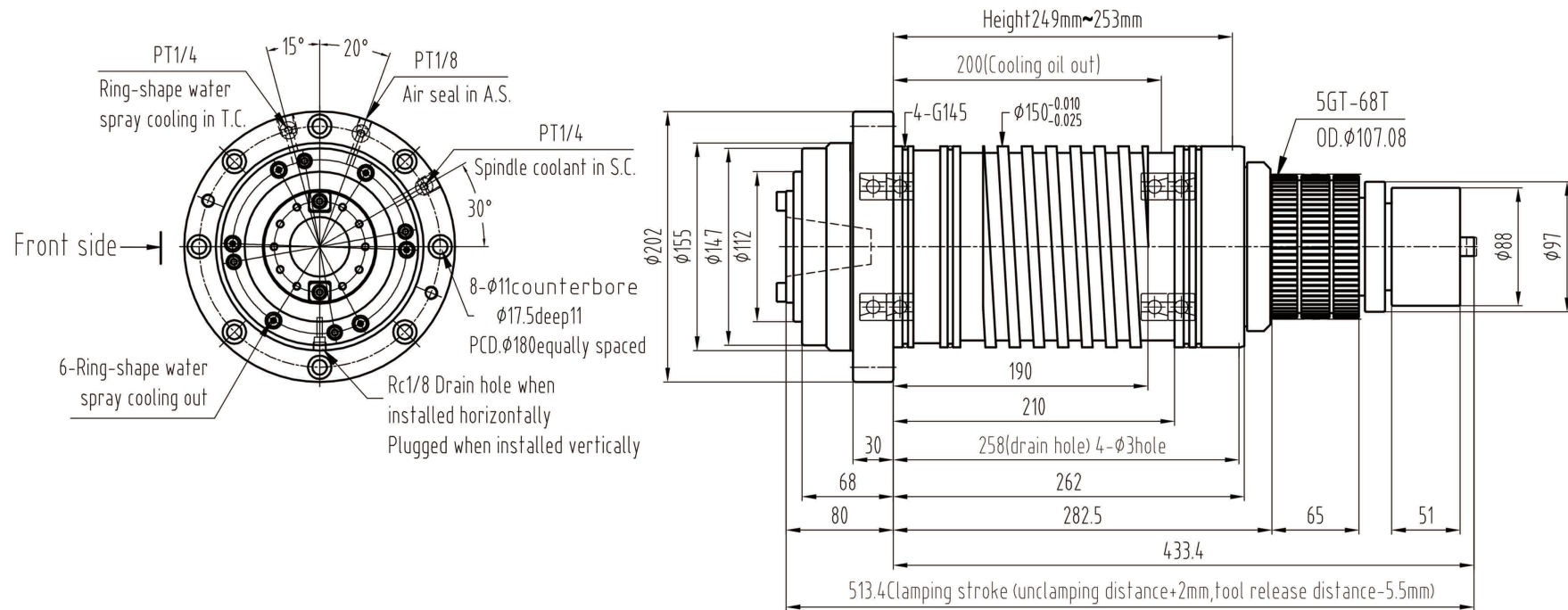


Model	Speed (rpm)	Spindle taper	I.D of front bearings	Housing diameter	Rotation accuracy ( MM )		Clamping method	Clamping force	Dynamic balancing	Temperature rise	Transmission belt	Water through
					Spindle nose runout	runout at 300mm test bar						
FKS1206	10000	BT40	φ60	φ120	0.003	0.008	gripper	7000~7500N	G1	15°C	5GT-68T	optional

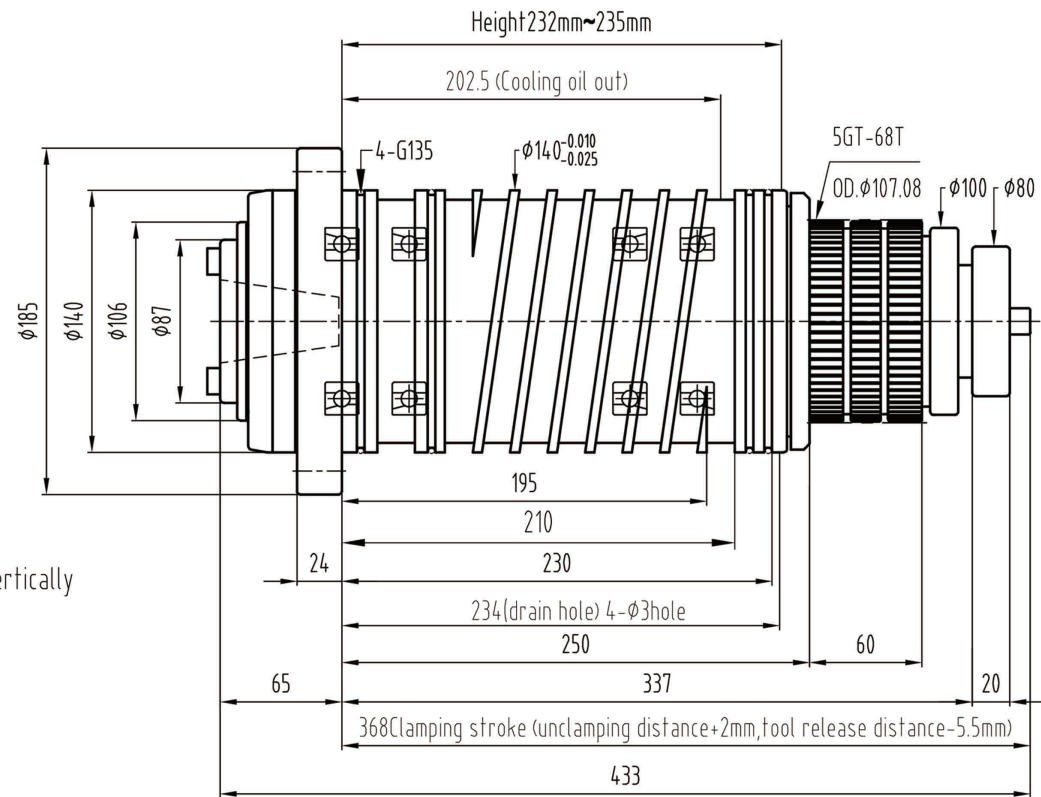
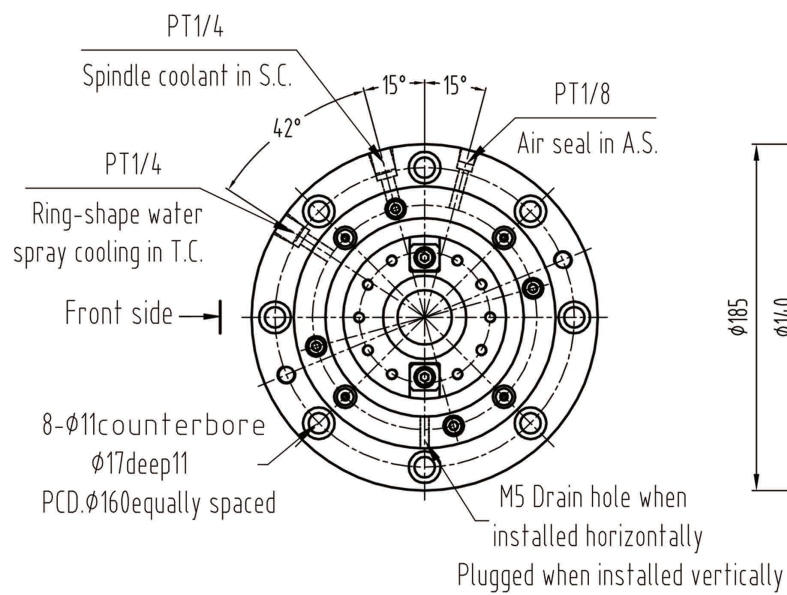




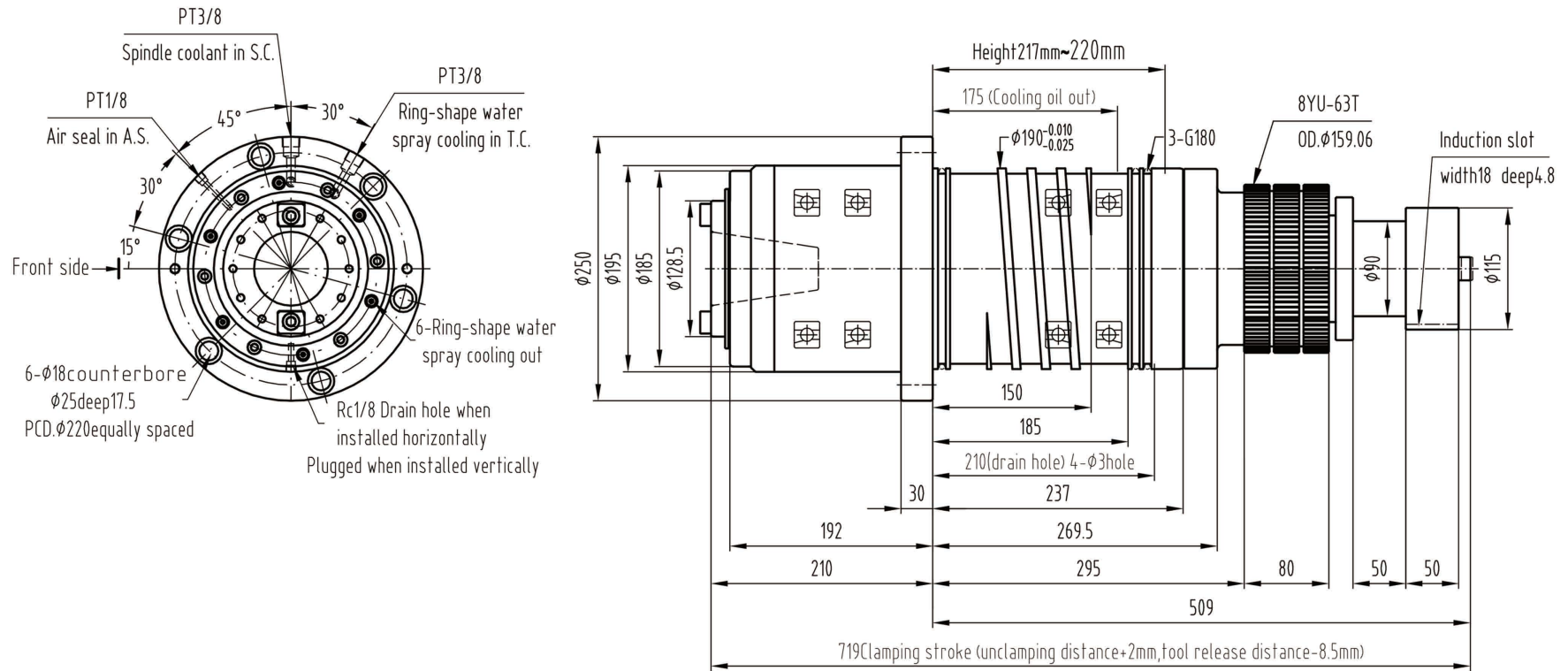
Model	Speed (rpm)	Spindle taper	I.D of front bearings	Housing diameter	Rotation accuracy ( MM )		Clamping method	Clamping force	Dynamic balancing	Temperature rise	Transmission belt	Water through
					Spindle nose runout	runout at 300mm test bar						
FKS1207	8000	BT40	φ70	φ150	0.003	0.008	gripper	10000±500N	G1	15°C	8YU-55T	optional



Model	Speed (rpm)	Spindle taper	I.D of front bearings	Housing diameter	Rotation accuracy ( MM )		Clamping method	Clamping force	Dynamic balancing	Temperature rise	Transmission belt	Water through
					Spindle nose runout	runout at 300mm test bar						
FKS1209	8000	BT40	φ70	φ150	0.003	0.008	gripper	10000±500N	G1	15°C	5GT-68T	optional



Model	Speed (rpm)	Spindle taper	I.D of front bearings	Housing diameter	Rotation accuracy ( MM )		Clamping method	Clamping force	Dynamic balancing	Temperature rise	Transmission belt	Water through
					Spindle nose runout	runout at 300mm test bar						
FKS1210	8000	BT40	$\phi 65$	$\phi 140$	0.003	0.008	gripper	7000~7500N	G1	15°C	5GT-68T	optional



Model	Speed (rpm)	Spindle taper	I.D of front bearings	Outer diameter	Rotation accuracy ( MM )		Clamping method	Clamping force	Dynamic balancing	Temperature rise	Transmission belt	Water through
					Spindle nose runout	runout at 300mm test bar						
FKS1302	6000	BT50	φ100	φ190	0.003	0.008	gripper	1850N	G1	20°C	8YU-63T	optional

## Specification selection



Thank you for choosing FUKA spindle

By choosing the specifications, we can provide the spindle that you need

Please contact with us after the specifications are selected and we will discuss in details

## FUKA Standard Model: FKS

### Basic model:

- ①FKS1201 ②FKS1202 ③FKS1203 ④FKS1205
- ⑤FKS1206 ⑥FKS1207 ⑦FKS1208 ⑧FKS1209
- ⑨FKS1210
- ⑩FKS1301 ⑪FKS1302 ⑫FKS1303 ⑬FKS1304
- ⑭FKS5301 ⑮FKS5302 ⑯FKS5303 ⑰FKS5304

### Specifications

#### 1. Spindle taper

- ①BT40 ②BBT40 ③BT50 ④BBT50
- ⑤HSK-A63 ⑥HSK-A100 ⑦others ( )

#### 2. Max speed

- ①3000rpm ②4000rpm ③5000rpm ④6000rpm
- ⑤7000rpm ⑥8000rpm ⑦9000rpm ⑧10000rpm
- ⑨12000rpm ⑩15000rpm ⑪16000rpm ⑫18000rpm
- ⑬20000rpm ⑭24000rpm ⑮25000rpm ⑯30000rpm

#### 3. Installation

- ①Vertically ②Horizontally ③Others(tilted)

#### 4. Driven by

- 1) belt
- 2) direct
- 3) built in motor

#### ①FANUC

Power 11/15Kw 18/22Kw 22/25Kw 25/30Kw Others:

#### ②SIEMENS

Power 11/15Kw 18/22Kw 22/25Kw 25/30Kw Others

- ③Required motor (brand: )

## 5. Specification selection

- 1) Cooling hole position on bearing outside surface  
(bearing outside surface can not be mixed up with bearing end surface)
- ① Flange outside surface (standard)      ② Flange end surface
- 2) Ring-shap water spray inlet
- ① Flange outside surface (standard)      ② Flange end surface
- 3) Air seal in
- ① Flange outside surface (standard)      ② Flange end surface
- 4) Spindle color (front cover and protective cover)
- ① Light gold (standard)      ② Silver      ③ Others
- 5) Special function (applicable to FKS1201 only)
- ① Standard model      ② High load model      ③ High rigidity
- ② ③ max speed:7000rpm

## 6. Need rotary joint or not ( Supply pressure: Max. 7 Mpa)

- ① Yes    ② No

## 7. Required delivery time and quantity

- ① Delivery time
- ② Quantity

## 8. Others

We take every of your requirement and advice seriously.

We hope that we could received your valuable advice  
Your advice will be a great help to our development of new products

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