







# TURIN Robot







# ROBOT - COBOT ROBOT AGV




# Quick Selection Table

**TURIN**

Product				
Model	STG030	STG100	STH030	STH100
Payload	3Kg	10Kg	3Kg	10Kg
Arm Reach	500mm	700mm	400/500/600mm	800/900/1000mm
IP Rating	IP40	IP40	IP40	IP40
Allowable Inertia of R-axis	0.05Kg*m <sup>2</sup>	0.3Kg*m <sup>2</sup>	0.05Kg*m <sup>2</sup>	0.3Kg*m <sup>2</sup>
Position Repeatability	J1/ J2	±0.01mm	±0.02mm	±0.01mm
	J3	±0.01mm	±0.01mm	±0.01mm
	J4	±0.01°	±0.01°	±0.01°

Product				
Model	STH200	STH500	STW030	STW060
Payload	20Kg	50Kg	3Kg	6Kg
Arm Reach	1200mm	1200mm	500/600mm	500/600/700mm
IP Rating	IP40	IP40	IP40	IP40
Allowable Inertia of R-axis	2.45Kg*m <sup>2</sup>	4.35Kg*m <sup>2</sup>	0.05Kg*m <sup>2</sup>	0.05Kg*m <sup>2</sup>
Position Repeatability	J1/ J2	±0.05mm	±0.05mm	±0.01mm
	J3	±0.02mm	±0.02mm	±0.01mm
	J4	±0.005°	±0.005°	±0.01°






**Quick Selection Table**

Product					
Model	TCR030	TCR050	TCR100	TCR200	TCR300
Payload	3Kg	5Kg	10Kg	20Kg	30Kg
Arm Reach	585mm	900mm	1310mm	1650mm	1800mm
	IP54/IP67	IP54/IP67	IP54/IP67	IP54	IP54
Position Repeatability	±0.03mm	±0.03mm	±0.05mm	±0.1mm	±0.1mm

# Quick Selection Table

**TURIN**

Product					
Model	TKB1010	TRB050	TKB060	TKB070	TKB1100
Payload	1Kg	3Kg	6Kg	7Kg	10Kg
Arm Reach	370mm	616mm	720mm	910mm	1110mm
IP Rating	IP54	IP54	IP54/IP67 (5&6 Axes Optional)	IP54/IP67	IP54
Position Repeatability	±0.01mm	±0.02mm	±0.02mm	±0.02mm	±0.03mm

Product					
Model	TKB1210	TKB1400	TKB1440	TKB1600	TKB2030
Payload	7Kg	6Kg	10Kg	12Kg	6Kg
Arm Reach	960mm	1412mm	1455mm	1410mm	2078mm
IP Rating	IP54/IP67 (5&6 Axes Optional)	IP54/IP67 (5&6 Axes Optional)	IP54	IP54/IP67 (5&6 Axes Optional)	IP54
Position Repeatability	±0.04mm	±0.05mm	±0.05mm	±0.06mm	±0.07mm

**Quick Selection Table**

Product					
Model	TKB2670/2690	TKB3670	TKB3690	TKB5600/5700	TKB5800
Payload	20Kg	30kg	30kg	60/70Kg	50Kg
Arm Reach	1721/1920mm	1721mm	1920mm	2119mm	2448mm
IP Rating	IP54/IP67 (5&6 Axes Optional)	IP54/IP67 (5&6 Axes Optional)	IP54/IP67 (5&6 Axes Optional)	IP54	IP54
Position Repeatability	±0.05mm	±0.05mm	±0.05mm	±0.08mm	±0.08mm

Product				
Model	RRB6700	TKB460	TKB4600	TKB660
Payload	210Kg	30Kg	12Kg	180Kg
Arm Reach	2700mm	1840mm	1435mm	3200mm
IP Rating	IP54/IP65 (5&6 Axes Optional)	IP54	IP54	IP54/IP65 (4 Axes Optional)
Position Repeatability	±0.1mm	±0.08mm	±0.08mm	±0.1mm

# STG030

Payload: 3kg  
Arm Reach: 500mm

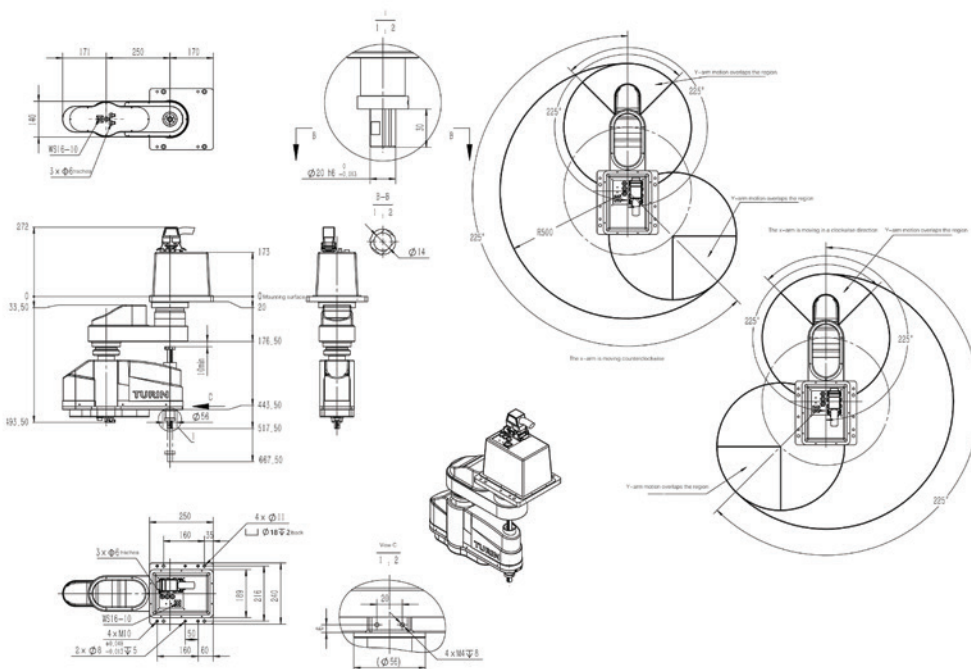
**TURIN**



		J1 Axis	J2 Axis	J3 Axis	R Axis
Axis Specifications	Arm Reach (mm)	250	250	150	-
	Rotation Range (degree)	225 -225	225 -225	-	360 -360
Reducer Box		Harmonic Drive	Harmonic Drive	-	-
Retarding Mechanism	Conduction Mode	Motor and Reducer	Synchronous Pulley	Synchronous Pulley	Synchronous Pulley
		Reducer and Output	Diret Connection	/	/
Repeated Positioning Accuracy (XYZ:mm)(r:degree)※		±0.01		±0.01	±0.01
Maximum Speed (XYZ:mm/sec)(r:°/sec)		9420		1000	3500
Payload(kg)		3kg			
Standard cycle time*1		0.32			
Allowable inertia moment of Raxisaxis(kg <sup>m</sup> ²)		0.05			
Input(IN) Output(OUT)		0.2*10			
Users Pipe(outside admission)		Φ 6*3			
Robot Cablelength(m)		Standard: 3 Optional: 5			
Weight(kg)		27kg			
Control Cabinet		TRC4-A03			

※ This precision applies to the Turin Intelligence series.

## Working Range



**TURIN**



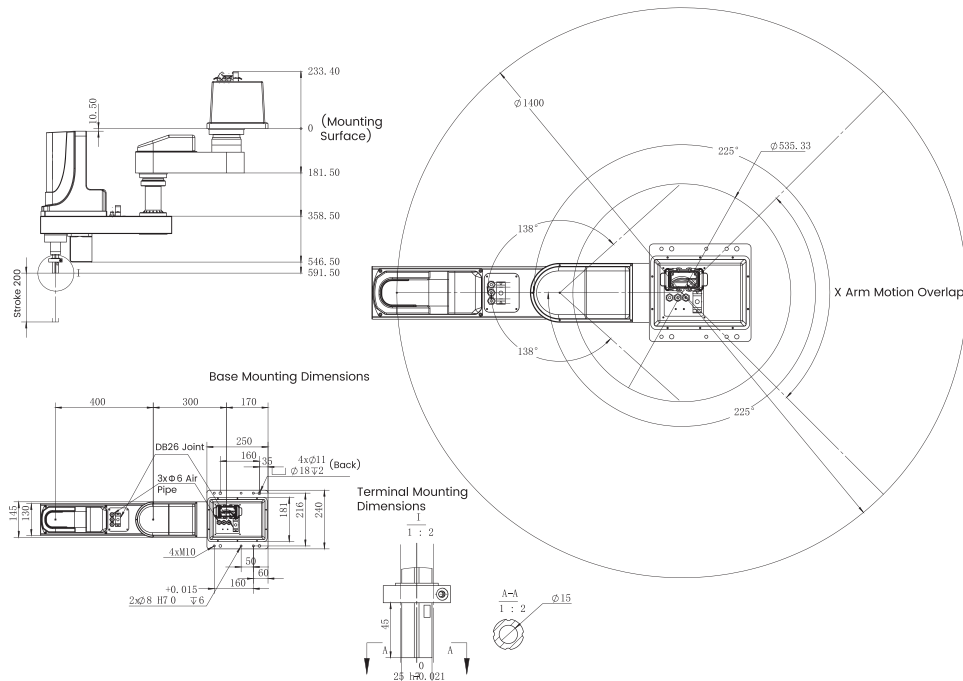
STG100

Payload: 10kg  
Arm Reach: 700mm

		J1 Axis	J2 Axis	J3 Axis	R Axis
Axis Specifications	Arm Reach (mm)	300	400	200	-
	Rotation Range(degree)	225 -225	138 -138	-	360 -360
Retarding Mechanism		Harmonic Drive	Harmonic Drive	-	Harmonic Drive
Conduction Mode		Motor and Reducer Reducer and Output	Synchronous Pulley	-	Synchronous Pulley
		Diret Connection			
Repeated Positioning Accuracy (XYZ:mm)(r:degree)※		±0.02		±0.01	±0.01
Maximum Speed (XYZ:mm/sec)(r:°/sec)		13816		1000	720
Payload(kg)		10kg			
Standard cycle time*1		0.6			
Allowable inertia moment of Raxisaxis(kgm <sup>2</sup> )		0.3			
Input(IN) Output(OUT)		0.2*20			
Users Pipe(outside admission)		Φ6*3			
Robot Cablelength (m)		Standard: 3 Optional: 5			
Weight(kg)		43kg			
Control Cabinet		TRC4-A03			

※This precision applies to the Turin Intelligence series.

### Working Range



# STH030

Payload: 3kg  
Arm Reach: 400/500/600mm

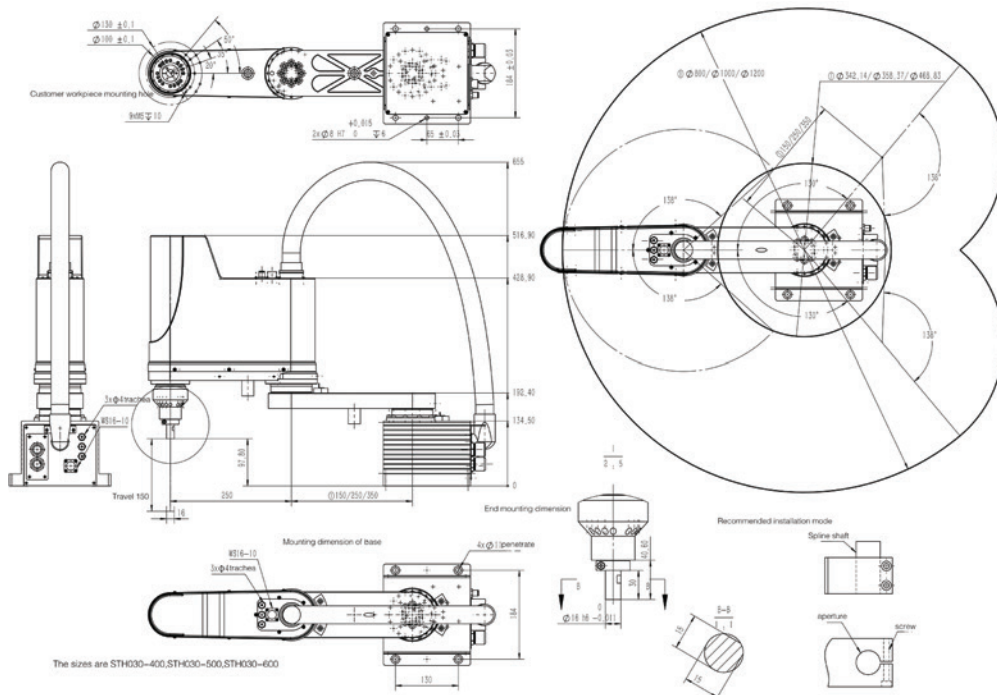


**TURIN**

		J1 Axis			J2 Axis	J3 Axis	R Axis
Axis Specifications	Arm Reach (mm)	STH030-400	STH030-500	STH030-600	250	150	-
		150	250	350			
	Rotation Range(degree)	130			138	-	360
		-130			-138		-360
	Reducer Box	Harmonic Drive			Harmonic Drive	-	Harmonic Drive
Retarding Mechanism	Conduction Mode	Motor and Reducer			Diret Connection		Synchronous Pulley
		Reducer and Output			Diret Connection		
Repeated Positioning Accuracy (XYZ:mm)(r:degree)※		±0.01			±0.01	±0.01	±0.01
Maximum Speed (XYZ:mm/sec)(r:°/sec)		6280/7065/7850				1000	720
Payload(kg)		3kg					
Standard cycle time*1		0.4					
Allowable inertia moment of Raxisaxis(kgm <sup>2</sup> )		0.05					
Input(IN) Output(OUT)		0.2*10					
Users Pipe(outside admission)		Φ4*3					
Robot Cablelength(m)		Standard: 3 Optional: 5					
Weight(kg)		16.8/17.9/19kg					
Control Cabinet		TRC4-A03					
Working Temperature		0-45°C					

※This precision applies to the Turin Intelligence series.

## Working Range





**TURIN**



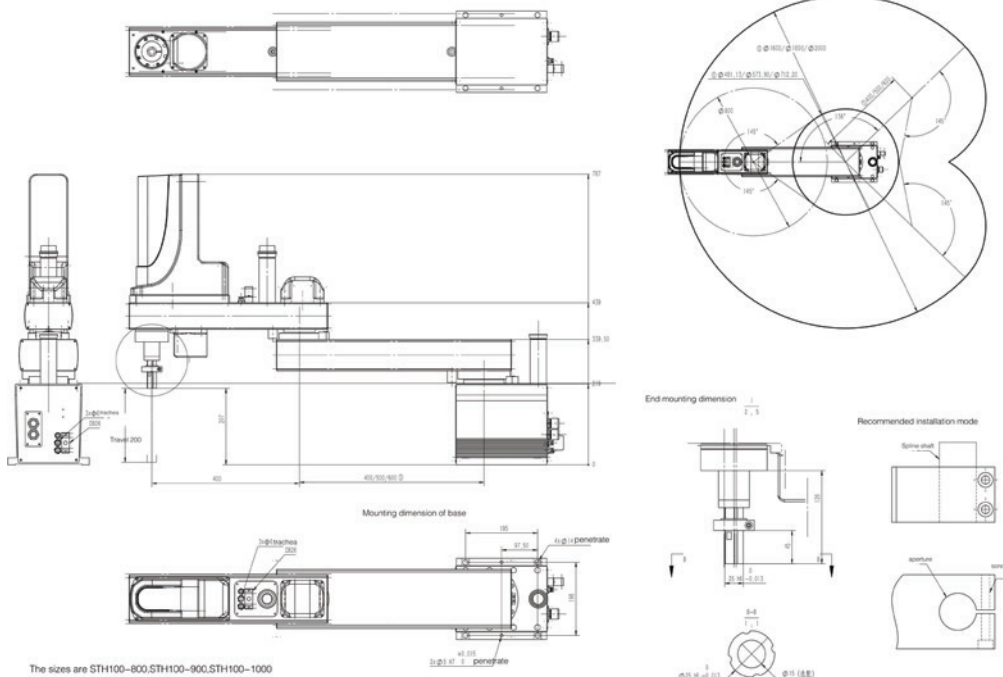
## STH100

Payload: 10kg  
Arm Reach: 800/900/1000mm

		J1 Axis			J2 Axis	J3 Axis	R Axis
Axis Specifications	Arm Reach (mm)	STH100-800	STH100-900	STH100-1000	400	200	-
		400	500	600			
	Rotation Range(degree)	136			145	-	360
		-136			-145		-360
Retarding Mechanism		Harmonic Drive			Harmonic Drive	-	Harmonic Drive
Conduction Mode	Motor and Reducer	Diret Connection				-	Synchronous Pulley
	Reducer and Output	Diret Connection					
Repeated Positioning Accuracy (XYZ:mm)(r:degree)※		±0.02			±0.01		±0.01
Maximum Speed (XYZ:mm/sec)(r:°/sec)		11304/12089/12874				1000	720
Payload(kg)		10kg					
Standard cycle time*1		0.6					
Allowable inertia moment of Raxisaxis(kgm <sup>2</sup> )		0.3					
Input(IN) Output(OUT)		0.2*20					
Users Pipe(outside admission)		Φ 6*3					
Robot Cablelength(m)		Standard: 3 Optional: 5					
Weight(kg)		46kg	48kg	50kg			
Control Cabinet		TRC4-A03					
Working Temperature		0-45°C					

※This precision applies to the Turin Intelligence series.

### Working Range



# STH200

Payload: 20kg  
Arm Reach: 1200mm

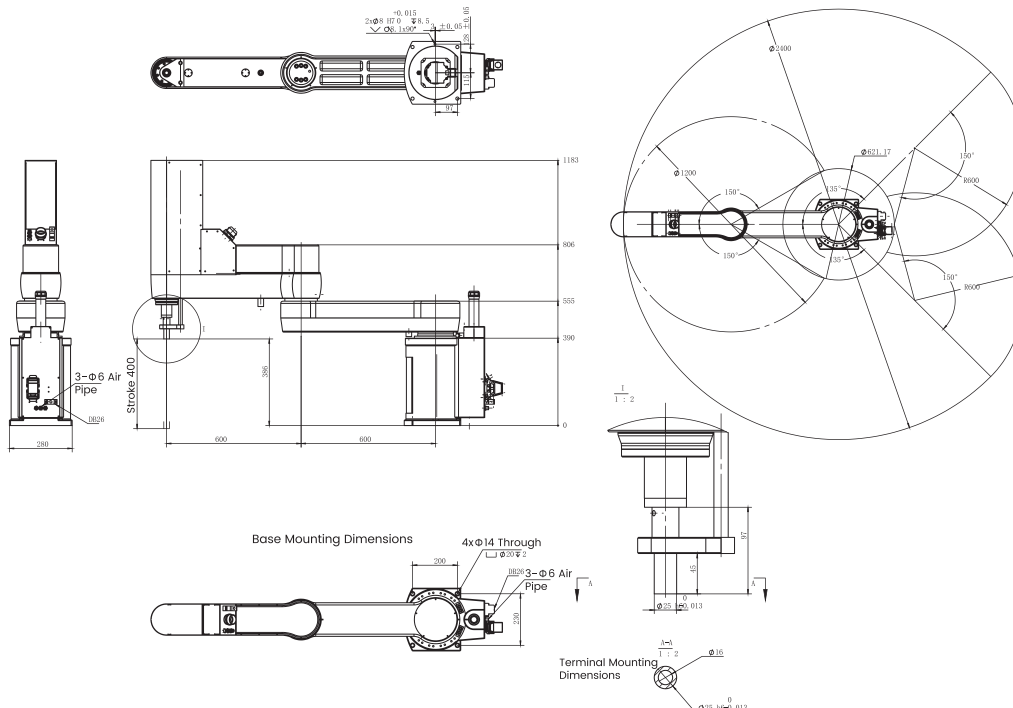


**TURIN**

		J1 Axis	J2 Axis	J3 Axis	R Axis
Axis Specifications	Arm Reach (mm)	600	600	400	-
	Rotation Range (degree)	135 -135	150 -150	-	180 -180
Retarding Mechanism	Reducer Box	RV	RV	Ball Screw	Harmonic Drive
Conduction Mode	Motor and Reducer Reducer and Output	Diret Connection		Synchronous Pulley	
Repeated Positioning Accuracy (XYZ:mm)(r:°/sec)※		±0.05		±0.02	±0.005
Maximum Speed (XYZ:mm/sec)(r:°/sec)		12417		1000	720
Rated handling capacity (kg)		20kg			
Payload(kg)		50kg			
Standard cycle time*1		0.91			
Allowable inertia moment of Raxisaxis(kgm <sup>2</sup> )		2.45			
Input(IN) Output(OUT)		0.2*20			
Users Pipe(outside admission)		Φ 6*3			
Robot Cablelength(m)		Standard: 3 Optional: 5			
Weight(kg)		155kg			
Control Cabinet		TRC4-A03			

※This precision applies to the Turin Intelligence series.

## Working Range



**TURIN**



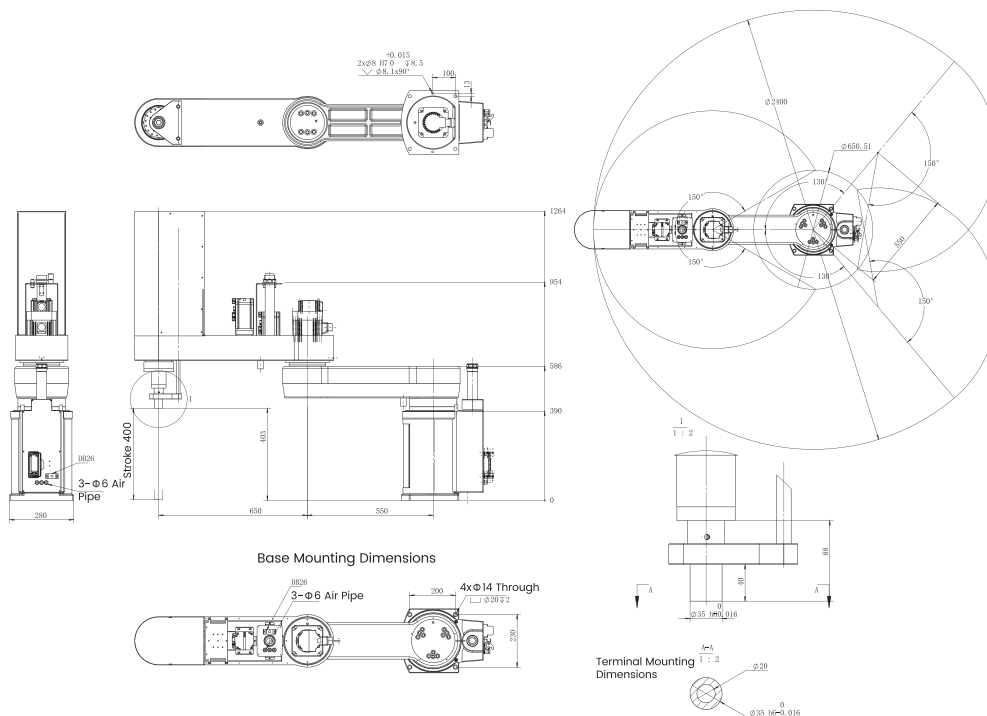
STH500

Payload: 50kg  
Arm Reach: 1200mm

		J1 Axis	J2 Axis	J3 Axis	R Axis
Axis Specifications	Arm Reach (mm)	550	650	400	-
	Rotation Range(degree)	130	150	-	180
		-130	-150	-	-180
Retarding Mechanism	Conduction Mode	Motor and Reducer	Direct Connection	Ball Screw	Harmonic Drive
		Reducer and Output	Direct Connection	Synchronous Pulley	
Repeated Positioning Accuracy (XYZ:mm)(r:degree)※		±0.05		±0.02	±0.005
Maximum Speed (XYZ:mm/sec)(r:°/sec)		10162		1000	720
Payload (kg)		50kg			
Standard cycle time*1		0.98			
Allowable inertia moment of Raxisaxis(kgm <sup>2</sup> )		4.35			
Input(IN) Output(OUT)		0.2*20			
Users Pipe(outside admission)		Φ6*3			
Robot Cablelength(m)		Standard: 3 Optional: 5			
Weight(kg)		170kg			
Control Cabinet		TRC3-A06			

※This precision applies to the Turin Intelligence series.

### Working Range



**STW030**  
 Payload: 3kg  
 Arm Reach: 500/600mm

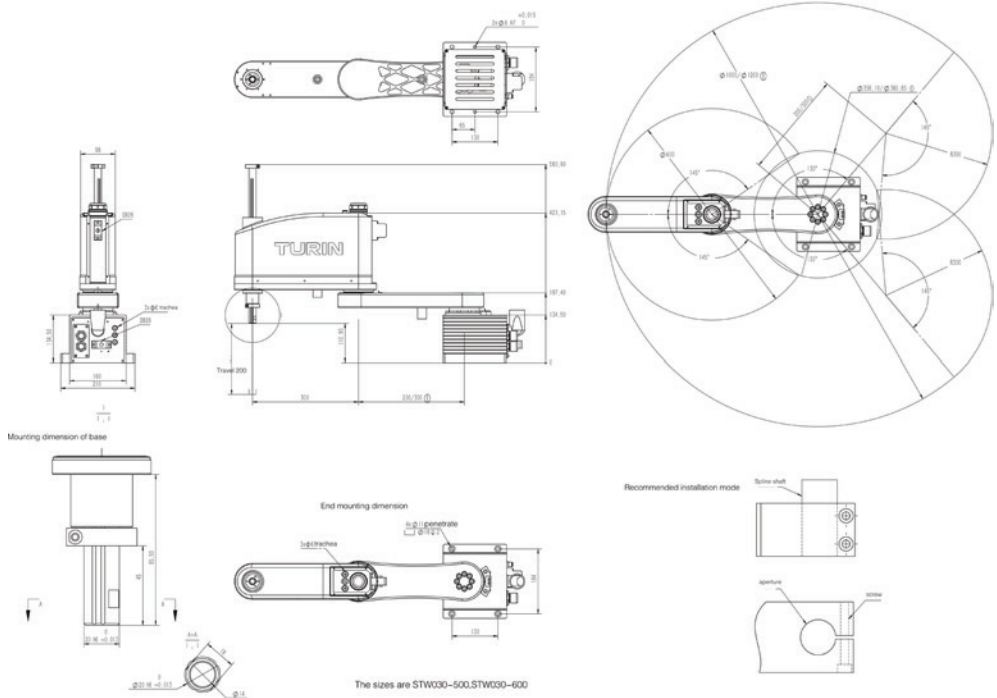
**TURIN**



		J1 Axis			J2 Axis	J3 Axis	R Axis
Axis Specifications	Arm Reach (mm)	STW030-500	STW030-600		300	200	-
		200	300				
	Rotation Range(degree)	130 -130			145 -145	-	360 -360
Retarding Mechanism	Reducer Box	Harmonic Drive			Harmonic Drive	-	Harmonic Drive
Conduction Mode	Motor and Reducer	Diret Connection			-	Synchronous Pulley	
	Reducer and Output	Diret Connection					
Repeated Positioning Accuracy (XYZ:mm)(r:degree)※		±0.01			±0.01	±0.01	
Maximum Speed (XYZ:mm/sec)(r:°/sec)		7693/8478			1000	3500	
Payload(kg)		3kg					
Standard cycle time*1		0.4					
Allowable inertia moment of Raxisaxis(kgm <sup>2</sup> )		0.05					
Input(IN) Output(OUT)		0.2*10					
Users Pipe(outside admission)		φ6*3					
Robot Cablelength(m)		Standard: 3 Optional: 5					
Weight(kg)		20/25kg					
Control Cabinet		TRC4-A03					
Working Temperature		0-45°C					

※This precision applies to the Turin Intelligence series.

**Working Range**



**TURIN**



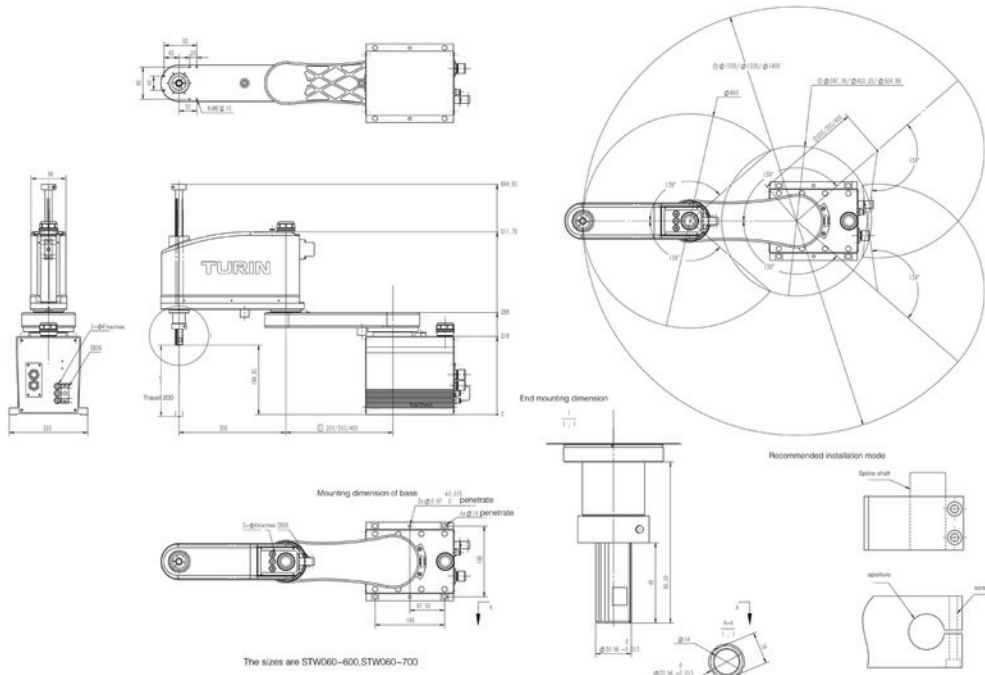
STW060

Payload: 6kg  
Arm Reach: 500/600/700mm

		J1 Axis			J2 Axis	J3 Axis	R Axis
Axis Specifications	Arm Reach (mm)	STW060-500	STW060-600	STW060-700	300	200	-
		200	300	400			
	Rotation Range (degree)				139	-	360
					-139	-	-360
	Reducer Box	Harmonic Drive			Harmonic Drive	-	Harmonic Drive
Retarding Mechanism	Conduction Mode	Motor and Reducer			Diret Connection		-
		Reducer and Output			Diret Connection		Synchronous Pulley
Repeated Positioning Accuracy (XYZ:mm)(r:degree)※		±0.02			±0.01	±0.01	
Maximum Speed (XYZ:mm/sec)(r:°/sec)		7693/8478/9263			1000		3500
Payload(kg)		6kg					
Standard cycle time*1		0.4					
Allowable inertia moment of Raxisaxis(kgm <sup>2</sup> )		0.05					
Input(IN) Output(OUT)		0.2*10					
Users Pipe(outside admission)		Φ 6*3					
Robot Cablelength(m)		Standard: 3 Optional: 5					
Weight(kg)		37.5/40/42kg					
Control Cabinet		TRC4-A03					
Working Temperature		0-45°C					

※This precision applies to the Turin Intelligence series.

### Working Range

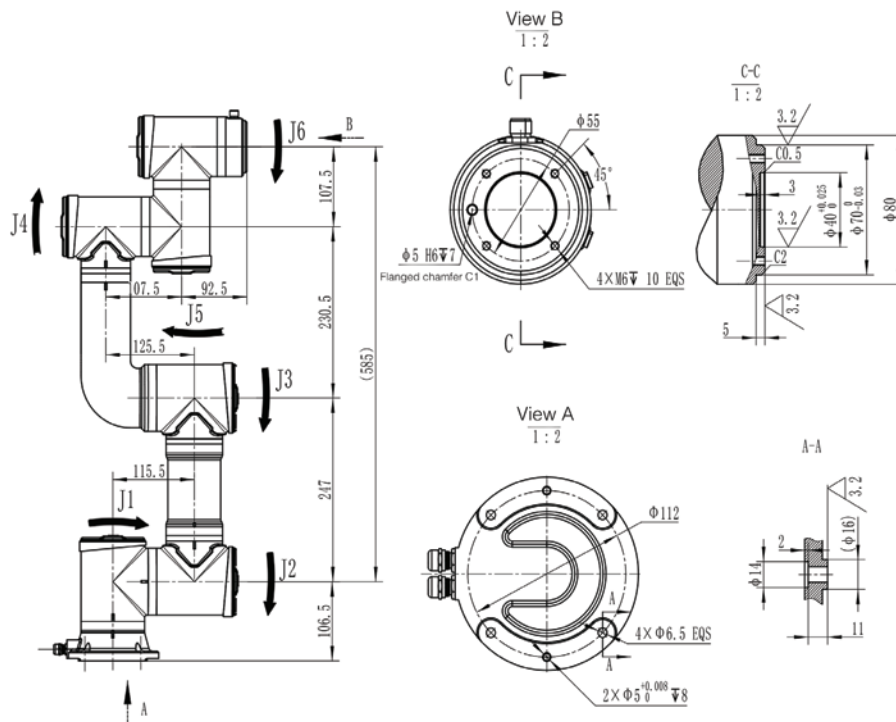


**TCR030**  
 Payload: 3kg  
 Arm Reach: 585mm

Model	TCR030	
Payload	3kg	
Maximum Working Range	585mm	
Body Weight	16kg	
Rated Power	0.9kw	
Max Speed	J1	180°/s
	J2	180°/s
	J3	180°/s
	J4	180°/s
	J5	180°/s
	J6	180°/s
Max Operation Area	J1	±175°
	J2	±175°
	J3	-240°~+60°
	J4	±175°
	J5	±175°
	J6	±360°
IP Rating	IP54/IP67	
Position Repeatability ※	±0.03mm	
Working Temperature	0~45°C	

※This precision applies to the Turin Intelligence series.

Working Range



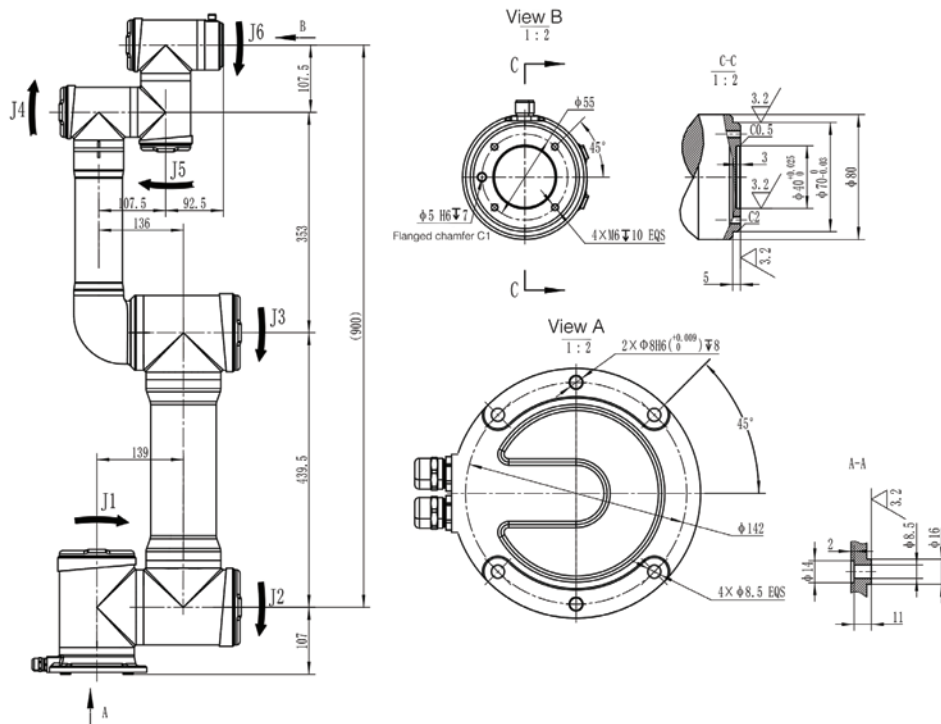
**TCR050**  
 Payload: 5kg  
 Arm Reach: 900mm

Model	TCR050	
Payload	5kg	
Maximum Working Range	900mm	
Body Weight	26kg	
Rated Power	2.55kw	
Max Speed	J1	180°/s
	J2	180°/s
	J3	180°/s
	J4	180°/s
	J5	180°/s
	J6	180°/s
Max Operation Area	J1	±175°
	J2	±175°
	J3	-245°~+65°
	J4	±175°
	J5	±175°
	J6	±360°
IP Rating	IP54/IP67	
Position Repeatability ※	±0.03mm	
Working Temperature	0~45°C	



※This precision applies to the Turin Intelligence series.

**Working Range**

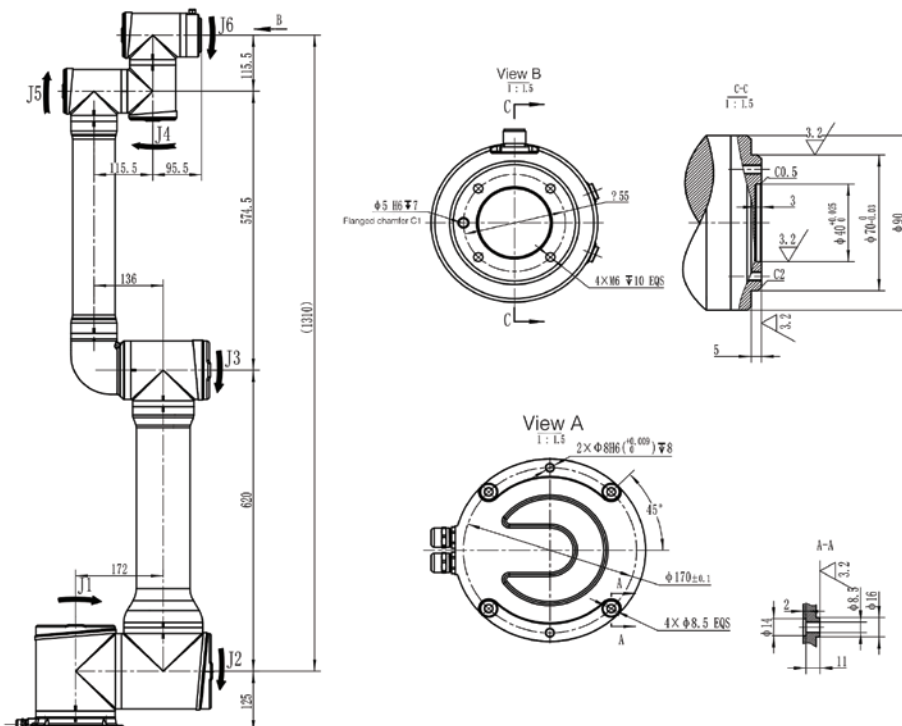


**TCR100**  
 Payload: 10kg  
 Arm Reach: 1310mm

Model	TCR100	
Payload	10kg	
Maximum Working Range	1310mm	
Body Weight	43kg	
Rated Power	3.5kw	
Max Speed	J1	120°/s
	J2	120°/s
	J3	120°/s
	J4	180°/s
	J5	180°/s
	J6	180°/s
Max Operation Area	J1	±175°
	J2	±175°
	J3	-245°~+65°
	J4	±175°
	J5	±175°
	J6	±360°
IP Rating	IP54/IP67	
Position Repeatability ※	±0.05mm	
Working Temperature	0~45°C	

※ This precision applies to the Turin Intelligence series.

**Working Range**



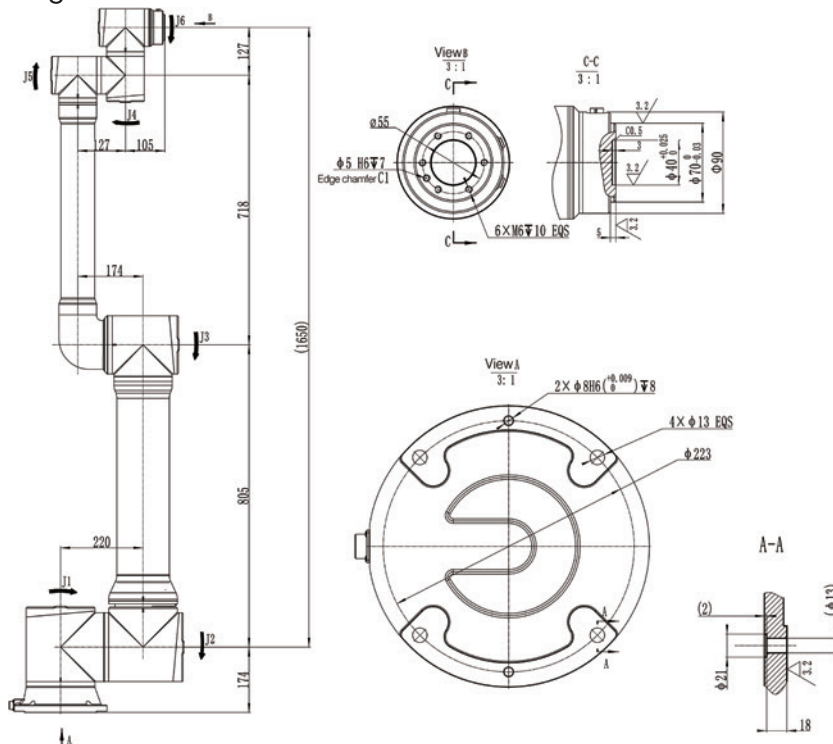


**TCR200**  
 Payload: 20kg  
 Arm Reach: 1650mm

Model	TCR200	
Payload	20kg	
Maximum Working Range	1650mm	
Body Weight	68kg	
Rated Power	3.9kw	
Max Speed	J1	100°/s
	J2	100°/s
	J3	150°/s
	J4	180°/s
	J5	180°/s
	J6	180°/s
Max Operation Area	J1	±175°
	J2	±175°
	J3	-245°~+65°
	J4	±175°
	J5	±175°
	J6	±360°
IP Rating	IP54	
Position Repeatability ※	±0.1mm	
Working Temperature	0~45°C	

※ This precision applies to the Turin Intelligence series.

**Working Range**

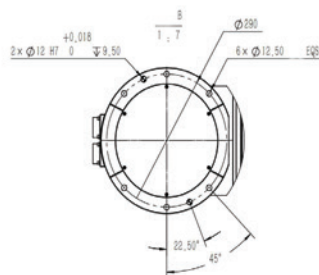
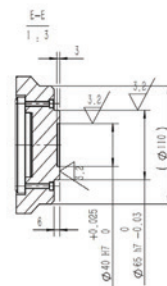
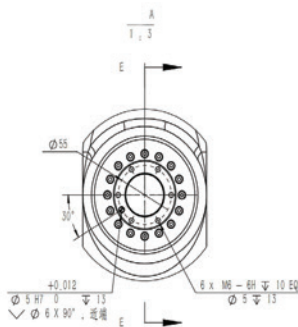
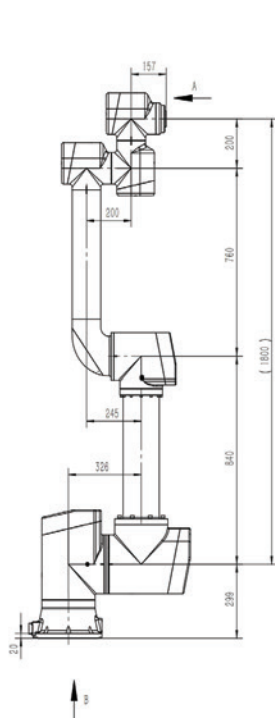


**TCR300**  
 Payload: 30kg  
 Arm Reach: 1800mm

Model	TCR300	
Payload	30kg	
Maximum Working Range	1800mm	
Body Weight	154kg	
Rated Power	5.95kw	
Max Speed	J1	100°/s
	J2	100°/s
	J3	150°/s
	J4	180°/s
	J5	180°/s
	J6	180°/s
Max Operation Area	J1	±175°
	J2	±175°
	J3	-245°~+65°
	J4	±175°
	J5	±175°
	J6	±360°
IP Rating	IP54	
Position Repeatability ※	±0.1mm	
Working Temperature	0~45°C	

※ This precision applies to the Turin Intelligence series.

**Working Range**



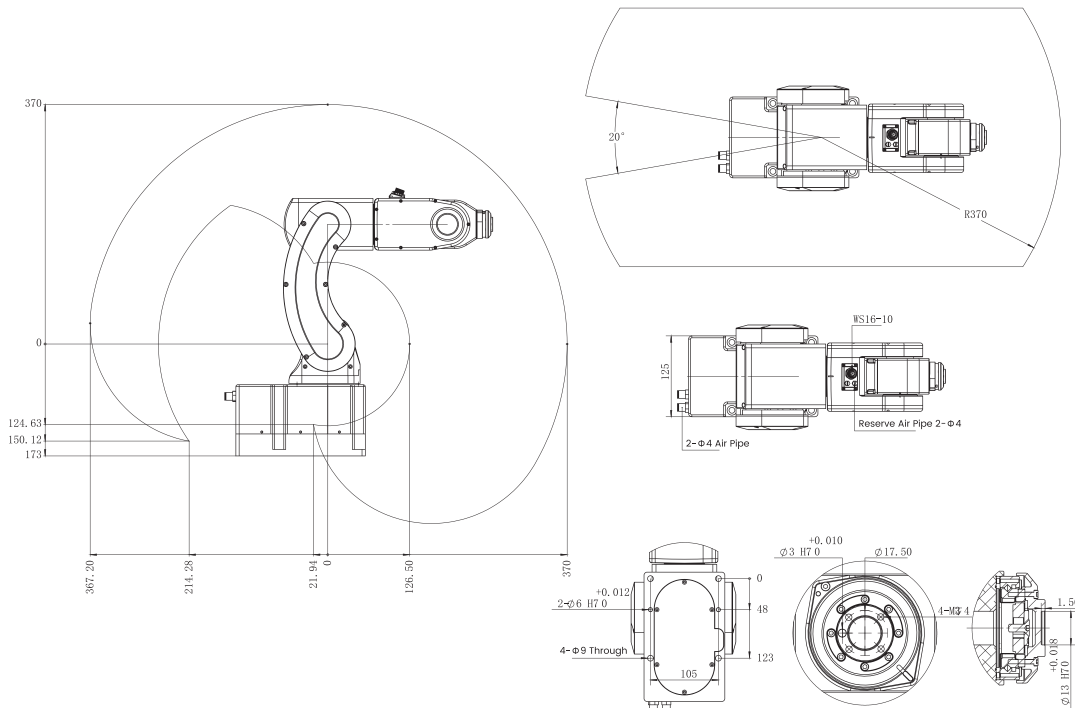


Model	TKB1010	
Payload	1kg	
Maximum Working Range	370mm	
DOF	6 axes	
Body Weight	15kg	
Rated Power	0.4kw	
Max Speed	J1	320°/s
	J2	320°/s
	J3	375°/s
	J4	500°/s
	J5	470°/s
	J6	500°/s
Max Operation Area	J1	±170°
	J2	-80°~120°
	J3	-180°~50°
	J4	±170°
	J5	±125°
	J6	±360°
IP Rating	IP54	
Position Repeatability ※	±0.01mm	
Controller	TRC4-A03	
Working Temperature	0~45°C	



※This precision applies to the Turin Intelligence series.

**Working Range**



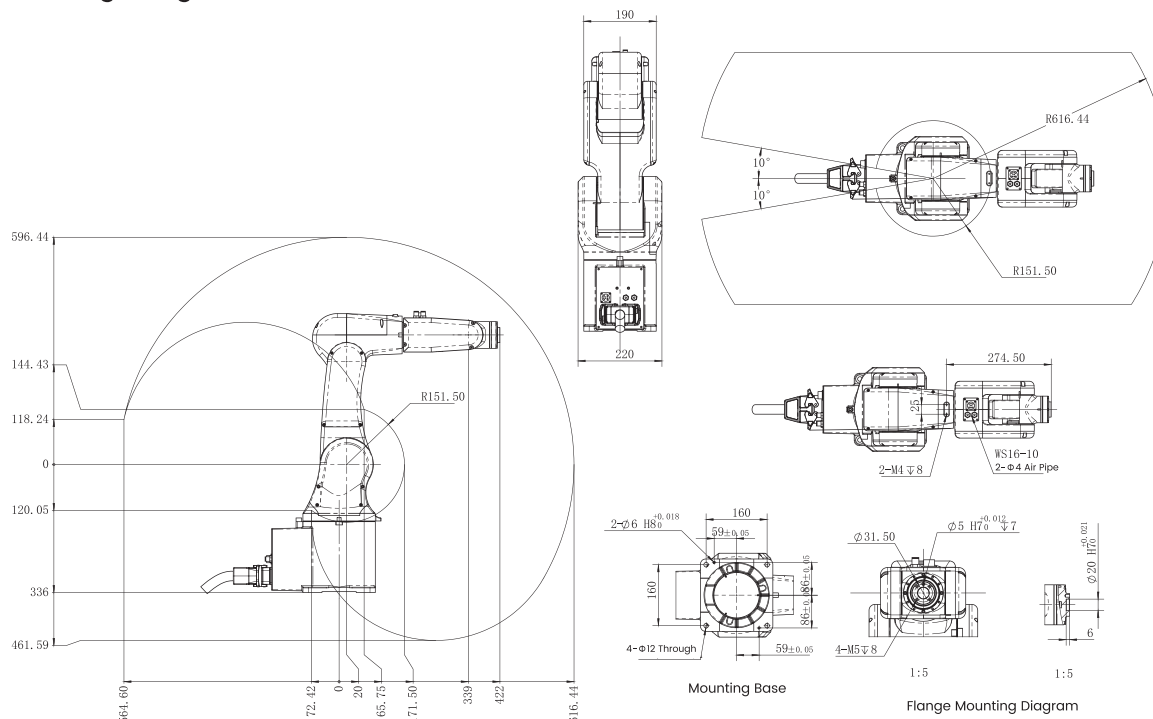
**TRB050**  
 Payload: 3kg  
 Arm Reach: 616mm

Model	TRB050	
Payload	3kg	
Maximum Working Range	616mm	
DOF	6 axes	
Body Weight	35kg	
Rated Power	1.05kw	
Max Speed	J1	450°/s
	J2	450°/s
	J3	720°/s
	J4	720°/s
	J5	720°/s
	J6	720°/s
Max Operation Area	J1	±170°
	J2	-80°~120°
	J3	-75°~75°
	J4	±120°
	J5	±120°
	J6	±360°
IP Rating	IP54	
Position Repeatability ※	±0.02mm	
Controller	TRC4-A03	
Working Temperature	0~45°C	



※ This precision applies to the Turin Intelligence series.

**Working Range**

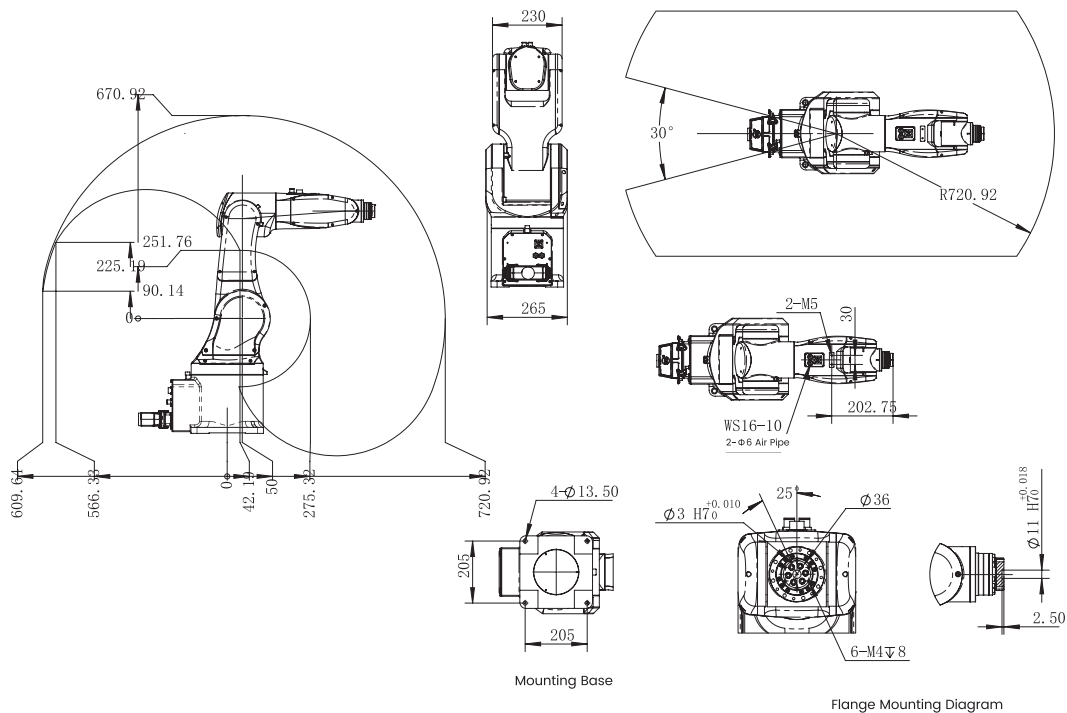


**TKB060**  
 Payload: 6kg  
 Arm Reach: 720mm

Model	TKB060	
Payload	6kg	
Maximum Working Range	720mm	
DOF	6 axes	
Body Weight	40kg	
Rated Power	2.2kw	
Max Speed	J1	450°/s
	J2	450°/s
	J3	450°/s
	J4	458°/s
	J5	540°/s
	J6	360°/s
Max Operation Area	J1	±165°
	J2	-75°~110°
	J3	-100°~55°
	J4	±160°
	J5	±110°
	J6	±360°
IP Rating	IP54/IP67(5&6 axes optional)	
Position Repeatability ※	±0.02mm	
Controller	TRC4-A03	
Working Temperature	0~45°C	

※This precision applies to the Turin Intelligence series.

**Working Range**

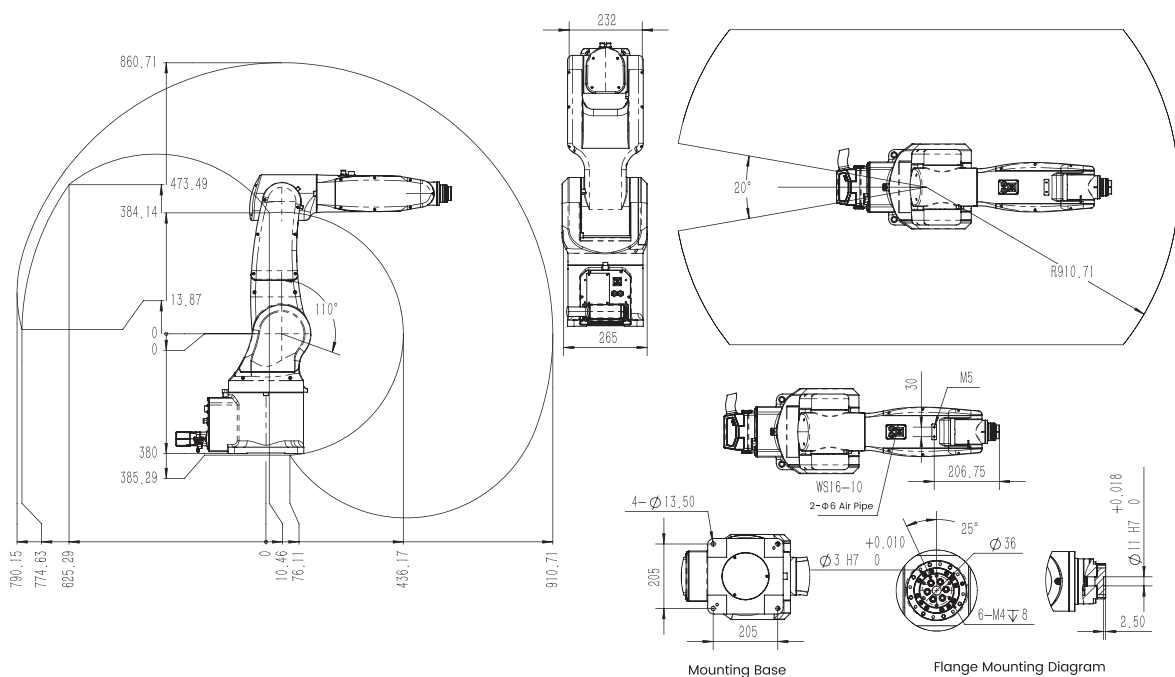


**TKB070**  
 Payload: 7kg  
 Arm Reach: 910mm

Model	TKB070	
Payload	7kg	
Maximum Working Range	910mm	
DOF	6 axes	
Body Weight	50kg	
Rated Power	2.4kw	
Max Speed	J1	450°/s
	J2	450°/s
	J3	450°/s
	J4	458°/s
	J5	720°/s
	J6	720°/s
Max Operation Area	J1	±170°
	J2	-75°~110°
	J3	-120°~50°
	J4	±160°
	J5	±120°
	J6	±360°
IP Rating	IP54/IP67	
Position Repeatability ※	±0.02mm	
Controller	TRC4-A03	
Working Temperature	0~45°C	

※This precision applies to the Turin Intelligence series.

**Working Range**

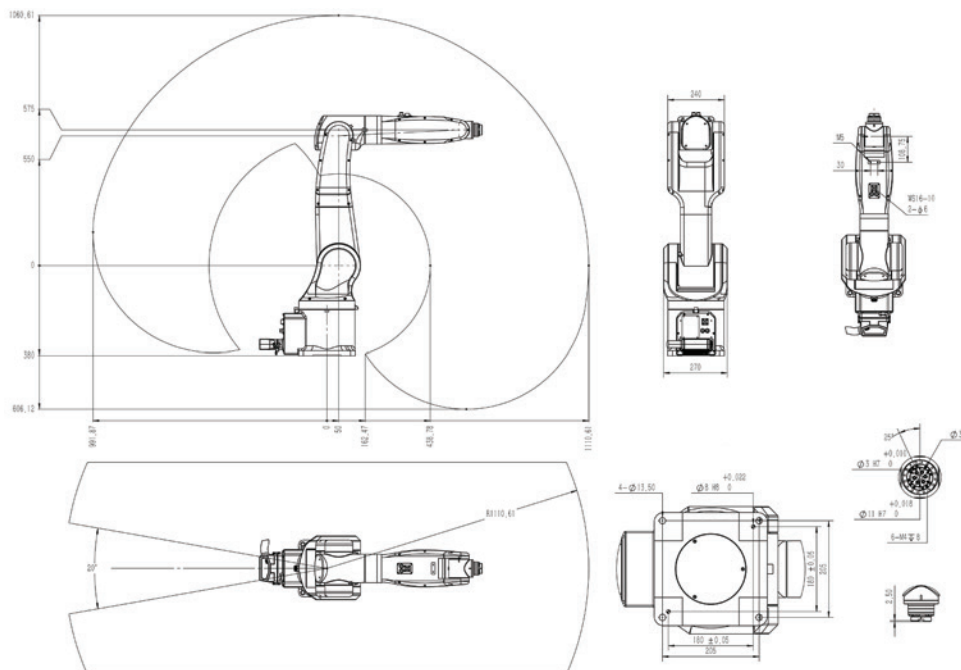


**TKB1100**  
 Payload: 10kg  
 Arm Reach: 1110mm

Model	TKB1100	
Payload	10kg	
Maximum Working Range	1110mm	
DOF	6 axes	
Body Weight	55kg	
Rated Power	2.5kw	
Max Speed	J1	360°/s
	J2	300°/s
	J3	300°/s
	J4	520°/s
	J5	360°/s
	J6	450°/s
Max Operation Area	J1	±170°
	J2	-75°~110°
	J3	-120°~50°
	J4	±160°
	J5	±120°
	J6	±360°
IP Rating	IP54	
Position Repeatability ※	±0.03mm	
Controller	TRC4-A03	
Working Temperature	0~45°C	

※This precision applies to the Turin Intelligence series.

**Working Range**



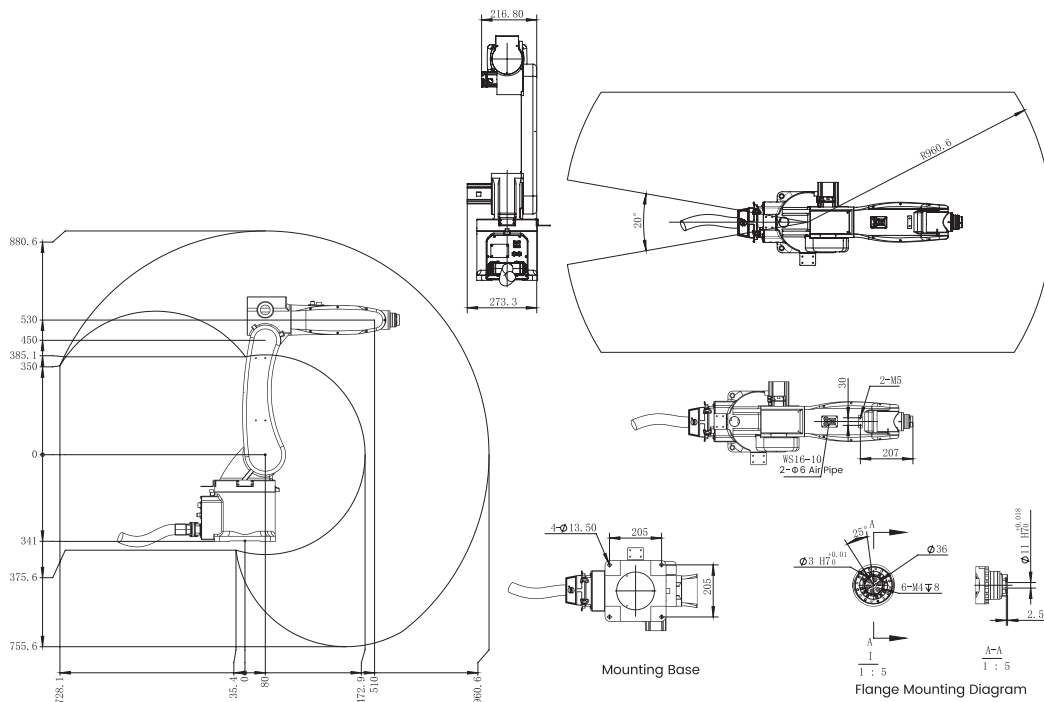
**TKB1210**  
 Payload: 7kg  
 Arm Reach: 960mm

Model	TKB1210	
Payload	7kg	
Maximum Working Range	960mm	
DOF	6 axes	
Body Weight	49kg	
Rated Power	2.4kw	
Max Speed	J1	450°/s
	J2	450°/s
	J3	450°/s
	J4	458°/s
	J5	720°/s
	J6	720°/s
Max Operation Area	J1	±170°
	J2	-70°~135°
	J3	-75°~75°
	J4	±160°
	J5	±120°
	J6	±360°
IP Rating	IP54/IP67(5&6 axes optional)	
Position Repeatability ※	±0.04mm	
Controller	TRC4-A03	
Working Temperature	0~45°C	



※ This precision applies to the Turin Intelligence series.

**Working Range**





**TKB1400**

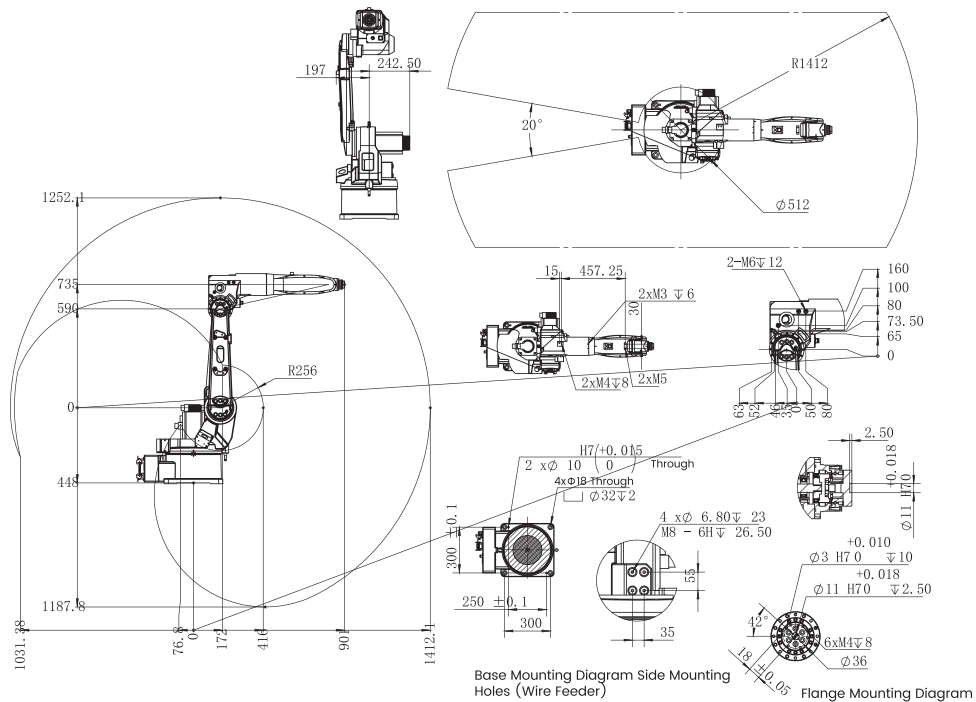
Payload: 6kg  
Arm Reach: 1412mm

Model	TKB1400	
Payload	6kg	
Maximum Working Range	1412mm	
DOF	6 axes	
Body Weight	160kg	
Rated Power	3.5kw	
Max Speed	J1	198°/s
	J2	198°/s
	J3	169°/s
	J4	360°/s
	J5	360°/s
	J6	600°/s
Max Operation Area	J1	±170°
	J2	-92°~153°
	J3	-100°~80°
	J4	±140°
	J5	±120°
	J6	±360°
IP Rating	IP54/IP67(5&6 axes optional)	
Position Repeatability ※	±0.05mm	
Controller	TRC5-B06	
Working Temperature	0~45°C	



※This precision applies to the Turin Intelligence series.

**Working Range**



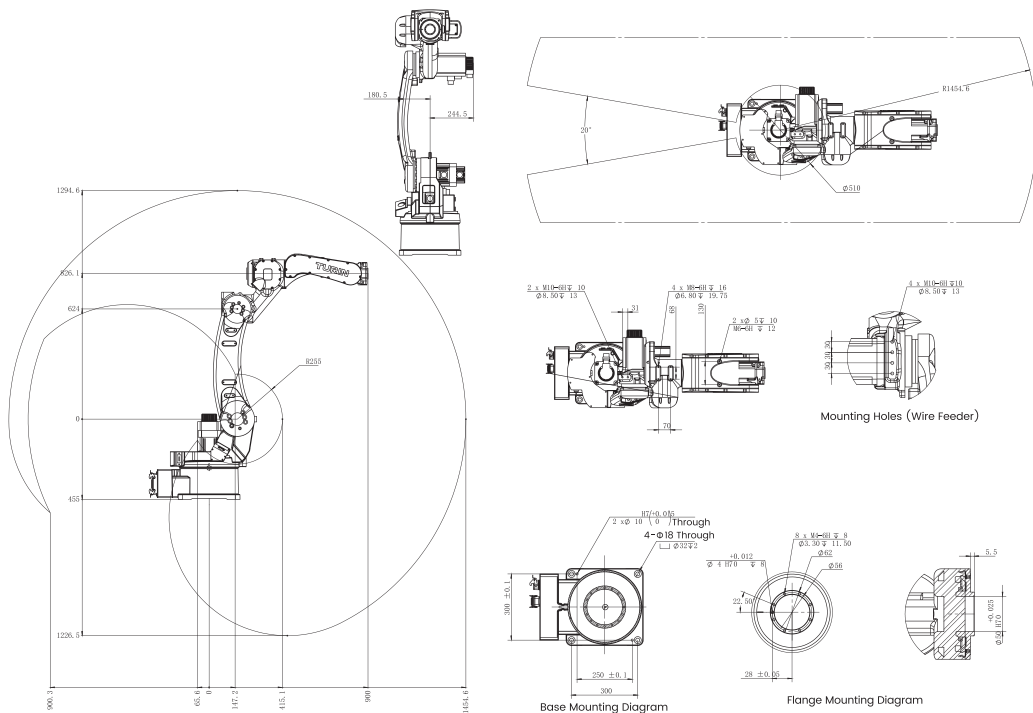
**TKB1440**  
 Payload: 10kg  
 Arm Reach: 1455mm

Model	TKB1440	
Payload	10kg	
Maximum Working Range	1455mm	
DOF	6 axes	
Body Weight	155kg	
Rated Power	4.3kw	
Max Speed	J1	198°/s
	J2	198°/s
	J3	210°/s
	J4	330°/s
	J5	450°/s
	J6	700°/s
Max Operation Area	J1	±170°
	J2	-92°~153°
	J3	-100°~75°
	J4	±190°
	J5	±130°
	J6	±360°
IP Rating	IP54	
Position Repeatability ※	±0.05mm	
Controller	TRC5-B06	
Working Temperature	0~45°C	



※This precision applies to the Turin Intelligence series.

**Working Range**



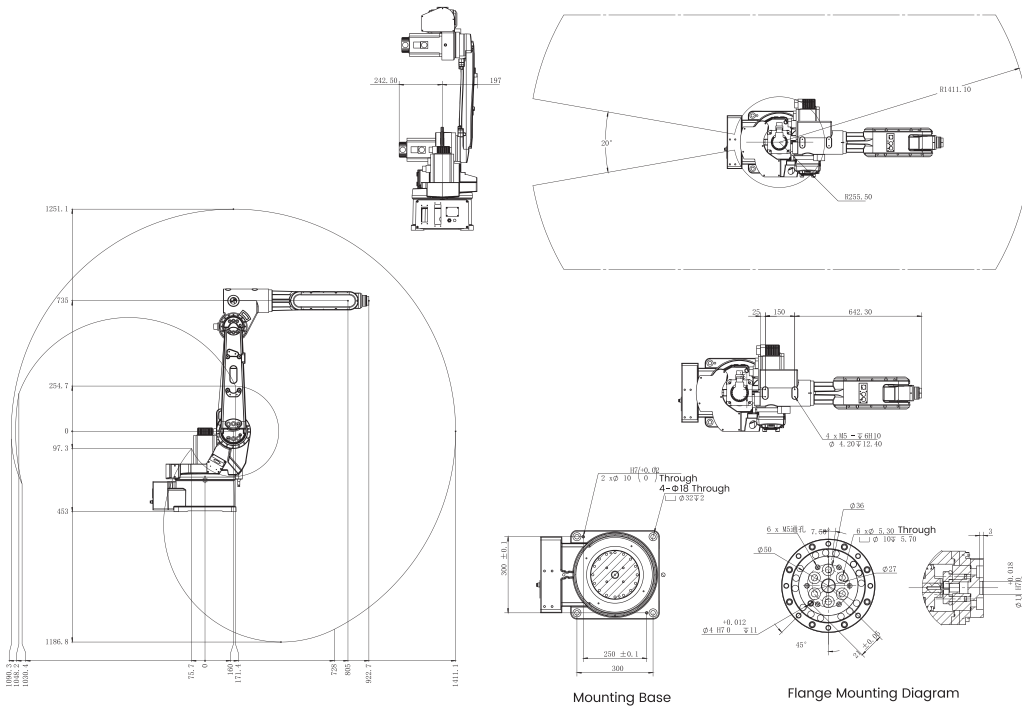
**TKB1600**  
 Payload: 12kg  
 Arm Reach: 1410mm

Model	TKB1600	
Payload	12kg	
Maximum Working Range	1410mm	
DOF	6 axes	
Body Weight	160kg	
Rated Power	4.3kw	
Max Speed	J1	148°/s
	J2	148°/s
	J3	230°/s
	J4	480°/s
	J5	256°/s
	J6	450°/s
Max Operation Area	J1	±170°
	J2	-92°~153°
	J3	-100°~80°
	J4	±140°
	J5	±120°
	J6	±360°
IP Rating	IP54/IP67(5&6 axes optional)	
Position Repeatability ※	±0.06mm	
Controller	TRC5-B06	
Working Temperature	0~45°C	



※This precision applies to the Turin Intelligence series.

**Working Range**



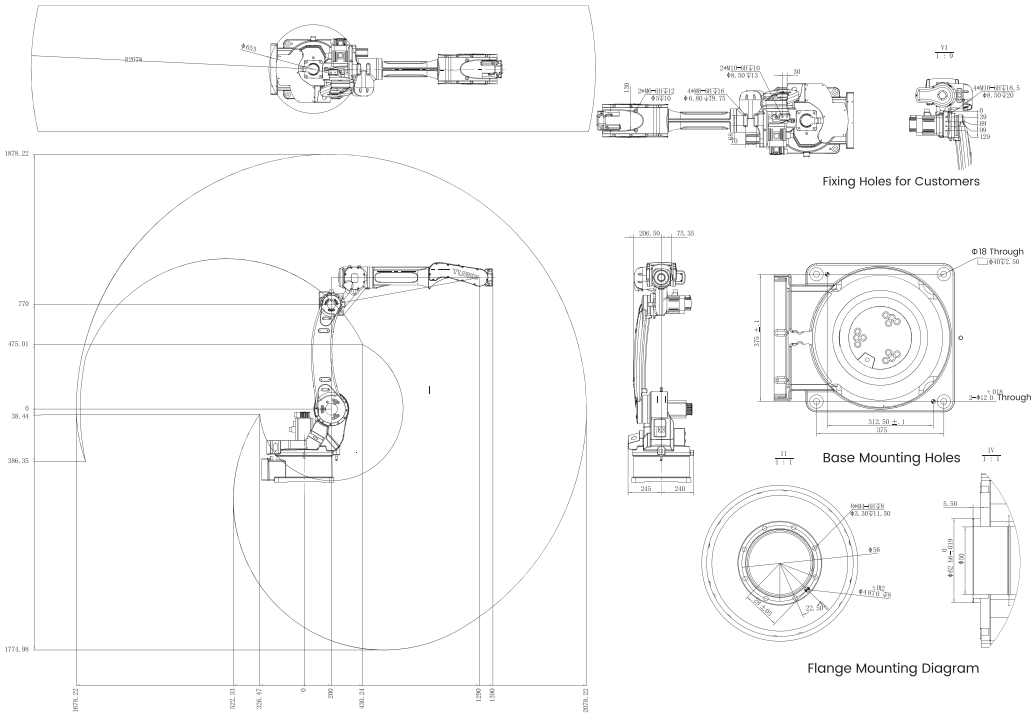
**TKB2030**  
 Payload: 6kg  
 Arm Reach: 2078mm

Model	TKB2030	
Payload	6kg	
Maximum Working Range	2078mm	
DOF	6 axes	
Body Weight	210kg	
Rated Power	4.3kw	
Max Speed	J1	168°/s
	J2	148°/s
	J3	160°/s
	J4	330°/s
	J5	450°/s
	J6	700°/s
Max Operation Area	J1	±160°
	J2	-90°~150°
	J3	-100°~75°
	J4	±190°
	J5	±130°
	J6	±360°
IP Rating	IP54	
Position Repeatability ※	±0.07mm	
Controller	TRC5-B06	
Working Temperature	0~45°C	



※This precision applies to the Turin Intelligence series.

Working Range

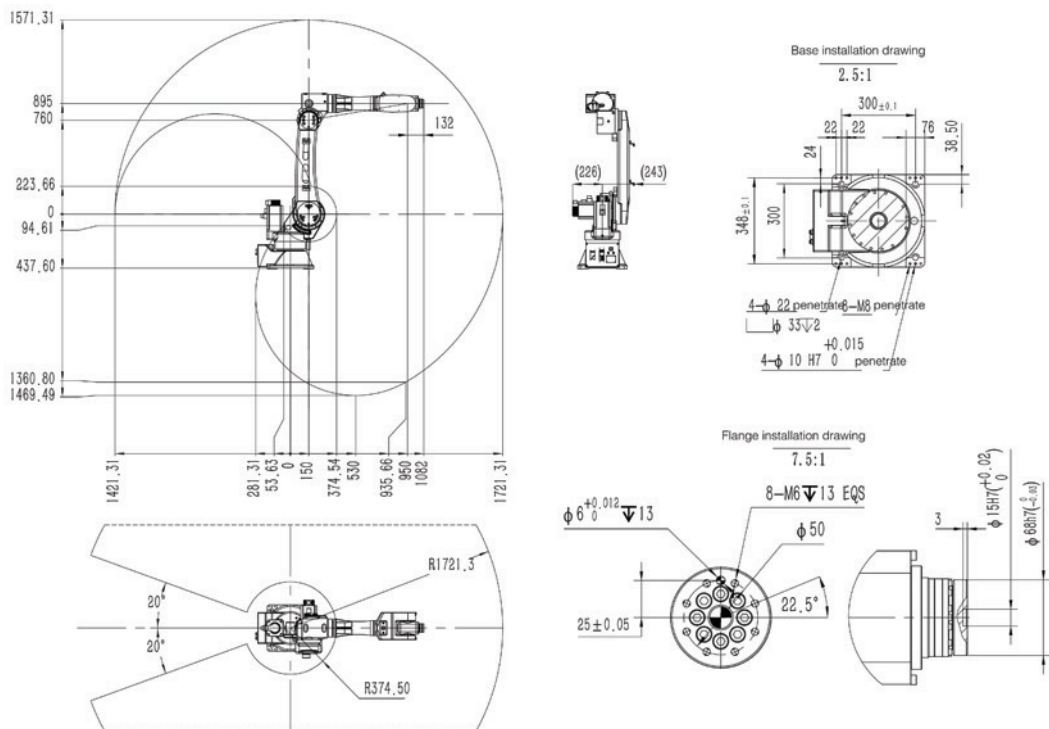


**TKB2670**  
 Payload: 20kg  
 Arm Reach: 1721mm

Model	TKB2670	
Payload	20kg	
Maximum Working Range	1721mm	
DOF	6 axes	
Body Weight	210kg	
Rated Power	4.5kw	
Max Speed	J1	186°/s
	J2	186°/s
	J3	200°/s
	J4	452°/s
	J5	400°/s
	J6	555°/s
Max Operation Area	J1	±160°
	J2	-90°~150°
	J3	-100°~80°
	J4	±150°
	J5	±110°
	J6	±360°
IP Rating	IP54/IP67(5&6 axes optional)	
Position Repeatability ※	±0.05mm	
Controller	TRC5-B06	
Working Temperature	0~45°C	

※This precision applies to the Turin Intelligence series.

**Working Range**



# TKB2690

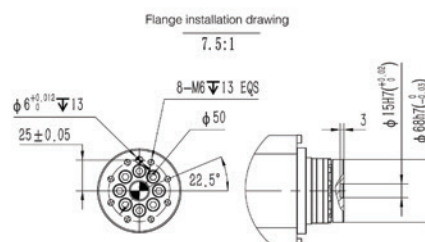
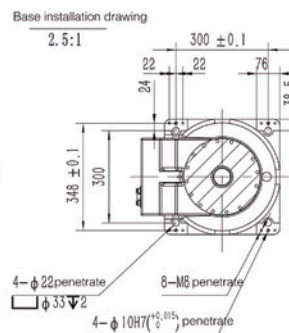
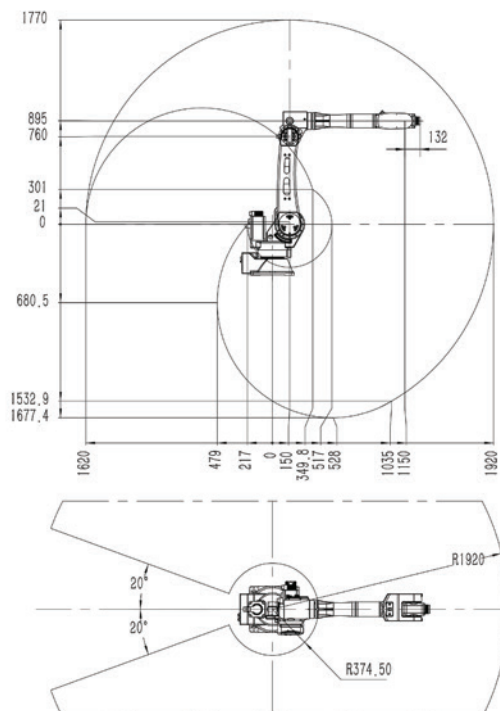
Payload: 20kg  
Arm Reach: 1920mm

Model	TKB2690	
Payload	20kg	
Maximum Working Range	1920mm	
DOF	6 axes	
Body Weight	220kg	
Rated Power	4.7kw	
Max Speed	J1	186°/s
	J2	186°/s
	J3	200°/s
	J4	452°/s
	J5	400°/s
	J6	555°/s
Max Operation Area	J1	±160°
	J2	-80°~150°
	J3	-100°~80°
	J4	±150°
	J5	±110°
	J6	±360°
IP Rating	IP54/IP67(5&6 axes optional)	
Position Repeatability ※	±0.05mm	
Controller	TRC5-B06	
Working Temperature	0~45°C	



※This precision applies to the Turin Intelligence series.

## Working Range

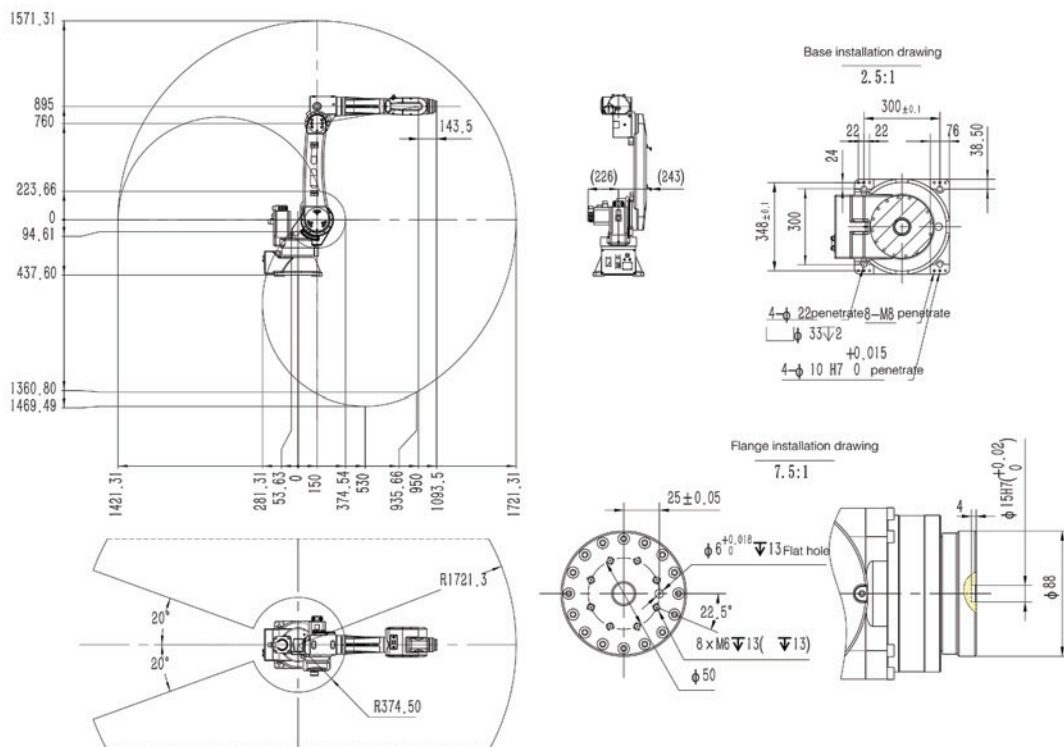


**TKB3670**  
 Payload: 30kg  
 Arm Reach: 1721mm

<b>Model</b>	<b>TKB3670</b>	
Payload	30kg	
Maximum Working Range	1721mm	
DOF	6 axes	
Body Weight	220kg	
Rated Power	5kw	
Max Speed	J1	186°/s
	J2	170°/s
	J3	200°/s
	J4	452°/s
	J5	330°/s
	J6	450°/s
Max Operation Area	J1	±160°
	J2	-80°~150°
	J3	-100°~80°
	J4	±150°
	J5	±110°
	J6	±360°
IP Rating	IP54/IP67(5&6 axes optional)	
Position Repeatability ※	±0.05mm	
Controller	TRC5-B06	
Working Temperature	0~45°C	

※ This precision applies to the Turin Intelligence series.

**Working Range**

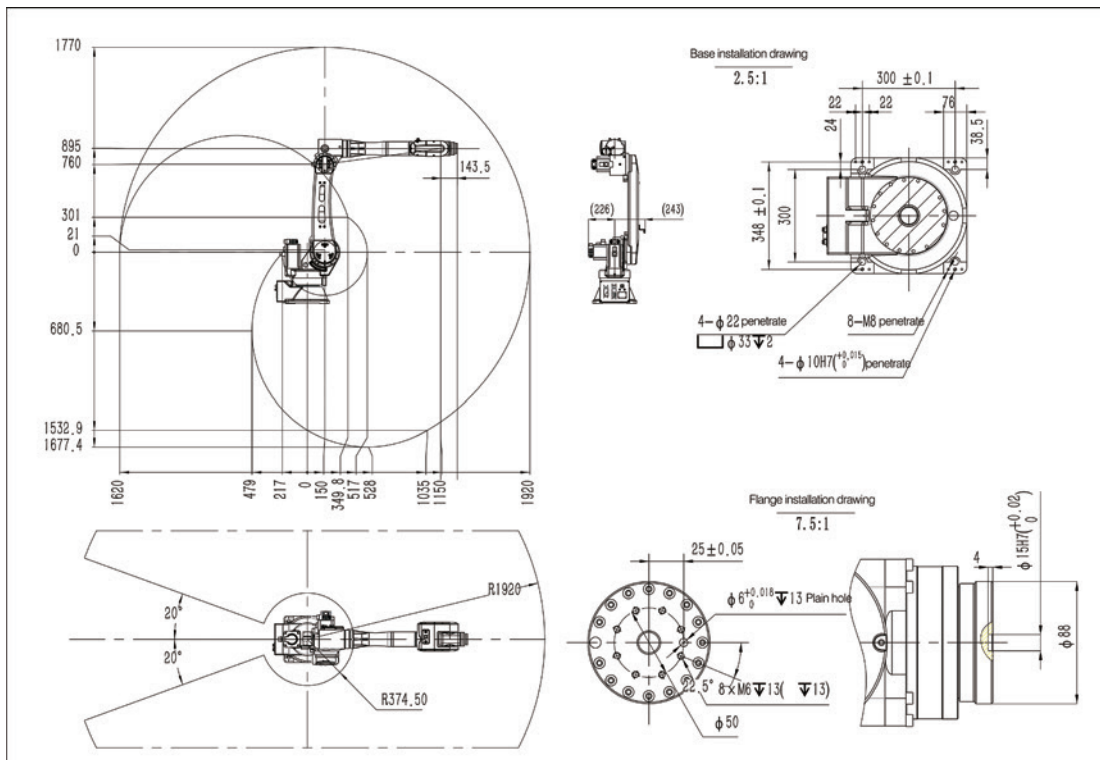


**TKB3690**  
 Payload: 30kg  
 Arm Reach: 1920mm

Model	TKB3670	
Payload	30kg	
Maximum Working Range	1920mm	
DOF	6 axes	
Body Weight	220kg	
Rated Power	5.2kw	
Max Speed	J1	186°/s
	J2	170°/s
	J3	200°/s
	J4	452°/s
	J5	330°/s
	J6	450°/s
Max Operation Area	J1	±160°
	J2	-80°~150°
	J3	-100°~80°
	J4	±150°
	J5	±110°
	J6	±360°
IP Rating	IP54/IP67 (5&6 axes optional)	
Position Repeatability ※	±0.05mm	
Controller	TRC5-B06	
Working Temperature	0~45°C	

※ This precision applies to the Turin Intelligence series.

Working Range



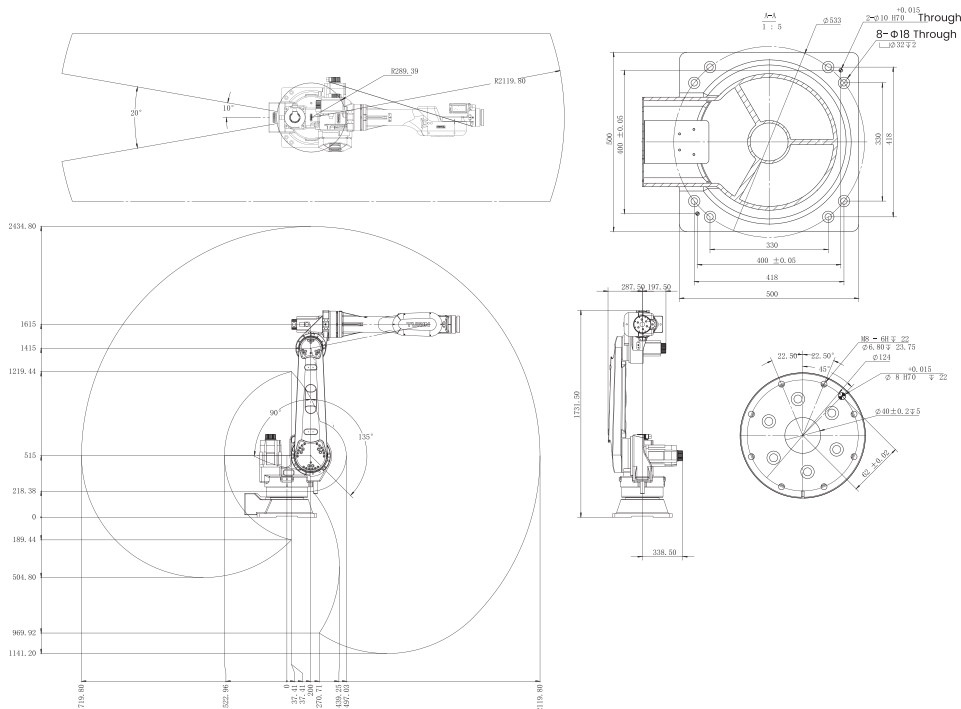


**TKB5600**  
 Payload: 60kg  
 Arm Reach: 2119mm

Model	TKB5600	
Payload	60kg	
Maximum Working Range	2119mm	
DOF	6 axes	
Body Weight	600kg	
Rated Power	6.5kw	
Max Speed	J1	127°/s
	J2	105°/s
	J3	165°/s
	J4	253°/s
	J5	250°/s
	J6	372°/s
Max Operation Area	J1	±170°
	J2	-90°~135°
	J3	-185°~90°
	J4	±200°
	J5	±105°
	J6	±360°
IP Rating	IP54	
Position Repeatability ※	±0.08mm	
Controller	TRC3-C06	
Working Temperature	0~45°C	

※This precision applies to the Turin Intelligence series.

**Working Range**



# TKB5700

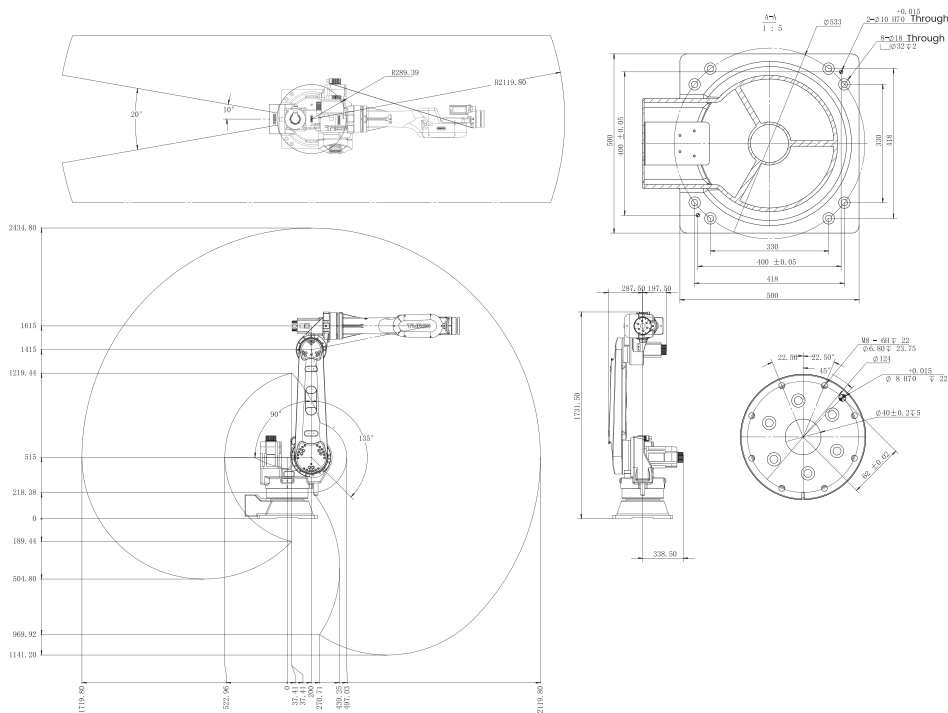
Payload: 70kg  
Arm Reach: 2119mm

Model	TKB5700	
Payload	70kg	
Maximum Working Range	2119mm	
DOF	6 axes	
Body Weight	600kg	
Rated Power	6.8kw	
Max Speed	J1	127°/s
	J2	105°/s
	J3	165°/s
	J4	253°/s
	J5	220°/s
	J6	372°/s
Max Operation Area	J1	±170°
	J2	-90°~135°
	J3	-185°~90°
	J4	±200°
	J5	±105°
	J6	±360°
IP Rating	IP54	
Position Repeatability ※	±0.08mm	
Controller	TRC3-C06	
Working Temperature	0~45°C	



※This precision applies to the Turin Intelligence series.

### Working Range



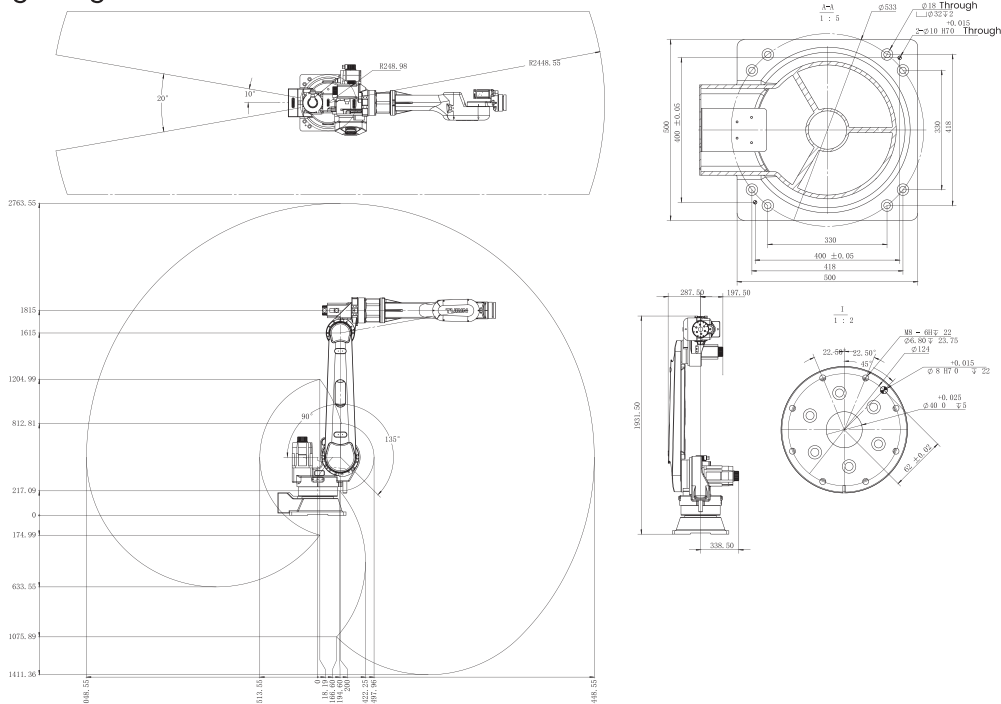
# TKB5800

Payload: 50kg  
Arm Reach: 2448mm

Model	TKB5800	
Payload	50kg	
Maximum Working Range	2448mm	
DOF	6 axes	
Body Weight	650kg	
Rated Power	7kw	
Max Speed	J1	127°/s
	J2	105°/s
	J3	150°/s
	J4	231°/s
	J5	250°/s
	J6	372°/s
Max Operation Area	J1	±170°
	J2	-90°~135°
	J3	-185°~90°
	J4	±200°
	J5	±120°
	J6	±360°
IP Rating	IP54	
Position Repeatability ※	±0.08mm	
Controller	TRC3-C06	
Working Temperature	0~45°C	

※This precision applies to the Turin Intelligence series.

## Working Range



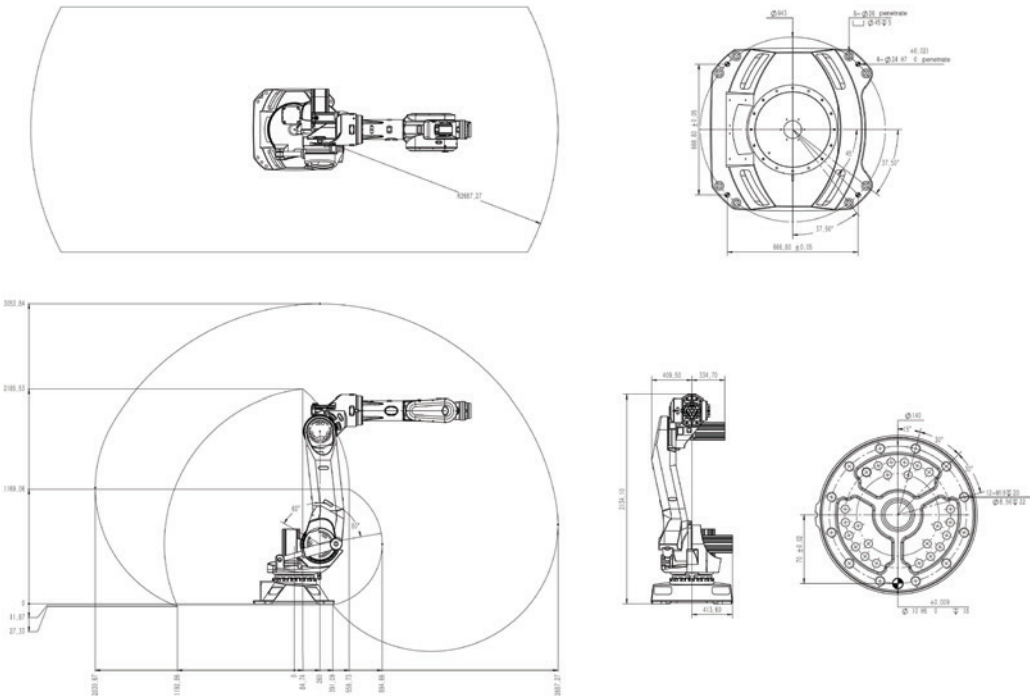
**RRB6700**  
 Payload: 210kg  
 Arm Reach: 2700mm

Model	RRB6700	
Payload	210kg	
Maximum Working Range	2700mm	
DOF	6 axes	
Body Weight	1100kg	
Rated Power	8.5kw	
Max Speed	J1	114°/s
	J2	83°/s
	J3	95°/s
	J4	180°/s
	J5	165°/s
	J6	219°/s
Max Operation Area	J1	±185°
	J2	-50°~ 85°
	J3	-180°~ 70°
	J4	±360°
	J5	±125°
	J6	±360°
IP Rating	IP54/IP65 (5&6 axes optional)	
Position Repeatability ※	±0.1mm	
Controller	TRC3-D06	
Working Temperature	0~45°C	



※This precision applies to the Turin Intelligence series.

Working Range





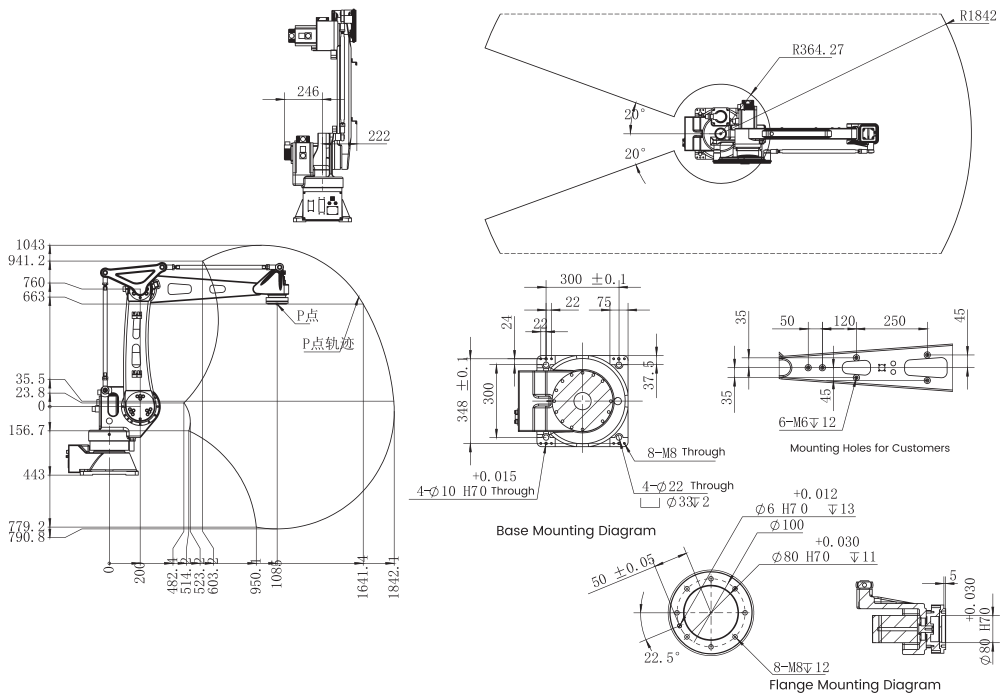
Model	TKB460	
Payload	30kg	
Maximum Working Range	1840mm	
DOF	4 axes	
Body Weight	240kg	
Rated Power	4.2kw	
Max Speed	J1	200°/s
	J2	175°/s
	J3	175°/s
	J4	360°/s
Max Operation Area	J1	±175°
	J2	-35°~85°
	J3	-90°~70°
	J4	±360°
IP Rating	IP54	
Position Repeatability ※	±0.08mm	
Controller	TRC5-B06/TRC3-D06	

Working Temperature

0~45°C

※This precision applies to the Turin Intelligence series.

**Working Range**



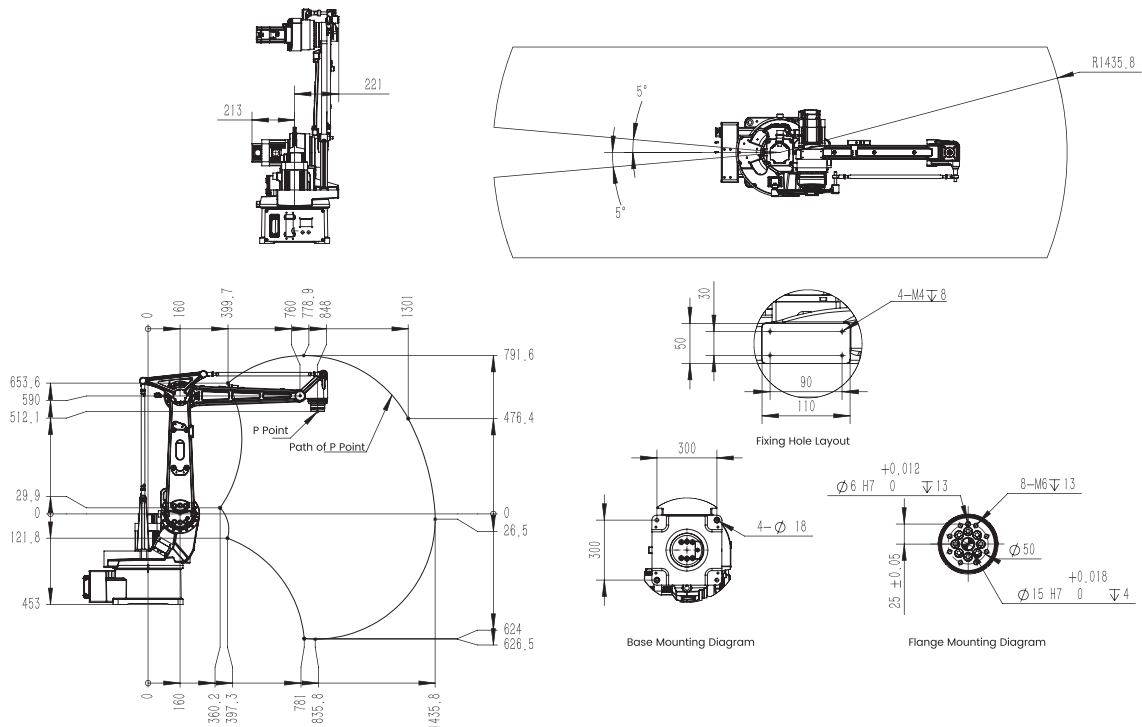
**TKB4600**  
 Payload: 12kg  
 Arm Reach: 1435mm

Model	TKB4600	
Payload	12kg	
Maximum Working Range	1435mm	
DOF	4 axes	
Body Weight	175kg	
Rated Power	2.5kw	
Max Speed	J1	210°/s
	J2	205°/s
	J3	185°/s
	J4	500°/s
Max Operation Area	J1	±175°
	J2	-35°~85°
	J3	-90°~70°
	J4	±330°
IP Rating	IP54	
Position Repeatability ※	±0.08mm	
controller	TRC5-B06	
Working Temperature	0~45°C	



※This precision applies to the Turin Intelligence series.

**Working Range**

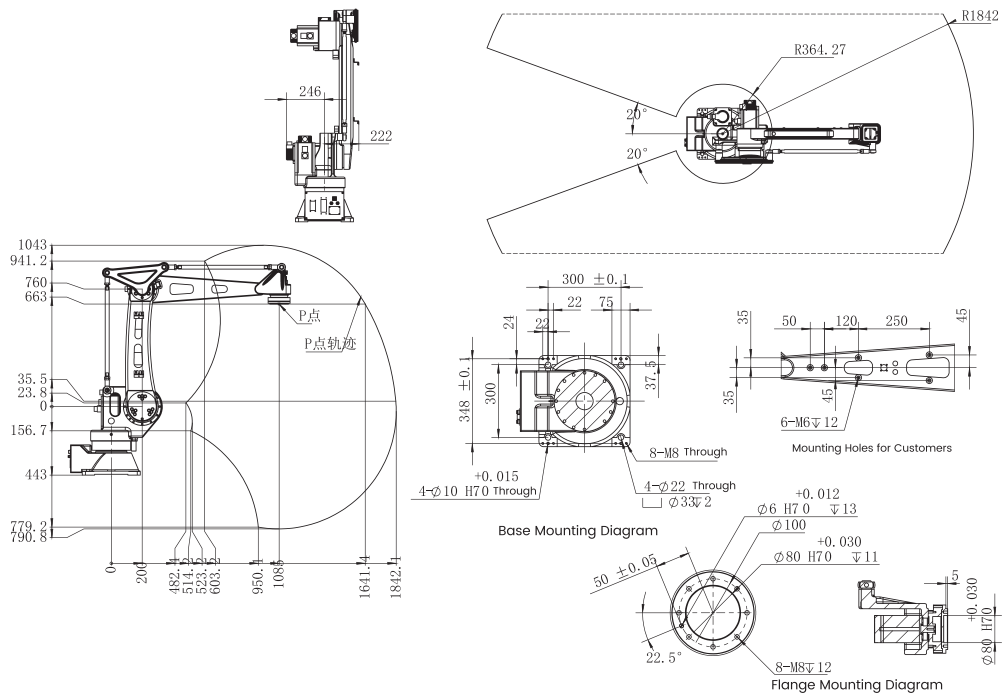




Model	TKB660	
Payload	180kg	
Maximum Working Range	3200mm	
DOF	4 axes	
Body Weight	1193kg	
Rated Power	5.5kw	
Max Speed	J1	105°/s
	J2	83°/s
	J3	129.5°/s
	J4	270°/s
Max Operation Area	J1	±185°
	J2	-42°~85°
	J3	-20°~110°
	J4	±360°
IP Rating	IP54/IP65(4 axes optional)	
Position Repeatability ※	±0.01mm	
Controller	TRC3-D06	
Working Temperature	0~45°C	

※This precision applies to the Turin Intelligence series.

**Working Range**



# Turin TRP04 Teach Pendant

Model	TRP04-DS	TRP04-QT
Main Chipset	REALTEK	ARM
Memory	/	512MBDDR
Storage Capacity	/	4G Flash
Operating System	/	LINUX
Touch Screen	Resistive	
IDE	/	QT5.15
USB	/	USB2.0HOST
Screen Resolution	8 Inch TFT Resolution 1024*768	
Keys	12 Log Keys, 4 Program Control Keys, 4 Custom Function Keys	
Switches	Emergency Stop Switch, Enable Switch, Mode Switch	
Protection Level	IP54	
Communication	LVDS	Ethernet
Cable Length	5m	10/15/20/30m
Operating Temperature	Temperature: -30° ~80°	
Dimensions	290*240*53	



- High-performance processor: The control cabinet is equipped with a high-performance processor to ensure stable operation and high-speed data transmission, enabling complex multi-axis motion control.
- Diverse Communication Interfaces: The TRP04 teaching pendant supports various communication interfaces such as Ethernet, serial ports, CAN bus, etc., facilitating connection and data interaction with a variety of industrial equipment.
- Remote Monitoring and Debugging: Accessing the TRP04 teaching pendant remotely via the Internet allows real-time monitoring of the robot's operational status, enabling remote debugging and program updates, significantly improving work efficiency.

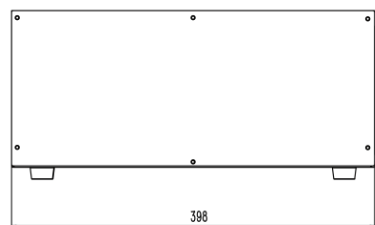
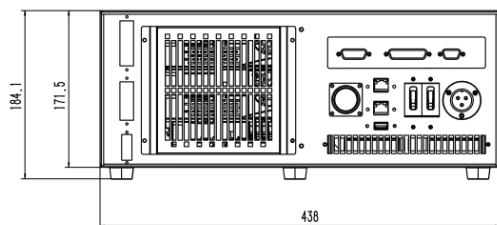


# TRC4-A03 Control Cabinet

Model	TRC4-A03
Installation Method	Vertical installation
Standard IO	Input: 18 channels (NPN); Output: 10 channels (relay)
Communication Interface	Ethernet port: Used for TCP/IP, Modbus TCP, Ethernet/IP, MC communication protocols
	EtherCAT Port: Used to expand external shafts
	Expandable Modbus-TCP to RS232 and RS485 serial server
	USB 2.0 interface: Program backup and loading, export of machine, customer, and personnel status information
Control Method	PC programming platform control, teach pendant control, remote IO control, remote Modbus control, API control
IP Rating	IP54
Operating Environment Conditions	Temperature: 0°C to 40°C Humidity: 20% to 95% RH (30°C) (No condensation)
Dimensions	438mmx398mmx185mm
Weight	12kg
Applicable Robots	STG030 \ STG100 \ STH030 \ STH100 \ STH200 \ STW030 \ STW060 TKB1010 \ TRB050 \ TKB060 \ TKB070 \ TKB210 \



## External Dimensions of the Control Cabinet

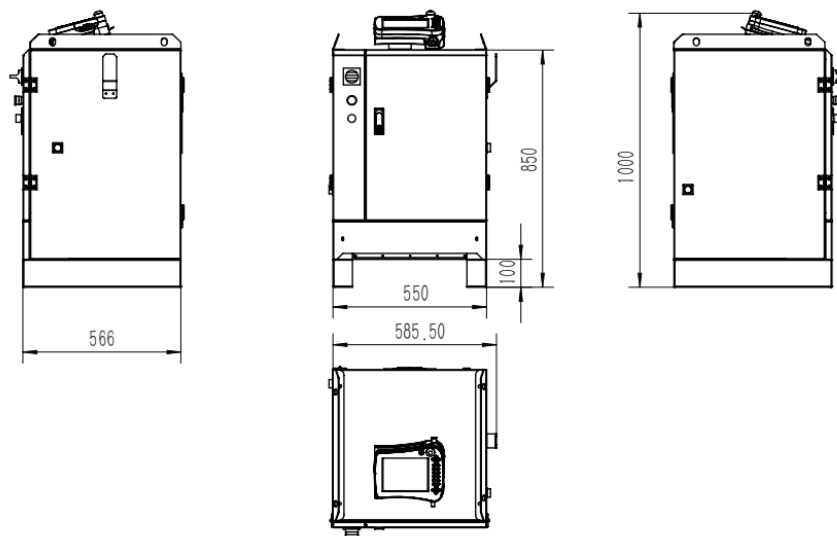


# TRC5-B06 Control Cabinet

Model	TRC5-B06
Installation Method	Vertical installation
Standard IO	Input: 18 channels (NPN); Output: 10 channels (relay) Welding: Input: 6 channels (NPN) / Output: 10 channels (Relay); 2 AO (Analog Output)
Communication Interface	Ethernet port: Used for TCP/IP, Modbus TCP, Ethernet/IP, MC communication protocols
	EtherCAT Port: Used to expand external shafts
	Expandable Modbus-TCP to RS232 and RS485 serial server
	USB 2.0 interface: Program backup and loading, export of machine, customer, and personnel status information
Control Method	PC programming platform control, teach pendant control, remote IO control, remote Modbus control, API control
IP Rating	IP65
Operating Environment Conditions	Temperature: 0°C to 40°C Humidity: 20% to 95% RH (30°C) (No condensation)
Dimensions	850mmx550mmx566mm
Weight	76kg
Applicable Robots	TKB1400 \ TKB1440 \ TKB1900 \ TKB2030 \ TKB1600 \ TKB2670 \ TKB2690 \ TKB3690 \ TKB460 \ TKB4600 \ TKB3670



## External Dimensions of the Control Cabinet

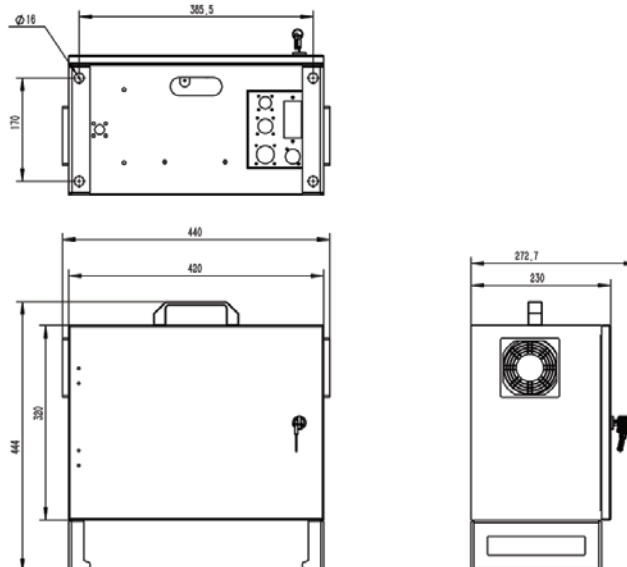


# TRC5-G06 Control Cabinet

型号	TRC5-G06
Installation Method	Vertical installation
Standard IO	Input: 10 channels (NPN) Output: 14 channels (NPN)
Communication Interface	Ethernet port: Used for TCP/IP, Modbus TCP, Ethernet/IP, MC communication protocols
	EtherCAT Port: Used to expand external shafts
	Expandable Modbus-TCP to RS232 and RS485 serial server
	USB 2.0 interface: Program backup and loading, export of machine, customer, and personnel status information
Control Method	PC programming platform control, teach pendant control, remote IO control, remote Modbus control, API control
IP Rating	IP54
Operating Environment Conditions	Temperature: 0°C to 40°C Humidity: 20% to 95% RH (30°C) (No condensation)
Dimensions	440mmx444mmx230mm
Weight	14kg
Applicable Robots	TCR030\TCR050\TCR100\TCR200\TCR300



## External Dimensions of the Control Cabinet

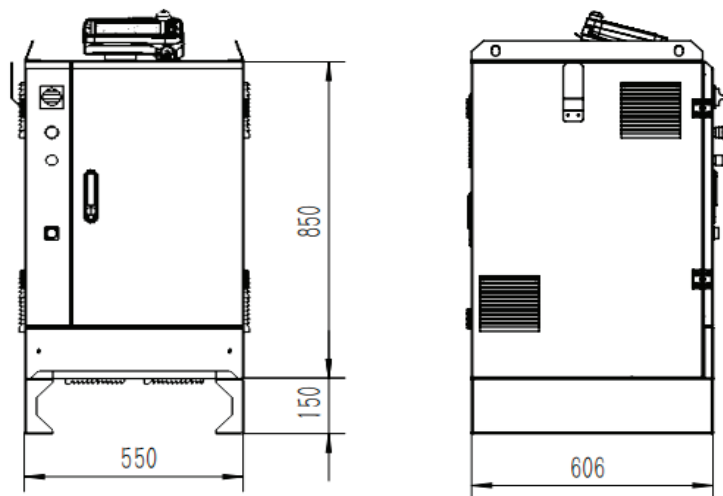


# TRC3-C06 Control Cabinet

型号	TRC3-C06
Installation Method	Vertical installation
Standard IO	Input: 10 channels (NPN) ;Output: 14 channels (Relay)
Communication Interface	Ethernet port: Used for TCP/IP, Modbus TCP, Ethernet/IP, MC communication protocols
	EtherCAT Port: Used to expand external shafts
	Expandable Modbus-TCP to RS232 and RS485 serial server
	USB 2.0 interface: Program backup and loading, export of machine, customer, and personnel status information
Control Method	PC programming platform control, teach pendant control, remote IO control, remote Modbus control, API control
IP Rating	IP54
Operating Environment Conditions	Temperature: 0°C to 40°C Humidity: 20% to 95% RH (30°C) (No condensation)
Dimensions	1000mmx550mmx606mm
Weight	100kg
Applicable Robots	TKB5600\TKB5700\TKB5800



## External Dimensions of the Control Cabinet

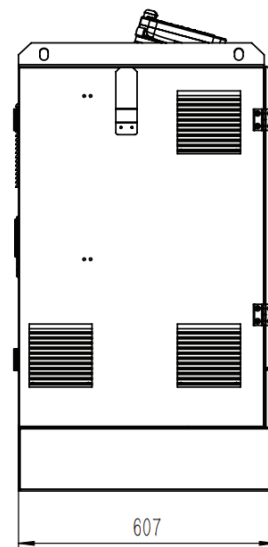
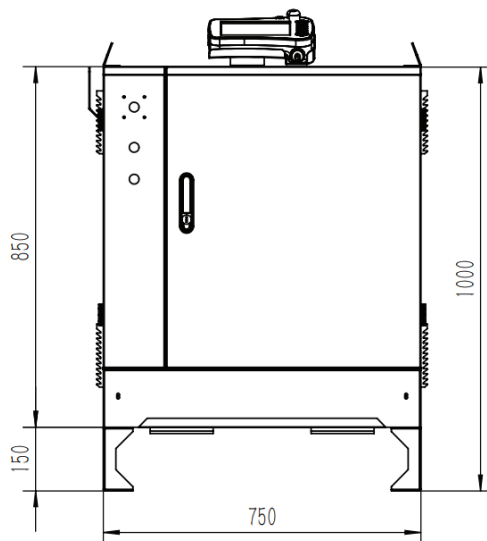


# TRC3-D06 Control Cabinet

型号	TRC3-C06
Installation Method	Vertical installation
Standard IO	Input: 10 channels (NPN) ;Output: 14 channels (Relay)
Communication Interface	Ethernet port: Used for TCP/IP, Modbus TCP, Ethernet/IP, MC communication protocols
	EtherCAT Port: Used to expand external shafts
	Expandable Modbus-TCP to RS232 and RS485 serial server
	USB 2.0 interface: Program backup and loading, export of machine, customer, and personnel status information
Control Method	PC programming platform control, teach pendant control, remote IO control, remote Modbus control, API control
IP Rating	IP54
Operating Environment Conditions	Temperature: 0°C to 40°C Humidity: 20% to 95% RH (30°C) (No condensation)
Dimensions	1000mmx750mmx607mm
Weight	140kg
Applicable Robots	RRB6700\TKB4600\TKB460\TKB660



## External Dimensions of the Control Cabinet



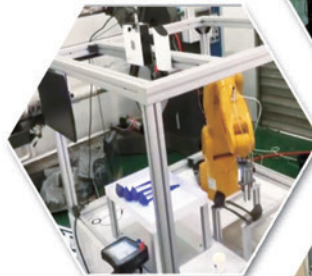
# Industrial Robot Application Scenarios

## Handling and Palletizing Automation

Turin's palletizing and handling robots cover various industries. Traditional manual methods have proven to be inefficient in terms of material transportation. A robot that can replace human labor in carrying out repetitive and heavy-duty tasks can help reduce transport costs, increase a company's output rate, and improve efficiency. The use of TURIN robots eliminates



Storage enclosure visual-guided handling



Unordered Grasping Based on



Handling of Hot Parts



Handling of Motor Stator Silicone Steel Sheets



Pallet Destacking and Handling



Battery Handling in Lithium Battery Industry



Photovoltaic basket handling

## Dispensing and Gluing Automation

With Turin's independently developed offline programming software, complex continuous surface trajectories can be generated automatically and executed by industrial robots equipped with advanced motion control technology. The control of steady pressure and custom mechanical structures can meet the demands for dispensing and gluing applications.



Gluing of washing machine covers



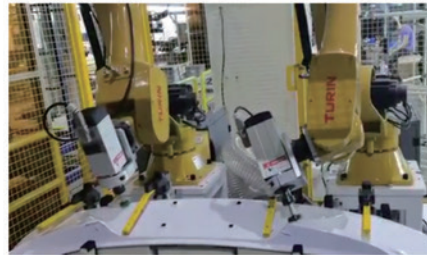
Gluing of control cabinet doors

## Polishing Automation

Polishing applications are often difficult in terms of programming, high-frequency vibration, and ensuring constant torque output. Turin's proprietary offline programming software and customized mechanical structures equipped with force control technologies can resolve the difficulties of polishing applications.



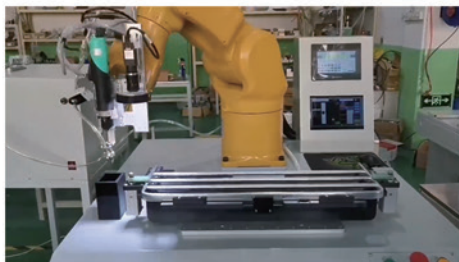
Deburring of castings



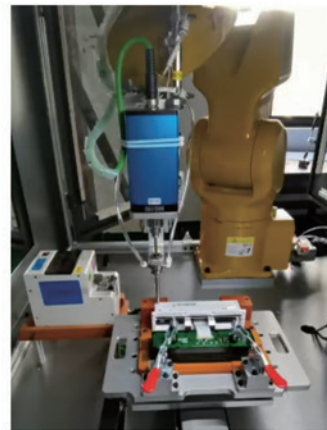
Polishing

## Screw Locking Automation

Equipped with screw-locking process packages, Turin's industrial robots possess features such as torque feedback, multi-stage torque control, as well as the ability to detect abnormal scenarios such as missing screws and slipping threads. These robots can satisfy customer demands.



TKB060 visual-guided screw fastening



TKB070 screw fastening



Notebook C-side screw fastening



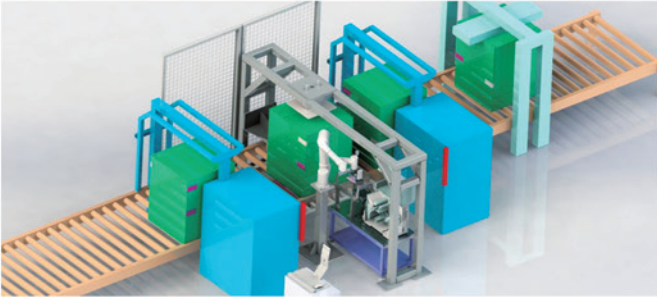
Household appliances screw fastening

# Collaborative Robot Application Scenarios

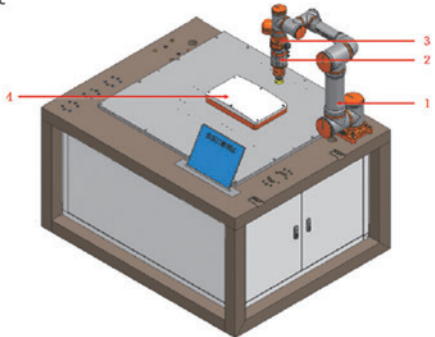
Collaborative robots, designed to work alongside humans in the same environment, have a wide range of applications. Our company specializes in the research, development, application, and promotion of human-robot collaborative robots, striving to provide the best welding automation solutions for manufacturing industry upgrading and transformation. Our team of highly skilled engineers can provide customers with a full range of technical solutions, quickly offering industry 4.0 automation solutions that are both operational and practical.



Automatic coffee art



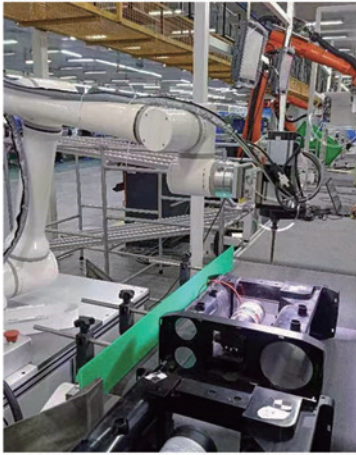
Automatic labeling machines



Curved surface polishing



Light bulb grabbing



Household appliances screw tightening



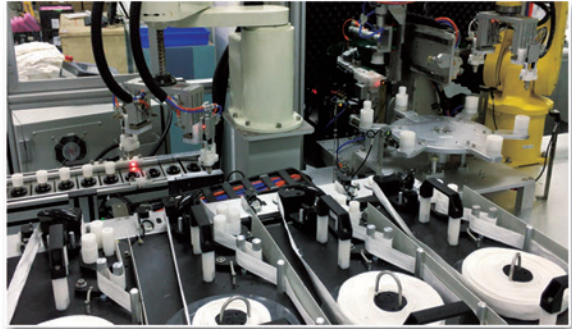
Collaborative AGV



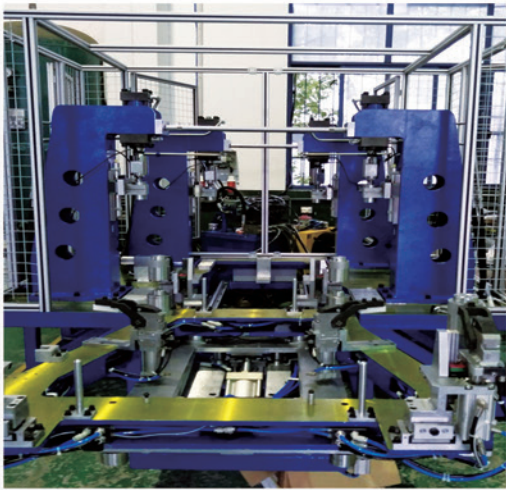
# Other Application Scenarios



Emergency response in 3C industry smart data center



LED assembly in lighting industry



Production line for automotive front beam pressing equipment



Laser cutting



Fully-automated factory of a Fortune Global 500 environmental company



Educational demonstration workstation



## Palletizing robot workstation



## Flexible deployment

Quick installation, convenient mobility, and quick switching between multiple scenarios; Integrated design with small footprint.

## Widely used

Widely used in fast moving consumer goods (care products, brand packaging, food, beverage, tobacco and wine), medicine, 3C and other industries.

## Easy to use

Visual programming; ordinary employees can master programming within 1 hour; standardized palletizing procedures, only four steps to complete the new task program settings.

## Value investment

The average payback is 6-12 months; its rapid deployment and multi-scenario application features can easily switch between multi-category products and off-peak seasons, freeing employees from heavy handling work and improving the intelligence of the factory.



## High compatibility

- Large reach, can cover a variety of pallet sizes.
- Multiple product stack types can be accommodated by simply creating a single program.

## Operability

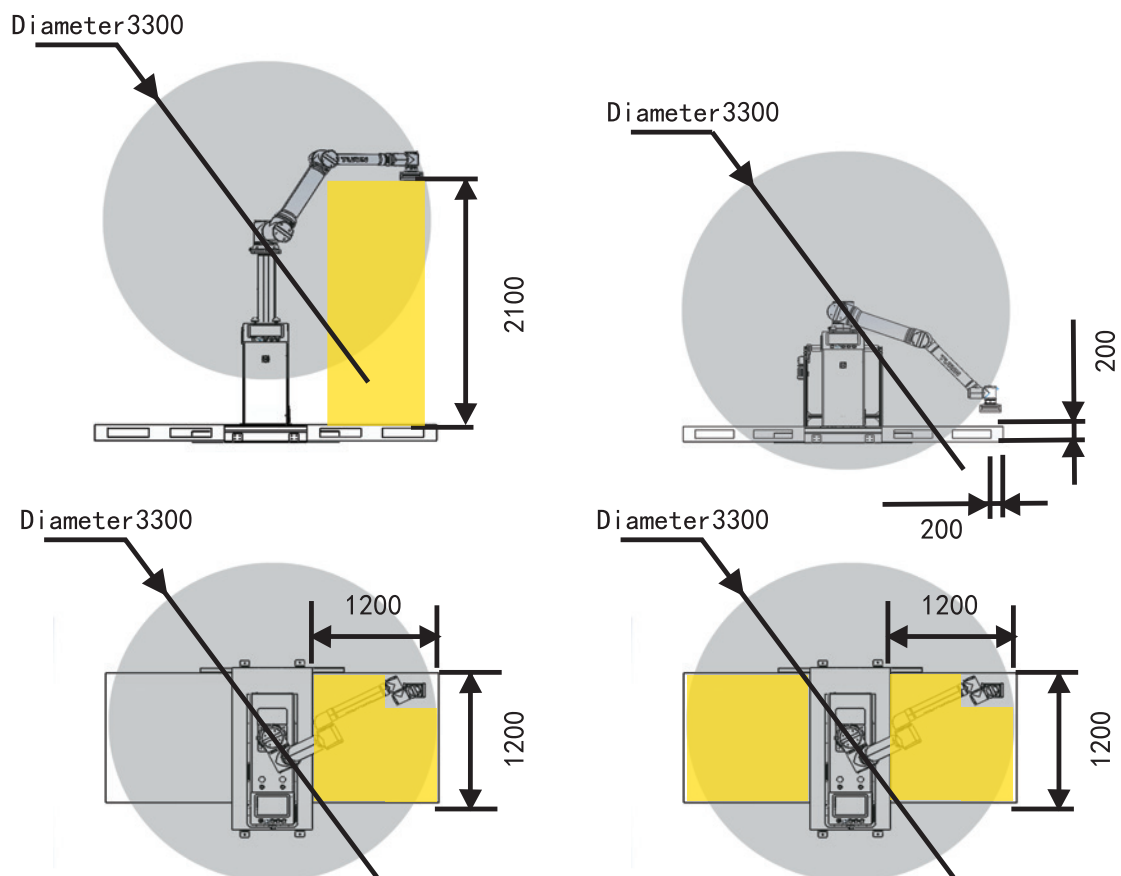
- Easy palletizing in four steps
  - 1、 Set box size
  - 2、 Set pallet size
  - 3、 Set stacking style
  - 4、 Incoming material position setting

## TPW 20 Parameters

**TURIN**

Model	TPW 20
Payload	20kg
Working radius	1650mm
Maximum tray size	1200*1200
Stacking height	2100mm
Palletizing speed	8-10 boxes/min
Rated voltage	Single-phase 220V
Working air pressure	>0.5Mpa
IP rating	IP54

## Travel Range



# TCR 200 Parameters

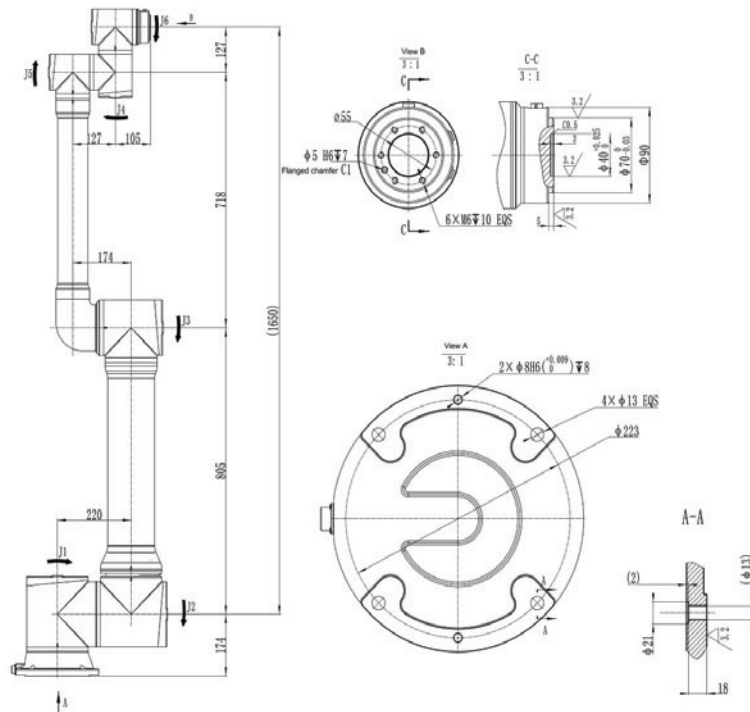
**TURIN**

<b>Model</b>	<b>TCR200</b>	
Payload	20kg	
Maximum Working Range	1650mm	
Body Weight	68kg	
Rated Power	3.9kw	
Max Speed	J1	100°/s
	J2	100°/s
	J3	150°/s
	J4	180°/s
	J5	180°/s
	J6	180°/s
Max Operation Area	J1	±175°
	J2	±175°
	J3	-245°~+65°
	J4	±175°
	J5	±175°
	J6	±360°
Protection Rating	IP54	
Position Repeatability ※	±0.1mm	
Working Temperature	0~45°C	



※This precision applies to the Turin Intelligence series.

## Working Range



# TCR 300 Parameters

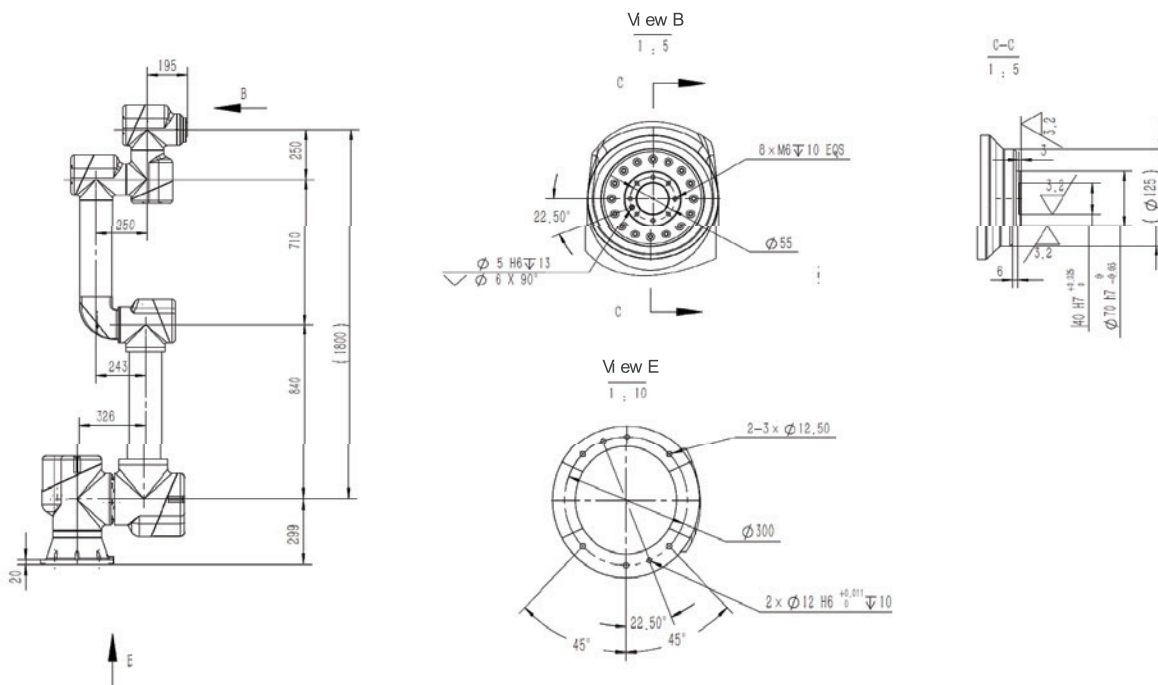
**TURIN**

Model	TCR300	
Payload	30kg	
Maximum Working Range	1800mm	
Body Weight	154kg	
Rated Power	5.95kw	
Max Speed	J1	100°/s
	J2	100°/s
	J3	150°/s
	J4	180°/s
	J5	180°/s
	J6	180°/s
Max Operation Area	J1	±175°
	J2	±175°
	J3	-245°~+65°
	J4	±175°
	J5	±175°
	J6	±360°
Protection Rating	IP54/IP67	
Position Repeatability ※	±0.06mm	
Working Temperature	0~45°C	
Control Cabinet	TRC-B06	



※ This precision applies to the Turin Intelligence series.

## Working Range



# TURIN ROBOT

## Welding Robot Expert



**TURIN**

# PRODUCT

## DIAGRAM

Welding Robot >>



MIG  
MIG Welding Robot



TIG  
TIG Welding Robot

Cutting Robot >>

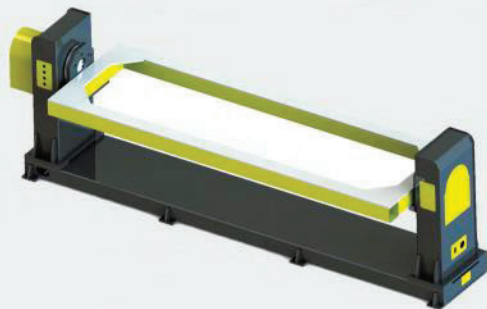


Plasma Cutting Robot

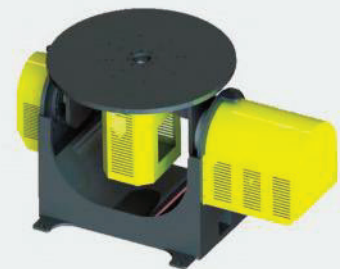


Flame Cutting Robot

Robot Auxiliary Equipment >>



Uniaxial Positioner



Biaxial Positioner

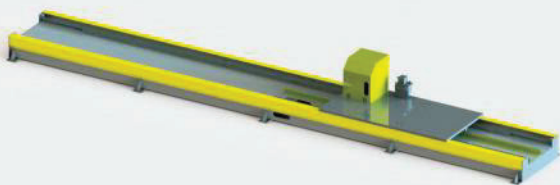




Laser Welding Robot



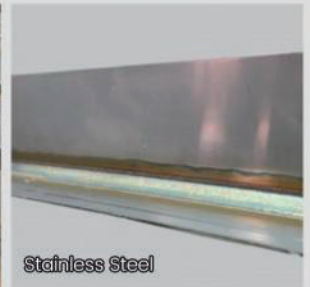
Laser Cutting Robot



Walking Track of Robot



Carbon Steel



Stainless Steel

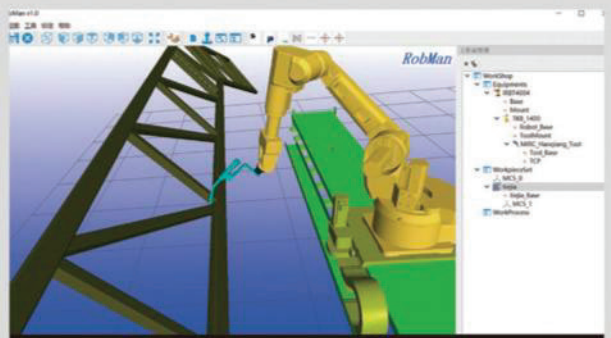


Aluminium Alloy



Special Metal

Machinable Material



Off-line Programming



Laser Tracking

**TURIN**

# MIG

**WELDING ROBOT SUIT**

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**TKB-1440**

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**TKB-2030**

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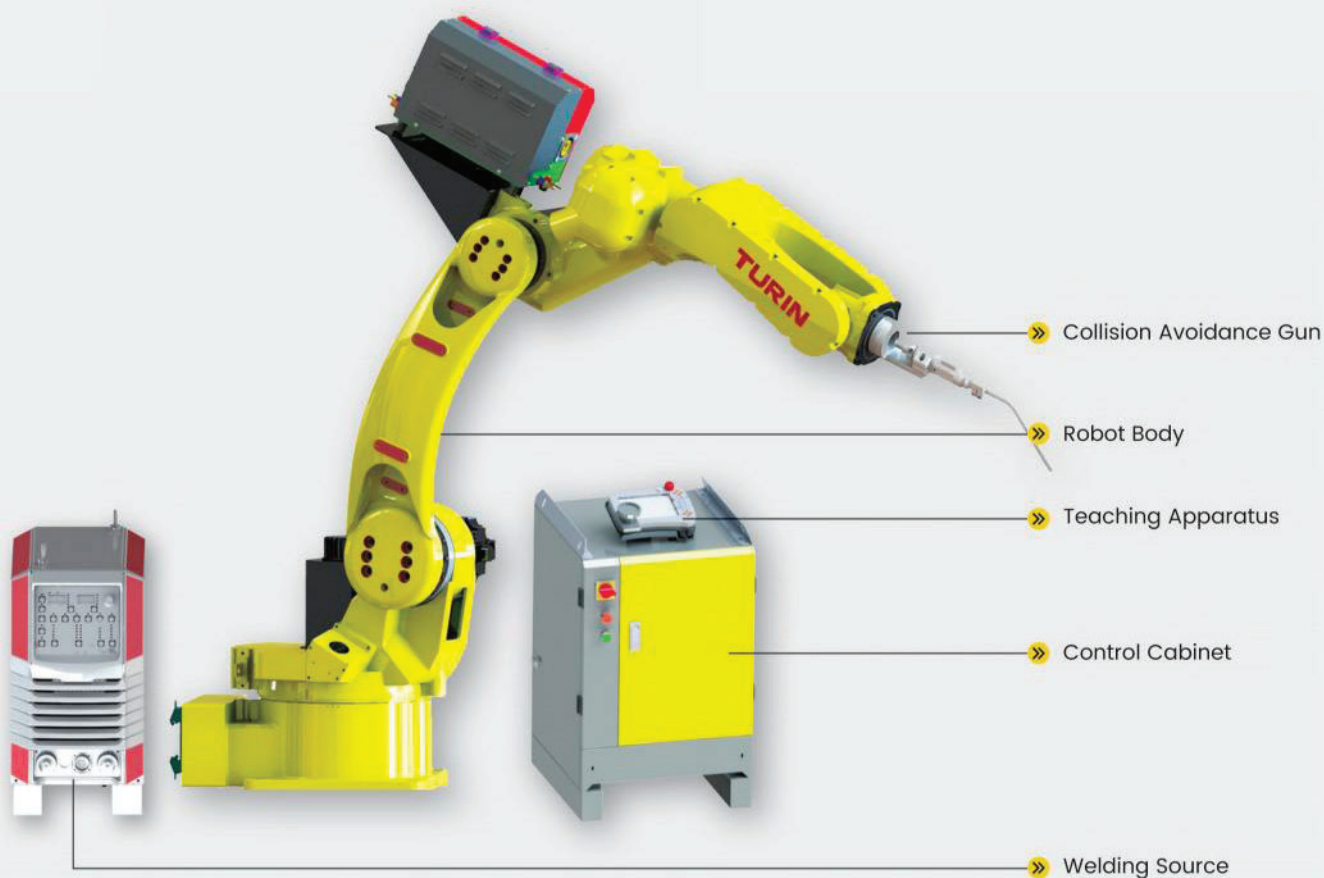
Application Diagram >>



Progea Leonardo srl

✉ [info@progealeonardo.com](mailto:info@progealeonardo.com)

🌐 [progealeonardo.com](http://progealeonardo.com)



Model	TKB1440	
Payload	10kg	
Max Working Radius	1455mm	
DOF	6	
Body Weight	155kg	
Rated Power	4.3kw	
Max Speed	J1	198°/s
	J2	198°/s
	J3	169°/s
	J4	300°/s
	J5	240°/s
	J6	520°/s
Max Operation Area	J1	±170°
	J2	153°~92°
	J3	75°~-100°
	J4	±190°
	J5	±130°
	J6	±360°
Protective specification	IP54	
Position Repeat Accuracy	±0.05mm	
Working Temperature	0~45°C	

**TURIN**

# PLASMA

**CUTTING ROBOT SUIT**

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**TKB1400**

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**TKB1600**

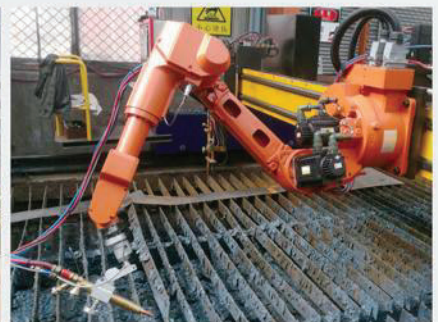
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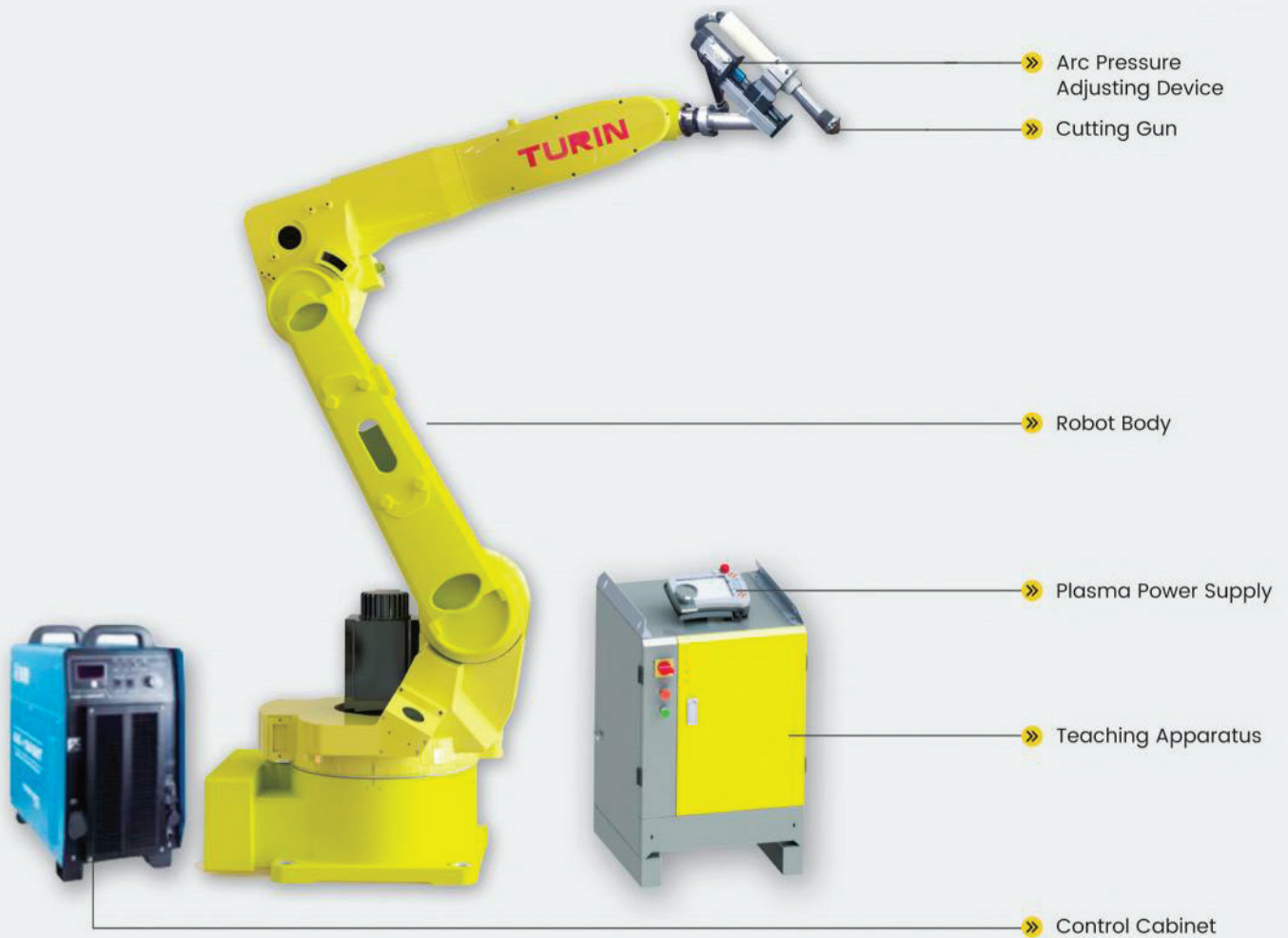
**TKB1900**

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Application Diagram





Technical Parameter »

Model	TKB1400		
Payload	6kg		
Max Working Radius	1412mm		
DOF	6		
Body Weight	160kg		
Rated Power	3.5kw		
Max Speed	J1	198°/s	
	J2	198°/s	
	J3	169°/s	
	J4	360°/s	
	J5	360°/s	
	J6	600°/s	
Max Operation Area	J1	±170°	
	J2	153°--92°	
	J3	80°--100°	
	J4	±140°	
	J5	±120°	
	J6	±360°	
Protective specification	IP54/IP67		
Position Repeat Accuracy	±0.05mm		
Working Temperature	0-45°C		

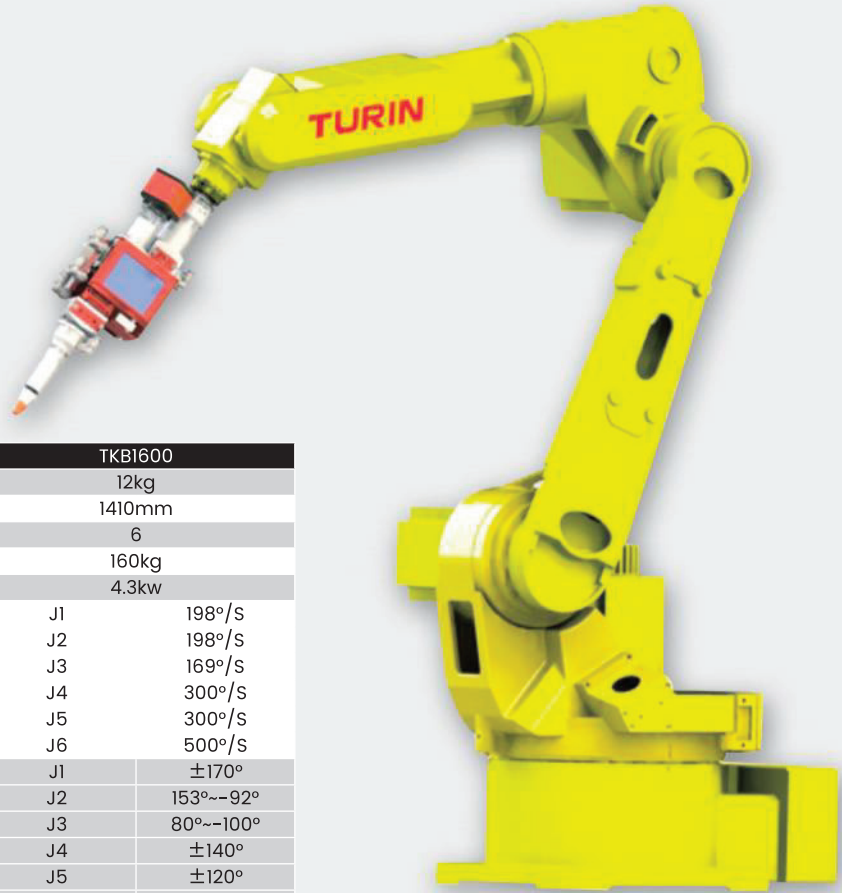
**TURIN**

# TKB1600

Laser welding

Payload: 12kg

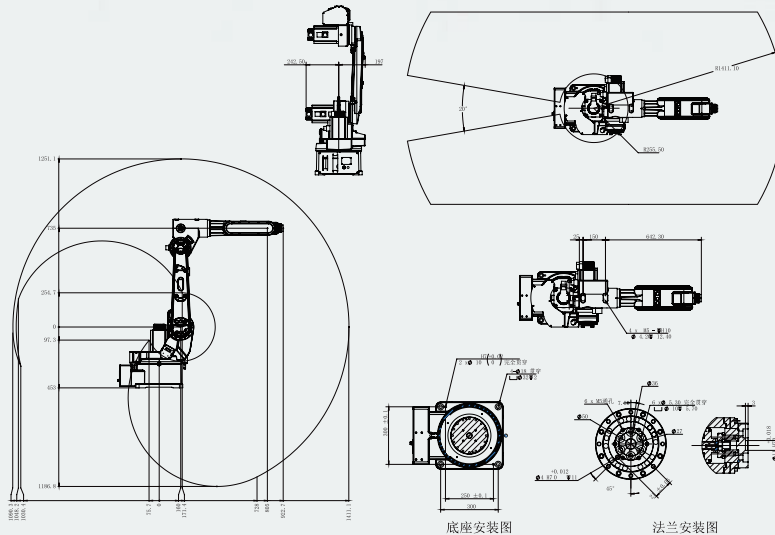
Arm Reach: 1410mm



### Technical Parameter >>

Model	TKB1600	
Payload	12kg	
Max Working Radius	1410mm	
DOF	6	
Body Weight	160kg	
Rated Power	4.3kw	
Max Speed	J1	198°/s
	J2	198°/s
	J3	169°/s
	J4	300°/s
	J5	300°/s
	J6	500°/s
Max Operation Area	J1	±170°
	J2	153°~92°
	J3	80°~100°
	J4	±140°
	J5	±120°
	J6	±360°
Protective specification	IP54/IP67	
Position Repeat Accuracy	±0.06mm	
Working Temperature	0~45°C	

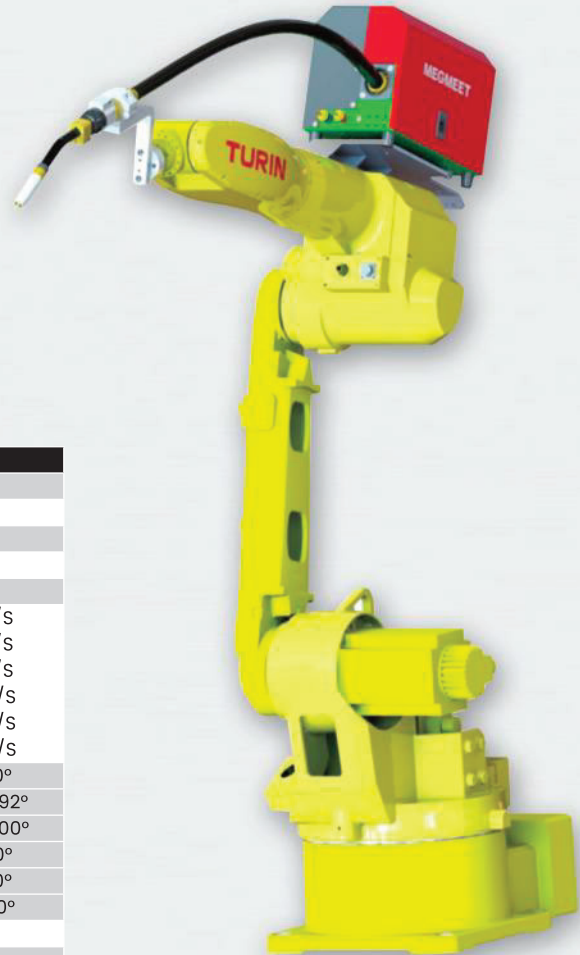
### Scope of work >>



**TURIN**

# TKB1400

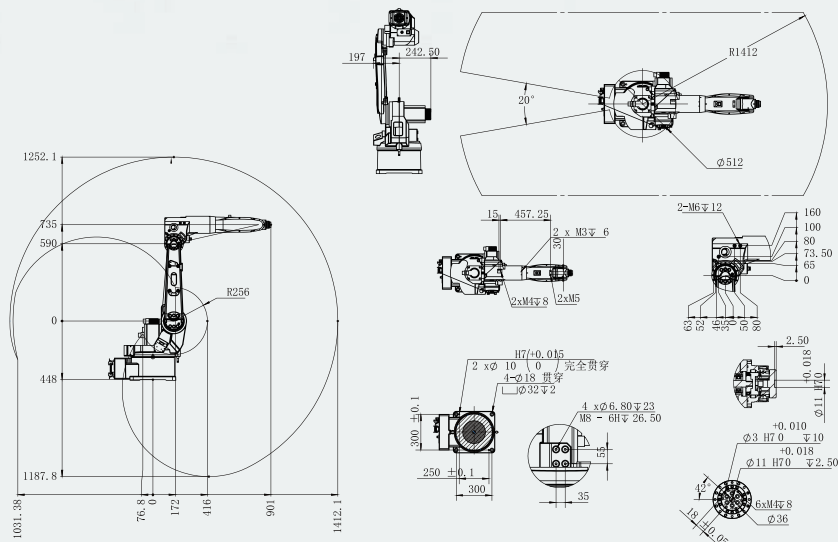
Payload: 6kg  
Arm Reach: 1412mm



Technical Parameter >

Model	TKB1400	
Payload	6kg	
Max Working Radius	1412mm	
DOF	6	
Body Weight	160kg	
Rated Power	3.5kw	
Max Speed	J1	198°/s
	J2	198°/s
	J3	169°/s
	J4	360°/s
	J5	360°/s
	J6	600°/s
Max Operation Area	J1	±170°
	J2	153°--92°
	J3	80°--100°
	J4	±140°
	J5	±120°
	J6	±360°
Protective specification	IP54/IP67	
Position Repeat Accuracy	±0.05mm	
Working Temperature	0~45°C	

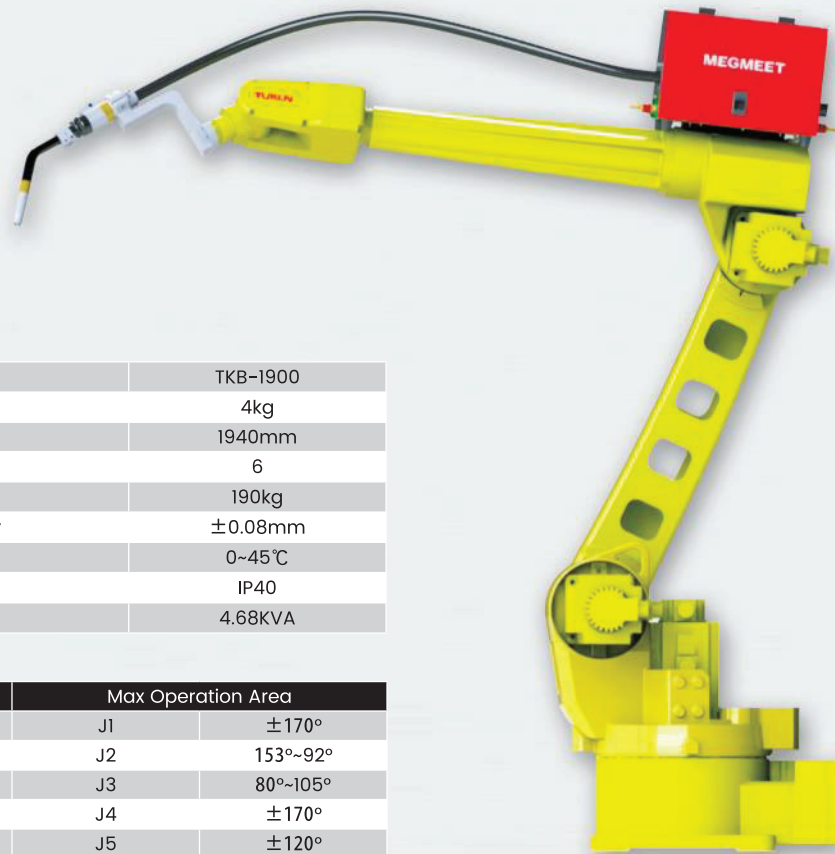
Scope of work >>



# TURIN

# TKB-1900

Payload: 4kg  
Arm Reach: 1940mm

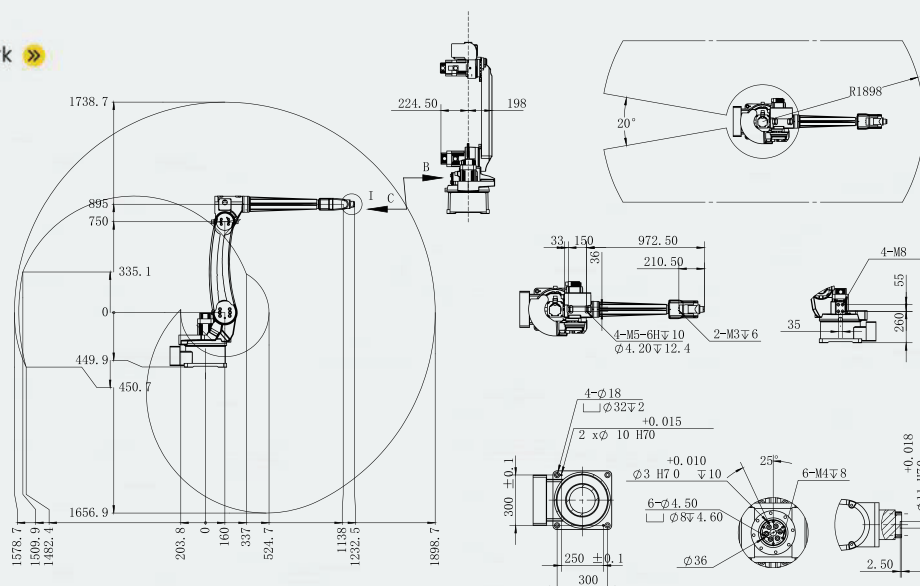


### Technical Parameter »

Model	TKB-1900
Payload	4kg
Max Working Radius	1940mm
DOF	6
Body Weight	190kg
Position Repeat Accuracy	±0.08mm
Working Temperature	0~45°C
Protection Grade	IP40
Power Capacity	4.68KVA

Max Speed		Max Operation Area	
J1	140°/S	J1	±170°
J2	150°/S	J2	153°~92°
J3	160°/S	J3	80°~105°
J4	245°/S	J4	±170°
J5	300°/S	J5	±120°
J6	450°/S	J6	±360°

### Scope of Work »







Technical Parameter >>

Model		J1			J2	J3	J4
Axis Specification	Arm Length (mm)	STH30-400 150	STH30-500 250	STH30-600 350	250	150	-
	Rotation Range(°)	140 -140			140 -140	-	360 -360
Repeated Positioning Accuracy (XYZ:mm)(r:°)		±0.01			±0.01	±0.02	±0.016
Top speed (XYZ:mm/sec)(r:°/sec)		320			520	1020	600
Maximum Carrying Weight		3kg					
Standard Periodic Time (sec)		0.4					
R Axis Allowable Inertia Moment (kgm <sup>2</sup> )		0.5					
(IN) (OUT)		0.2*10					
User Piping		Φ4*3					
Length of Robot Cable (m)		Standard: 3 Optional: 5					
Host Weight (kg)		16.8~19kg					
Action Limit Setting		1					



Technical Parameter >>

Model	TKB070	TKB2030	TKB2670	TKB3670	TKB6700
Payload	7kg	6kg	20kg	30kg	210kg
Max Working Radius	910mm	2078mm	1721mm	1721mm	2700mm
DOF	6	6	6	6	6
Body Weight	50kg	210kg	210kg	220kg	1131kg
Rated Power	2.4kw	4.3kw	4.5kw	5kw	8.5kw
Max Speed	J1 450°/s	J1 168°/s	J1 187°/s	J1 187°/s	J1 123°/s
	J2 360°/s	J2 148°/s	J2 148°/s	J2 148°/s	J2 115°/s
	J3 360°/s	J3 148°/s	J3 169°/s	J3 169°/s	J3 112°/s
	J4 450°/s	J4 300°/s	J4 234°/s	J4 234°/s	J4 179°/s
	J5 576°/s	J5 240°/s	J5 225°/s	J5 225°/s	J5 172°/s
	J6 720°/s	J6 520°/s	J6 360°/s	J6 225°/s	J6 219°/s
Max Operation Area	J1 ±170°	J1 ±160°	J1 ±160°	J1 ±160°	J1 ±185°
	J2 110°~-75°	J2 150°~-90°	J2 150°~-90°	J2 150°~-90°	J2 85°~-50°
	J3 50°~-120°	J3 75°~-100°	J3 80°~-100°	J3 80°~-100°	J3 120°~-155°
	J4 ±160°	J4 ±190°	J4 ±150°	J4 ±150°	J4 ±350°
	J5 ±120°	J5 ±130°	J5 ±110°	J5 ±110°	J5 ±125°
	J6 ±360°	J6 ±360°	J6 ±300°	J6 ±300°	J6 ±350°
Protective specification	J5J6 IP 67 other IP 54	IP 54	IP 54	IP 54	J5J6 IP 67 other IP 54
Position Repeat Accuracy	±0.02mm	±0.07mm	±0.05mm	±0.05mm	±0.7mm
Working Temperature	0~45°	0~45°	0~45°	0~45°	0~45°

**TURIN**

# TRC5-B06

## INDUSTRIAL ROBOT CONTROL CABINET

The third generation of Turing robot control cabinet, TRC3 control cabinet is a high-performance industrial robot control cabinet developed based on ETHRECAT bus by Turing robot introduced totally for 40 years of industrial robot technology research and development experience, combined with domestic practical application experience. In addition to fully inheriting the advantages of the previous generation of products in motion control, flexibility, versatility, security, reliability and other aspects, TRC3 control cabinet also made new breakthroughs in distribution, modularization, user interface, bus communication, multi-robot coordination control, off-line simulation software and other aspects.



Arc welding package.....Cutting package  
Positioner.....External shaft synergy Offline  
Fill-in-the-blank programming.....programming

### Technical Parameter »

Model	Configuration
processor	Intel J316
Memory capacity	4G DDR3
User storage space	MSATA solid state Drive 60GB
Demonstrator	8" TFT-LCD (resolution 1024*768), tempered touch screen, physical button, safety enable switch, emergency stop button, hand/automatic switch key.
Control cabinet switch buttons	Power switch, emergency stop button (optional hand/automatic switch, start button, stop button)
Control cabinet indicator light	Power indicator (optional running indicator and status indicator)
Number of control axes	The single machine has 6 axes, and can expand 3 external axes for linkage and cooperative movement. (Single axis rotation axis xy rotation axis, walking axis.
Number of 10 bits	Standard DI (digital input): 10 DO (digital output): 14 Optional DI (digital input): 18 DO (digital output): 10 Reserved for welding DI (digital input): 8 DO (digital output): 10 AO (analog output): 2
Supports external communication and interfaces	Ethernet interface RJ45 (TCP/IP; Modbus TCP); HDMI; USB
Security module	Associate emergency stop and ensure that the robot stops quickly when the robot is abnormal
Operation mode	Teaching, reproducing, remote
Programming methods	Teaching reproduction, off-line import, process programming
Process package	Welding process package, palletizing process package, dispensing process package, stamping process package, remote/appointment, visual follow process package
Motion function	Joint, straight line, arc, alignment machine linkage, coordination, conveyor belt to follow
Instruction system	Movement, logic, craft, arithmetic
Coordinate system	Joint coordinates, world coordinates, tool coordinates, user coordinates
Exception detection function	Emergency stop exception, servo exception, safety maintenance, arc starting exception, user coordinate exception, tool coordinate exception, etc
Application	Palletizing, loading and unloading, gas welding, argon arc welding, plasma cutting, spraying, gluing, polishing, stamping, visual follow grab
Protection level	IP65
Origin function	Absolute: battery memory; Zero calibration function
Cooling	Heat exchanger
Power supply	220V AC



### FlexPendant >>

Turing robot teaching device is a teaching terminal used in conjunction with Turing robot control system. The teaching device uses a large size touch display, with high protection grade, ABS engineering plastic housing. Fully self-developed control system and programming method, providing online fill-in-the-blank programming teaching method. Enable beginners to grasp quickly.

Arc extinguishing  
parameter sticky  
wire detection

ArcOff  
quenching

+ Optional off-line programming

swing welding

Arc tracking

ArcOn  
Arc starting

Arc initiation  
parameter  
swing parameter  
gas detection

### Technical Parameter >>

Model	Technical specifications PrincipalData
Processor	Cortex-A9 quad-core,1.4GHz main frequency
Memory capacity	1G DDR3
Memory card	Comes standard with an8GB EMMC
Touchscreen resolution	8" TFT resolution 1024*768
Touch screen	resistive type
Operating system	Ubuntu12.04
Buzzer	There are
Internal integrated TF card slots	There are
Keys	Jog key 12, program manual control key, 4 custom function keys and other emergency stop switch, enable switch, hand automatic switch
Switches	key
Communication interface	Ethernet
norm	Protection class: IP54/65; Shell: ABS engineering plastic; Input voltage: 24VDC
Cable length	7m/10m
Power supply	DC24V about 20W
Overall dimensions	250*207*80mm

**TURIN**

## LASER WELD TRACKER



The laser seam tracker has digitalized and integrated integrated structure. It can detect and track many kinds of welds online and realize automation and intellectualization of welding



### Technical Parameter >>

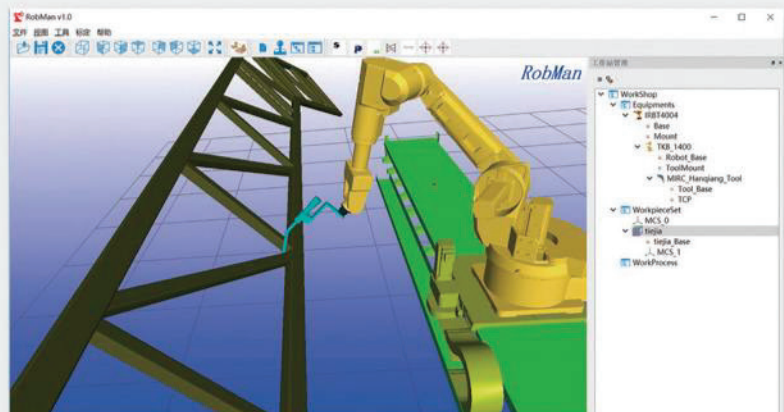
- » Advantages of optical weld tracking
  - Non-contact and never wear
  - reducing heat load
  - increase productivity
  - Ensure safe welding and perfect welds
  - Can make the torch in the ideal position
  - Can compensate for production, equipment and operator
  - Consistent and reproducible connections can be achieved
  - For complex weldment can reduce programming work

Laser Weld Tracker	
Dimensions	132*65*28mm
weight	390g
power	5W
Detection range	18mm*30mm
Mounting height	80mm
Detection accuracy	0.1mm/0.5mm/0.04mm
Welding type	MIG,MAG,TIG
Welding adaptability	Anti arc, anti splash, anti spot welding, anti electromagnetic interference
Weld form	Straight seam/ring seam/curved seam,etc; Splice/lap/fillet weld, etc

## OFF-LINE PROGRAMMING

Robot off-line programming and simulation software

- » Automatic calculation and simulation of robot machining trajectory based on 3D geometric features
  - Support externalaxis collaboration tools
  - Applied to cutting, high-precision welding, intelligent flexible production

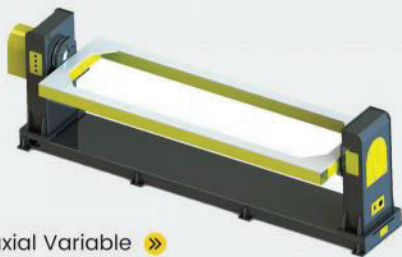


## AUXILIARY EQUIPMENT



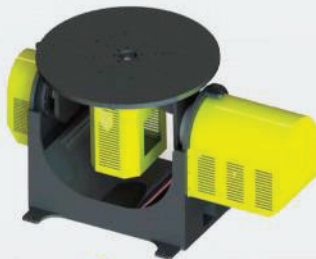
Walking Track of Robot »

Model	TDG-500	TDG-1000
Maximum load	500kg	1000kg
Maximum velocity	800mm/s	400mm/s
Positioning accuracy	±0.1mm	±0.1mm
Stop position	Arbitrary	
Other	Itineraries can be customized	



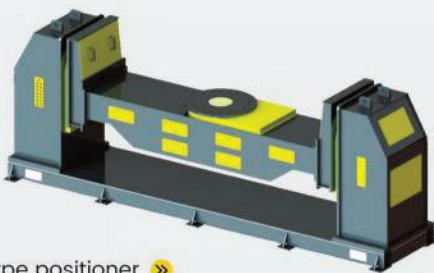
Uniaxial Variable Position Machine »

Model	TBW-300	TBW-500	TBW-1000
Maximum load	200kg	500kg	1000kg
Maximum velocity	150°/s	120°/s	100°/s
Positioning accuracy	±0.1mm	±0.1mm	±0.1mm
Stop position	Arbitrary		
Other	Clamping frames are customizable		



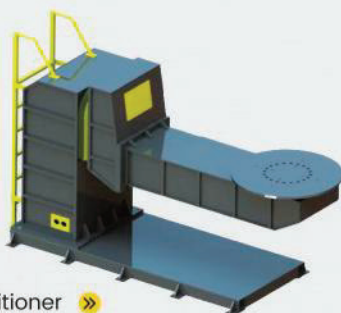
Biaxial Variable Position Machine »

Model	TBW-200 (s)	TBW-500 (s)	
Maximum load (2 axis center)	200kg	500kg	1Axis range: ±90 2 Axis range: any Angle
Maximum speed	1axis 80°/s; 2 axis 100/s		
Positioning accuracy L=300mm light to I test heart line	±0.12mm	±0.12mm	Note: Workpiece height <500mm



U-type positioner »

Model	Maximum load	Motor power	Maximum velocity	Positioning accuracy
TBW-300(U)	300	2.9 kW/1.6KW	67.7°/sec 45°/sec	0.08
TBW-600(U)	600	2.9 kW/1.8KW		0.12
TBW-1000(U)	1000	2.9 kW/2.9 KW		0.15



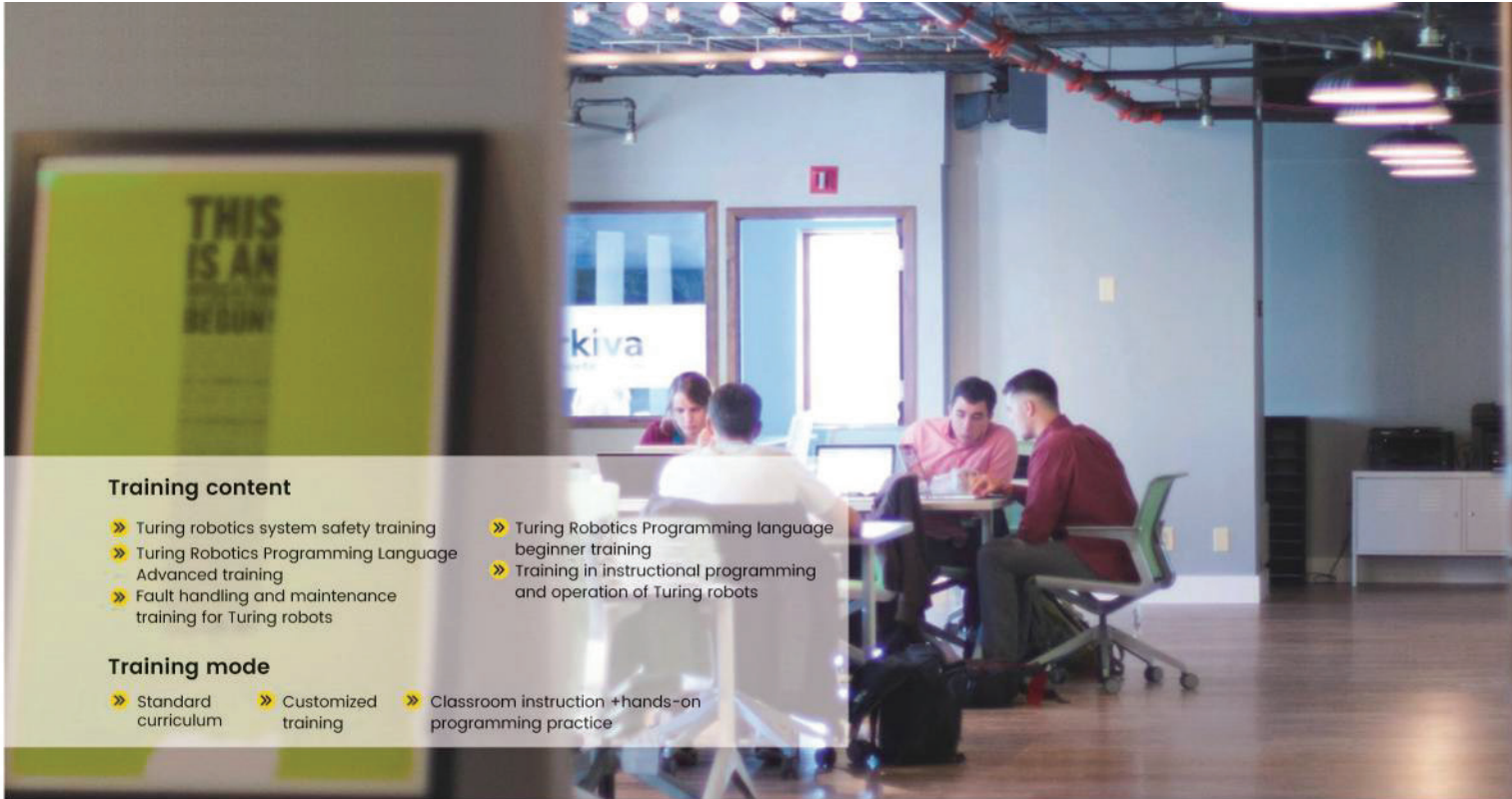
L-type positioner »

Model	Maximum load	Motor power	Maximum velocity	Positioning accuracy
TBW-500(L)	500	2.9kw 1.8kw	45°/sec 42°/sec	0.1
TBW-1000(L)	1000	2.9kw 1.8kw	42°/sec 10.8°/sec	0.15
TBW-2000(L)	2000	4.3kw 2.9kw	16.8°/sec 9.98°/sec	0.18

**TURIN**

## TRAINING

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### Training content

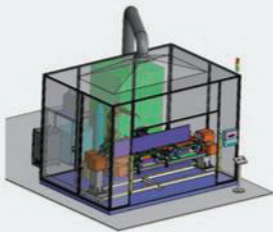
- » Turing robotics system safety training
- » Turing Robotics Programming Language Advanced training
- » Fault handling and maintenance training for Turing robots
- » Turing Robotics Programming language beginner training
- » Training in instructional programming and operation of Turing robots

### Training mode

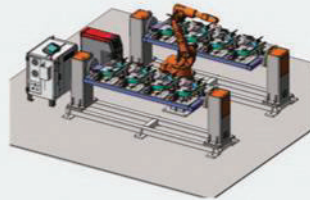
- » Standard curriculum
- » Customized training
- » Classroom instruction +hands-on programming practice

## SUPPORT

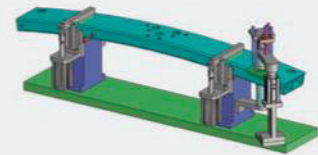
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Holistic Robot Workstation



Eight Axis Double Station



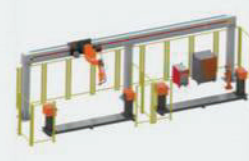
Work Fixture Scheme



Eight Axis Single Station



Robot + Walking Axis  
+ Double Single Axis Transformer



Robot Side Hanging  
+ Double Station

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## **APPLICATION CASE**

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**TURIN**

## **SOLUTIONS**

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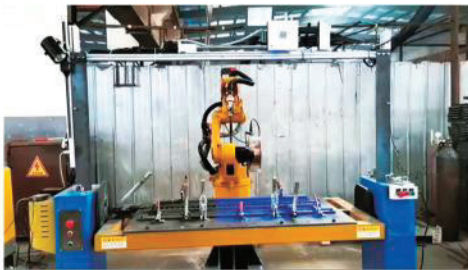
### **Welding Automation**

Workpiece deformation due to exposure to heat and welding spatters adhering to the tooling and chuck in the welding process will affect uniformity of welding. Large workpiece and complicated weld joint also make teaching more cumbersome and require higher skills of commissioning and operating personnel. The new generation of welding technology of TURIN pursues smart application adaptability and flexible weld path and by combining such technologies as laser tracker, 3D vision system and path generation, it makes the robots meet the various welding requirements with respect to resistance to external disturbance, adaptability to complex paths and commissioning in the welding process.



Welding of New Energy Electric Bicycle Frame

Welding with a TURIN robot requires no human participation to realize automatic welding, thus reducing occurrence of occupational diseases and improving automation of the welding industry. With the special welding process package, the welding quality may be expressed with a value. Programmed welding operations facilitate high integration of application functions and easy commissioning. One automatic robot can finish the work of two to three welders, thus reducing the company's material and labor costs, enhancing yield, shortening the iteration cycle of the products and improving customer confidence and enterprise competitiveness.



3D Vision Guided Teach-free Welding

#### **1.Electric car welding**

TKB1440/TKB2030 welding robot with Aotai low spatter welder

·Combine with product characteristics, observe the deviation value of multiple batches of workpieces, and develop suitable process methods and program trajectory planning

- Simulate multiple welding sequences and





## SOLUTIONS

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posture angles according to the product structure to achieve the shortest program trajectory time and improve the empty walking speed

- According to the characteristics of the product, develop differentiated parameters, from arc initiation to welding to arc closing precise control
- Flying arc saving arc initiation time, to the point of arc initiation, kinetic control of the movement program to achieve fast, accurate and stable



Ship Welding with Dual-robot Collaborative Laser Tracking

### **2. robot upside down laser tracking welding ship structure with gantry system**

- TKB1400 with pulse welding machine
- Adopting laser tracking process to solve the problem of large deviation
- Laser position finding is before welding, the laser first scans the product

to determine the weld position, and after the product position changes, the actual weld position is corrected for the path

- Laser real-time tracking is in welding, the laser real-time access to weld position, according to offset compensation, get the actual welding path
- Multi-functional pulse welder solves the need for welding multiple materials

### **TURIN robot welding function introduction**

- Full English interface, easy to operate
- Off-line simulation
- Precise control from arc initiation to welding process to arc closing
- Multi-layer and multi-pass
- Contact position finding
- Arc tracking
- Laser tracking
- 2D visual guidance
- 3D vision guidance

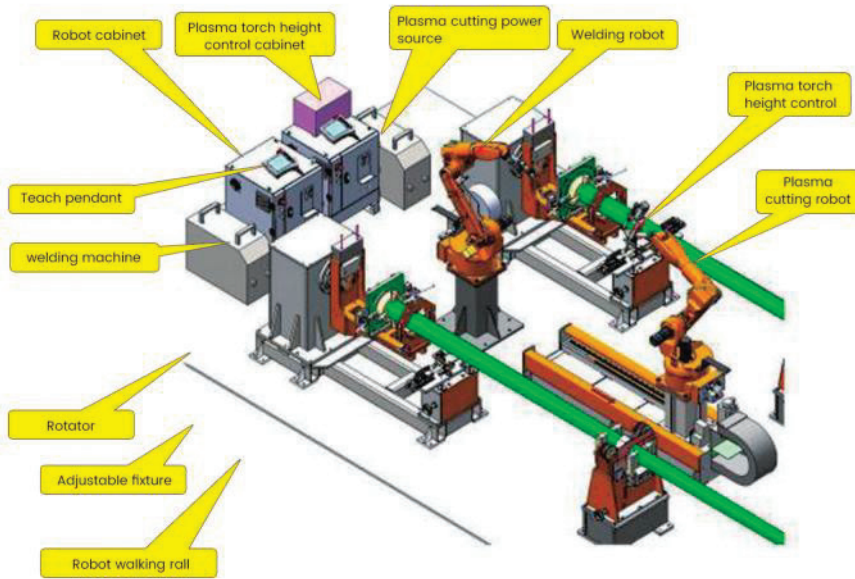
**TURIN**

## **SOLUTIONS**

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### **Light Pole–Robot Welding / Cutting Station Solution**

Two robots for welding and plasma cutting of light pole exported to Belarus were completed in collaboration.



### **ARC Welding Robot With Laser Tracking**

- 1.Laser tracking system scans the outline of welding part via feature points and collect the data
- 2.Controller use its specific algorithm, data analysis and trajectory fitting
- 3.On the basis of fitting trajectory, teach program the actual position(only for the first time)
- 4.Before welding, the laser scans the featured points of the welding part to determine the position of the weld If the part position changes, it calculates the deviation between the theoretical trajectory and the actual trajectory by the algorithm and correct the path of the actual weld position.
- 5.Laserreal-time tracking: inthewelding, the laser real-time obtains the position of the weld, compensates according to the offset, and obtains the actual welding path.







206.50 75.35

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CERTIFICAZIONI

