





Value Added Accessories

- 

High Positioning Accuracy
- 

High Speed
- 

High Rigidity
- 

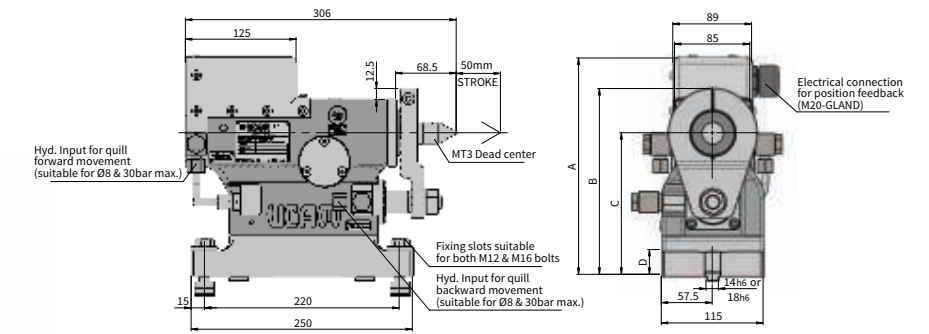
High Clamping Torque



Tailstocks are used in conjunction with a CNC rotary table on a milling machine when the components are lengthy. A tailstock enables a CNC machine to precisely and safely process shaft-type work pieces. The tailstock is typically used to support the components via the use of a dead centre or Live centre. The tailstock can be moved along the bed to accommodate the component of varying lengths.

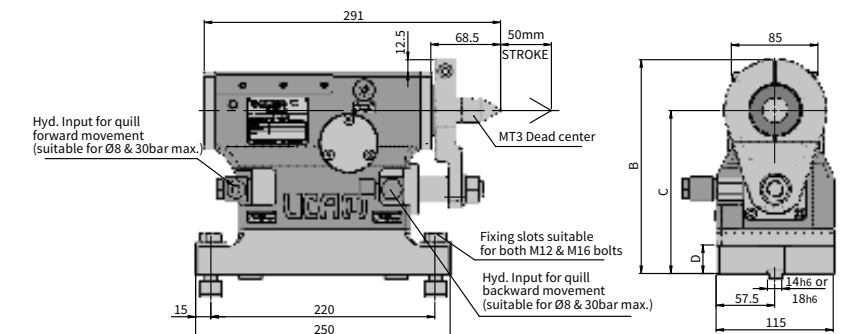


Hydraulic Tailstock With Feedback



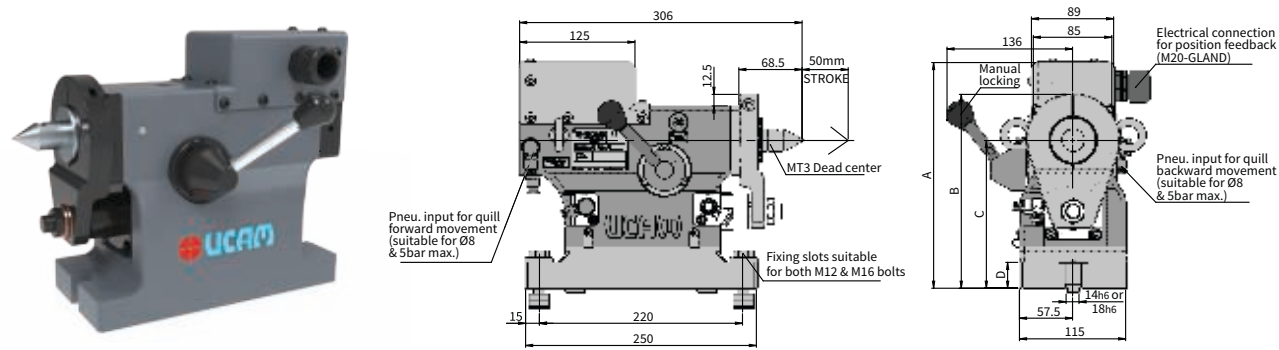
MODEL NUMBER	SUITABLE ROTARY TABLE	A	B	CENTRE HEIGHT 'C'	D	DEAD CENTRE	STROKE	AXIAL THRUST HYD@30BAR
UTAIL-135-Mx	URX-180	21.95	172.5	135	18	MT#3	50	3750N
UTAIL-140-Mx	URX-200	224.5	177.5	140	19	MT#3	50	3750N
UTAIL-160-Mx	URX-250	244.5	197.5	160	28	MT#3	50	3750N
UTAIL-175-Mx	USSR-200i-TN	259.5	212.5	175	30	MT#3	50	3750N
UTAIL-200-Mx	URH-200-TN	284.5	237.5	200	30	MT#3	50	3750N
UTAIL-210-Mx	URX-320	294.5	247.5	210	30	MT#3	50	3750N
UTAIL-220-Mx	URH-320-TN	304.5	257.5	220	30	MT#3	50	3750N
UTAIL-230-Mx	URH-400	314.5	267.5	230	30	MT#3	50	3750N

Hydraulic Tailstock Without Feedback



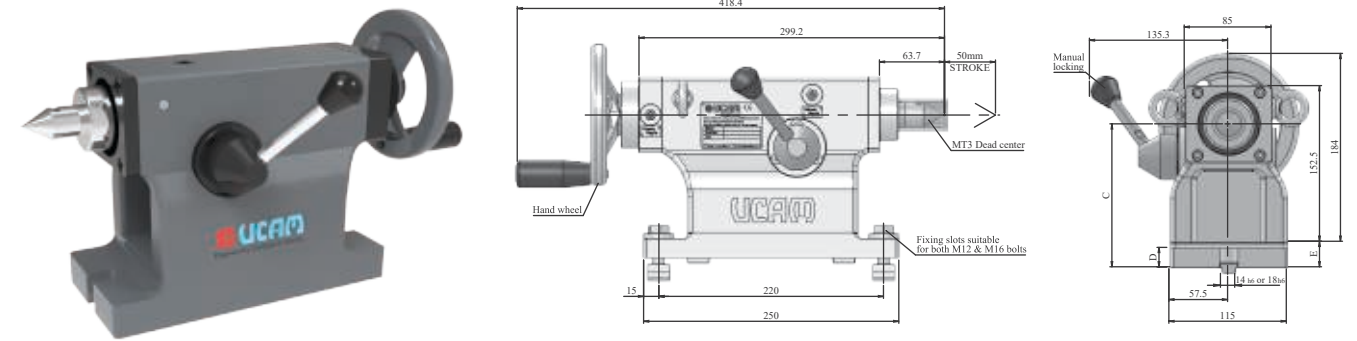
MODEL NUMBER	SUITABLE ROTARY TABLE	CENTRE HEIGHT 'C'	D	DEAD CENTRE	S	NET WEIGHT (KGS) (APPROX)
UTAIL-135-Mx	URX-180	135	18	MT#3	50	16
UTAIL-140-Mx	URX-200	140	19	MT#3	50	19
UTAIL-160-Mx	URX-250	160	28	MT#3	50	22
UTAIL-175-Mx	USSR-200i-TN	175	30	MT#3	50	24
UTAIL-210-Mx	URX-320	210	30	MT#3	50	26
UTAIL-220-Mx	URH-320-TN	220	30	MT#3	50	27
UTAIL-230-Mx	URH-401	230	30	MT#3	50	28

Pneumatic Tailstock With Feedback



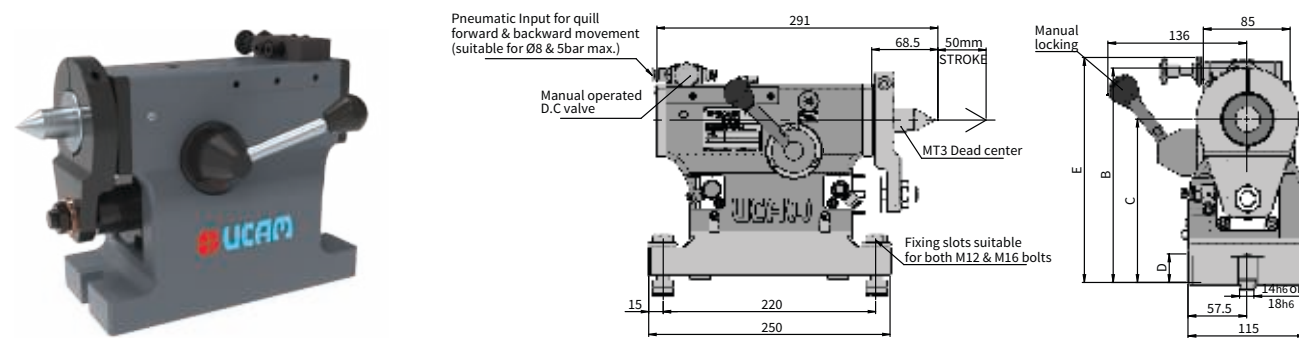
MODEL NUMBER	SUITABLE ROTARY TABLE	A	B	CENTRE HEIGHT 'C'	D	DEAD CENTRE	STROKE	AXIAL THRUST HYD@30BAR
UTAIL-135-Px	URX-180	21.95	172.5	135	18	MT#3	50	1000N
UTAIL-140-Px	URX-200	224.5	177.5	140	19	MT#3	50	1000N
UTAIL-160-Px	URX-250	244.5	197.5	160	28	MT#3	50	1000N
UTAIL-175-Px	USSR-200i-TN	259.5	212.5	175	30	MT#3	50	1000N
UTAIL-200-Px	URH-200-TN	284.5	237.5	200	30	MT#3	50	1000N
UTAIL-210-Px	URX-320	294.5	247.5	210	30	MT#3	50	1000N
UTAIL-220-Px	URH-320-TN	304.5	257.5	220	30	MT#3	50	1000N
UTAIL-230-Px	URH-400	314.5	267.5	230	30	MT#3	50	1000N

Manual Tailstock



MODEL NUMBER	SUITABLE ROTARY TABLE	CENTRE HEIGHT 'C'	D	DEAD CENTRE	S	NET WEIGHT (KGS) (APPROX)
UTAIL-135-Mx	URX-180	135	18	MT#3	50	16
UTAIL-140-Mx	URX-200	140	19	MT#3	50	19
UTAIL-160-Mx	URX-250	160	28	MT#3	50	22
UTAIL-175-Mx	USSR-200i-TN	175	30	MT#3	50	24
UTAIL-210-Mx	URX-320	210	30	MT#3	50	26
UTAIL-220-Mx	URH-320-TN	220	30	MT#3	50	27
UTAIL-230-Mx	URH-401	230	30	MT#3	50	28

Pneumatic Tailstock Without Feedback



MODEL NUMBER	SUITABLE ROTARY TABLE	CENTRE HEIGHT 'C'	D	DEAD CENTRE	S	AXIAL THRUST HYD@30BAR	NET WEIGHT (KGS) (APPROX)
UTAIL-135-Px	URX-180	135	18	MT#3	50	1000N	18
UTAIL-140-Px	URX-200	140	19	MT#3	50	1000N	21
UTAIL-160-Px	URX-250	160	28	MT#3	50	1000N	24
UTAIL-175-Px	USSR-200i-TN	175	30	MT#3	50	1000N	26
UTAIL-210-Px	URX-320	210	30	MT#3	50	1000N	28
UTAIL-220-Px	URH-320-TN	220	30	MT#3	50	1000N	29
UTAIL-230-Px	URH-401	230	30	MT#3	50	1000N	30

Revolving Centre For Tailstocks



STANDARD OPTION

NON - STANDARD OPTION

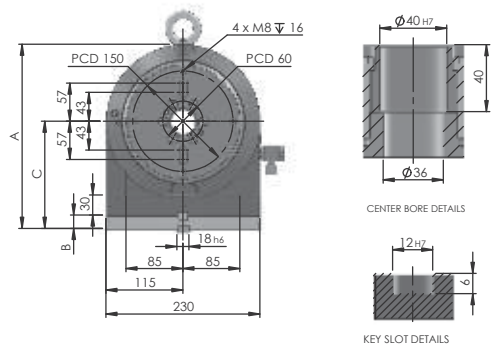


Faceplate Tailstock

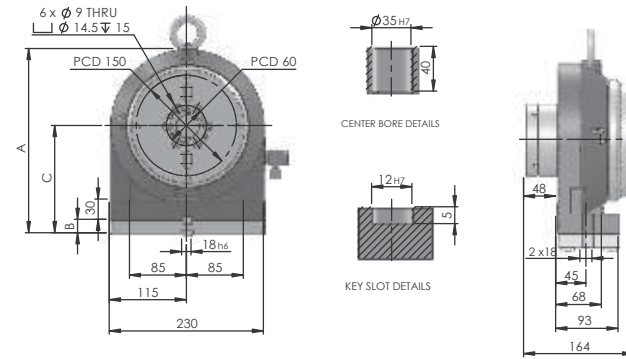


MODEL NUMBER	SUITABLE ROTARY TABLE	A	B	C	CLAMP TORQUE PNEU@5BAR HYD@30BAR	NET WEIGHT (KGS) (APPROX)
UFT-140	URX-200	259	0	140	200Nm 0	30
UFT-160	URX-250	275	20	160	200Nm 20	32
UFT-210-H	URX-320	347	50	210	NA 50	65
UFT-230-H	URH-401	367	70	230	NA 70	70
UFT-310-H	URH-500	516	75	310	NA 75	190
UFT-325-H	URH-631	536	90	325	NA 90	205

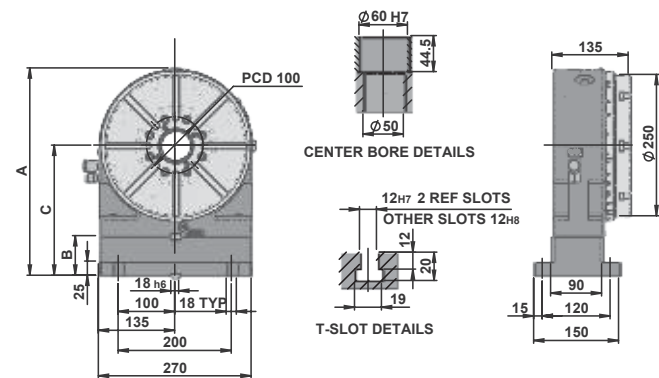
UFT-140/160



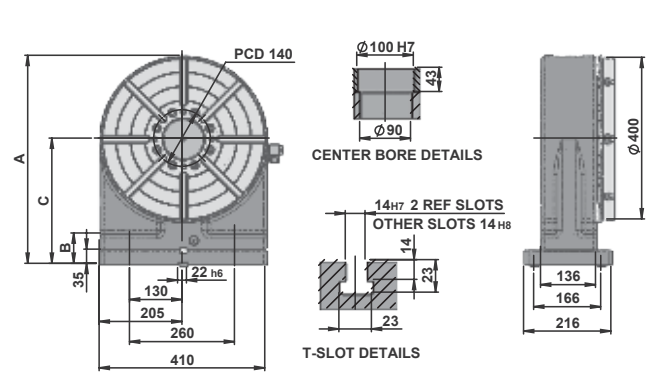
UFT-140/160 RU



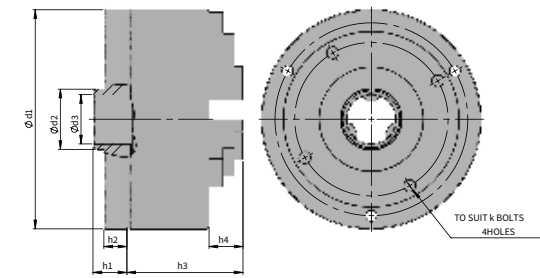
UFT-210/230



UFT-310/325

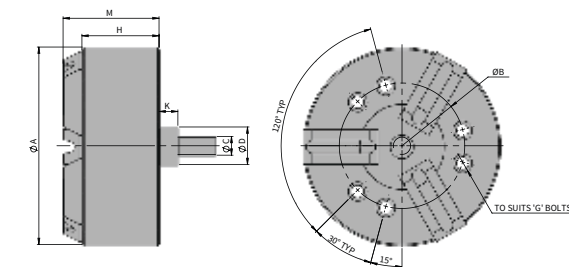


Manual Scroll Chuck



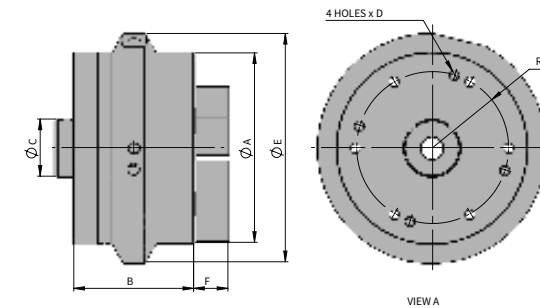
SUITABLE NCRT MODEL	D1	D2	D3	D4 (PCD)	H1	H2	H3	H4	K
URX-180	160	60h6	-	140±0.2	26	16	96	29	29
URX-200	200	60h6	45H7	176±0.2	31	21	106	31	31
URX-250	250	60h6	40H7	224±0.2	36	26	121	36	36
URX-320	320	100h6	80H7	286±0.2	39	24	123	36	36

Hydraulic Power Chuck



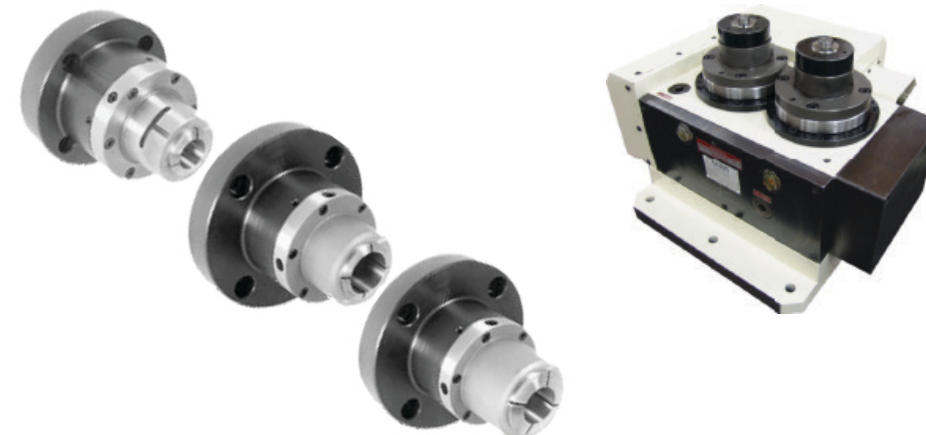
MODEL NUMBER	A	B (PCD)	C	H1	G	H	K	M	GRIPPING FORCE (N)
URX-180	169	60h6	-	26	M10	81	25	121	49000
URX-200	210	60h6	45H7	31	M12	82	23	128	66000
URX-250	254	60h6	40H7	36	M12/M16	94	26	133	93500
URX-320	304	100h6	80H7	39	M16/M18	107	32	154	122500

Rotary Air Chuck



MODEL NUMBER	A	B	C	D	E	F	M	MODEL NUMBER
URX-180	166	93	40	M10	210	40	148	16000
URX-200	215	112	60	M10	250	42	155	26000
URX-250	255	120	60	M10	290	46	171	38000

Collet Chuck



Angle Plate

- Available to suit different models of Rotary Tables
- Can be manufactured to match required angles

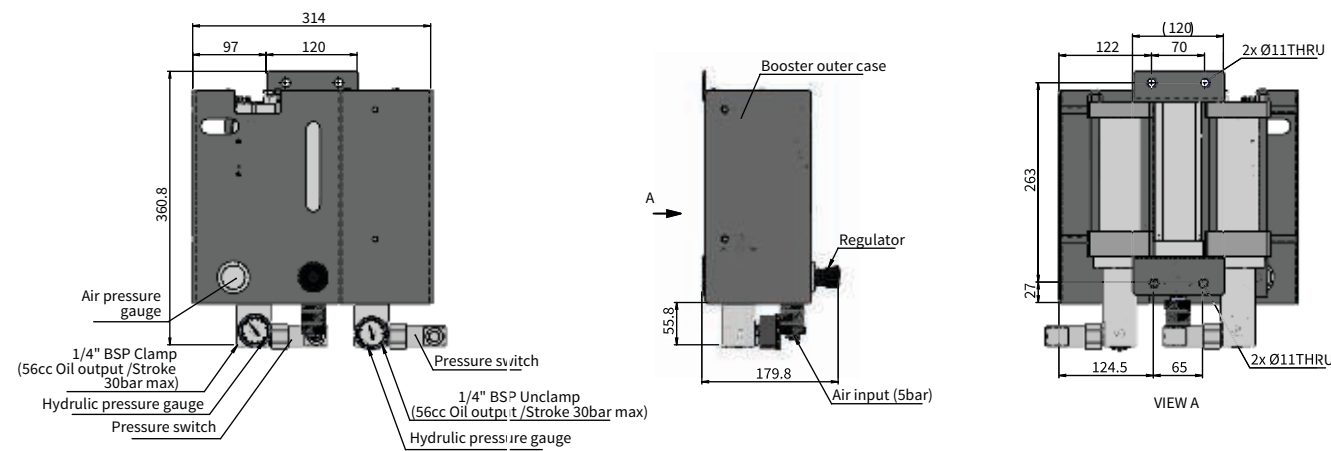


Taper Adapter and Taper Center Bore

- Standard adapters available for BT30, BT40, MT3, MT4 Tapers
- Dia 200 Rotary Tables and Tilting Tables also available with integrated taper center bore as option.



Hydropneumatic Booster



MODEL NUMBER	SUITABLE ROTARY TABLE	SUITABLE ROTARY PRODUCTION SYSTEM	SUITABLE ROTARY TILTING TABLE
UHPBX-100	DIA - 150, 170, 180, 200, 250, 320	Dia - 180, 200	Dia - 150, 200, 250, 320 (Rotary Axis)
	DIA - 400, 500, 630	Dia - 250, 320	Dia - 320 (Tilt Axis)

* For URX Table Double Acting Booster Available
 * For Tilting Table 2 numbers of Hydro Pneumatic Boosters are required

Hydraulic Powerpack



- Flow: 6.8/9/12lpm
- Pressure: 30 Bar max
- Solenoid valves and pressure switches depend on the applications
- Continuous duty

HYDRAULIC POWER PACK SELECTION WITH APPLICATIONS

FOR URH TABLES

POWER PACK	NUMBER OF LINES	PRESSURE	FLOW	POWER PACK
HPP- 1 Single Acting Solenoid	1 line	30 Bar	6.8lpm	Rotary Table
HPP-1 Single & 1 Double Solenoid	3 line	30 Bar	6.8lpm	Rotary Table + Tailstock/Power Chuck
HPP-1 Single & 2 DBL Solenoid	5 line	30 Bar	6.8lpm	Rotary Table + Tailstock + Power Chuck
HPP-1 Single & 2 Double Solenoid	5 line	100 Bar	6.8lpm	Rotary Table + 4 Line Rotary Union
HPP-2 Single Acting Solenoid	2 line	30 Bar	6.8lpm	Tilting Table Table
HPP-2 Single & 1 Double Solenoid	4 line	30 Bar	6.8lpm	Tilting Table + Tailstock/Power chuck
HPP-2 Single & 2 Double Solenoid	6 line	30 Bar	6.8lpm	Tilting Table + Tailstock + Power chuck
HPP-2 Single & 2 Double Solenoid	6 line	100 Bar	6.8lpm	Tilting Table + 4 Line Rotary Union

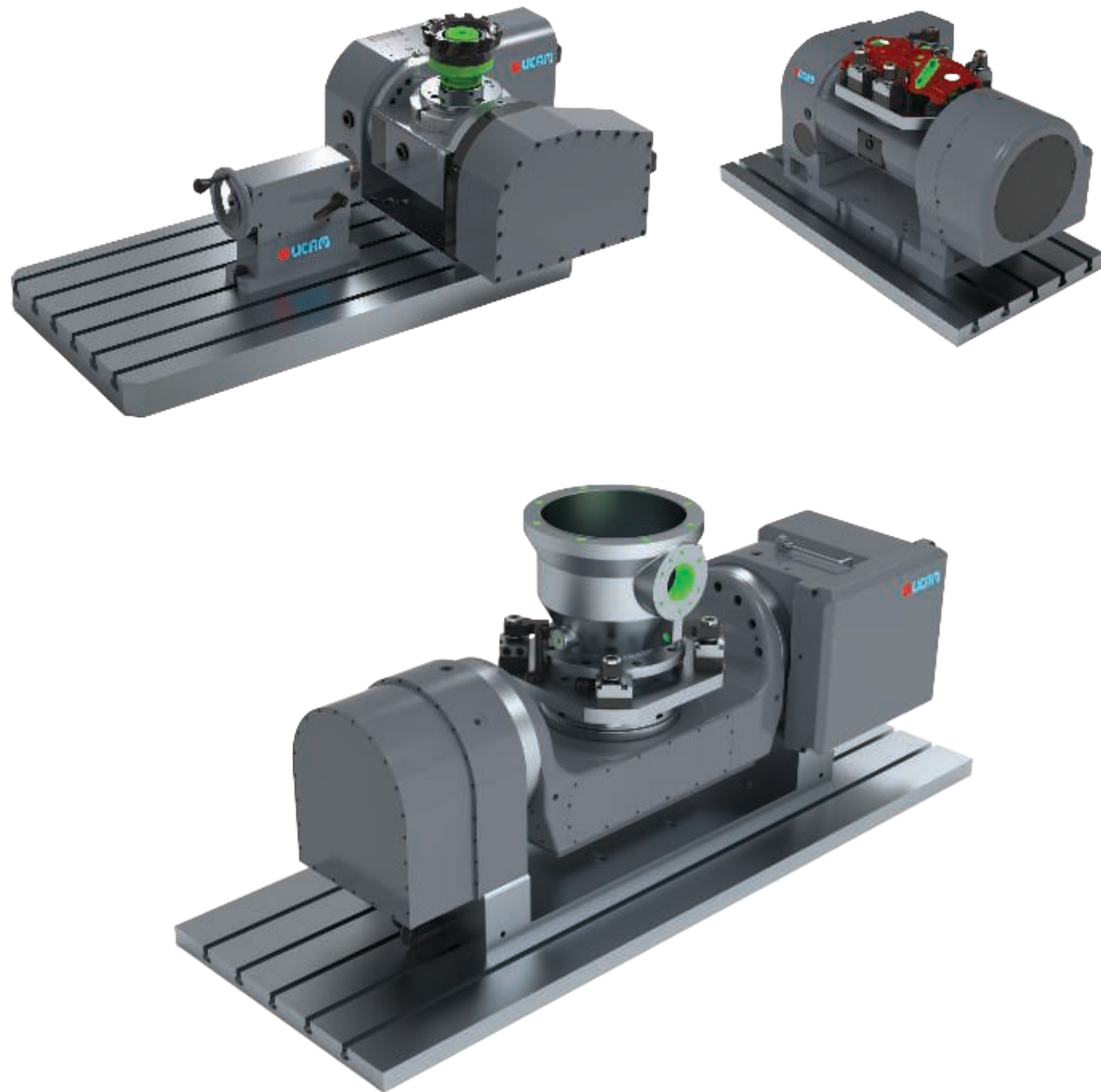
FOR URX & USSR TABLES

POWER PACK	NUMBER OF LINES	PRESSURE	FLOW	POWER PACK
HPP-1 Single Acting Solenoid	2 line	30 Bar	6.8lpm	Rotary Table
HPP-1 Single & 1 Double Solenoid	4 line	30 Bar	6.8lpm	Rotary Table + Tailstock/Power Chuck
HPP-1 Single & 2 Double Solenoid	6 line	30 Bar	6.8lpm	Rotary Table + Tailstock + Power Chuck
HPP-1 Single & 2 Double Solenoid	6 line	100 Bar	6.8lpm	Rotary Table + 4 Line Rotary Union + URPX
HPP-2 Single Acting Solenoid	4 line	30 Bar	6.8lpm	Tilting Table Table
HPP-2 Single & 1 Double Solenoid	6 line	30 Bar	6.8lpm	Tilting Table + Tailstock/Power Chuck
HPP-2 Single & 2 Double Solenoid	8 line	30 Bar	6.8lpm	Tilting Table + Tailstock + Power Chuck
HPP-2 Single & 2 Double Solenoid	8 line	100 Bar	6.8lpm	Tilting Table + 4 Line Rotary Union + URPX

* Pressure and Flow may change depending upon application

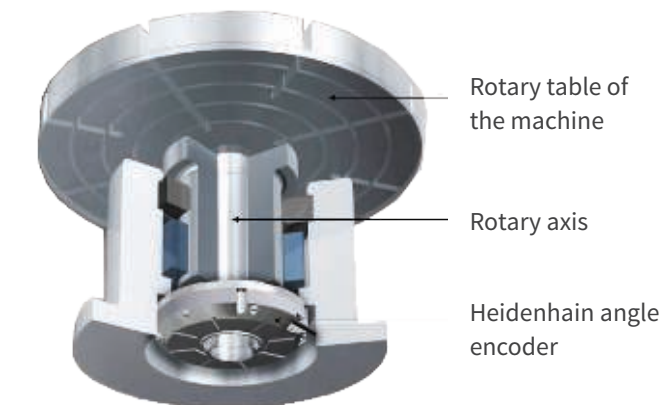


Productivity Improvement Solutions



Encoder Selection for Finer Accuracies

ENCODER TYPE	MAKE	MODEL NUMBER	ROTARY AXIS ACCURACY	TILT AXIS ACCURACY	SUITABLE CNC
Absolute angle encoder with integral bearing, Hollow through shaft Ø20 mm	Heidenhain	RCN 2580	± 3"	± 5"	Siemens
		RCN 2380	± 5"	± 7.5"	
		RCN 2590F	± 3"	± 5"	Fanuc
		RCN 2390F	± 5"	± 7.5"	
		RCN 2590M	± 3"	± 5"	Mitsubishi
RCN 2390M	± 5"	± 7.5"			
ENCODER TYPE	MAKE	MODEL NUMBER	ROTARY AXIS ACCURACY	TILT AXIS ACCURACY	SUITABLE CNC
Absolute angle encoder with integral bearing, Hollow through shaft Ø20 mm	Fagor	H2AD-28-D902	± 3"	± 5"	Siemens
		H2AD-28-D90	± 5"	± 7.5"	
		H2AF-28-D902	± 3"	± 5"	Fanuc
		H2AF-28-D90	± 5"	± 7.5"	
		H2AM-28-D902	± 3"	± 5"	Mitsubishi
H2AM-28-D90	± 5"	± 7.5"			
ENCODER TYPE	MAKE	MODEL NUMBER	ROTARY AXIS ACCURACY	TILT AXIS ACCURACY	SUITABLE CNC
Absolute angle encoder without integral bearing, Hollow through shaft	Heidenhain	AK ECA 4410	± 10"	± 15"	Siemens
		AK ECA 4490F	± 10"	± 15"	Fanuc
		AK ECA 4490M	± 10"	± 15"	Mitsubishi
ENCODER TYPE	MAKE	MODEL NUMBER	ROTARY AXIS ACCURACY	TILT AXIS ACCURACY	SUITABLE CNC
Absolute angle encoder without integral bearing, Hollow through shaft	Renishaw	RESA30USA100	± 10"	± 15"	Siemens
		RA29DAA100B99S	± 10"	± 15"	
		RESA30USA100	± 10"	± 15"	Fanuc
		RA27FAA100B99H	± 10"	± 15"	
		RESA30USA100	± 10"	± 15"	Mitsubishi
RA27NAA10099N	± 10"	± 15"			

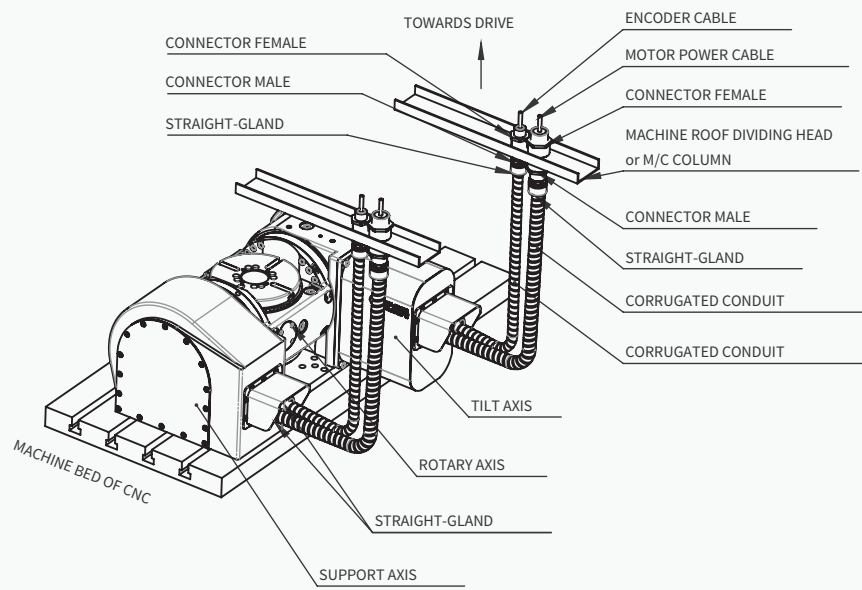
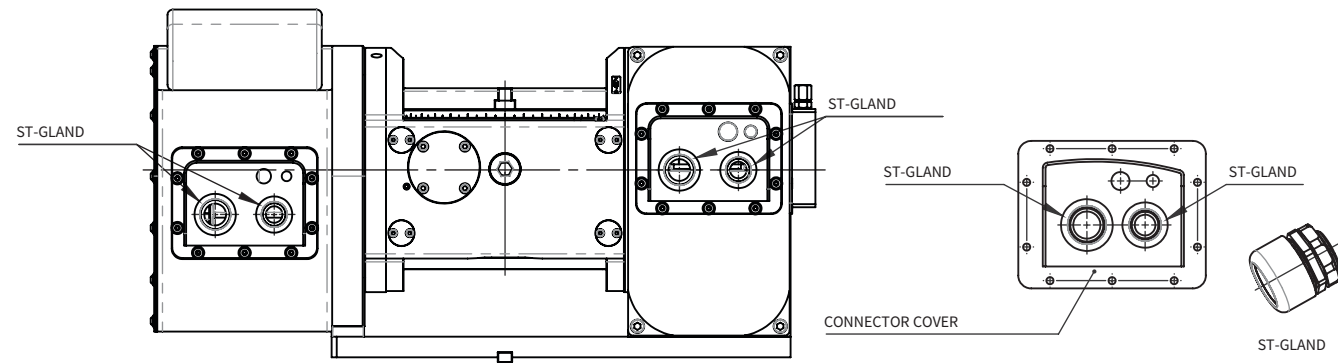


Encoder Assembly Cut Section view



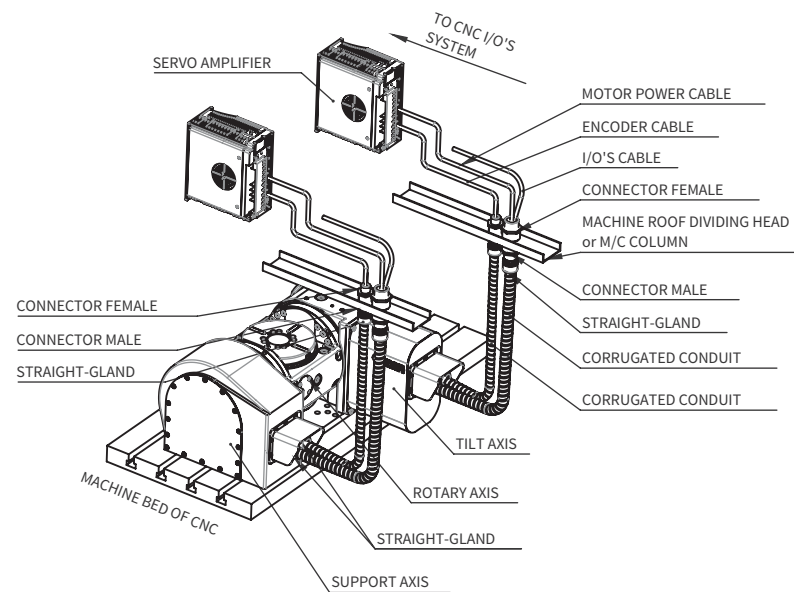
Electrical Cables & Conduit Options

ELECTRICAL CABLES TERMINATED ON ROTARY TABLE SHEET GUARD



ELECTRICAL CABLES TERMINATED ON MACHINE ROOF/GUARD

ELECTRICAL CABLES FROM ROTARY TABLE TO AMPLIFIER WITH INTERMEDIATE CONNECTORS ON MACHINE ROOF/GUARD



Accuracy Standards

CNC TILTING ROTARY TABLE

MODEL		URH 153 TN	URH 200 TN	USSR 200I TN	URH 320 TN
Table Top Flatness		0.01	0.01	0.01	0.01
Centre Bore Run Out (mm)		0.01	0.01	0.01	0.01
Table Top Run Out (mm)		0.015	0.015	0.015	0.015
Parallelism of Table Top Base (mm)		0.02	0.02	0.02	0.02
Perpendicularity of Table Top to Base (mm)		0.02	0.02	0.02	0.02
Parallelism between Tilt Axis with Base (mm)		0.02	0.02	0.02	0.02
Parallelism between Table Top Face and Guide Block (mm)		0.02	0.02	0.02	0.02

Servo Motor Selection Chart

TILTING ROTARY TABLE

URH-153-TN	Rotary Axis	Beta 4iS	Alpha iS4	1FK7042	HG105S
	Tilting Axis	Beta 4iS	Alpha iS4	1FK7042	HG105S
USSR-200i-TN	Rotary Axis	Beta 8iS	Alpha iS4	1FK7060	HG104S
	Tilting Axis	Beta 8iS	Alpha iS8	1FK7060	HG123S
ULSR-201-TN	Rotary Axis	Beta 4iS	Alpha iS4	1FK7060	HG104S
	Tilting Axis	Beta 8iS	Alpha iS8	1FK7060	HG123S
URH-320-TN	Rotary Axis	Beta 8iS	Alpha iS8	1FK7063	HG123S
	Tilting Axis	Beta 12iS	Alpha iS12	1FK7063	HG223S
URH-320-DTS	Rotary Axis	Beta 12iS	Alpha iS12	1FK7063	HG223S
	Tilting Axis	Beta 22iS	Alpha iS22	1FK7101	HG303S

