

QUASER

we cut faster

UX SERIES



UX series

Value model

UX300

Offer max. value for small parts up to
Ø400 x 300 mm / 100 kg



SIEMENS = **S** HEIDENHAIN = **H**

Motor		UX300			
		9B	12B	15C	24A
X / Y / Z (kW)	H	5.1 / 5.4 / 5.4			
	S	-			
A / C (kW)	H	2.18 / 1.67			
	S	-			

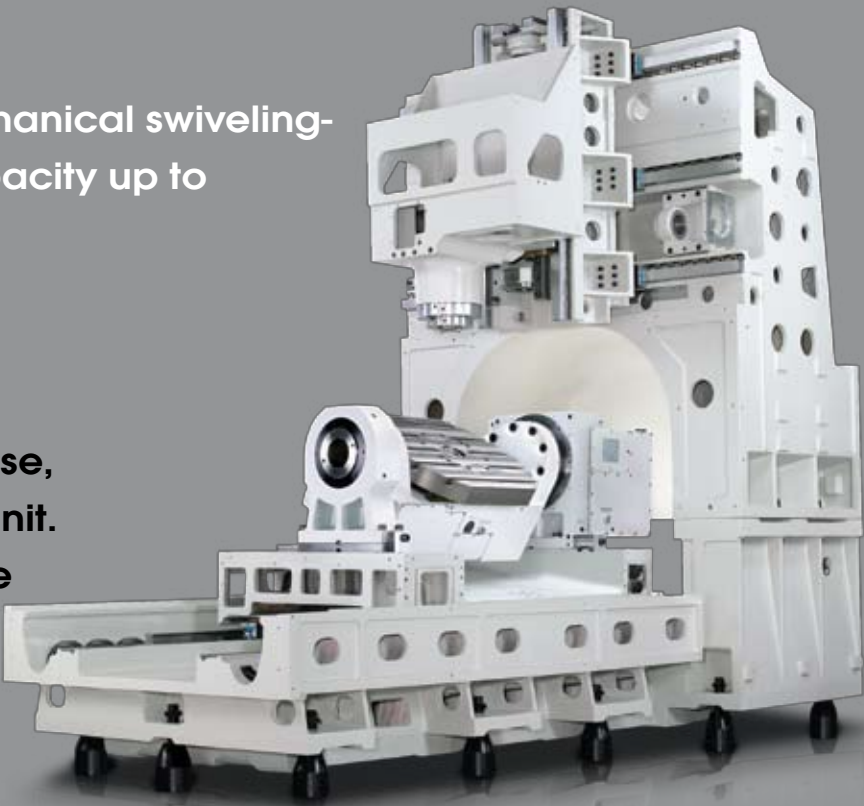


UX600

equipped with proven mechanical swiveling-rotary table for working capacity up to
 Ø600 x 400 mm / 300 kg

Ø640 x 415 mm / 500 kg

Modular structure designed
 on UX600, UX730Dyn
 All models use the same base,
 column, cross slider & ATC unit.
 Major difference are spindle
 head & A/C axes table.



Note: **Content in red for Europe only.**

UX600				UX730Dyn	
9B	12B	15C	24A	15C	24A
	5.4 / 5.4 / 5.4			5.4 / 8.6 / 5.4	
	4.45 / 4.45 / 4.87			-	
	2.6 / 1.67			2.75 / 3.67	
	3.3 / 2.29			-	

UX series



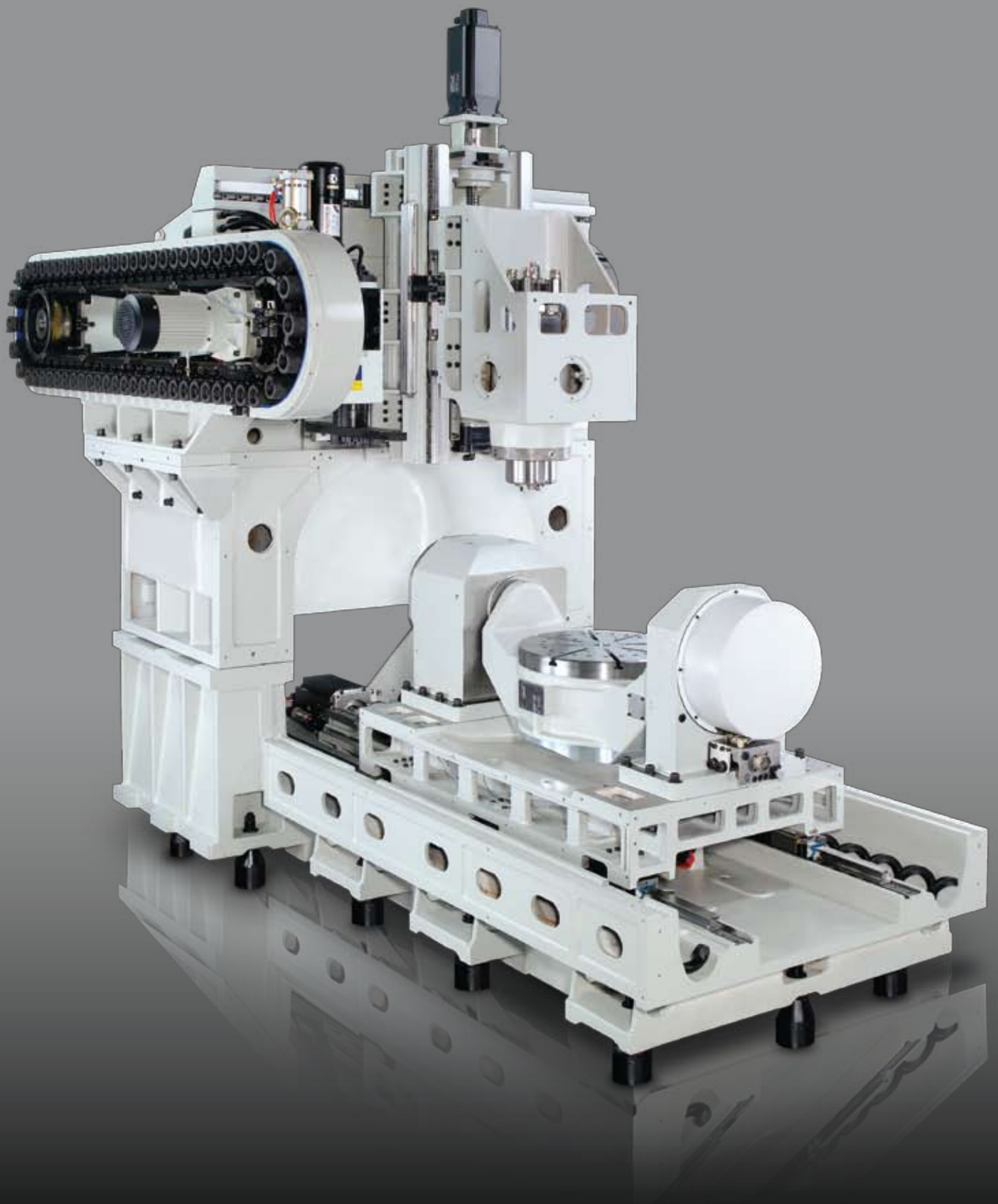
Performance models

UX730 Dyn

equipped with state-of-art torque motor on
swiveling & rotary axes (joint developed with Kessler, de)

UX730Dyn: Ø730 x 450 mm / 850 kg



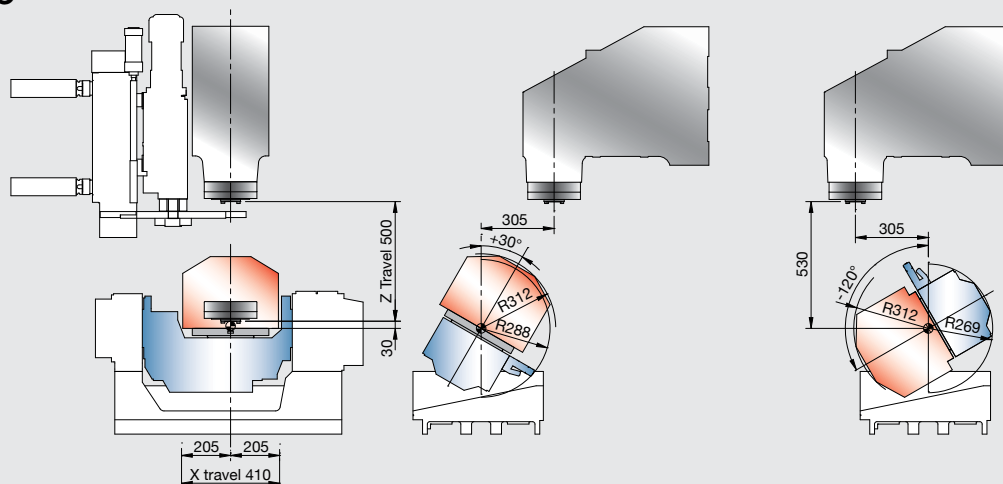


Cutting area and interference



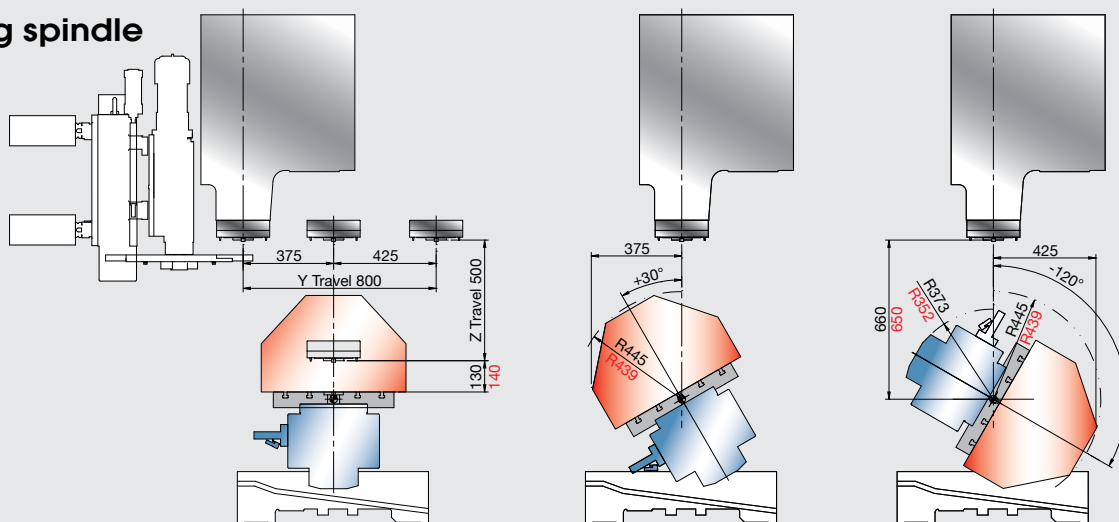
UX300

Belt / Coupling spindle



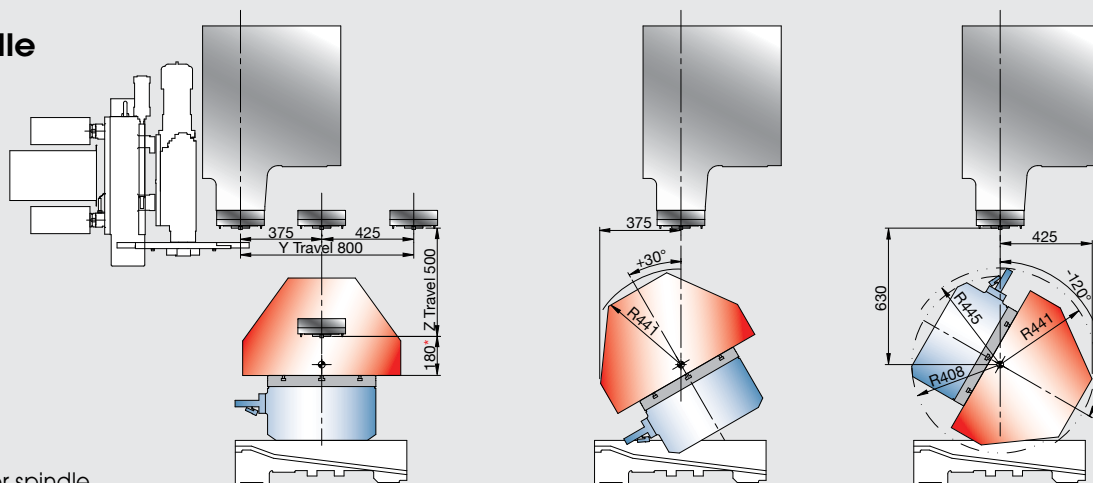
UX600

Belt / Coupling spindle

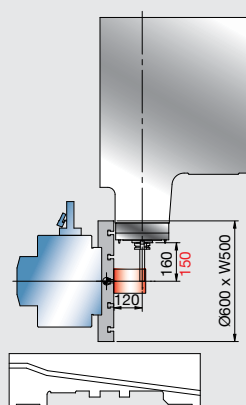
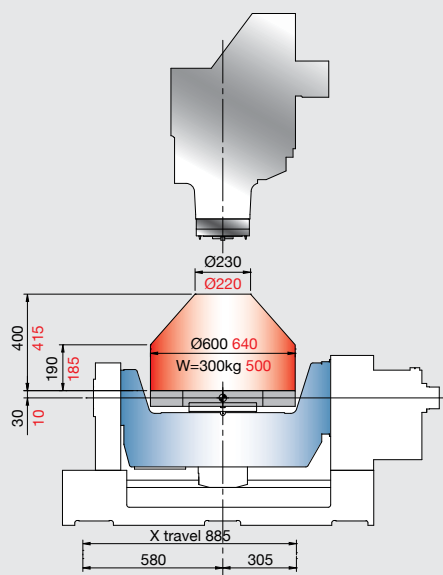
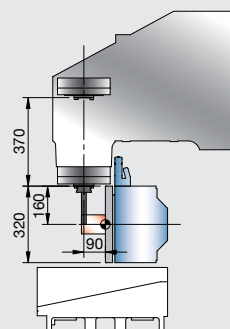
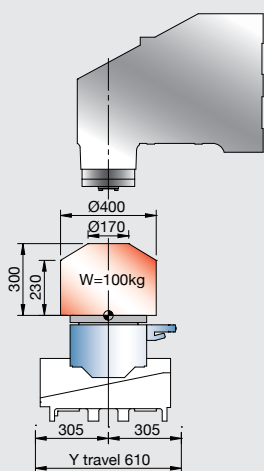


UX730Dyn

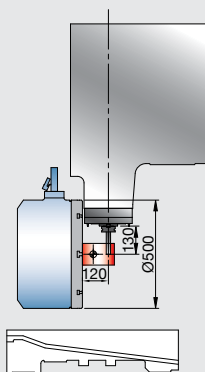
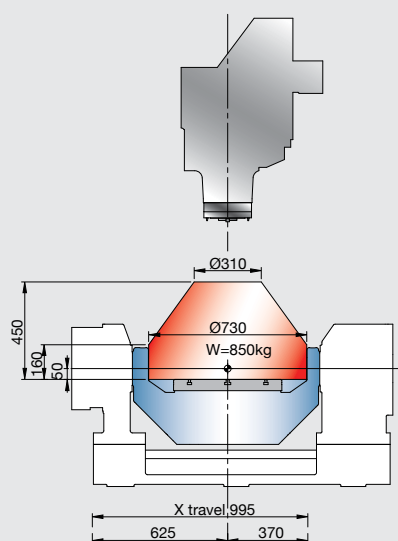
Coupling spindle



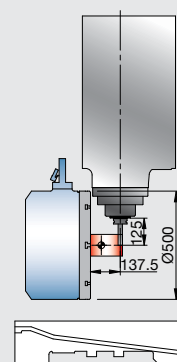
Note: *175 as fit on Motor spindle



Note: Content in red for Europe only.



Motor spindle

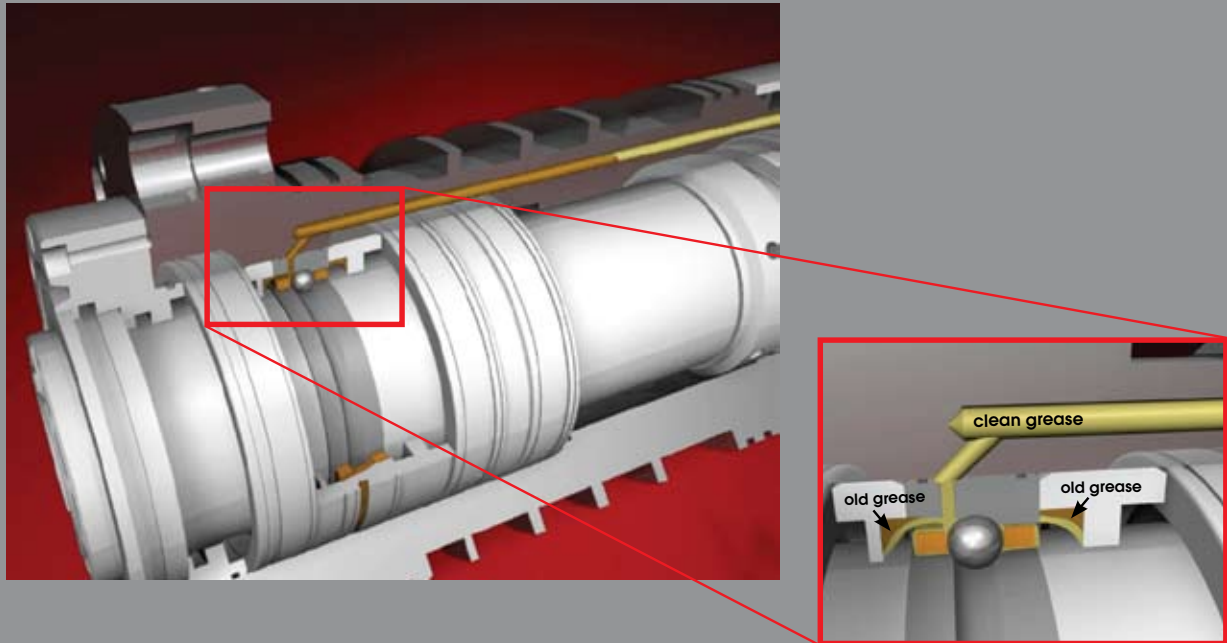


Unique spindle technology

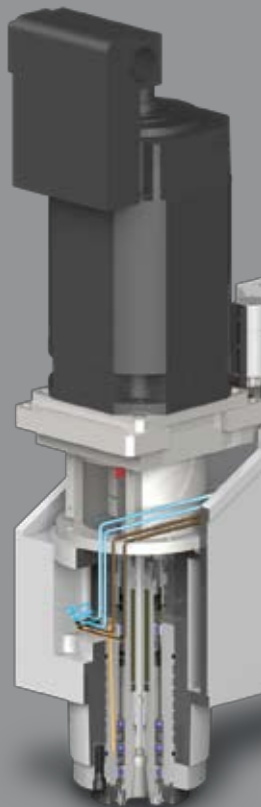
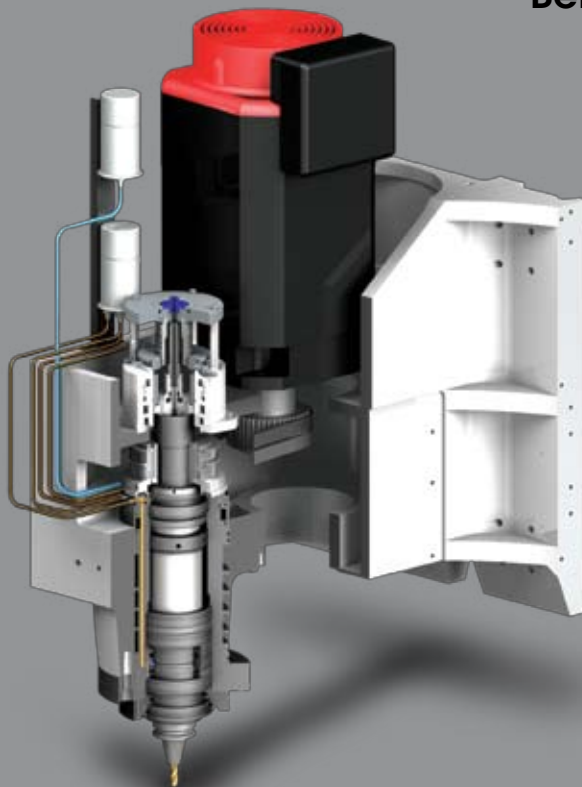


Grease replenishing system

Use car industry re-greasing principle to supply “clean grease” at 60~100 hr interval by 25~50 mm³ / shoot.



Belt Spindle



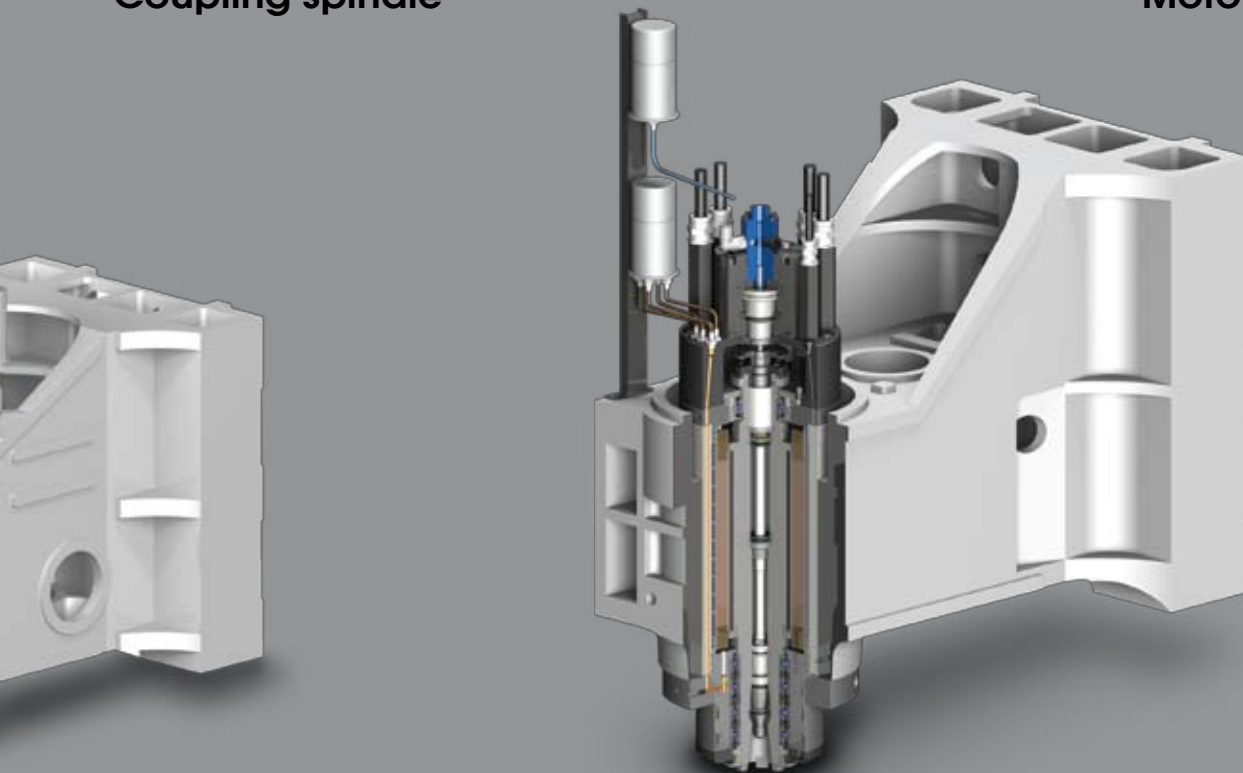


The grease volume in 1st installation can support 30,000 hr or 3 years.



Coupling spindle

Motor Spindle



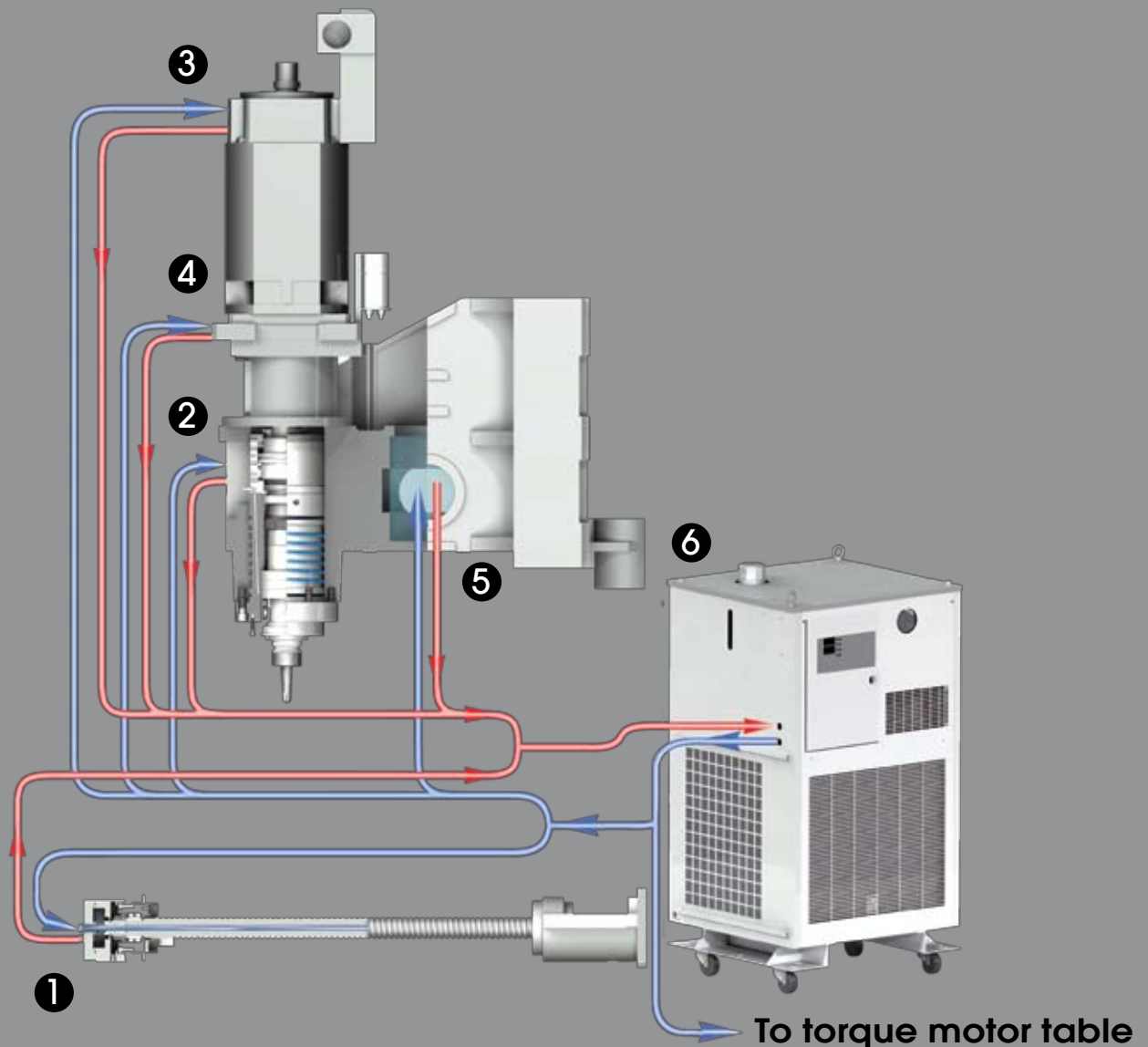
Thermal management



To meet more and more severe “WORKING ACCURACY” requirements, our “THERMAL MANAGEMENT”:

LEVEL I - Standard

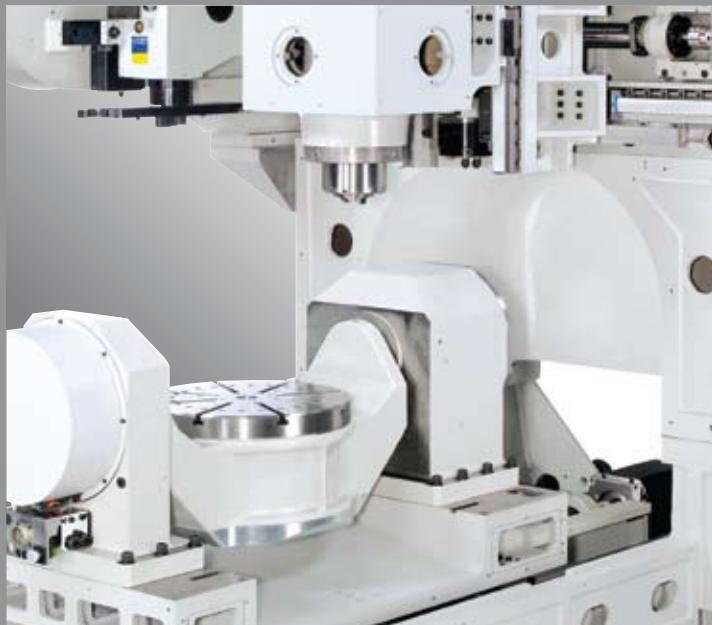
- ❶ Coolant through ball screw (CTB)
To keep a). Under $\pm 10 \mu\text{m}$ repeatability on X, Y & Z
b). Stable rigidity on ball screw system
- ❷ Spindle cooling circuit
- ❸ Motor cooling circuit (for coupling spindle & motor spindle)
- ❹ Motor mounting block cooling circuit (for coupling spindle)
- ❺ Head stock cooling chamber (UX600, UX730)
- ❻ Large capacity oil cooler





LEVEL II

- 7** Scale on X, Y, Z & C
(Scale on A axis as standard)



- 8** Headstock thermal control X, Y & Z $\pm 10 \mu\text{m}$ (as standard)

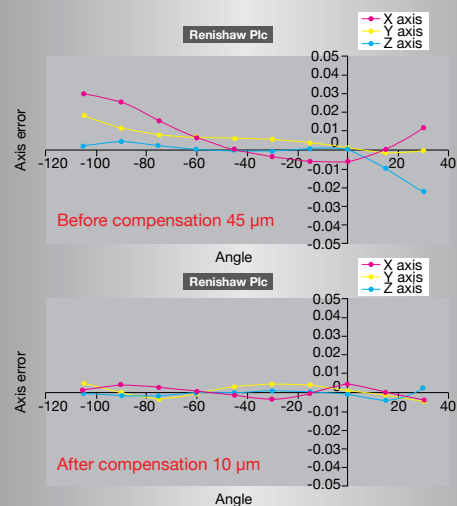


LEVEL III

- 9** Measurement & compensation



- 10** Tilting volumetric compensation



Work envelope



UX300	Rotary Axis (C - axis)	Tilting Axis (A - axis)	UX600	Rotary Axis (C - axis)	Tilting Axis (A - axis)
Max. swing (mm)	Ø400		Max. swing (mm)	Ø600 Ø640	
Table load capacity (kg)	100		Table load capacity (kg)	300 500	
Maximum R.P.M	25 min ⁻¹	25 min ⁻¹	Maximum R.P.M	33.3 min ⁻¹ 33 min⁻¹	25 min ⁻¹
Indexing accuracy	14 sec (10 sec)	(10 sec)	Indexing accuracy	14 sec (10 sec)	(10 sec)
Repeatability	4 sec (2 sec)	(4 sec)	Repeatability	4 sec (2 sec)	(5 sec)
Clamping torque	686 Nm	1,372 Nm	Clamping torque	1,666 Nm 2,300 Nm	2,156 Nm 2,900 Nm

Note: () with absolute rotary encoder

- Content in red for Europe only.





UX730Dyn	Rotary Axis (C - axis)	Tilting Axis (A - axis)
Max. swing (mm)	Ø730	
Table load capacity (kg)	850	
Maximum R.P.M	60 min ⁻¹	25 min ⁻¹
Indexing accuracy	(5 sec)	(5 sec)
Repeatability	(2 sec)	(5 sec)
Clamping torque	1,800 Nm	5,000 Nm



MODEL UX600

ATC system





Ergonomic operation



a Spindle to front at a convenient

- UX300: 910mm
- UX600 & UX730Dyn: 200mm

From center of table to operator door

- UX300: 605mm
- UX600 & UX730Dyn: 625mm

Max. size when operator door open

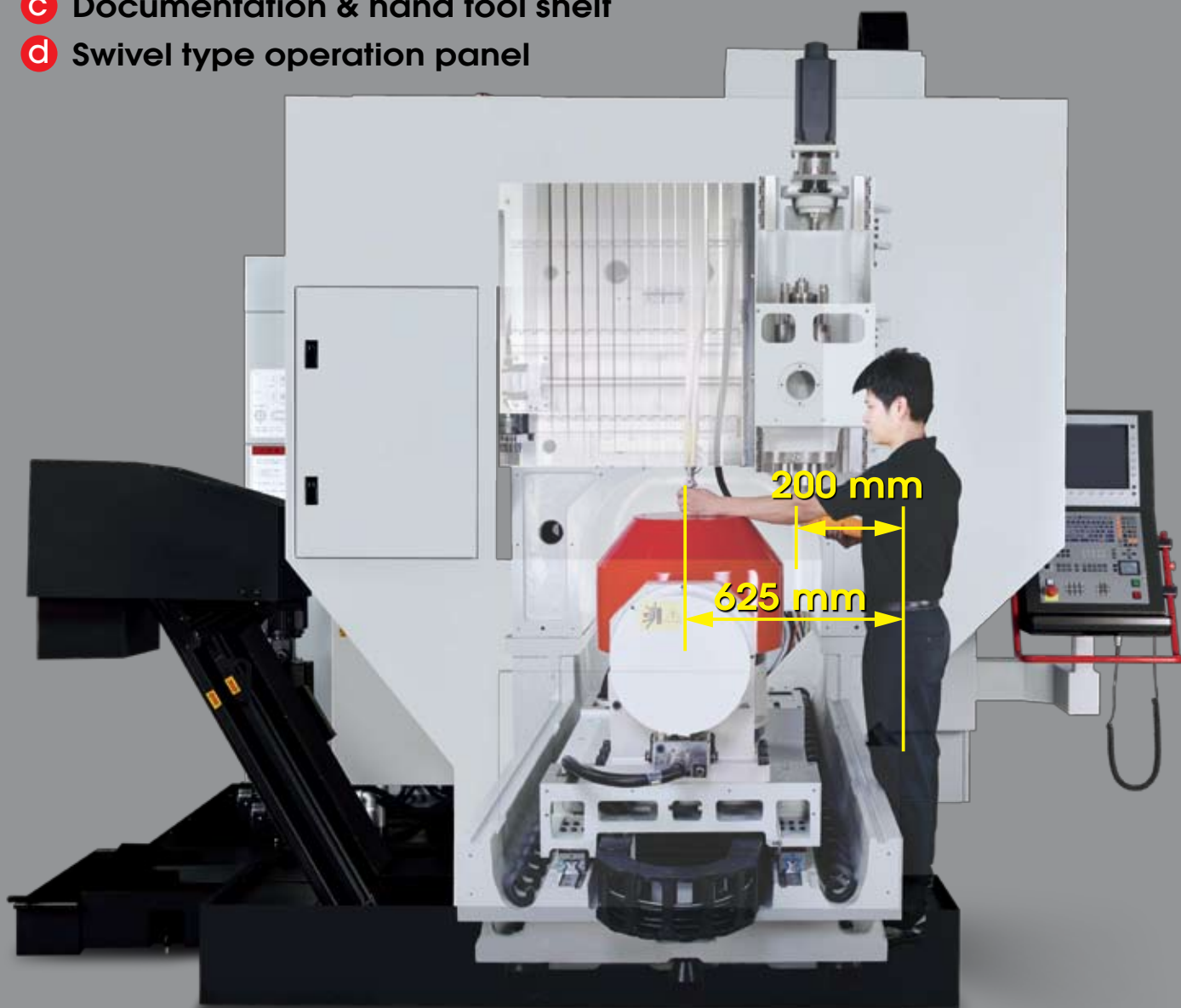
- UX300: 870mm
- UX600 & UX730Dyn: 830mm



MODEL UX300



- b** Tool loading / unloading on magazine side
- c** Documentation & hand tool shelf
- d** Swivel type operation panel



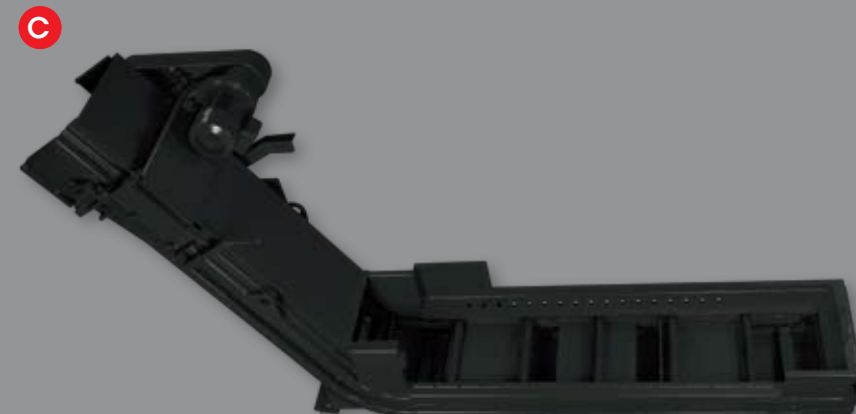
MODEL UX600
UX730Dyn

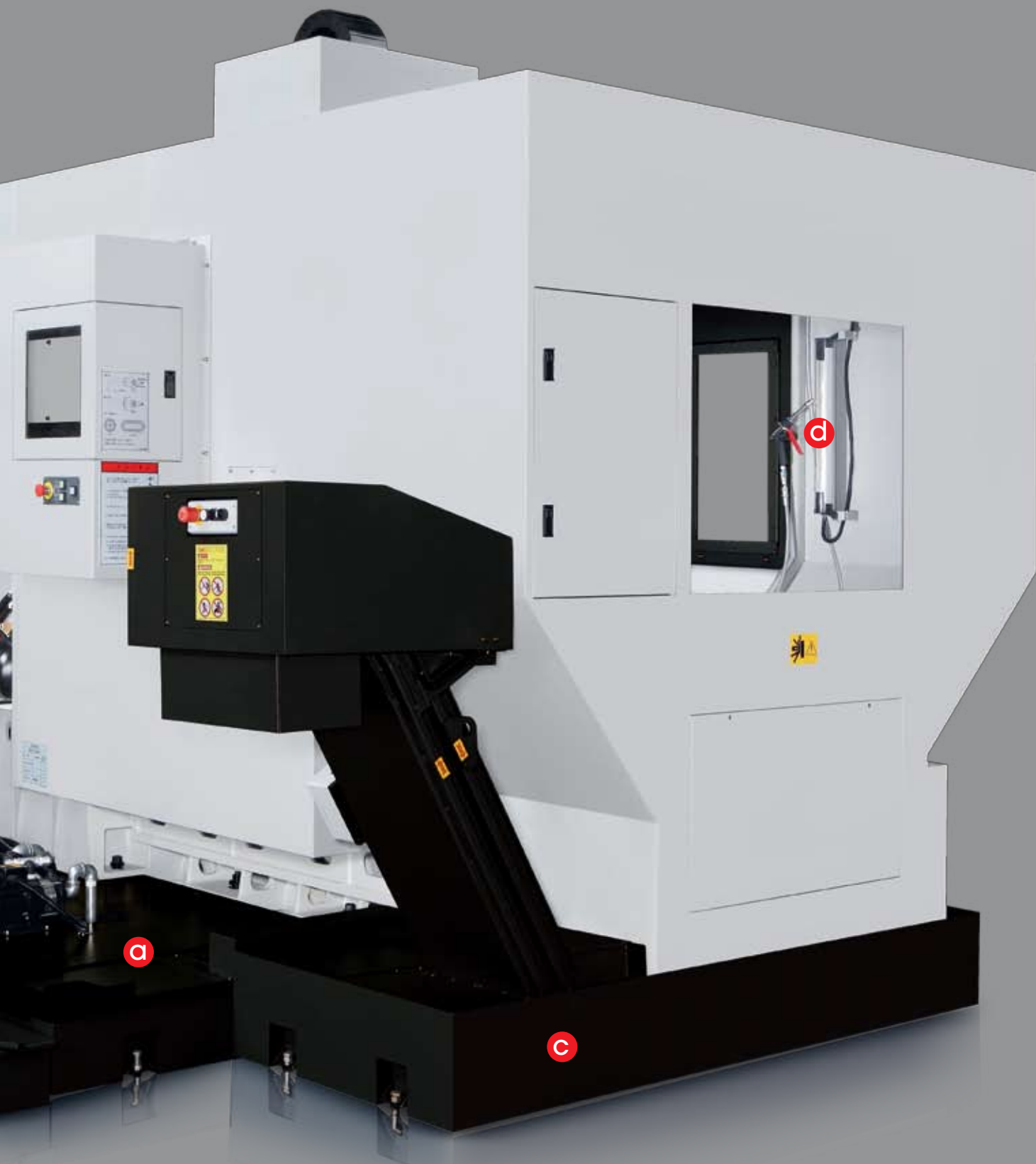
Coolant & chip management



- a** 400 liter coolant tank with
 - Coolant through spindle: 20 bar
 - Spindle nozzle coolant: 3 bar (UX300)
3.5 bar (UX600 / UX730Dyn)

- b** Dual augers
- c** Chip conveyor
- d** Wash gun





Technical data		UX300			
		9B	12B	15C	24A
Work range					
Table size (mm)		Ø320			
Travel	X (mm)	410			
	Y (mm)	610 (±305)			
	Z (mm)	500			
	A (degree)	+30° ~ -120°			
	C (degree)	360° (Continuous)			
Max. swing (mm)		Ø400			
Table surface to spindle nose (mm)		30 ~ 530			
Spindle nose to tilting center at 90°		30 ~ 530			
Max. work piece size (mm)		Ø400 x 300			
Table load capacity (kg)		100			
Feed drive					
Feed force	X / Y / Z (N)	11,300 / 13,700 / 13,700			
Rapid movement	X / Y / Z (m / min)	36 / 36 / 32			
	A / C (min ⁻¹)	A = 25 / C = 25			
Acceleration	X / Y / Z (m/s ²)	5 / 5 / 5			
Dia. & pitch of the ball screw		Ø45 / P = 12 / 12 / 12			
Accuracy Positioning / Repeatability					
ISO 230-2		0.008 / 0.004			
JIS 6338 (300 mm)		±0.003 / ±0.002			
VDI3441		0.008 / 0.004			
Main spindle					
Spindle taper		BBT40			HSK A63
Max. spindle speed		9,000	12,000	15,000	24,000
Spindle base speed	T	1,125	1,500	2,000	2,860
	S	-	-	-	-
Spindle output KW (S6-40%)	T	25	25	21.9	24
	S	-	-	-	-
Spindle torque Nm (S6-40%)	T	212	159	105	80
	S	-	-	-	-
Spindle transmission		Belt		Coupling	Motor (opt.)
Spindle diameter (mm)		Ø70			
Tool changer					
Tool selection		Random			
Magazine positions		48 (std.) / 60 (opt.)			
Max. tool diameter (mm)		76.2			-
w/o adjacent tool (mm)		125			76.2
Max. tool length (mm)		280			200
Max. tool weight (kg)		7			4.5
CTC time-ISO 10791-9 (sec.)		4.6			
Coolant system					
Coolant tank capacity (Liter)		300			
Pump capacity ⁽¹⁾					
- Nozzle coolant		75 L / min., 3 bar			
- Through spindle coolant		25 L / min., 20 bar			
- Wash down		75 L / min., 3 bar			
Machine size					
Height (mm)		3,070		3,140	3,070
Floor space W x D (mm)		2,500 x 2,820 (48ATC) 2,500 x 3,160 (60ATC)			
Weight (kg)		8,100			
Connections					
Main power		220 V / 60 Hz or 400 V / 50 Hz			
Power consumption (KVA)		35			37.5

Note: ⁽¹⁾At 60Hz.

Main spindle

Belt spindle - 9,000 / 12,000 min⁻¹
 Coupling spindle - 15,000 min⁻¹
 Motor spindle - 24,000 min⁻¹

Control

(T): HEIDENHAIN - iTNC530 (5 Axes)
 (S): SIEMENS - 840D (5 Axes)

UX600				UX730 Dyn	
9B	12B	15C	24A	15C	24A
Ø280 / Ø600 x W500 Ø600 x W500				Ø500	
885 (580 + 305)				995 (625 + 370)	
800 (-375 ~ +425)				800 (-375 ~ +425)	
500				500	
+30° ~ -120°				+30° ~ -120°	
360° (Continuous)				360° (Continuous)	
Ø600 Ø640				Ø730	
130 ~ 630 140 ~ 640				180 ~ 680	175 ~ 675
160 ~ 660 150 ~ 650				130 ~ 630	125 ~ 625
Ø600 x 400 Ø640 x 415				Ø730 x 450	
300 500				850	
13,700 / 13,700 / 13,700 (T) 10,472 / 10,472 / 14,137 (S)				19,800 / 11,300 / 13,700	
36				36	
A = 25 / C = 33.3 A=25 / C=33				A = 25 / C = 60	
5 / 5.5 / 5.5 (T)(S)				5.5 / 5.5 / 5.5	
Ø45 / P = 12 / 12 / 12				Ø45 / P = 12 / 12 / 12	
0.008 / 0.004				0.008 / 0.004	
±0.003 / ±0.002				±0.003 / ±0.002	
0.008 / 0.004				0.008 / 0.004	
BBT40			HSK A63	BBT40	HSK A63
9,000	12,000	15,000	24,000	15,000	24,000
1,125	1,500	2,000	2,860	2,000	2,860
1,125	1,500	2,000	2,860	-	-
25	25	21.9	24	21.9	24
22.5	22.5	21.9	24	-	-
212	159	105	80	105	80
191	144	105	80	-	-
Belt			Motor (opt.)	Coupling	Motor (opt.)
Ø70					
Random				Random	
48 (std.) / 60 (opt.)				48 (std.) / 60 (opt.)	
76.2			-	76.2	-
125			76.2	125	76.2
280			200	280	200
7			4.5	7	4.5
7					
400				400	
60 L / min., 3.5 bar				60 L / min., 3.5 bar	
25 L / min., 20 bar				25 L / min., 20 bar	
60 L / min., 3 bar				60 L / min., 3 bar	
3,200				3,200	
4,050 x 3,800				4,050 x 3,800	
12,100				12,700	
220 V / 60 Hz or 400 V / 50 Hz				220 V / 60 Hz or 400 V / 50 Hz	
35 (T)(S)			37.5	40	45

Note: - Content in red for Europe only.

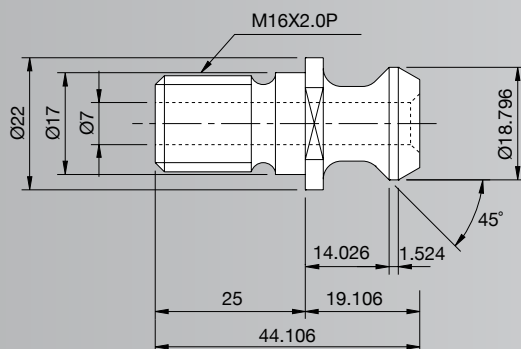
Standard / Option accessories	UX300			
	9B	12B	15C	24A
■ HEIDENHAIN iTNC530 (5 Axes) with Option 2	●	●	●	●
■ SIEMENS 840D	×	×	×	×
■ Spindle oil chiller	●	●	●	●
■ 40 taper 9,000 min ⁻¹ belt spindle	●	×	×	×
■ 40 taper 12,000 min ⁻¹ belt spindle	×	●	×	×
■ 40 taper 15,000 min ⁻¹ coupling spindle	×	×	●	×
■ 40 taper 24,000 min ⁻¹ motor spindle	×	×	×	●
■ 40 taper / 48 position tool magazine	●	●	●	●
■ 40 taper / 60 position tool magazine	○	○	○	○
■ Pull stud for BT tooling system	●	●	●	×
■ X / Y / Z linear scale & C rotary encoder	○	○	○	○
■ Rotary encoder on A axes	●	●	●	●
■ Preparation of auto pallet system (EROWA or 3R)	○	○	○	○
■ Coolant through ball screw	●	●	●	●
■ Thermal compensation	●	●	●	●
■ Coolant system	●	●	●	●
■ 20 bar through spindle coolant	●	●	●	●
■ Coolant wash gun	●	●	●	●
■ Coolant wash down	●	●	●	●
■ Chip conveyor	●	●	●	●
■ Chip augers	●	●	●	●
■ Cutter air blast	●	●	●	●
■ Stainless steel chip pan & chip channel	●	●	●	●
■ Work light	●	●	●	●
■ Machine status light	●	●	●	●
■ CE & EMC *	○	○	○	○
■ Laser tool measuring system	○	○	○	○

Note: * Standard for Eu area.

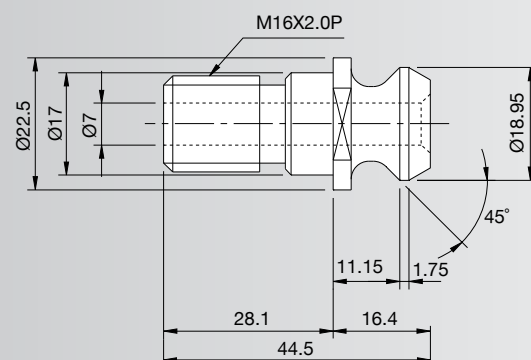
- Machine spec. might be different from the catalog if there is any spec. update.

Pull stud and applicable tools

BT 40 (QUASER SUPPLY)



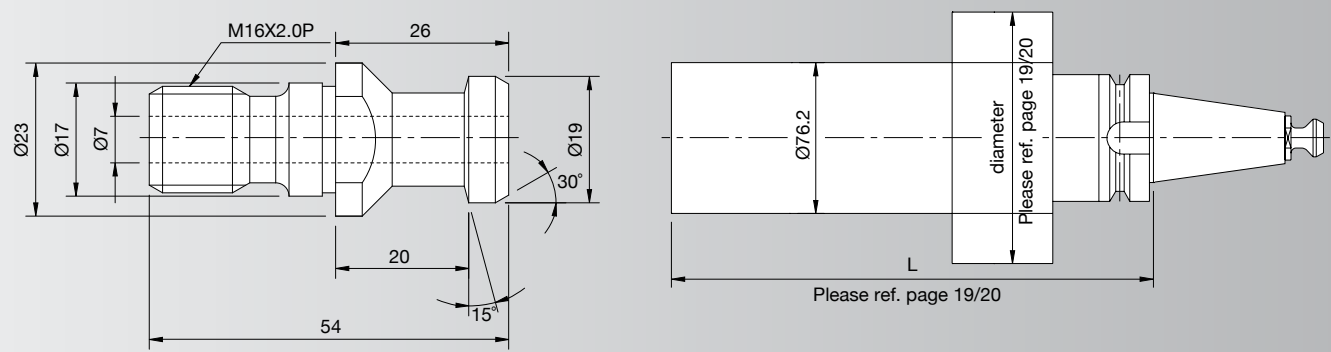
ISO (7388-B)



● = Standard ○ = Option X = N / A

UX600				UX730 Dyn	
9B	12B	15C	24A	15C	24A
●	●	●	●	●	●
○	○	○	○	X	X
●	●	●	●	●	●
●	X	X	X	X	X
X	●	X	X	X	X
X	X	●	X	●	X
X	X	X	●	X	●
●	●	●	●	●	●
○	○	○	○	○	○
●	●	●	X	●	X
○	○	○	○	●	●
●	●	●	●	●	●
○	○	○	○	○	○
●	●	●	●	●	●
●	●	●	●	●	●
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DIN (69872-A)

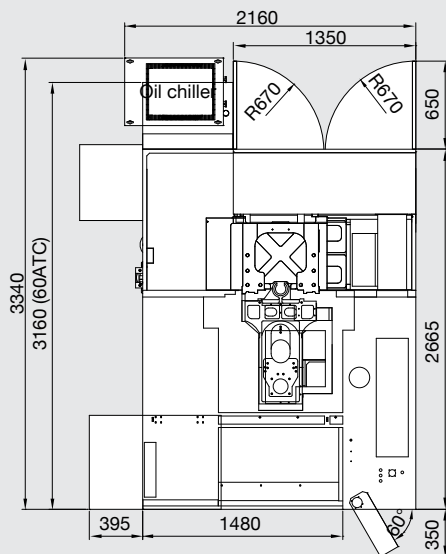




Layout

Installation dimension

UX300



	Belt	Couplig
B	3,070	3,140

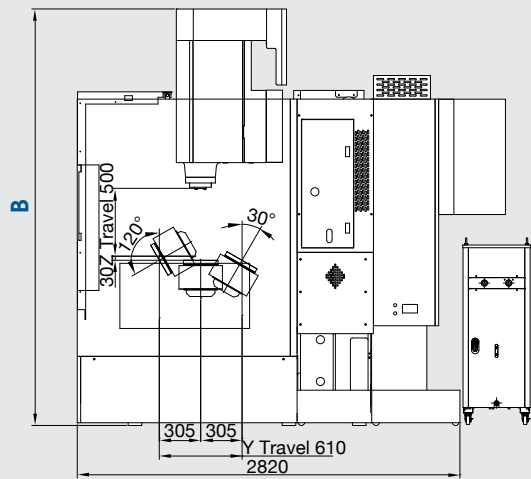
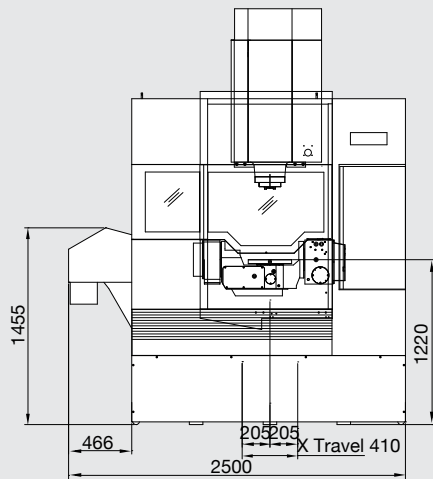
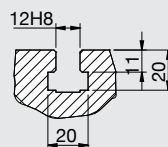
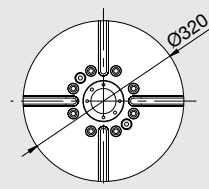


Table dimension

UX300



We build machines in a hybrid way

- Very classic craftsmanship combined with most advanced modern equipments in a clean environment...

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