

QUASER

we cut faster

UX SERIES

Value model

UX300

Offer max. value for small parts up to $\varnothing 300 \times 300$ mm / 100 kg



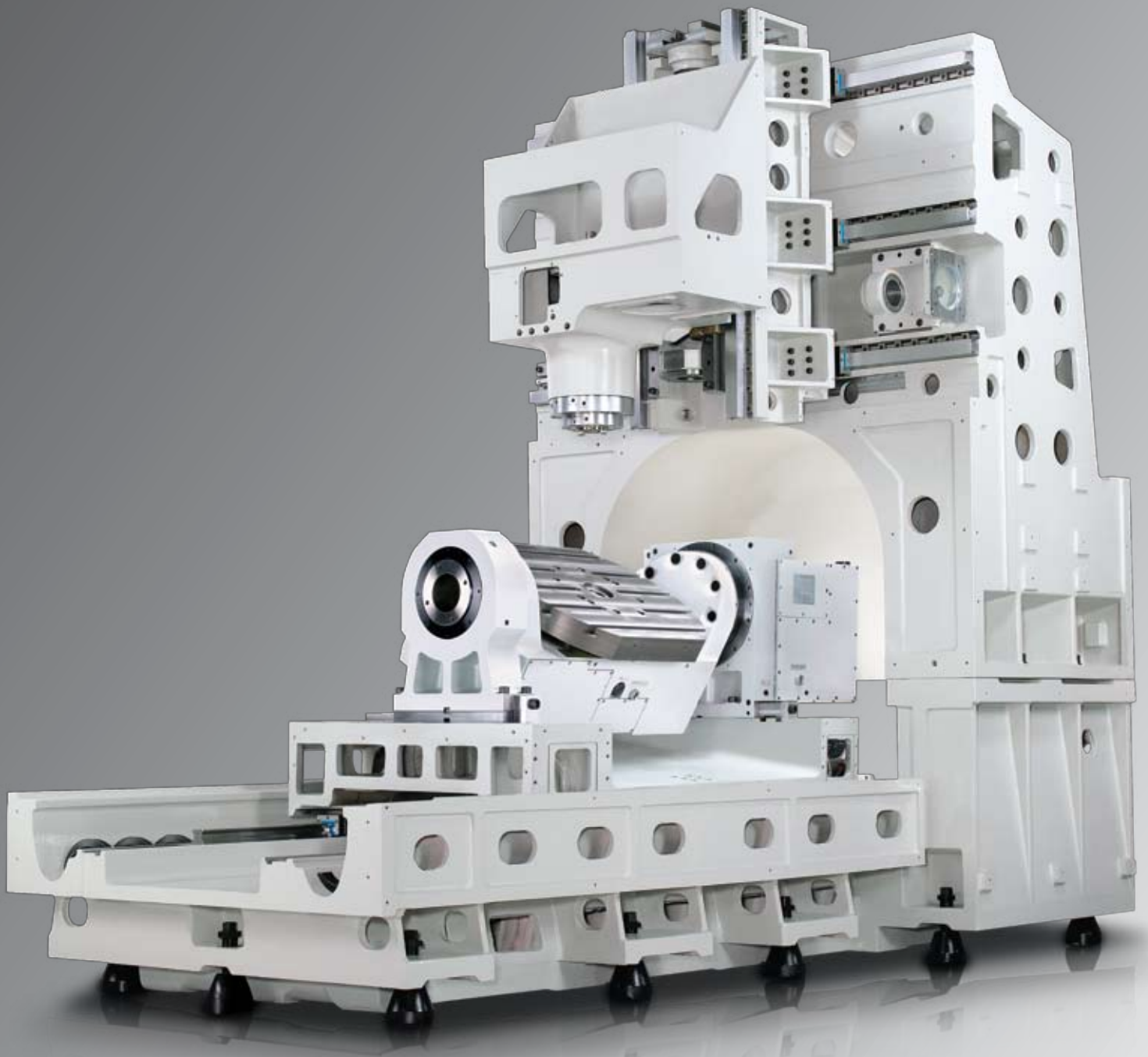


Value model

UX600

equipped with proven mechanical swiveling-rotary table
for working capacity up to $\text{\O}600 \times 450 \text{ mm}$ / 300 kg





**Modular structure designed on UX600, UX500Dyn, UX730Dyn
All three models use the same base, column, cross slider & ATC unit.
Major difference are spindle head & A/C axes table.**

Performance models

UX500 Dyn & UX730 Dyn

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

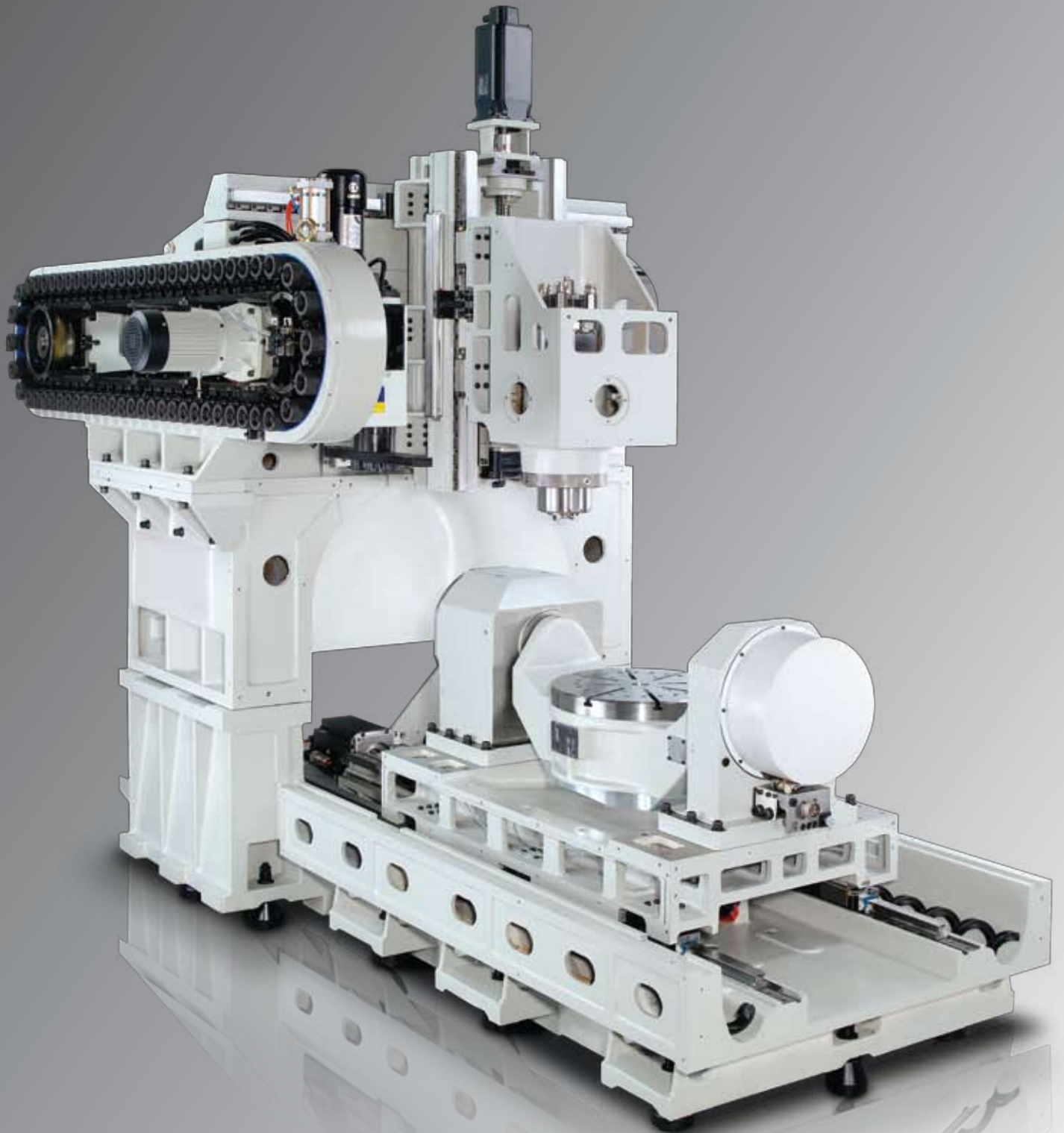
- UX500Dyn:

Ø500 x 400 mm / 300 kg

- UX730Dyn:

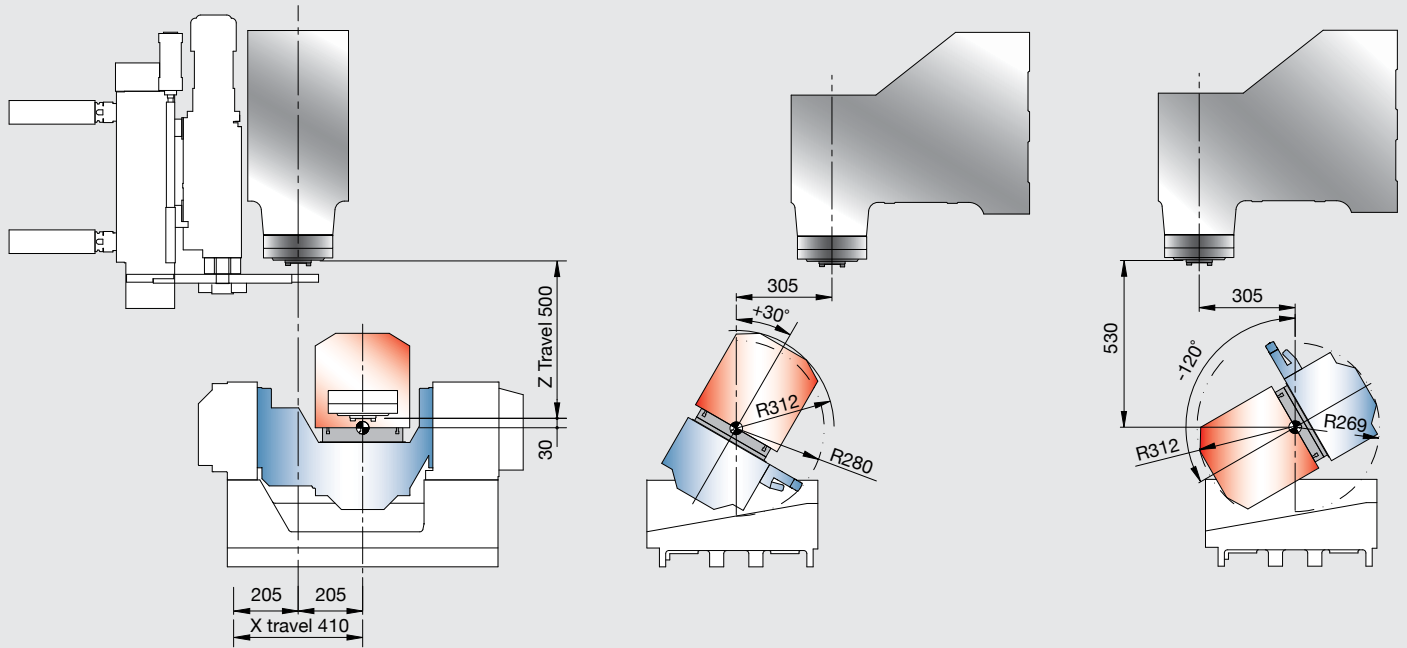
Ø730 x 450 mm / 850 kg



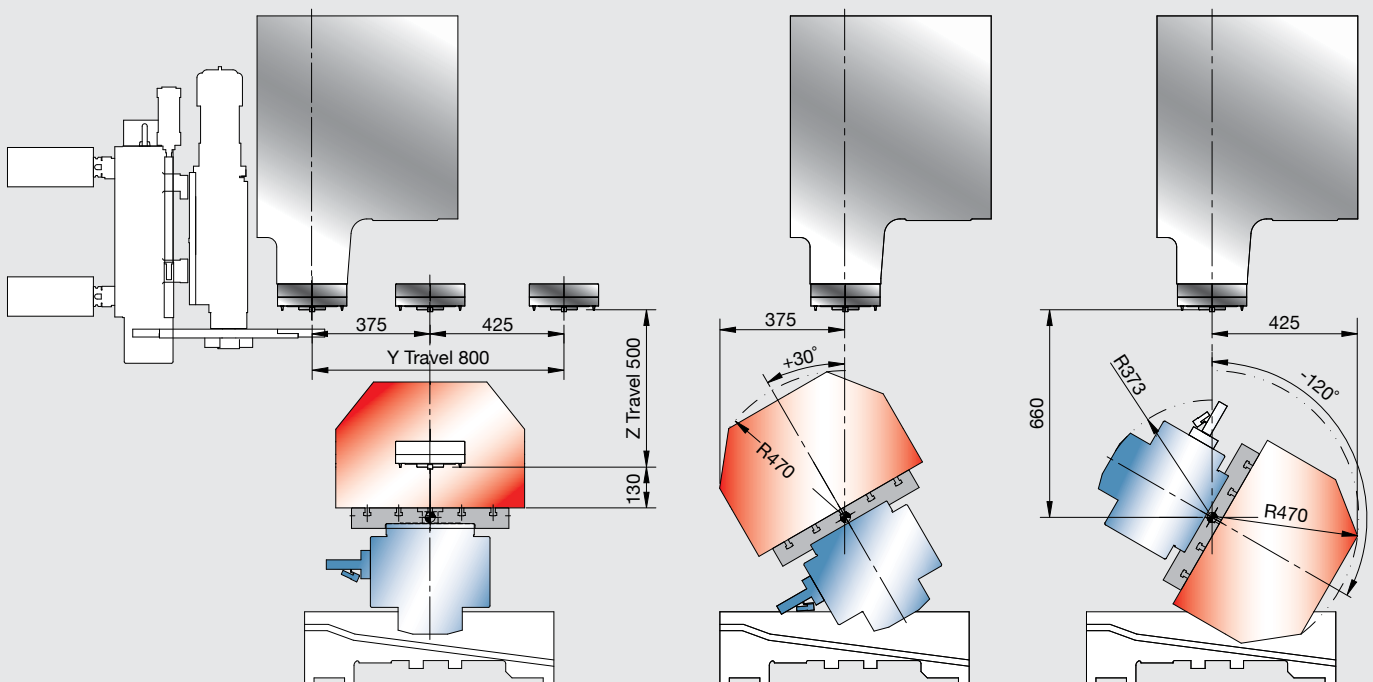


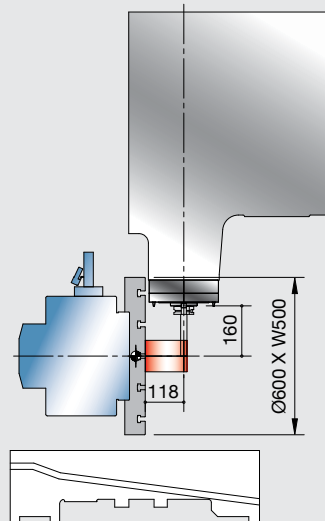
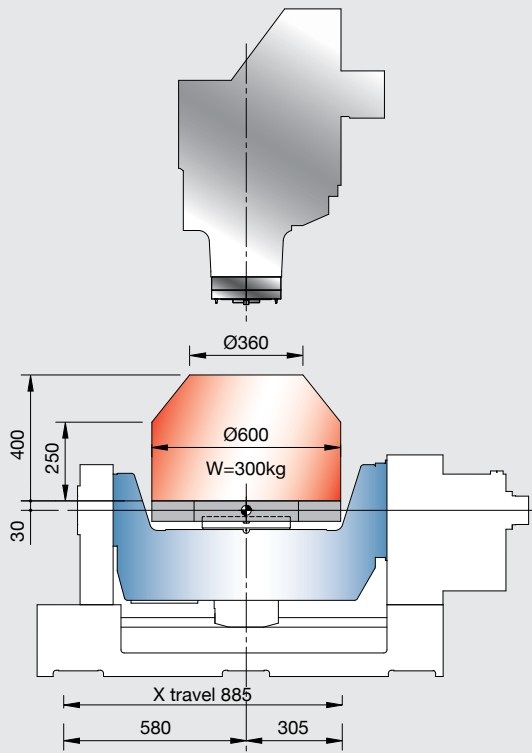
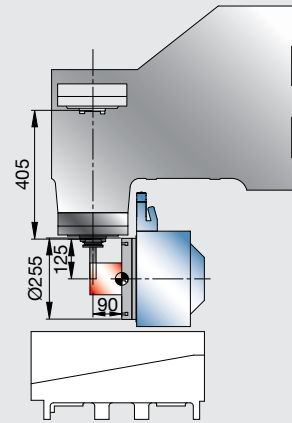
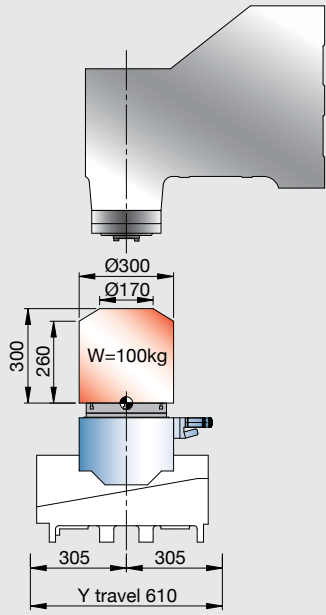
Cutting area and interference

UX300
WB40R SPINDLE



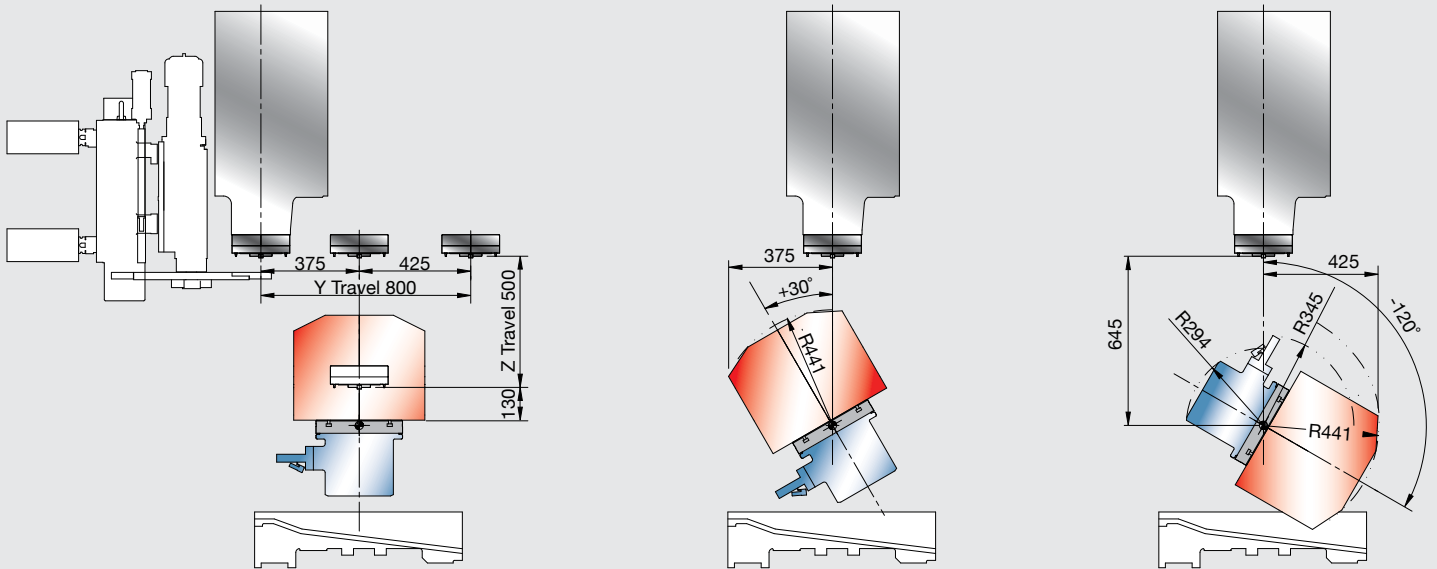
UX600
WB40R / NC40R SPINDLE



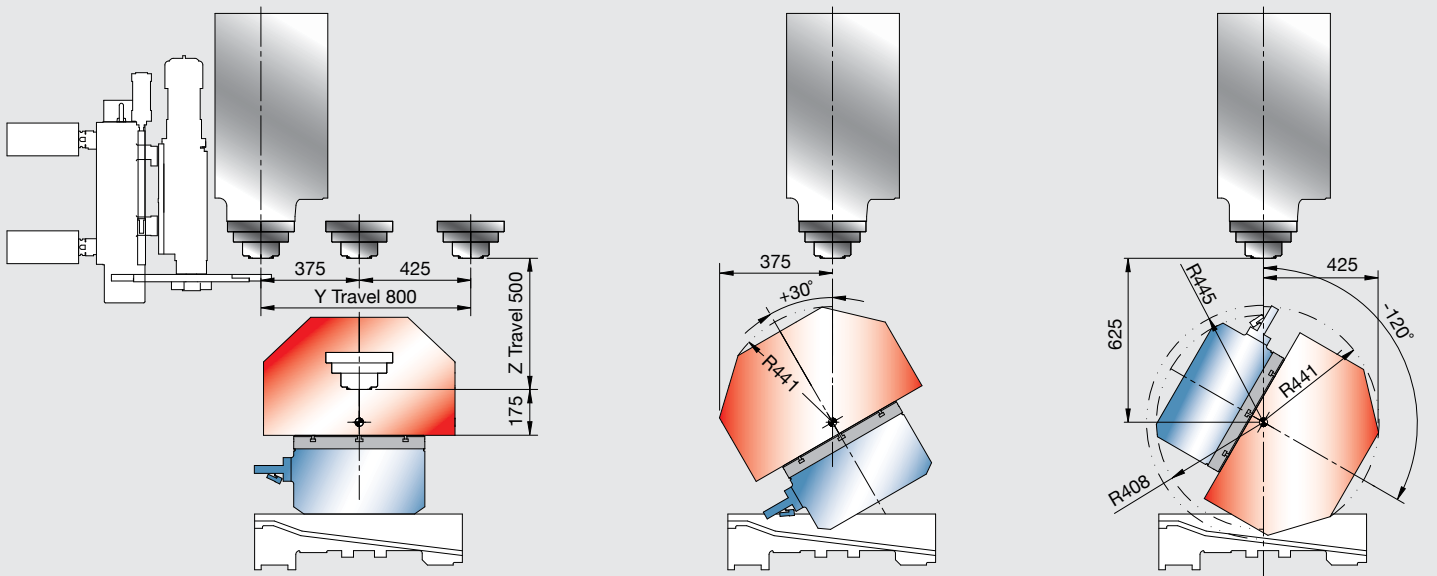


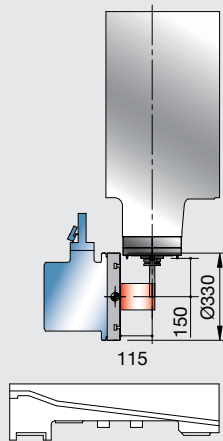
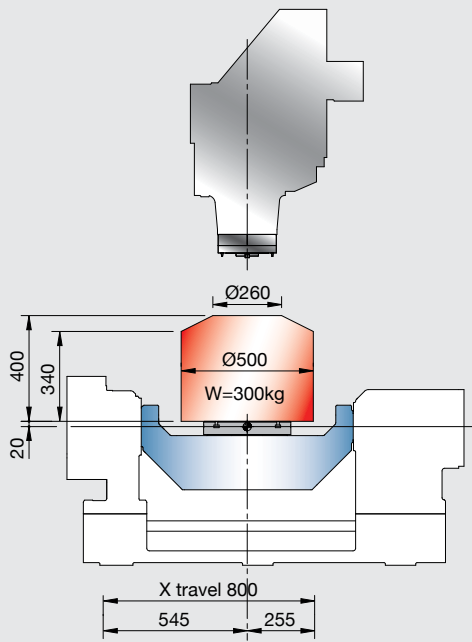
Cutting area and interference

UX500Dyn
NC40R SPINDLE

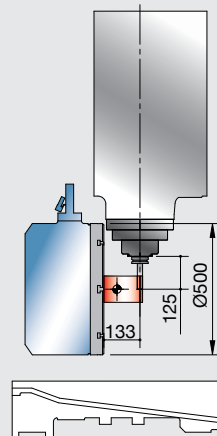
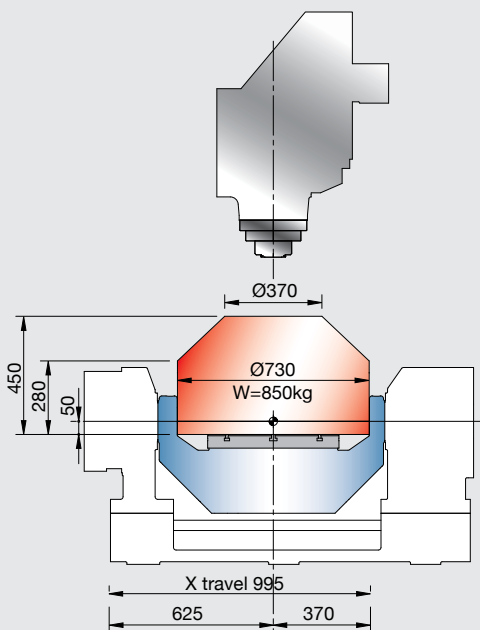
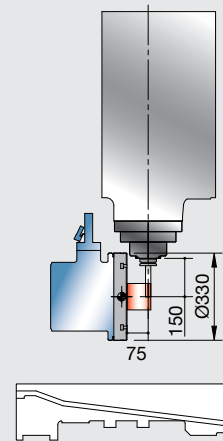


UX730Dyn
BN15R / BN25R SPINDLE

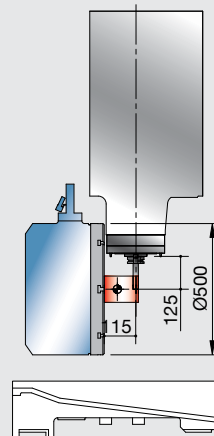




BN15R / BN25R SPINDLE



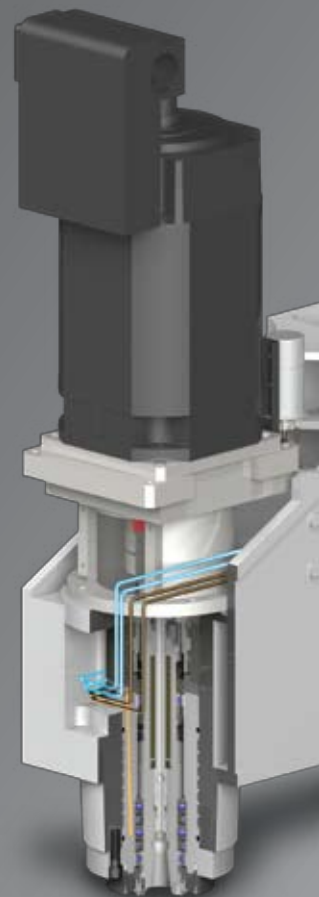
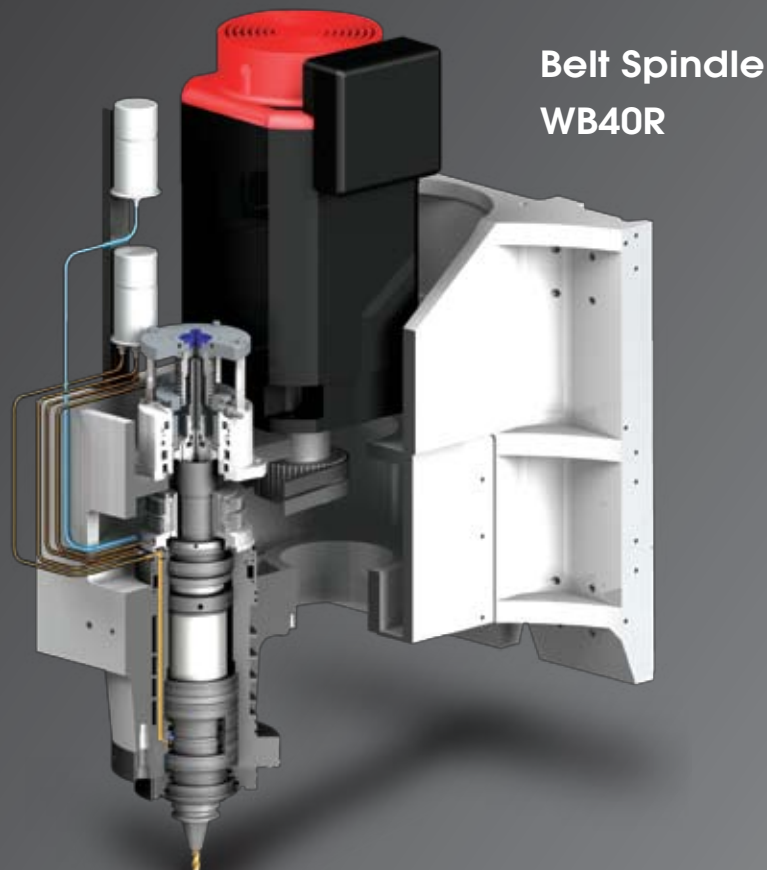
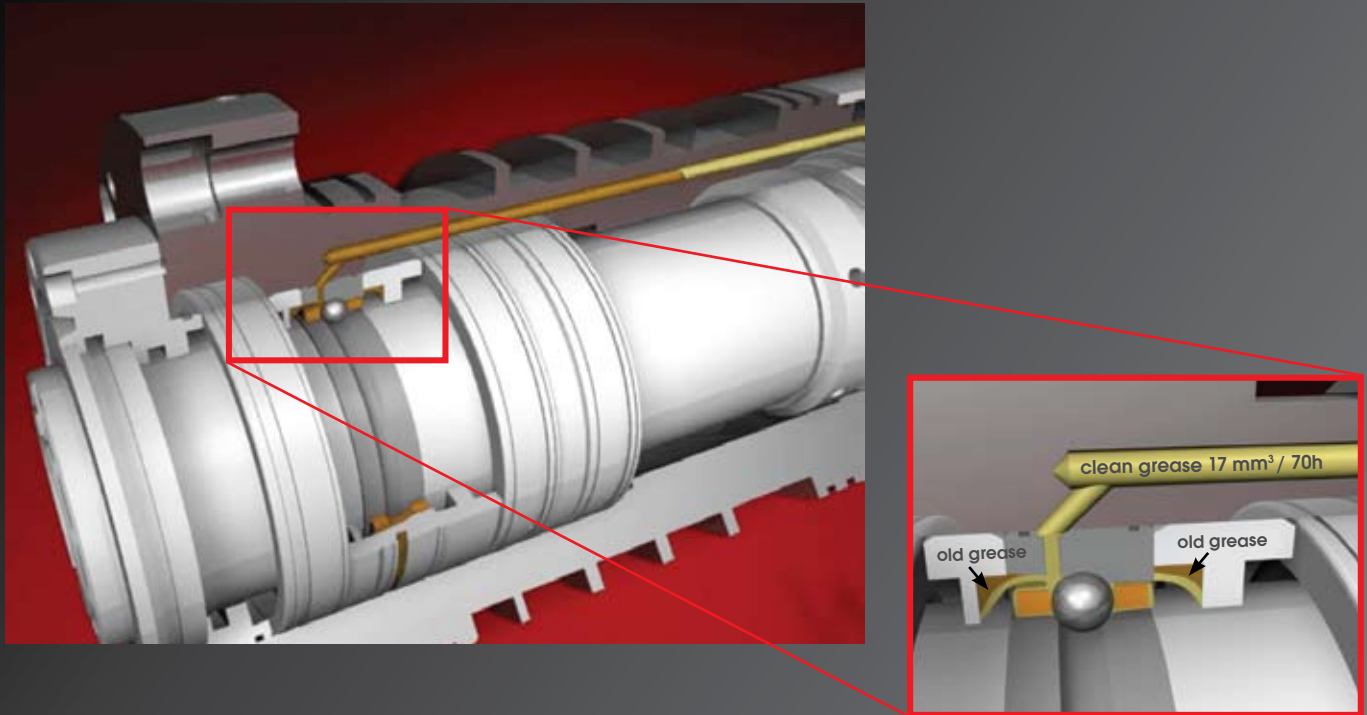
NC40R SPINDLE



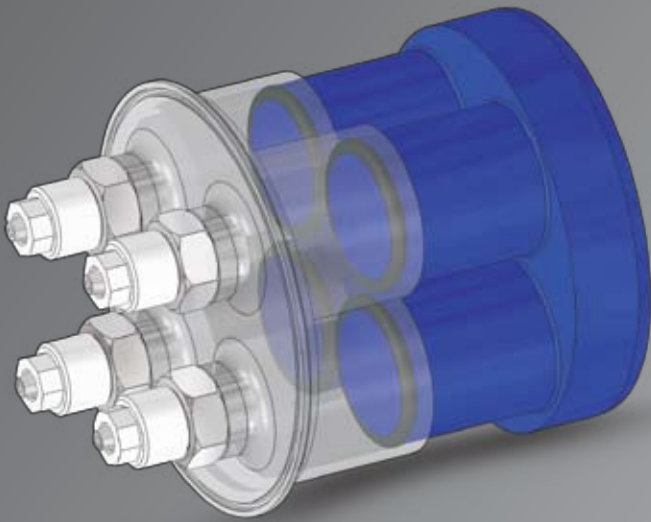
Unique spindle technology

Key principle

Use car industry re-greasing principle to supply “ clean grease”
at 70 hr interval by $17 \text{ mm}^3 / \text{shoot}$.

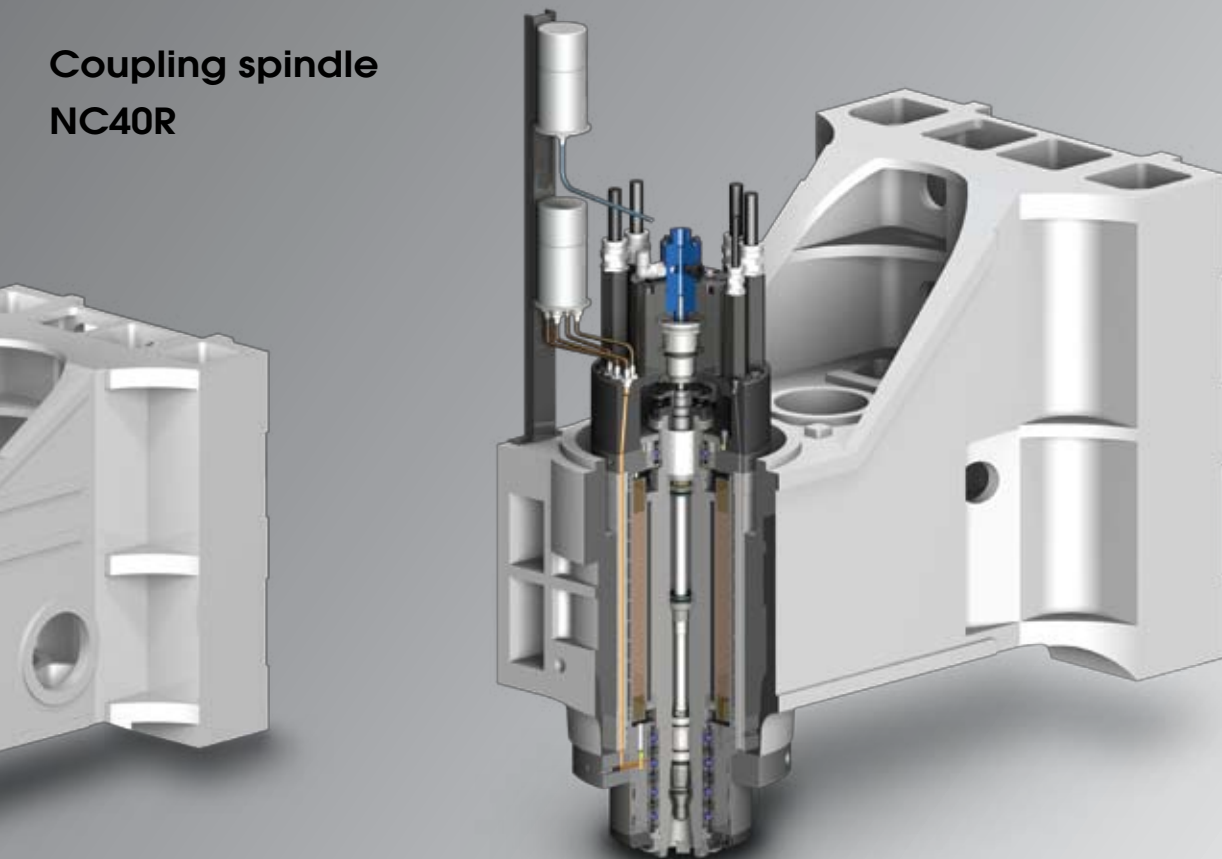


The grease chamber volume at 7.5 cm³ can support 28,840 hr.
This LUBCON unit service life at 3 years as minimum is guaranteed.



**Coupling spindle
NC40R**

**Motor Spindle
BN15R
BN25R**

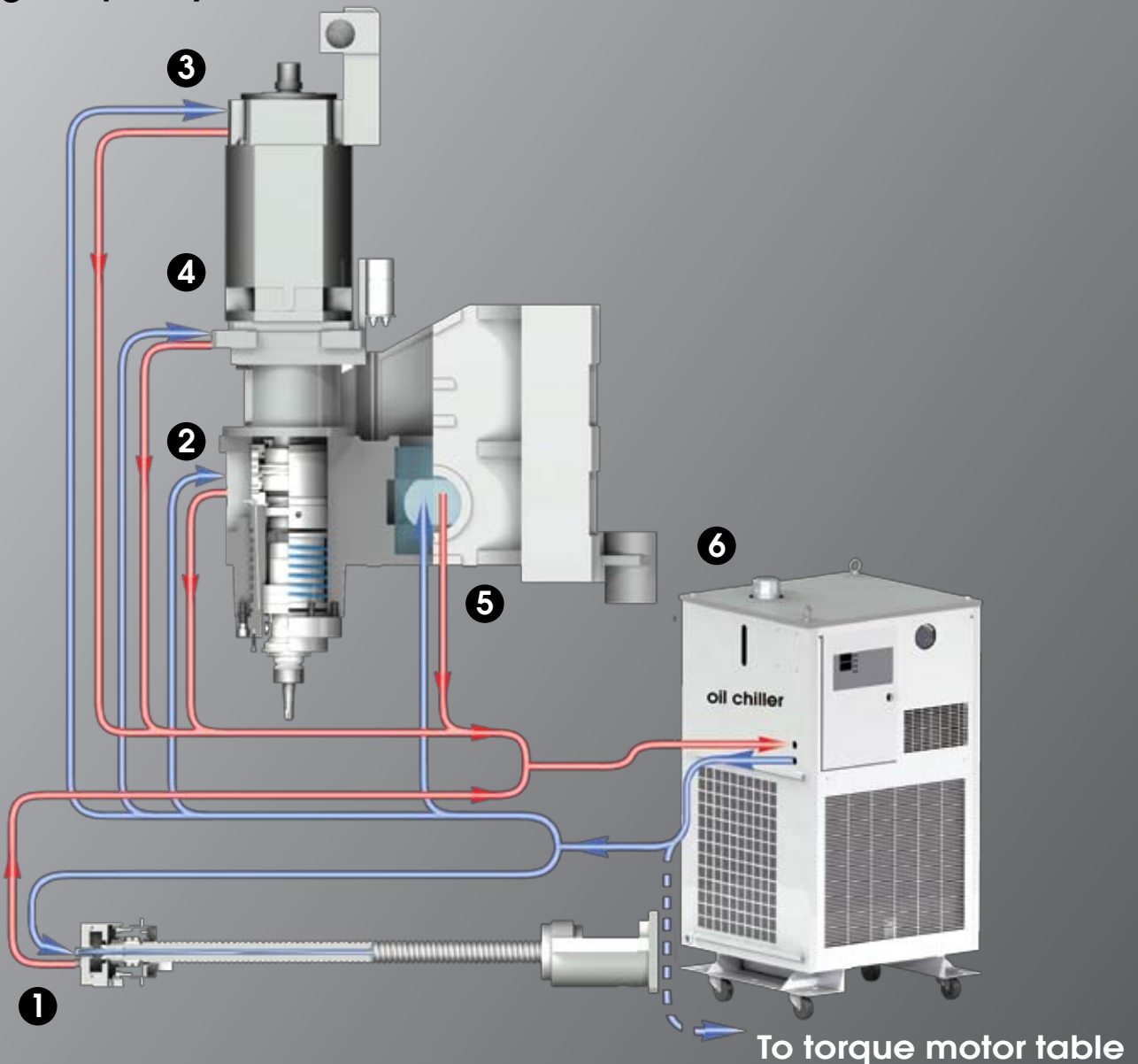


Thermal management

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

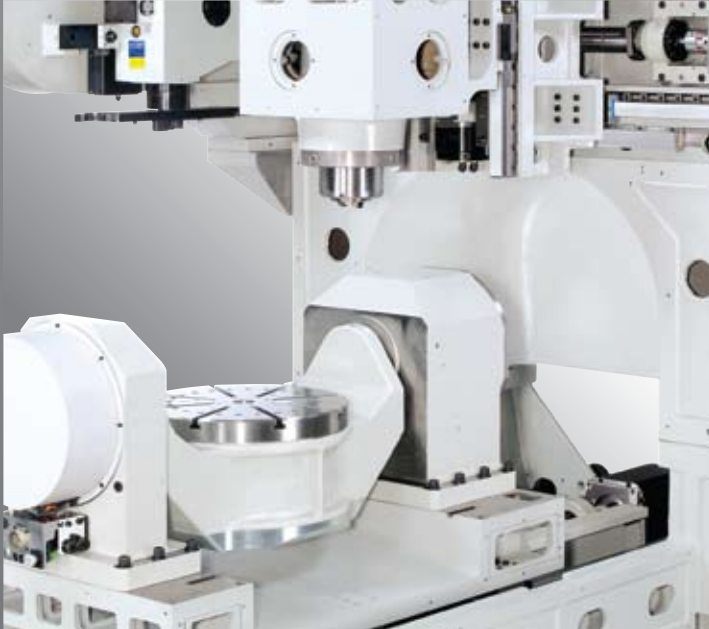
LEVEL I - Standard

- 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, UX500, 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 $\pm 10 \mu\text{m}$

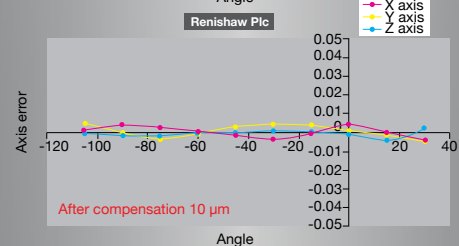
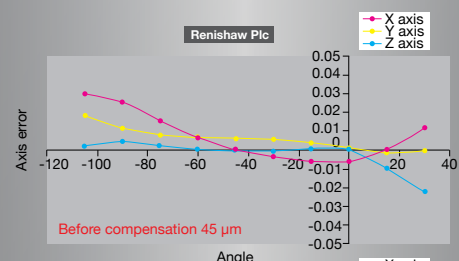


LEVEL III

- 9** Laser measurement & compensation



- 10** Tilting volumetric compensation



Work envelope

UX300	Rotary Axis (C - axis)	Tilting Axis (A - axis)
Max. swing (mm)	Ø300	
Table load capacity (kg)	100	
Maximum R.P.M	25 min ⁻¹	25 min ⁻¹
Indexing accuracy	15 sec (10 sec)	10 sec
Repeatability	4 sec (2 sec)	4 sec
Clamping torque	686 Nm	1,372 Nm

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

Note: () with optional absolute rotary encoder



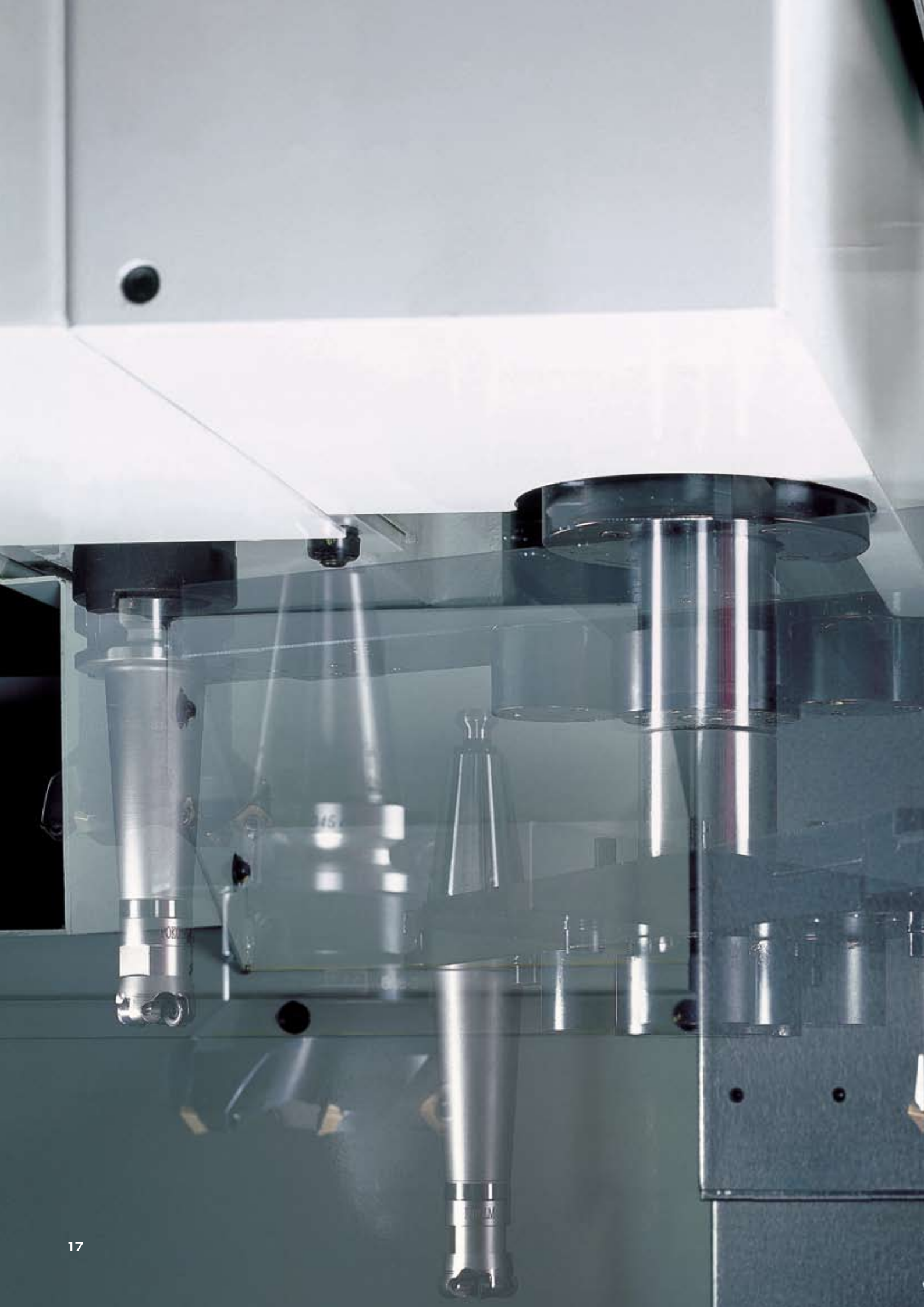
MODEL UX300

UX500Dyn	Rotary Axis (C - axis)	Tilting Axis (A - axis)
Max. swing (mm)	Ø500	
Table load capacity (kg)	300	
Maximum R.P.M	100 min ⁻¹	50 min ⁻¹
Indexing accuracy	5 sec	5 sec
Repeatability	5 sec	5 sec
Clamping torque	900 Nm	3,500 Nm

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	5 sec	5 sec
Clamping torque	1,800 Nm	5,000 Nm



MODEL UX600





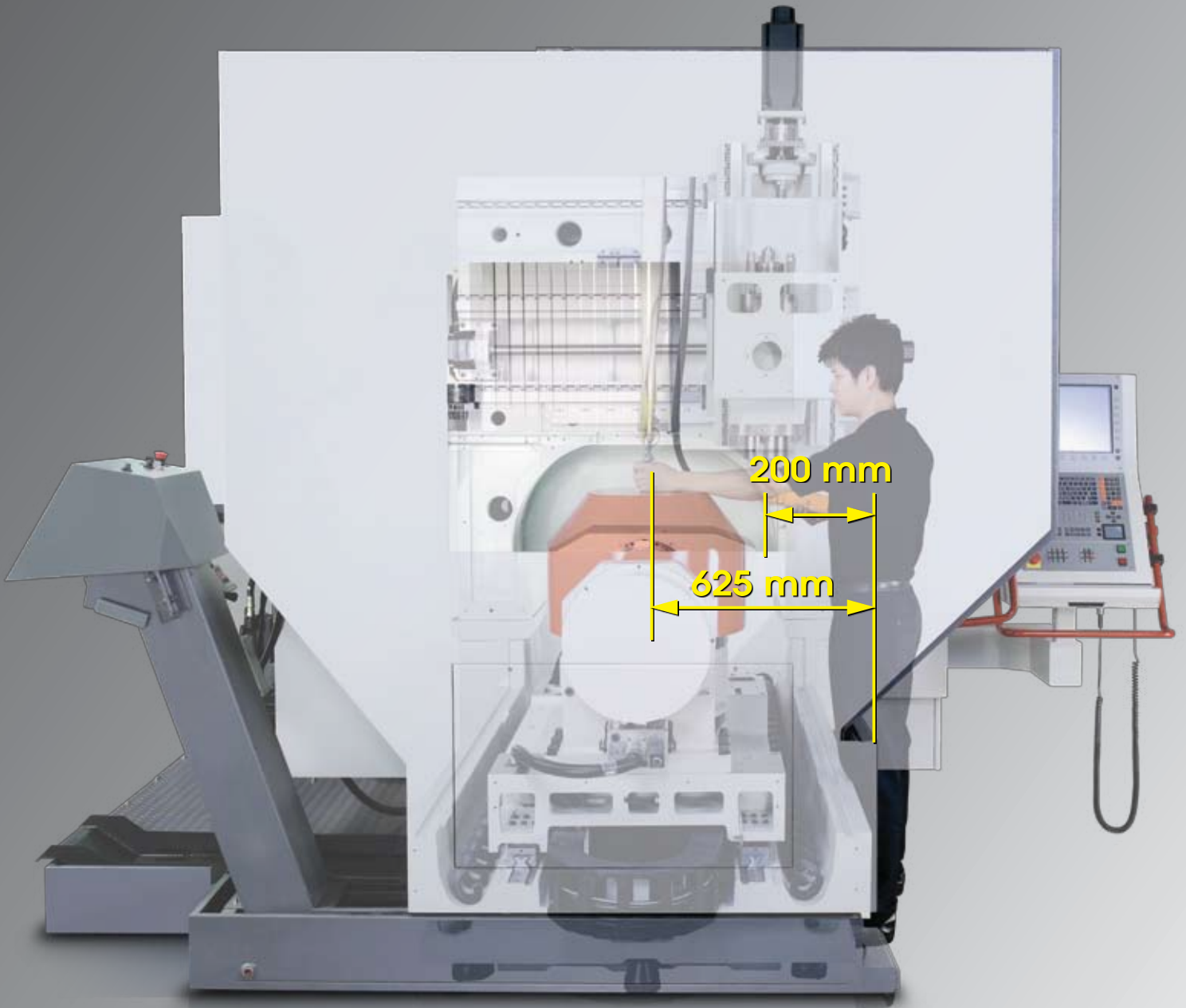
48ATC

60ATC

Ergonomic operation



MODEL UX300

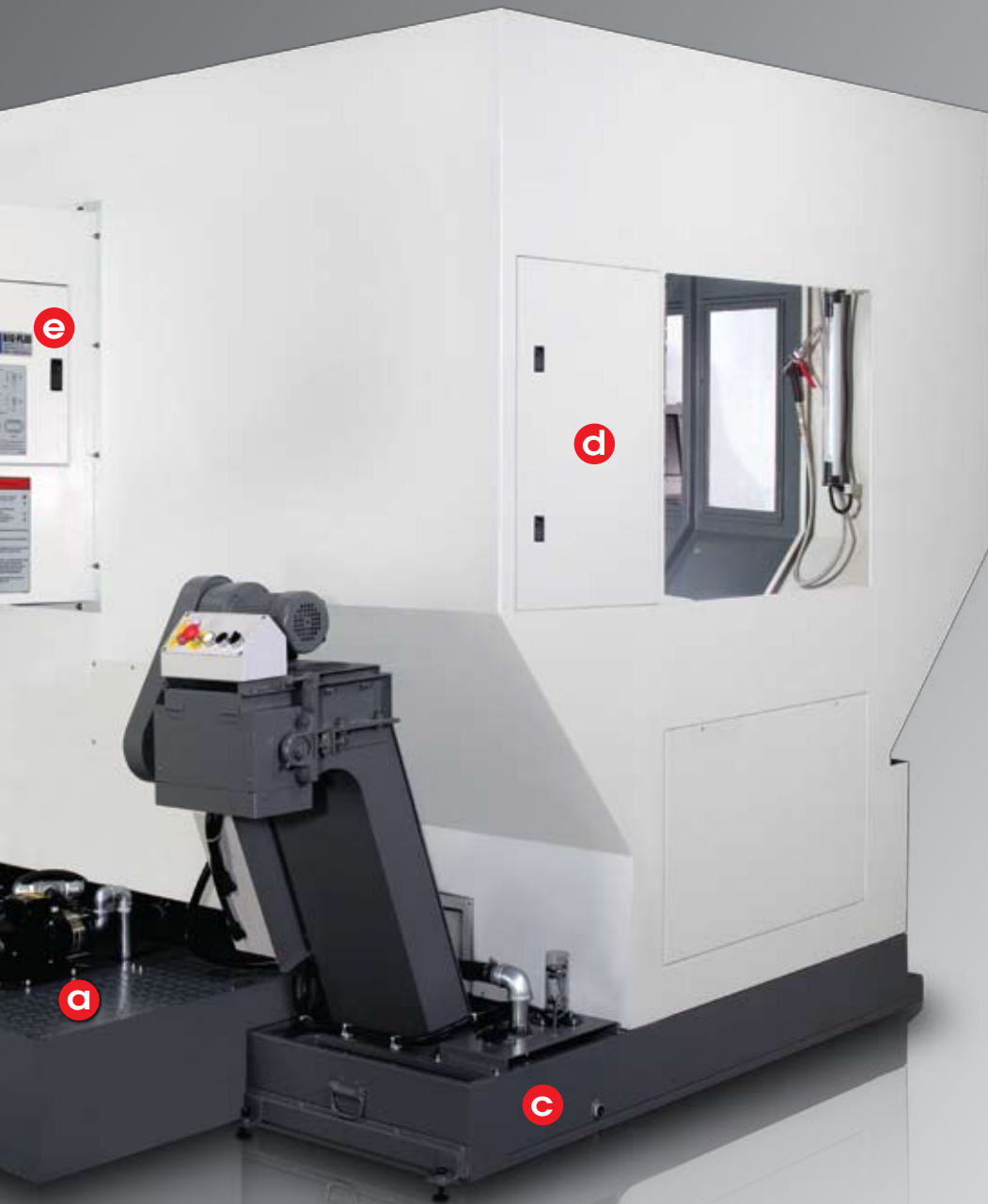


MODEL UX600
UX500Dyn
UX730Dyn

Chip management system

- a** 400 liter coolant tank with
 - Coolant through spindle: 20 bar
 - Spindle nozzle coolant: 2 bar (UX300)
 - Spindle nozzle coolant: 4 bar (UX600 / UX500Dyn / UX730Dyn)
- b** Dual augers
- c** Scraper or hinge type chip conveyor
- d** Documentation & hand tools shelf
- e** Tool loading / unloading on magazine side
- f** Swiveling operator panel





Technical data		UX300				UX600			
		/9B	/12B	/15B	15C	/9B	/12B	/15B	15C
Work range									
Table size (mm)		Ø255				Ø280 / Ø600 x W500			
Travel	X (mm)	410				885 (580 + 305)			
	Y (mm)	610 (±305)				800 (-375 ~ +425)			
	Z (mm)	500				500			
	A (degree)	+30° ~ -120°				+30° ~ -120°			
	C (degree)	360° (Continuous)				360° (Continuous)			
Max. swing (mm)		Ø300				Ø600			
Table surface to spindle nose (mm)		30 ~ 530				130 ~ 680			
Spindle nose to tilting center at 90°		30 ~ 530				160 ~ 680			
Max. work piece size (mm)		Ø300 x 300				Ø600 x 400			
Table load capacity (kg)		100				300			
Feed drive									
Feed force X / Y / Z (N)		6,283 / 11,519 / 11,519 (F) 11,300 / 13,700 / 13,700 (T)				11,519 / 11,519 / 11,519 (F) 13,700 / 13,700 / 13,700 (T)			
Rapid movement	X / Y / Z (m / min)	36 / 36 / 32				36			
	A / C (min ⁻¹)	A = 25 / C = 25				A = 25 / C = 33.3			
Acceleration X / Y / Z (m/s ²)		5.5 / 5.5 / 5.5 (F) 5 / 5 / 5 (T)				5.5 / 5.5 / 5.5 (F) 5 / 5.5 / 5.5 (T)			
Dia. & pitch of the ball screw		Ø45 / P = 12 / 12 / 12				Ø45 / P = 12 / 12 / 12			
Position accuracy		STD.	0.01 / 0.006			0.01 / 0.006			
		ISO 230-2 / JIS in X / Y / Z	0.008 / 0.004 (Linear scale)			0.008 / 0.004 (Linear scale)			
Main spindle									
Spindle taper		BBT40				BBT40			
Max. spindle speed		9,000	12,000	15,000	15,000	9,000	12,000	15,000	15,000
Spindle base speed	F	1,125	1,500	1,875	1,400	1,125	1,500	1,875	1,400
	T				1,500				1,500
Spindle output KW (S6-40%)	F	22*	22*	22*	22	22*	22*	22*	22
	T	25	25	25	25	25	25	25	25
Spindle torque Nm (S6-40%)	F	187*	140*	112*	150	187*	140*	112*	150
	T	212	159	127	159	212	159	127	159
Spindle transmission		Belt			Coupling	Belt			Coupling
Spindle diameter (mm)		Ø70				Ø70			
Tool changer									
Tool selection		Random				Random			
Magazine positions		48 (std.) / 60 (opt.)				48 (std.) / 60 (opt.)			
Max. tool diameter (mm)		75				75			
w/o adjacent tool (mm)		125				125			
Max. tool length (mm)		280				280			
Max. tool weight (kg)		7				7			
CTC time-ISO 10791-9 (sec.)		4.6				9			
Coolant system									
Coolant tank capacity (Liter)		300				400			
Pump capacity									
- Nozzle coolant		20 L / min., 2 bar				60 L / min., 4 bar			
- Through spindle coolant		25 L / min., 20 bar				25 L / min., 20 bar			
- Wash down		60 L / min., 4 bar				40 L / min., 2 bar			
Machine size									
Height (mm)		3,065				3,030			
Floor space W x D (mm)		2,635 x 3,160				3,950 x 3,670			
Weight (kg)		7,400				12,100			
Connections									
Main power		220 V / 60 Hz or 400 V / 50 Hz				220 V / 60 Hz or 400 V / 50 Hz			
Power consumption (KVA)		30 (F) 35 (T)				35 (F) 35 (T)			

Note: *S3-25%

Main spindle

Belt spindle - 9,000 / 12,000 / 15,000 min⁻¹
 Coupling spindle - 15,000 min⁻¹
 Motor spindle - 15,000 / 25,000 min⁻¹

Control

(T): HEIDENHAIN - iTNC530 (5 Axes)
 (F): FANUC - 18iMB (5 Faces)

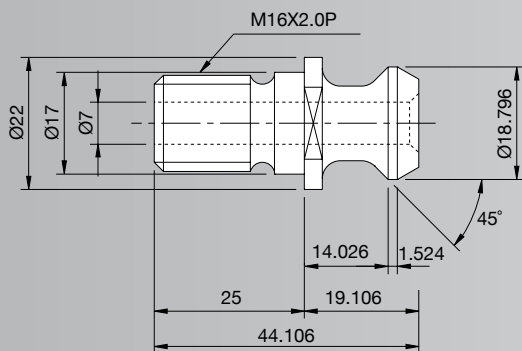
Technical data		UX500 Dyn			UX730 Dyn		
		/15C	/15M	/25M	/15C	/15M	/25M
Work range							
Table size (mm)		Ø330			Ø500		
Travel	X (mm)	800 (545 + 255)			995 (625 + 370)		
	Y (mm)	800 (-375 ~ +425)			800 (-375 ~ +425)		
	Z (mm)	500			500		
	A (degree)	+30° ~ -120°			+30° ~ -120°		
	C (degree)	360° (Continuous)			360° (Continuous)		
Max. swing (mm)		Ø500			Ø730		
Table surface to spindle nose (mm)		130 ~ 630			175 ~ 675		
Spindle nose to tilting center at 90°		150 ~ 630			125 ~ 675		
Max. work piece size (mm)		Ø500 x 400			Ø730 x 450		
Table load capacity (kg)		300			850		
Feed drive							
Feed force X / Y / Z (N)		19,800 / 13,700 / 13,700			19,800 / 11,300 / 13,700		
Rapid movement	X / Y / Z (m / min)	36			36		
	A / C (min ⁻¹)	A = 50 / C = 100			A = 25 / C = 60		
Acceleration X / Y / Z (m/s ²)		5.5 / 5.5 / 5.5			5.5 / 5.5 / 5.5		
Dia. & pitch of the ball screw		Ø45 / P = 12 / 12 / 12			Ø45 / P = 12 / 12 / 12		
Position accuracy							
ISO 230-2 / JIS in X / Y / Z		STD.	0.008 / 0.004 (with scale)		0.008 / 0.004 (with scale)		
Main spindle		BBT40			BBT40		
Spindle taper		HSK A63	BBT40	HSK A63	HSK A63	BBT40	HSK A63
Max. spindle speed		15,000	15,000	25,000	15,000	15,000	25,000
Spindle base speed		1,500	2,000	5,830	1,500	2,000	5,830
Spindle output KW (S6-40%)		25	36 / 42**	51 / 61**	25	36 / 42**	51 / 61**
Spindle torque Nm (S6-40%)		159	172 / 201**	81 / 97**	159	172 / 201**	81 / 97**
Spindle transmission		Coupling / Motor (opt.)			Coupling / Motor (opt.)		
Spindle diameter (mm)		Ø70		Ø65	Ø70		Ø65
Tool changer							
Tool selection		Random			Random		
Magazine positions		48 (std.) / 60 (opt.)			48 (std.) / 60 (opt.)		
Max. tool diameter (mm)		75			75		
w/o adjacent tool (mm)		125		75	125		75
Max. tool length (mm)		280		200	280		200
Max. tool weight (kg)		7		4.5	7		4.5
CTC time-ISO 10791-9 (sec.)		9		8	9		8
Coolant system							
Coolant tank capacity (Liter)		400			400		
Pump capacity							
- Nozzle coolant		60 L / min., 4 bar			60 L / min., 4 bar		
- Through spindle coolant		25 L / min., 20 bar			25 L / min., 20 bar		
- Wash down		40 L / min., 2 bar			40 L / min., 2 bar		
Machine size							
Height (mm)		3,030			3,030		
Floor space W x D (mm)		3,950 x 3,670			3,950 x 3,670		
Weight (kg)		12,100			12,700		
Connections							
Main power		220 V / 60 Hz or 400 V / 50 Hz			220 V / 60 Hz or 400 V / 50 Hz		
Power consumption (KVA)		40	55	65	40	55	65

Note: **S6-25%

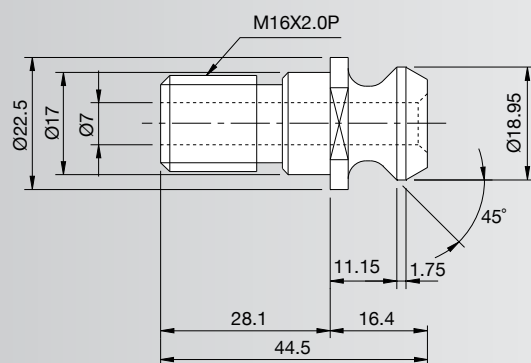
Standard / Option accessories	UX300			
	/9B	/12B	/15B	/15C
■ HEIDENHAIN iTNC530 (5 Axes) with Option 2	●	●	●	●
■ FANUC 18iMB (5 Faces)	●	●	●	●
■ Spindle oil chiller	●	●	●	●
■ 40 taper 9,000 min ⁻¹ WB40R belt spindle	●	×	×	×
■ 40 taper 12,000 min ⁻¹ WB40R belt spindle	×	●	×	×
■ 40 taper 15,000 min ⁻¹ WB40R belt spindle	×	×	●	×
■ 40 taper 15,000 min ⁻¹ NC40R coupling spindle	×	×	×	●
■ 40 taper 15,000 min ⁻¹ BN15R motor spindle	×	×	×	×
■ 40 taper 25,000 min ⁻¹ BN25R 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	●	●	●	●
■ Table plate Ø600 x W500	×	×	×	×
■ Preparation of auto pallet system (EROWA or 3R)	○	○	○	○
■ Coolant through ball screw	●	●	●	●
■ Coolant system	●	●	●	●
■ 20 bar through spindle coolant	●	●	●	●
■ Coolant wash gun	●	●	●	●
■ Coolant wash down	●	●	●	●
■ Chip conveyor	●	●	●	●
	Scrape type	●	●	●
	Hinge type	○	○	○
■ Chip augers	●	●	●	●
■ Cutter air blast	●	●	●	●
■ Stainless steel chip pan & chip channel	●	●	●	●
■ Work light	●	●	●	●
■ Machine status light	●	●	●	●
■ CE & EMC	●	●	●	●
■ Laser tool measuring system	○	○	○	○

Pull stud and applicable tools

BT 40 (QUASER SUPPLY)



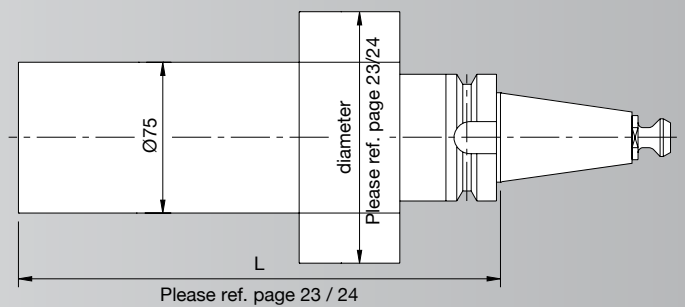
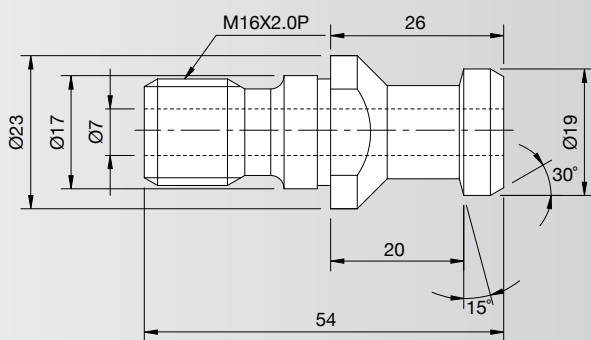
ISO (7388-B)



● = Standard ○ = Option ✕ = N / A

UX600				UX500 Dyn			UX730 Dyn		
/9B	/12B	/15B	/15C	/15C	/15M	/25M	/15C	/15M	/25M
●	●	●	●	●	●	●	●	●	●
●	●	●	●	✕	✕	✕	✕	✕	✕
●	●	●	●	●	●	●	●	●	●
●	✕	✕	✕	✕	✕	✕	✕	✕	✕
✕	●	✕	✕	✕	✕	✕	✕	✕	✕
✕	✕	●	✕	✕	✕	✕	✕	✕	✕
✕	✕	✕	●	●	✕	✕	●	✕	✕
✕	✕	✕	✕	✕	✕	●	✕	✕	●
●	●	●	●	●	●	●	●	●	●
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●	●	●	●	●	●	●	●	●	●
●	●	●	●	✕	✕	✕	✕	✕	✕
○	○	○	○	○	○	○	○	○	○
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DIN (69872-A)



Installation dimension

UX300

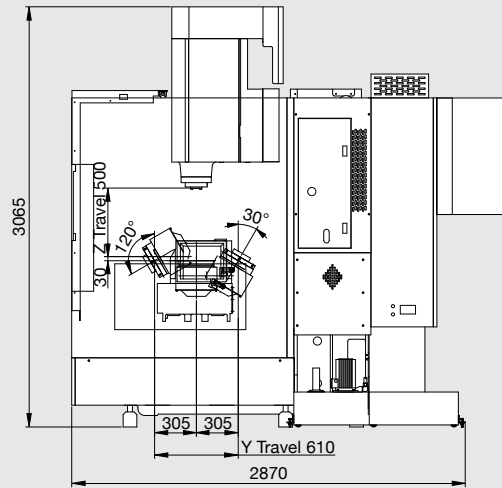
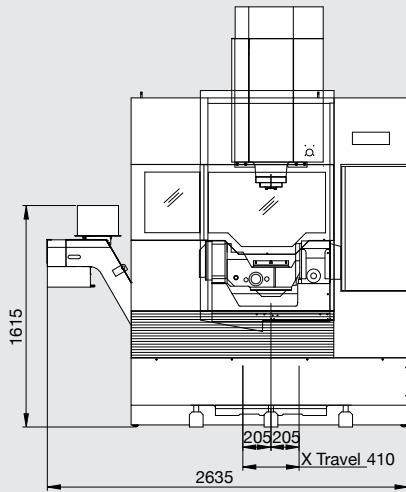
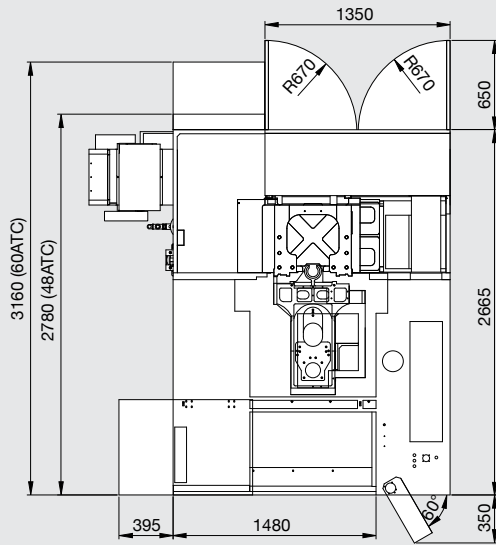
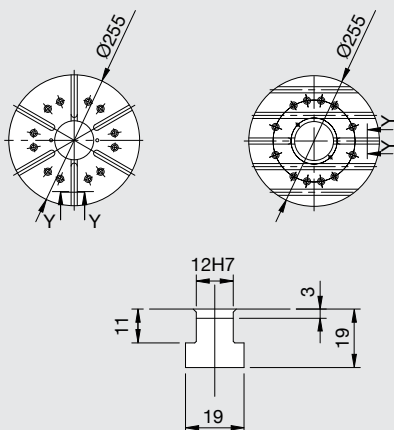
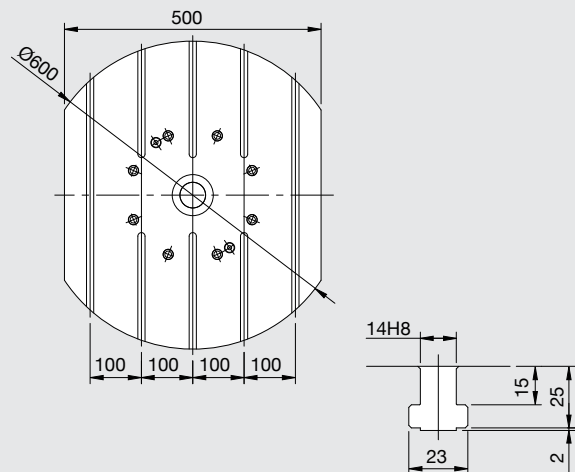


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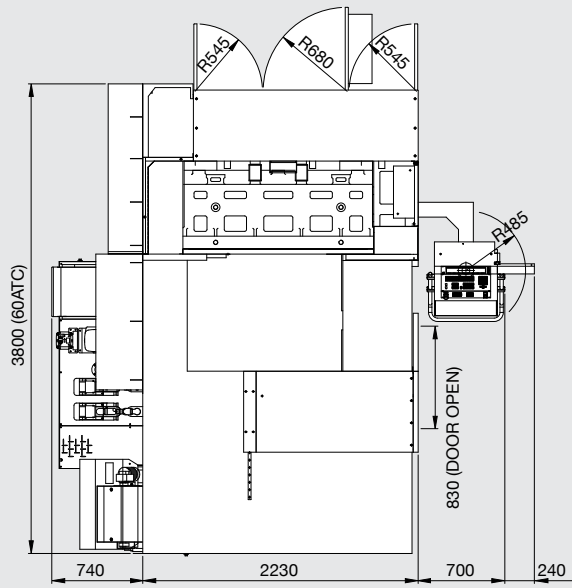
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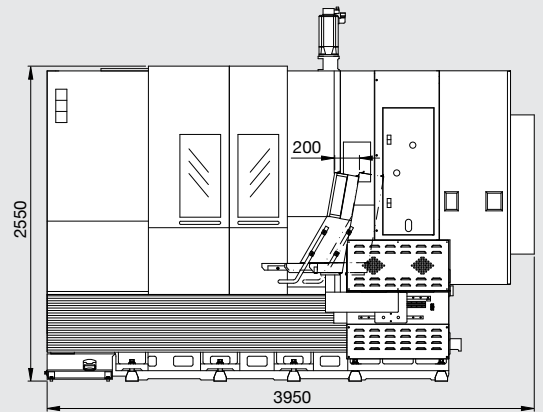
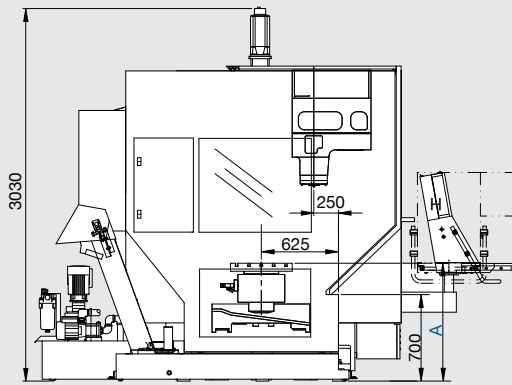
UX600



UX600
UX500Dyn
UX730Dyn

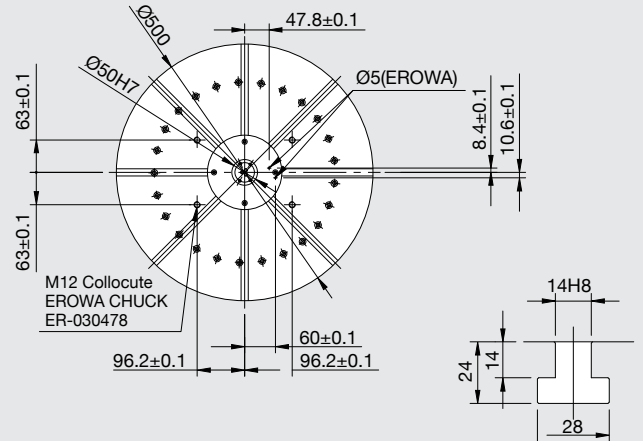
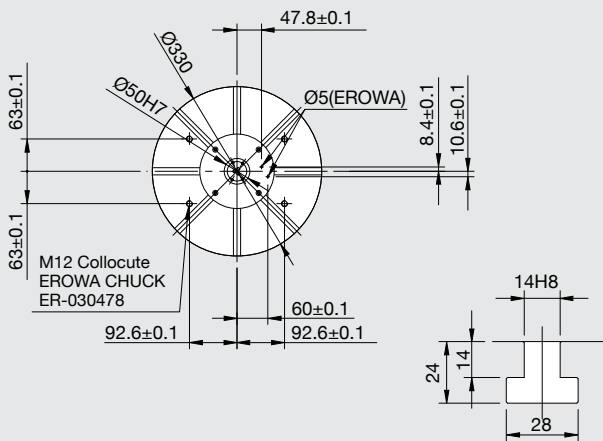


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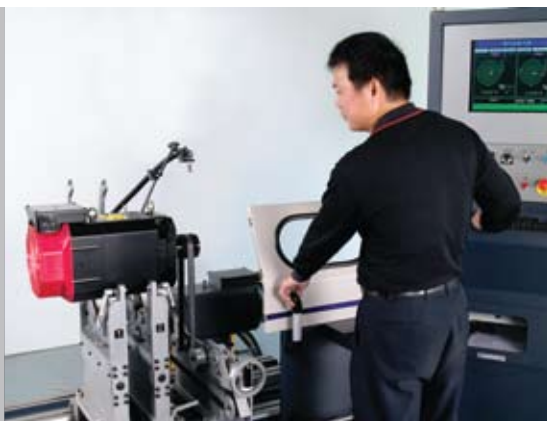
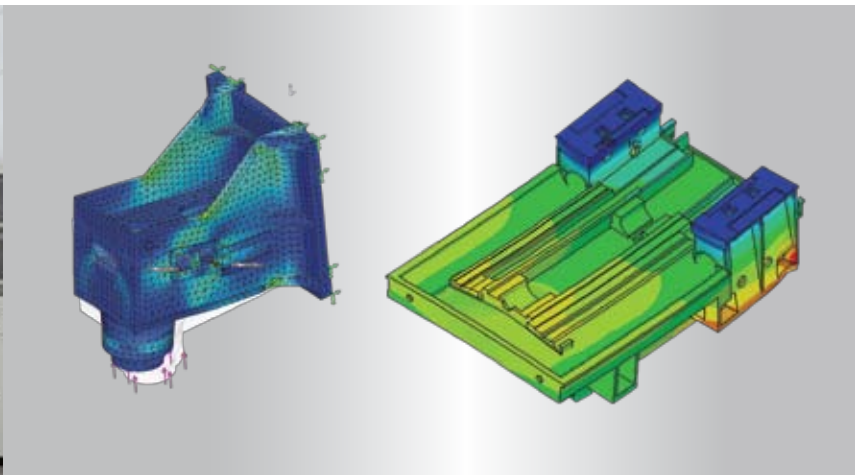


UX500Dyn

UX730Dyn



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