

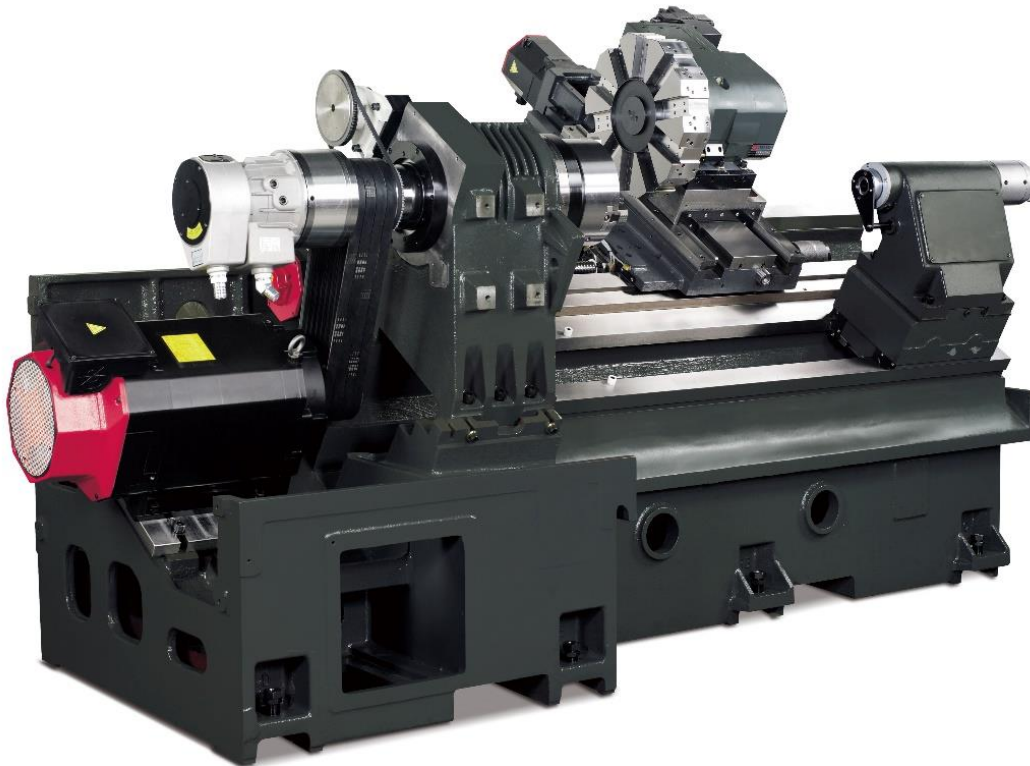
ML-600S

SPECIFICATIONS

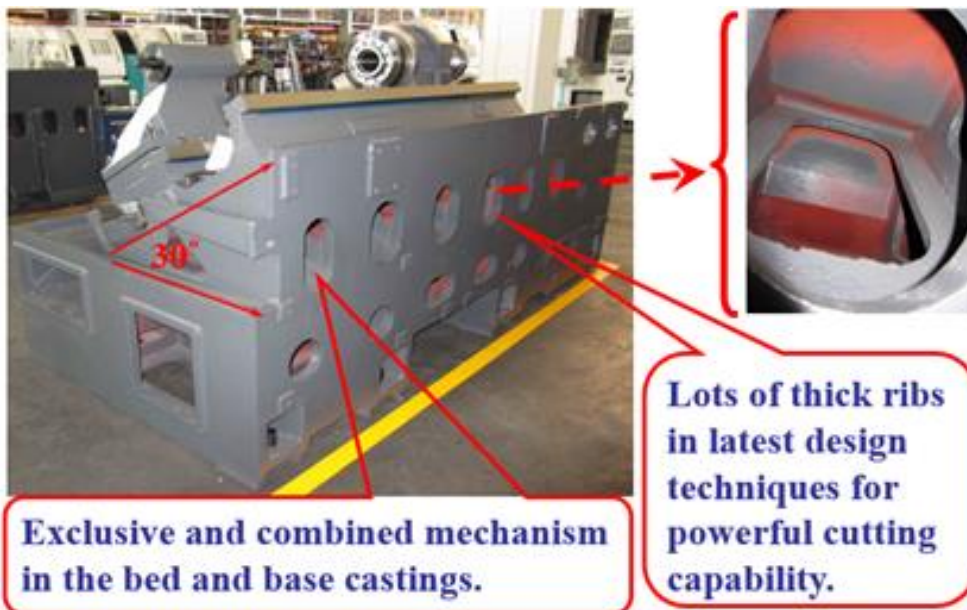


◀ New ML-600S outlook is similar left picture.

■ Massive Slant Bed Structure



- ✓ 30° slant bed, Φ 600 mm swing over bed
- ✓ The machine structure is manufactured from high quality cast iron, stress relieved for lifetime accuracy.
- ✓ Extra-wide ox ways on X/Z axes makes the machine suitable for heavy cutting with maximum stability.



■ Specification of Machine

ITEM	Unit	ML-600S		
		Standard	C axis	
Capacity	Swing over bed	mm	Ø600	
	Swing over saddle	mm	Ø450	
	Distance between center	mm	STD: 769 (A2-6); OPT: 759(A2-8)	
	Max. machining dia.	mm	Ø420	Ø340
	Max. machining length	mm	STD: 560 (8"); OPT: 540 (10")	
	Slant angle of bed		30°	
Travels	X-axis	mm	230(210+20)	225(170+55)
	Y-axis	mm	-	
	Z-axis	mm	600 (8"); 590 (10")	
	C-axis	mm	-	360° (0.001°)
Spindle	Spindle speeds	rpm	STD:50~4,500(A2-6); OPT:50~3,500(A2-8)	
	Spindle nose		STD:A2-6; OPT:A2-8	
	Spindle bore dia.	mm	STD: Ø62(A2-6); OPT: Ø86(A2-8)	
	Front bearing inner dia. (mm)	mm	STD: Ø100(A2-6);OPT: Ø120(A2-8)	
	Draw Bar Dia.	mm	STD: Ø 52; OPT: Ø 75	
Chuck	Chuck diameter	mm	STD: 8"; OPT: 10"	
Turret	Type		STD:Hydraulic; OPT:Servo	Live-tooling (VDI40)
	Stations	pcs	STD:10; OPT:12	STD:12
	Model		STD: LS-240 ; OPT: LS-240SV	TBMA200
	Square tool shank	mm	25x25	
	Boring bar shank diameter	mm	Ø40	
	Indexing time(0~180 °)	sec	1.8	0.73
Live-tool	Spindle speeds	rpm	-	50~4000
Feedrate	Rapid traverse	m/min	X:30, Z:30	
Tailstock	type		automatic	
	Quill diameter	mm	Ø85	
	Quill bore taper		MT-5	
	Quill travel	mm	120	
	Tailstock travel	mm	500	
Motors	Main spindle	kw	STD:α30ip/6,000 (15/18.5)	
	Live-tool	kw	-	α3/10,000 (3.7/5.5)
	X/Z-axis servo motor	kw	X:α12 (3.0); Z:α12 (3.0)	
	Hydraulic oil pump	kw	1.5	
	Chip conveyor	kw	0.2	
	Coolant pump	kw	0.85	
Accuracy	Positioning	mm	±0.004	
	Repeatability	mm	±0.003	
Power	Requirement	KVA	380-415/220V 26KVA	
Machine size	Height (mm)	cm	185	
	Floor space (W x D)	cm	401x214	
	Packing (w/conveyor)	cm	383x212x212	
	Net weight (w/conveyor)	kg	5,430	
	Gross weight (w/conveyor)	kg	5,730	

■ Standard Machine's Accessories

Other standard accessories	Q'ty	Other standard accessories	Q'ty
Fanuc Oi-TF (1) PLUS controller, 10.4" LCD	1 set	Foot pedal for chuck	1 set
Box way	1 set	Auto lubrication system	1 set
A2-6 spindle	1 set	Work lamp	1 set
8" 3-jaw hydraulic chuck	1 set	End of program indicator (3-colors)	1 set
Soft jaws (3pcs)	1 set	Coolant system	1 set
Hard jaws (3pcs)	1 set	Chain type chip conveyor + cart	1 set
10T hydraulic turret [Lio Shing]	1 set	Tool kits with box	1 set
Full enclosed splash guard	1 set	Leveling bolt and pads	1 set
Air blow for chuck + air unit	1 set	Yida manual	1 set
Programming hydraulic tail stock	1 set	Controller manual	1 set
Heat exchanger for electric cabinet	1 set		

■ Standard Tool Accessories for Turret

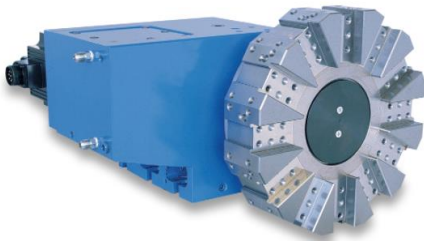
Turret model	Tool specification	Q'ty	Remark
LS-240 / LS-240SV (10T)	Turning holder □25x20	2 pcs	Standard
	Boring bar holder Φ40	5 pcs	Standard
	Wedge type tool clamping (for turning holder)	5 pcs	Standard
	(Φ8,10,12,16,20,25,23,)xΦ40	1 set	Standard
	(MT 2,3,4) x Φ40	1 set	Standard
	Quill MT 5	1 set	Standard
TMBA-200 (VDI40 - 12T) *Axial type* **Need offset tool holders	Turning holder □25x25	-	
	Boring bar holder Φ40	-	
	(Φ8,10,12,16,20,25,23,)xΦ40	1 set	Standard
	(MT 2,3,4) x Φ40	1 set	Standard
	Quill MT 5	1 set	Standard
	Radial tool holder VDI40-B3-40x25		Optional
	DIN 69880 axial static holders VDI40-C3-40x25		Optional
	DIN 69880 static holders(offset) VDI40-E2-40-B40x2-65		Optional
	Axial drilling and milling heads (offset) VDI40-DA40-MT3250		Optional
Radial drilling and milling head (offset) VDI40-BR40-MT32-90		Optional	
TMBR-200 (BMT65 – 12T) *Radial type*	Turning holder □25x25	-	
	Boring bar holder Φ40	-	
	(Φ8,10,12,16,20,25,23,)xΦ40	1 set	Standard
	(MT 2,3,4) x Φ40	1 set	Standard
	Quill MT 5	1 set	Standard
	Turning holder BMT65-DW300-C25-40-W110		Optional
	Facing holder BMT65-DW300-F25-82		Optional
	Boring bar holder BMT-65-DW300-B40-72-B		Optional
	Raidal drilling and milling head BMT65-DW300-DF65-32-72		Optional
	Raidal drilling and milling head BMT65-DW300-CW-DF65-32-72 (internal coolant supplier)		Optional
	Axial drilling and milling head BMT65-DW300-DA65-32		Optional
	Axial drilling and milling head BMT65-DW300-CW-DA65-32 (internal coolant supplier)		Optional

■ Live Tool Specification



Lio Shing – Hydraulic Turret

MODEL		LS-240
Center height	mm	120
Number of tools	N	10T/12
Rotating time (tool-to-tool)	sec	0.6
Rotating time (including locking)	sec	0.7
Total indexing time for 180°	sec	1.4/1.5
Total indexing time for 180° (including locking)	sec	1.6/1.7



Lio Shing – Servo Turret

MODEL		LS-240SV
Center height	mm	120
Number of tools	N	10T/12T
Rotating time (tool-to-tool)	sec	0.5/0.34
Rotating time (including locking)	sec	0.45/0.44
Total indexing time for 180°	sec	0.7
Total indexing time for 180° (including locking)	sec	0.8



Baruffaldi VDI40 Live Tool

MODEL		TBMA-200
Center height	mm	100
Number of tools	N	12T
Positioning time	30°	sec 0.20÷0.34
	45°	sec 0.25÷0.38
	180°	sec 0.53÷0.73
Unlocking + Locking time	sec	0.53















Baruffaldi BMT65 Live Tool

MODEL		TBMR-200
Center height	mm	100
Number of tools	N	12T
Positioning time	30°	sec 0.20÷0.34
	45°	sec 0.25÷0.38
	180°	sec 0.53÷0.73
Unlocking + Locking time	sec	0.53

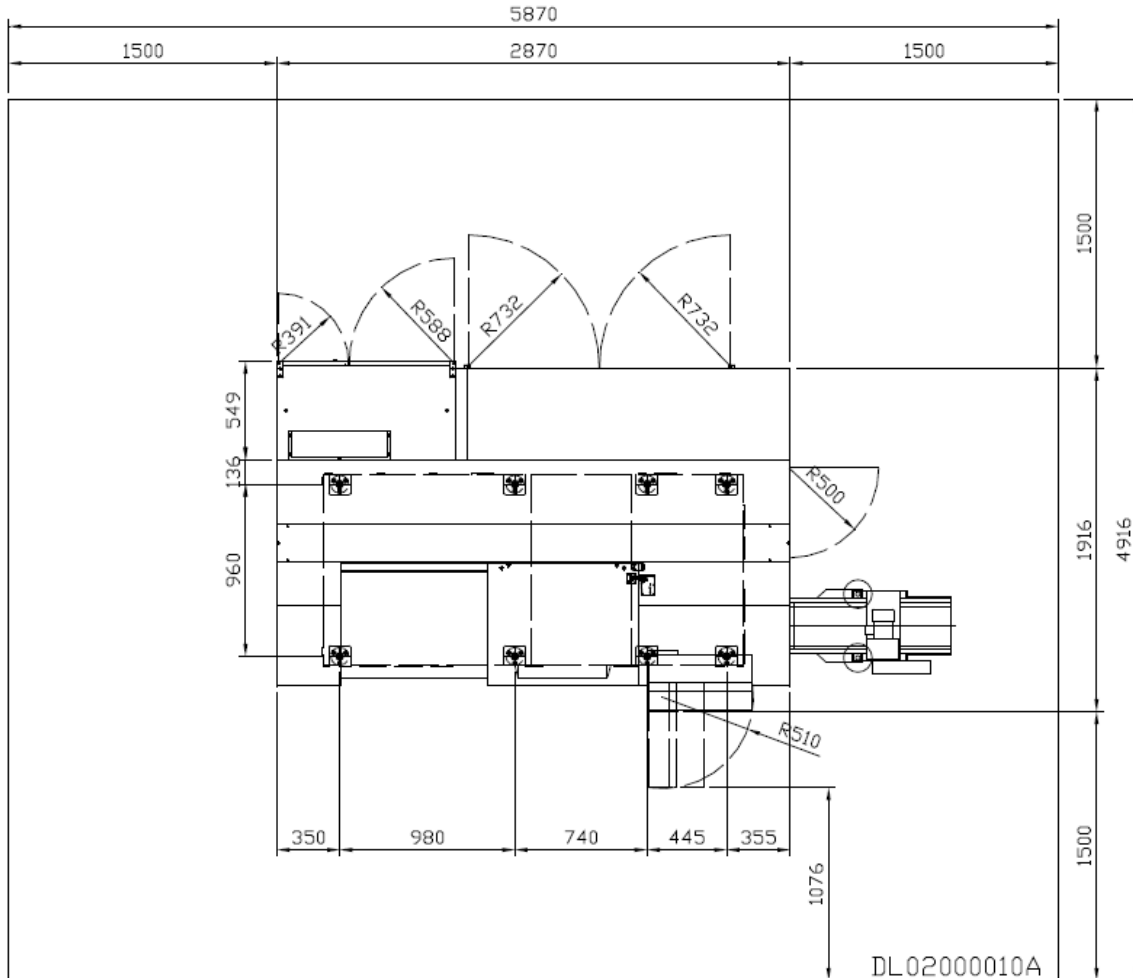
■ Pictures of Standard Accessories

01	1 set – Fanuc Oi-TF(1) plus ,10.4 LCD controller system with Yida control panel + fixed MPG	
02	1 set - Splash guard + Coolant system + chip conveyor with cart	
03	1 set - Hydraulic system	
04	1 set - A2-6 Spindle [Kenturn]	
05	1- pcs Foot pedal for chuck	
06	1 set – Transformer (26KVA) [Shin Hsing or others Taiwanese equal brand]	
07	1 set - 8" Chuck [Autogrip or Strong or others Taiwanese equal brand]	

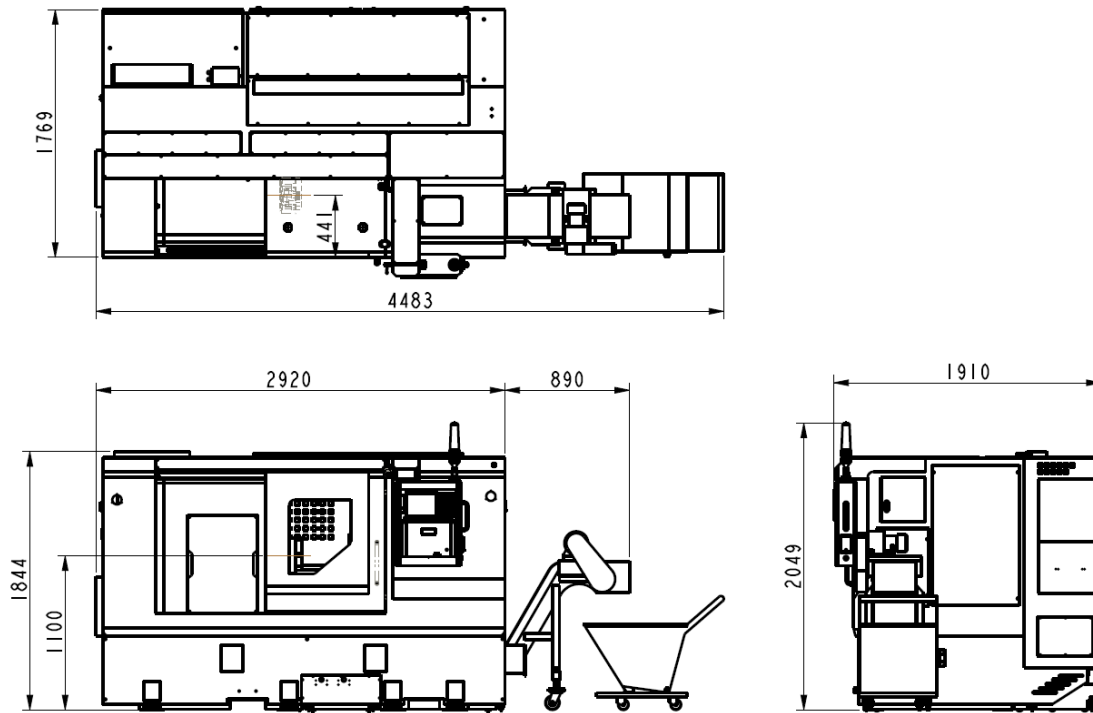
08	1 set/3pcs – 8” soft jaws	
09	1set/3pcs – 8” hard jaws	
10	1 set – work lamp	
11	1set - Programming hydraulic tailstock (saddle drives the moving of tailstock with lock pin)	
12	1 set - End of program indicator (3-colors)	
13	1 set – Air unit and auto lubrication system	
14	1 set - Leveling bolt and pads (8pcs)	
15	1 pc - air gun (put inside tool box only, not installed)	

16	1 set - Coolant tank + chip conveyor + cart *Coolant capacity: 160L	
17	1 set – Air blow for chuck	
18	Heat exchanger for electrical cabinet	
19	1 set - Tool kits with box	
20	1 set –Yida manual & controller manual (CD)	

■ Foundation (ML-600S)

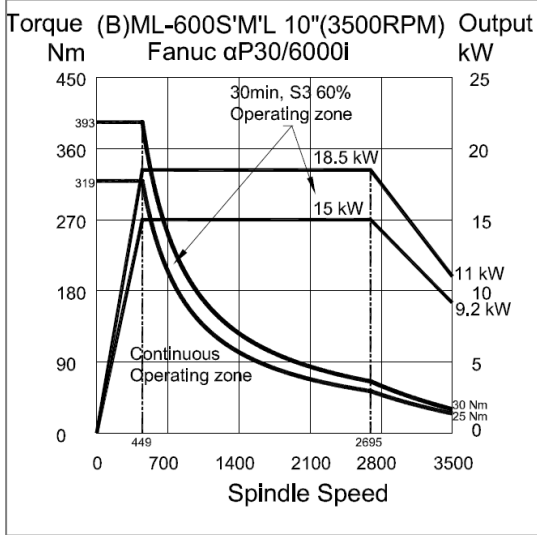


■ Dimension of Machine (ML-600S)

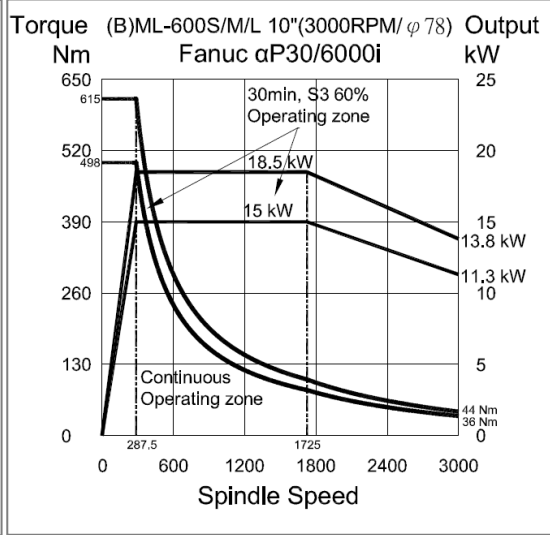


Spindle Power and Torque Diagram

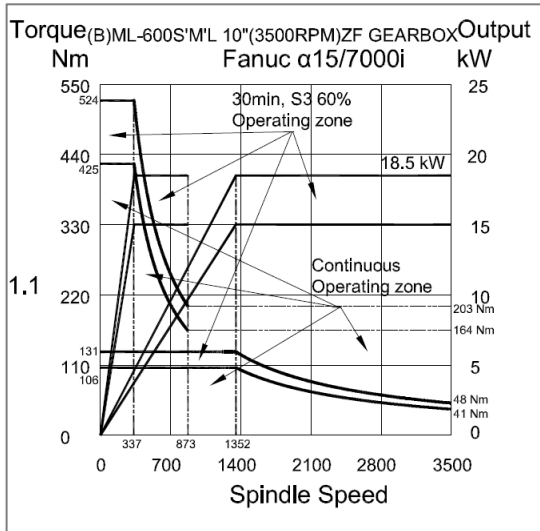
Fanuc controller



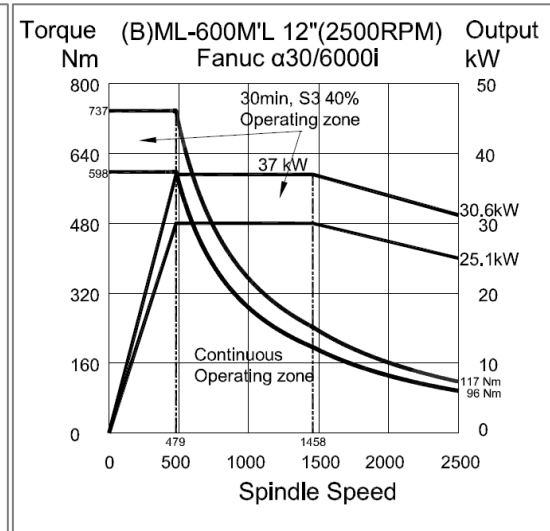
Standard



Optional



Optional

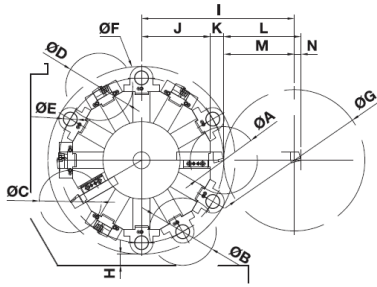


Optional

■ Tool Interference Diagram

Hydraulic / Servo Turret

unit: mm

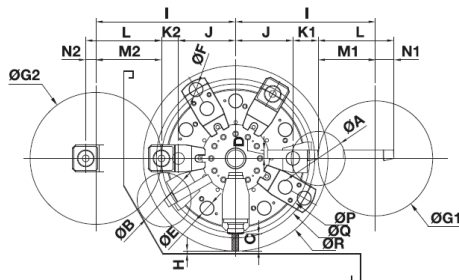


MODEL	CAPACITY	DIMENSION						
		A	B	C	D	E	F	G
BML-600S/M/L/T/MT/LT	10-TOOL	255	255	230	255	40	558	420
BML-600S/M/L/T/MT/LT	12-TOOL	205	205	185	210	40	558	420

MODEL	CAPACITY	DIMENSION						
		H	I	J	K	L	M	N
BML-600S/M/L/T/MT/LT	10-TOOL	32	455	205	40	230	210	20
BML-600S/M/L/T/MT/LT	12-TOOL	32	455	205	40	230	210	20

Live Tooling Turret

unit: mm



MODEL	CAPACITY	DIMENSION								
		A	B	C	D	E	F	G1	L	
BML-600S/M/L	12-TOOL	160	160	50	25	40	40	340	225	

MODEL	CAPACITY	DIMENSION						
		G2	H	I	J	K1	K2	M1
BML-600S/M/L	12-TOOL	390	7.9	415	170	75	50	170

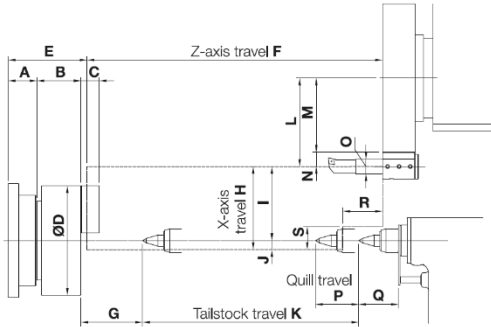
MODEL	CAPACITY	DIMENSION					
		M2	N1	N2	P	Q	R
BML-600S/M/L	12-TOOL	195	55	30	440	470	548

Work Envelope

Hydraulic / Servo Turret - I.D. Tool Holder

unit: mm

BML-600S/M/L



MODEL	SPINDLE	DIMENSION						
		A	B	C	D	E	F	G
BML-600S	8"	80	103	38	210	183	600	50
BML-600M	10"	80	113	43	254	193	830	182
BML-600L	10"	80	113	43	254	193	1330	281

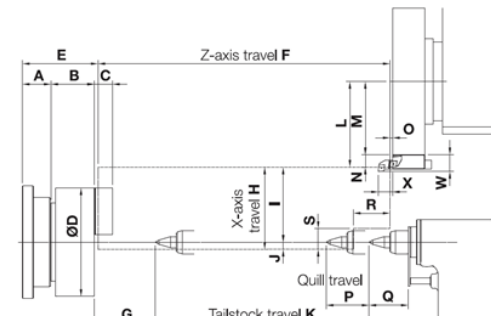
MODEL	SPINDLE	DIMENSION					
		H	I	J	K	L	M
BML-600S	8"	230	210	20	500	245	205
BML-600M	10"	230	210	20	600	245	205
BML-600L	10"	230	210	20	1000	245	205

MODEL	SPINDLE	DIMENSION					
		N	O	P	Q	R	S
BML-600S	8"	40	40	120	110	150	111
BML-600M	10"	40	40	120	110	150	111
BML-600L	10"	40	40	120	110	150	111

Hydraulic / Servo Turret - O.D. Tool Holder

unit: mm

BML-600S/M/L



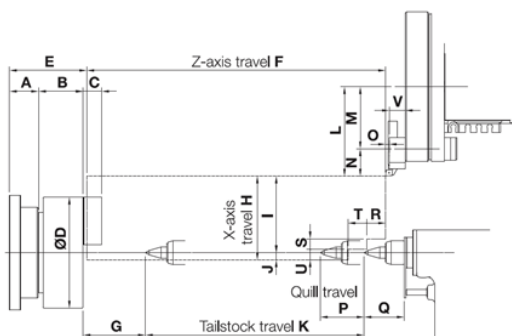
MODEL	SPINDLE	DIMENSION									
		A	B	C	D	E	F	G	H	I	J
BML-600S	8"	80	103	38	210	183	600	50	230	210	20
BML-600M	10"	80	113	43	254	193	830	182	230	210	20
BML-600L	10"	80	113	43	254	193	1330	281	230	210	20

MODEL	SPINDLE	DIMENSION										
		K	L	M	N	O	P	Q	R	S	W	X
BML-600S	8"	500	245	205	40	7	120	110	93	58	47	40
BML-600M	10"	600	245	205	40	7	120	110	93	58	47	40
BML-600L	10"	1000	245	205	40	7	120	110	93	58	47	40

Live Tooling Turret - O.D. Tool Holder

unit: mm

BML-600S/M/L



MODEL	SPINDLE	DIMENSION										
		A	B	C	D	E	F	G	H	I	J	K
BML-600S	8"	78	103	38	210	181	600	72	225	170	55	500
BML-600M	10"	79	113	43	254	192	830	202	225	170	55	600
BML-600L	10"	79	113	43	254	192	1330	302	225	170	55	1000

MODEL	SPINDLE	DIMENSION										
		L	M	N	O	P	Q	R	S	T	U	V
BML-600S	8"	245	170	75	10	120	110	100	24	129	64	44
BML-600M	10"	245	170	75	10	120	110	100	24	129	64	44
BML-600L	10"	245	170	75	10	120	110	100	24	129	64	44