



lymco



DV SERIES

Lymco Vertical Turning Center

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DV-3000T · DV-3000MT · DV-3000MTD · DV-4000T · DV-4000MT · DV-4000MTD

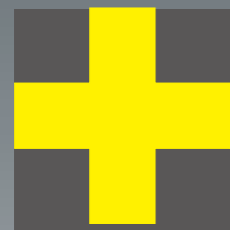
innovation · technology · service

One of a kind

It's commitment we offer, a commitment to provide superb engineering, continual improvement, refined service, and world class manufacturing. We are committed to present you the one of a kind Lymco experience.

Our mechanical designers set out to build a machine with exceptionally high versatility and capacity to meet and exceed shop owner's needs and desires. A machine that brings in business and generates high returns with a group of loyal, repeated customers. With detailed attention to structure, technology used, and application friendly designs, the DV series vertical turning center is our answer to achieve these goals.

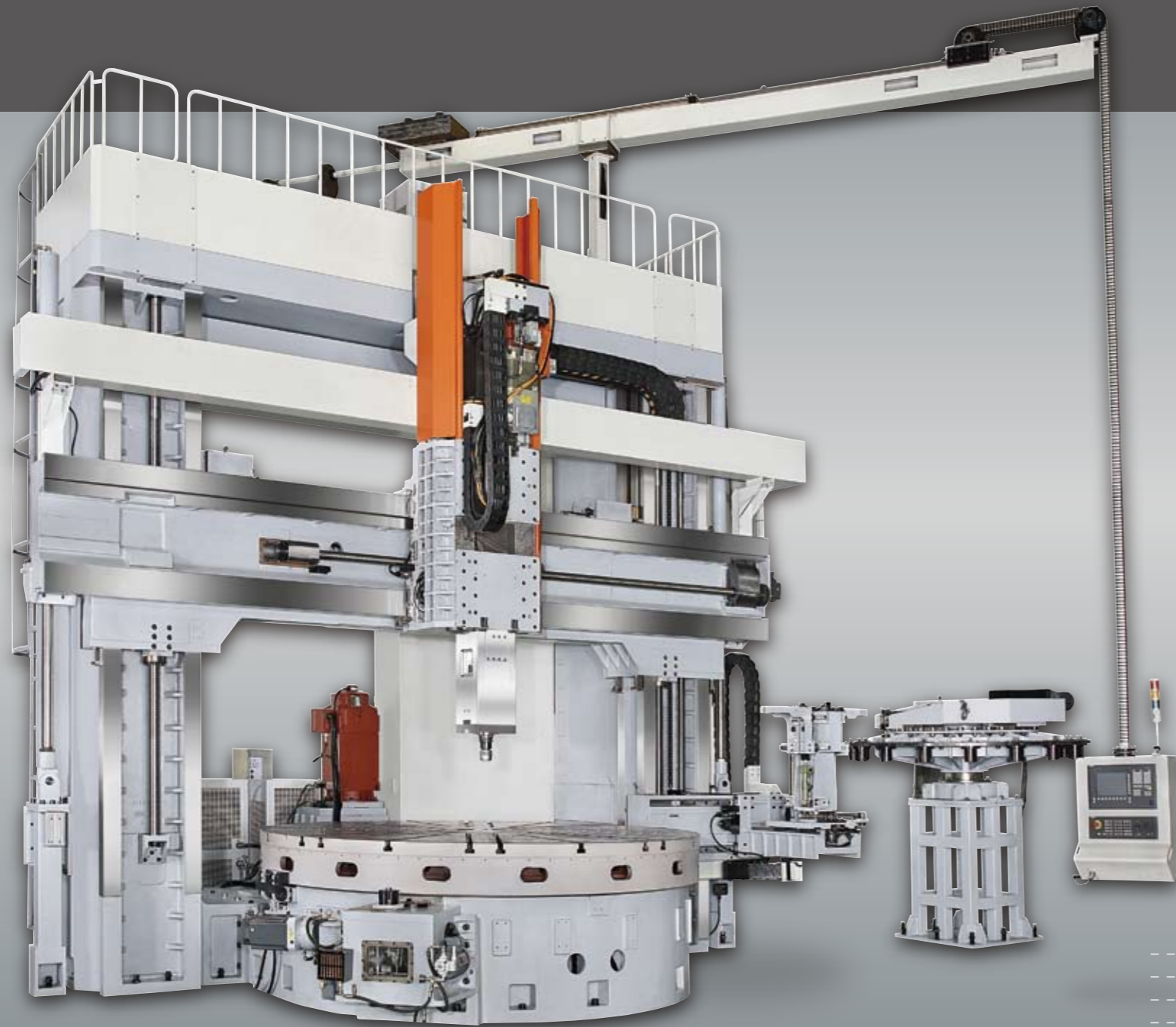




Dual magazine Up to 120 Tools each

The Machine

Machine should work for people, so the capacity of the DV series is designed with spacious envelop for easy deployment and wide variety of jobs in mind.

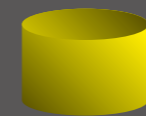


1+1 Dual ram Dual ATC DEPLOYMENT

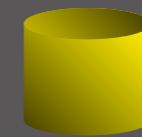


Up to 40 tons of loading capacity

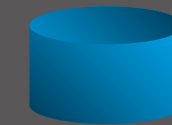
40



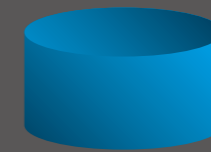
DV-3000 Series
Standard
Ø3,400 x 2,000mm
133.9x78.8"



DV-3000 Series
Optional
Ø3,400 x 3,000mm
133.9x118"



DV-4000 Series
Standard
Ø4,400 x 2,300mm
157.5x90.6"



DV-4000 Series
Optional
Ø5,500 x 3,000mm
216.5x118"



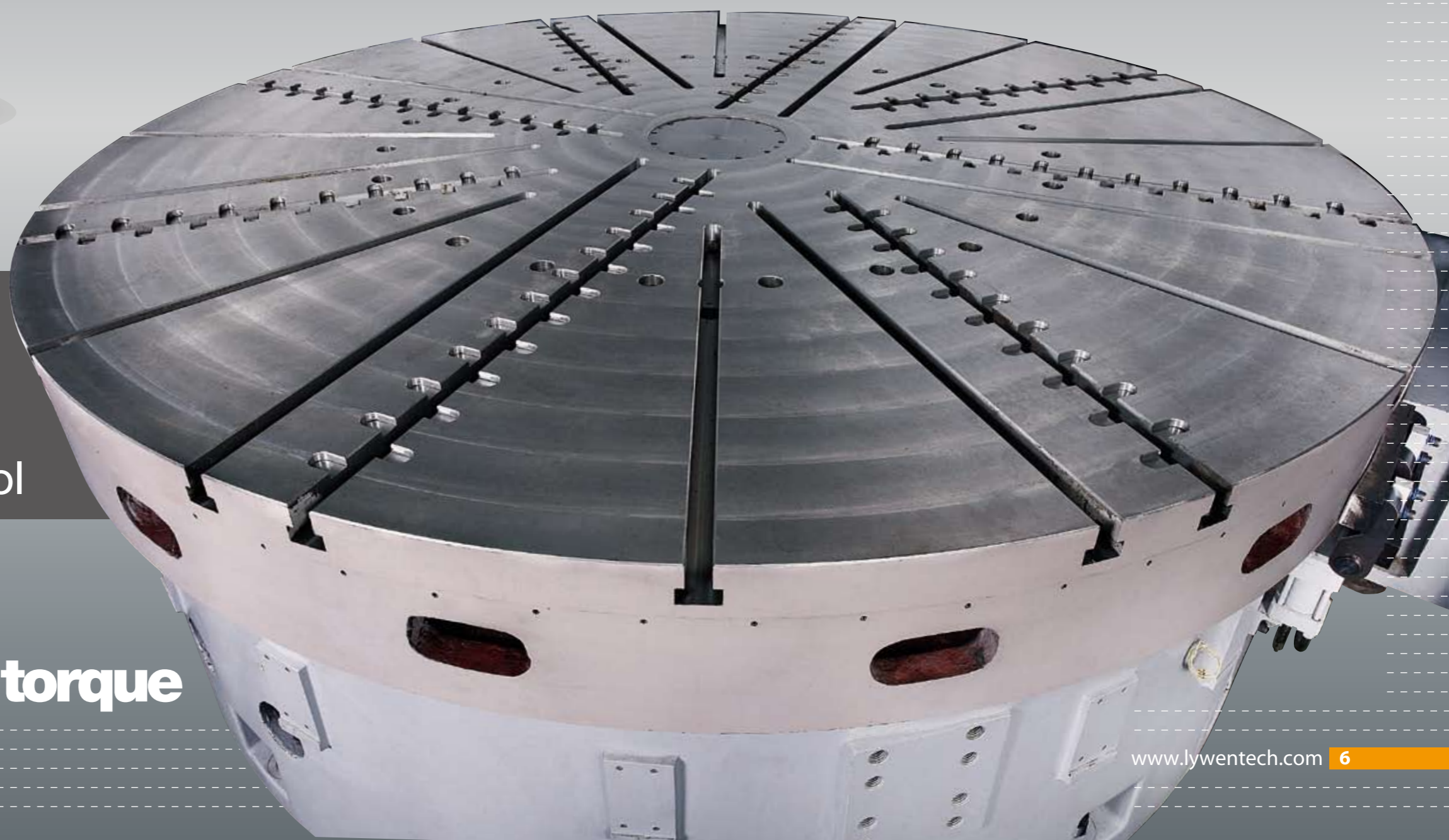
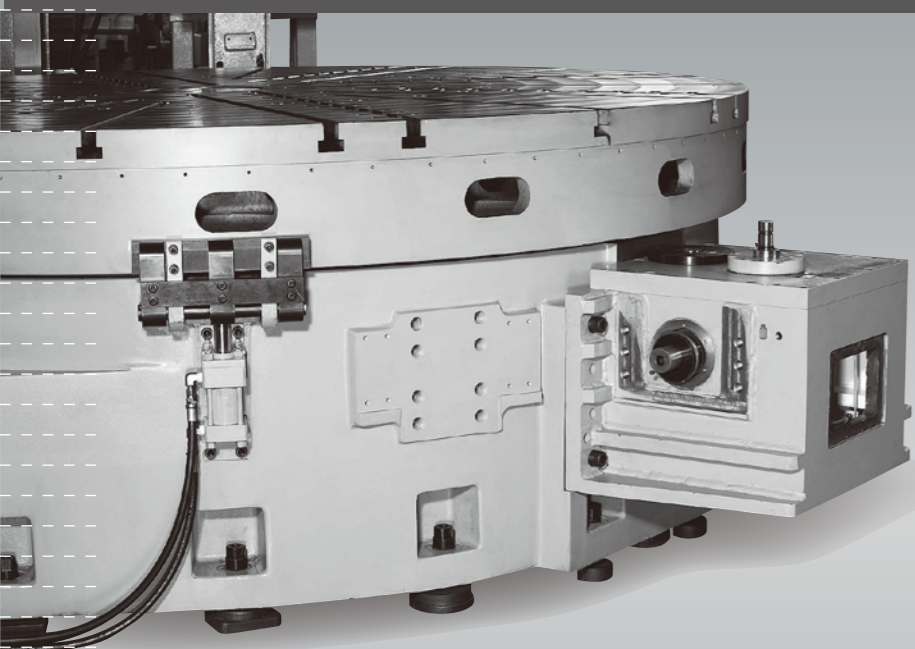
The Spindle

A VTL is only as good as its turning spindle, and we want to make sure that you, the user, is delivered the confidence of the machine's turning power throughout the lifespan of our machine.

Technology

- Cross-spindle design of hydrostatic pressure rail and cross-tapered roller bearings.
- European made cross tapered roller bearings via sophisticated assembly procedures.
- 1:1000 C-axis gear for stable mill drill tap performance.

32° Celsius
in a ambient temp of 22°



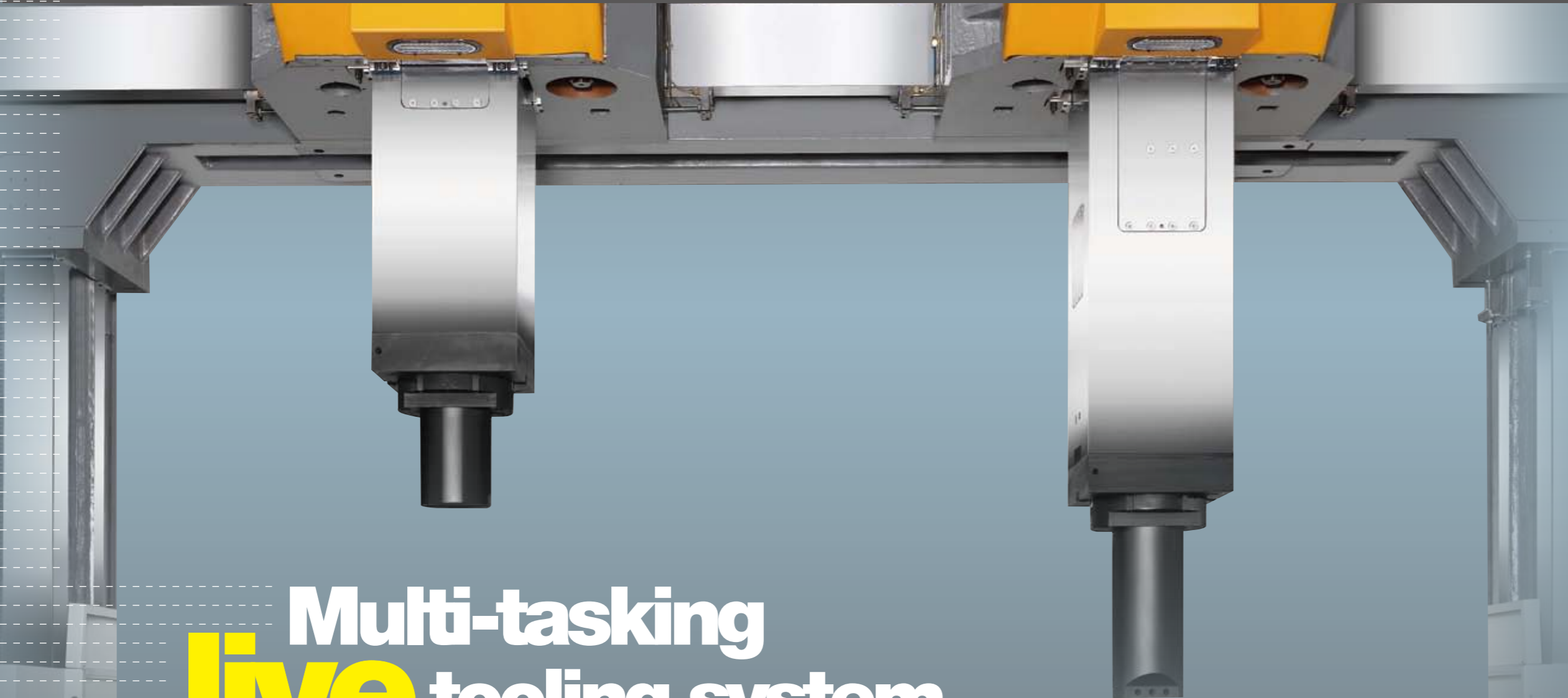
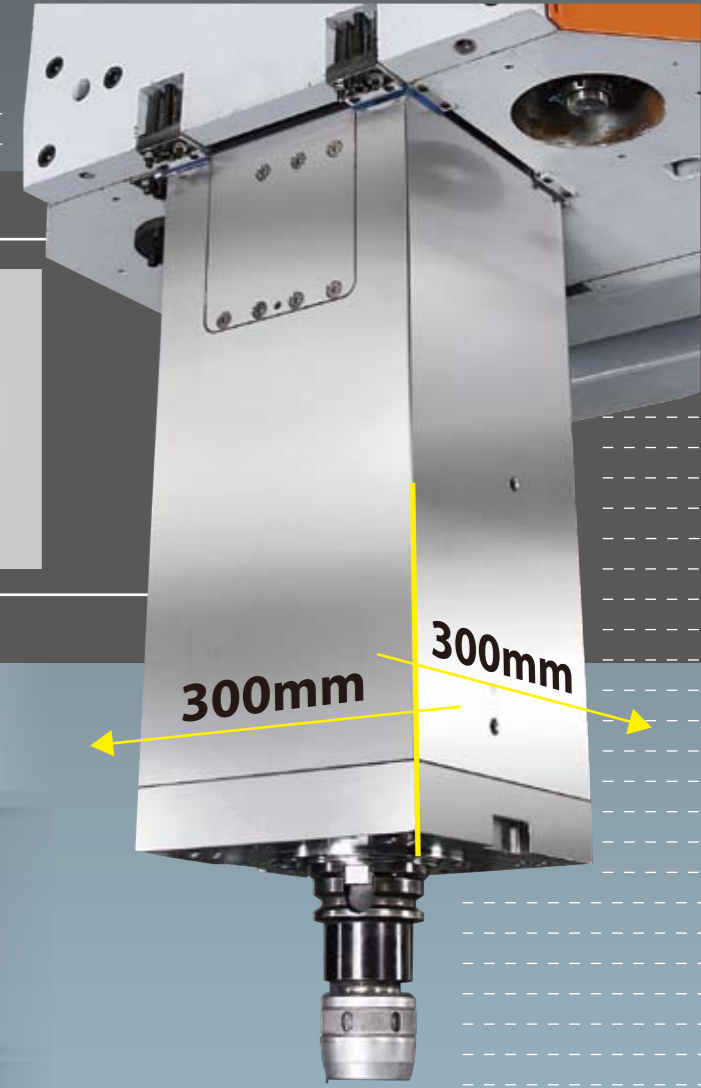
24/7

Stabilized thermal control

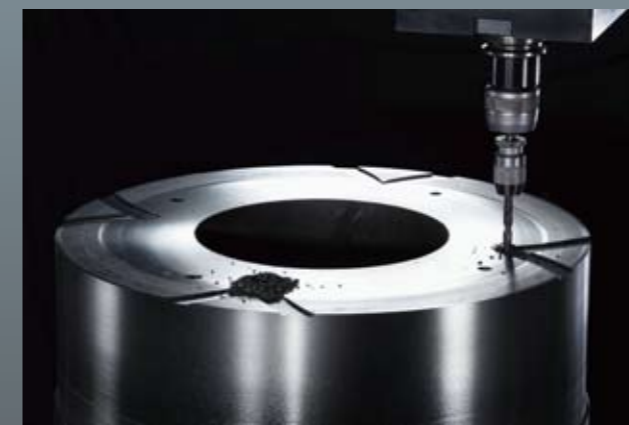
118,400 Nm Max. torque

The Ram

It does most of the heavy work, and it sustains the direct impact from various cutting jobs. So the DV series VTL is equipped with steel forged ram with 300x300mm cross sections to handle all types of applications. Tool holders utilized 4 sets of DIN40 with 3.8 tons of gripping power and 4 sets of anchoring to position and hold the tools.



Multi-tasking **live** tooling system



Unmatched Steadiness

The Crossrail

The less time spent for reprocessing, the more productive and profitable for the owner. Therefore our engineers created the hybrid crossrail system with precision grinded slide ways for ram travel while assuring great cutting power as well as a horizontally placed roller guide for maximum damping. Crossrail rail balanced by hydraulic unit with 4 independent hydraulic locks at the top and the back of cross rail and column T-slots.

X4



Sets Of Independent Hydraulic Locks

Patented Locking System

Unlimited number of tools with Capto availability

The Equipment

To make the DV series the most versatile VTL in the market, we have built in numerous optional equipment on top of the abundant standard equipment

Accessories

Standard

- Fanuc or Siemens controls
- 6 jaws manual chuck
- Dual speed gear box
- Hydraulic unit
- Coolant unit
- Pressure relief automatic lubrication system
- Air conditioner for electrical cabinet
- Chip conveyor
- Work lamp
- 12 positions tool magazine
- RS-232 interface, Ethernet, Data Server
- CE certificate
- Leveling block and bolts
- Tool kit

Optional

- Max. turning height up to 3000mm
- Enhanced ram travel to 1500mm
- Coolant through spindle, 20 kg/cm² with sub tank and paper filter system
- Heidenhain linear scales for X and Z axis
- Tool and parts probe from Renishaw or Blum
- Dual ATC tool change arm with optional number of tool magazine
- Grinding attachments

The Automatic Tool Change Mechanism

Our engineers want to totally eliminate any dynamic stress on the machine body, so they came up with the idea of an independent tool change arm. With this design, owners of DV series can enjoy Tool change at any crossrail (W-axis) position.

Tool to tool time in **30** seconds

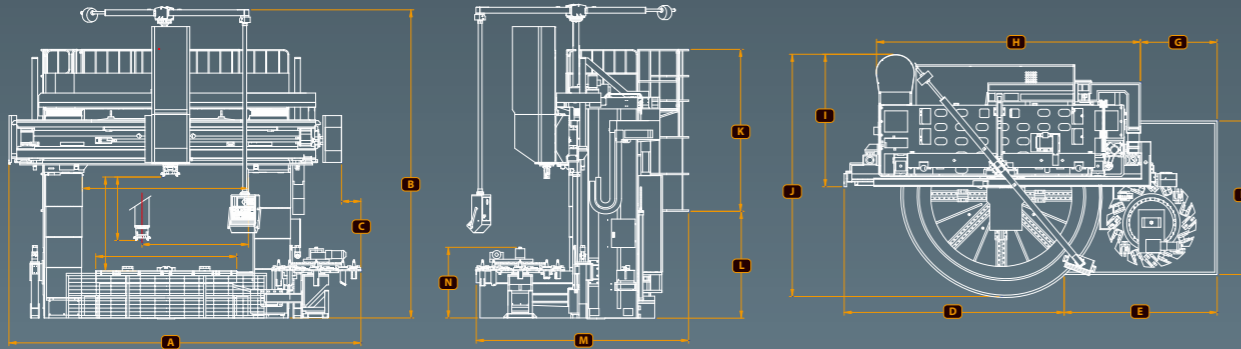
Dimensions mm Dimension varies due to final configuration

DV-3000 series

Part	A	B	C	D	E	F	G	H	I	J	K	L	M	N
Size/mm	7491	6559	414	4680	3255	3267	1632	5616	2820	5156	3447	2274	4517	1504
	*8880													

DV-4000 series

Size/mm	8491	6859	414	5031	3404	3267	1632	6215	2820	5392	3747	2274	4517	1504
	*9479													
	* for dual magazine setup													



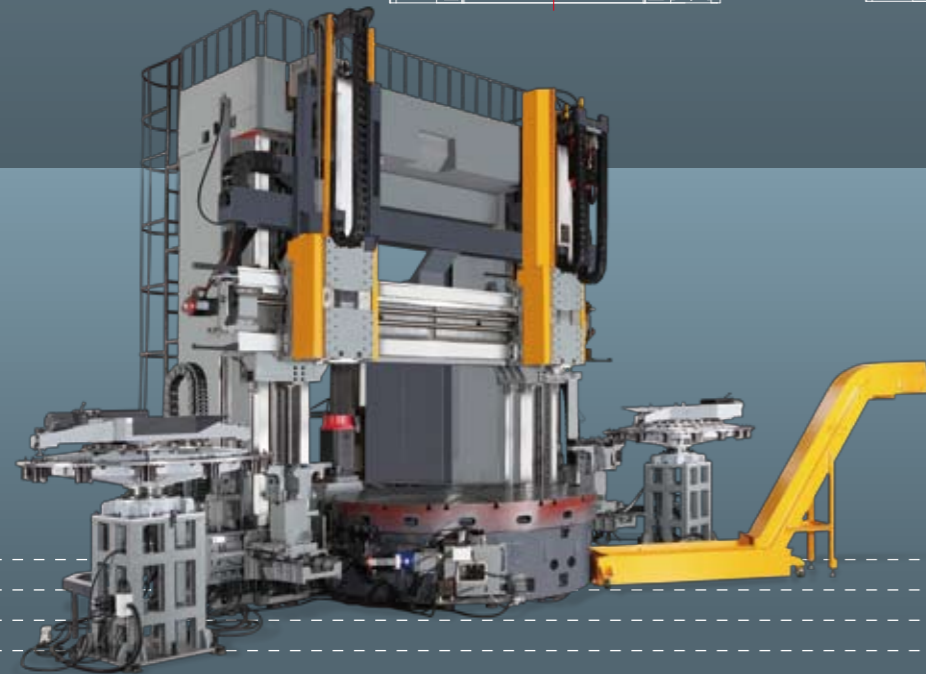
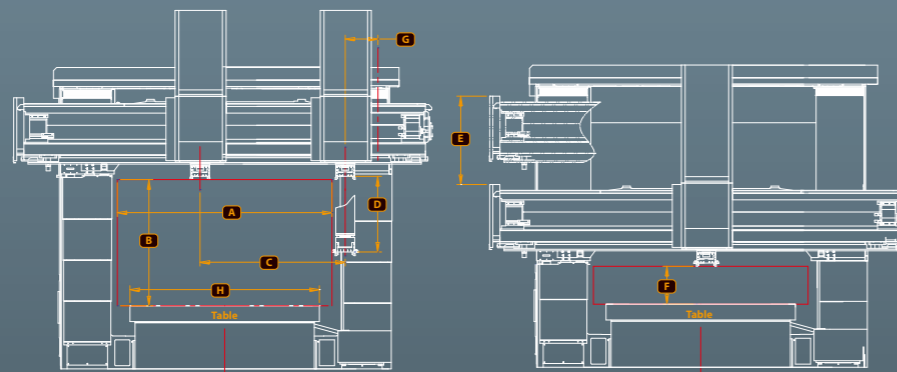
Standard machining range mm Envelope may vary by final configuration

DV-3000 series

Part	A	B	C	D	E	F	G	H
Size/mm	3400	0-2000	2300	1200	1400	600	350	3000

DV-4000 series

Size/mm	4400	0-2300	2800	1350	1700	600	350	4000
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Specifications

			DV-3000 Series	DV-4000 Series
CAPACITY				
Table Diameter	mm (inch)		Ø 3000 (118.1)	Ø 4000 (157.4)
Max Turning Diameter	mm (inch)		Ø 3400 (133.8)	Ø 4400 (173.2)
Max. Swing Diameter	mm (inch)		Ø 3400 (133.8)	Ø 4400 (173.)
Max. Turning Height	mm (inch)		2000 (78.7)	2300 (90.5)
Max. Table Load	kg (lbs)		22000 (48488)	26000 (57304)
TRAVEL				
Cross Travel (X axis)	mm (inch)		2300 (90.5)	2800 (110.2)
Vertical Travel of Ram (Z axis)	mm (inch)		1200/1500 (47.2/59)	1350/1500 (53.1/59)
Vertical Travel of Cross Rail (W Axis)	mm (inch)		1400 (55.1)	1700 (66.9)
SPINDLE				
Spindle Speed	Low	rpm	2~32	1~16
	High	rpm	33~100	17~60
Max. Torque of Spindle		N.m(kgf-m)	68100 (6941)	118400 (12081)
Live Tooling Spindle Speed	Low	rpm	2~1150	2~1150
	High	rpm	1151~2500	1151~2500
			(N/A for 3000T/4000T models)	
FEEDRATE				
Rapids on X Axis	m(inch)/min		8 (315)	7 (276)
Rapids on Z Axis	m(inch)/min		10 (394)	10 (394)
Rapids on W Axis	mm(inch)/min		600 (23.6)	600 (23.6)
Cutting Feedrate	mm(inch)/min		1~2100 (82.7)	1~2100 (82.7)
Manual Feedrate	m(inch)/min		0~6 (236)	0~6 (236)
MOTOR				
Spindle Motor	kw (HP)		60/75 (80/101)	100 (134)
Live Tooling Spindle Motor (N/A for 3000T/4000T models)	kw (HP)		11/15 (15/20)	15/18.5 (20/25)
X-Axis Servo Motor	kw (HP)		5.5 (7)	5.5 (7)
Z-Axis Servo Motor	kw (HP)		5.5 (7)	5.5 (7)
C-Axis Servo Motor	kw (HP)		5.5 (7)	5.5 (7)
W-Axis Motor	AC/HP		7.5	10
	kw (HP)		0.37 (0.5)	0.75 (1)
	kw (HP)		1.5 (2)	1.5 (2)
ATC MAGAZINE				
Number of Tool	pcs		12	12
Type of Tool Shank	taper		BT50	BT50
Max. Tool Size	mm (inch)		300 (11.8)	300 (11.8)
Max. Tool Weight	kg (lbs)		50 (110)	50 (110)
Tool Change Arm Max. Loading	kg (lbs)		520 (1146)	520 (1146)
Tool change time	sec		30	30
MACHINE SIZE				
Power requirement	kva		165	195
Machine weight	kg (lbs)		58900 (129816)	71800 (158247)
Machine size (L x W x H) t notice	mm (inch)		7935 x 5156 x 6559 (312.4 x 202.9 x 258.2)	8491 x 5392 x 6859 (334.2 x 212.2 x 270)