

DUGARD

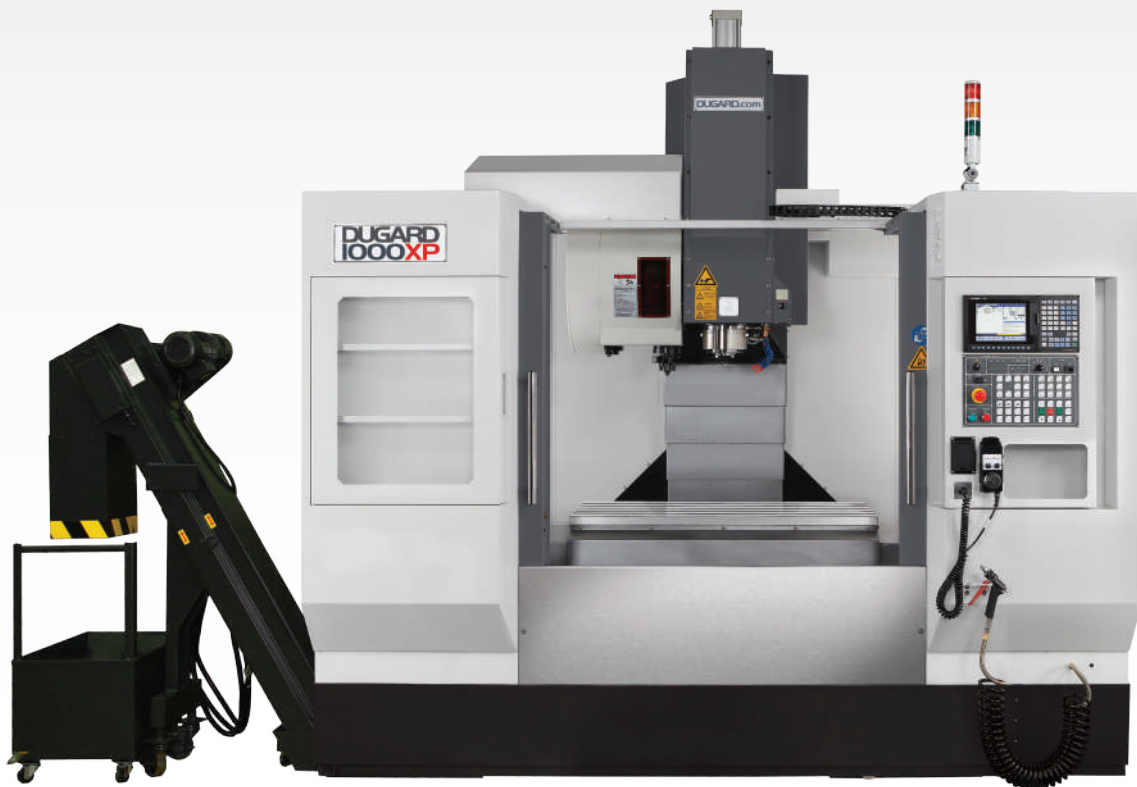
Machine Tools That Create Solutions Since 1939

DUGARD
VMCs

XP Range

Dugard Vertical Machining Centres

More power, more tools, faster travels



DUGARD

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More power, more tools, faster travels, Incredible value for money with a comprehensive choice of b



Dugard 760**XP**

- X/Y/Z travel - 760/435/520mm
- 15kW spindle drive
- 20~12,000rpm speed range
- 44/44/36 m/min rapids
- 28 station twin arm ATC
- BT40 spindle (CAT flange opt)
- 2696 x 2200mm footprint

Dugard 1000**XP**

- X/Y/Z travel - 1050/540/560mm
- 27kW spindle drive
- 20~12,000rpm speed range
- 44/44/25 m/min rapids
- 36 station twin arm ATC
- BT40 spindle (CAT flange opt)
- 3366 x 2238mm footprint



Dugard 1350**XP**

- X/Y/Z travel - 1350/640/660mm
- 27kW spindle drive
- 20~12,000rpm speed range
(11,000rpm Fanuc)
- 33/33/25 m/min rapids
- 36 station twin arm ATC
- BT40 spindle (CAT flange opt)
- 3866 x 2500mm footprint



through spindle coolant and swarf auger.
ed sizes, compact footprint and heavy cast iron construction

Dugard 1600**XP**



- X/Y/Z travel - 1630/850/815mm
- 27kW spindle drive
- 20~12,000rpm speed range (11,000rpm Fanuc)
- 33/33/25 m/min rapids
- 36 station twin arm ATC
- BT40 spindle (CAT flange opt)
- 4820 x 3576mm footprint

Dugard 2000**XP** / 2600**XP**



- X/Y/Z travel **2000XP** 2060/850/815mm
- X/Y/Z travel **2600XP** 2600/1030/815mm
- 27kW spindle drive
- 20~12,000rpm speed range (11,000rpm Fanuc)
- 33/33/25 m/min rapids
- 36 station twin arm ATC
- BT40 spindle (CAT flange opt)
- **2000XP** footprint 5670 x 3576mm
- **2600XP** footprint 3960 x 6400mm

Pre-Tensioned Twin Nut Ballscrew



- Double-anchored ballscrews with twin pre-loaded ball nut giving superior high speed cutting rigidity and accuracy with high speed cutting
- Full laser calibration and ball bar testing to ensure squareness and accuracy



Cartridge Belt Drive Spindle

Simple design giving high torque and durability through a timing belt suitable for most machining applications.

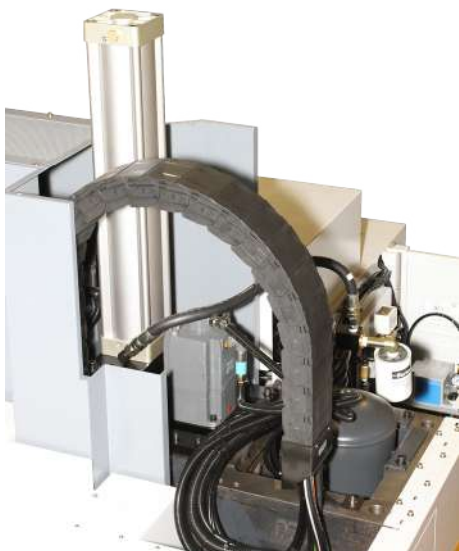
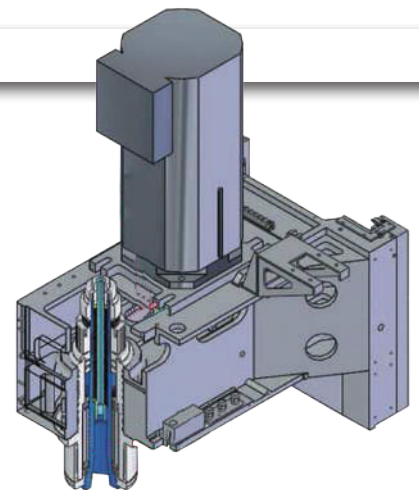
Impressive spindle speeds with low friction design for efficient acceleration and deceleration. High tool clamping force secures tool holder for high speed rotation. Labyrinth seal with positive air pressure prevents spindle contamination



Stable Thermal Control

Both spindle cartridge and head casting are cooled to maintain thermal stability and spindle life. Physical rigidity is guaranteed by the use of digital FEA (Finite Element Analysis).

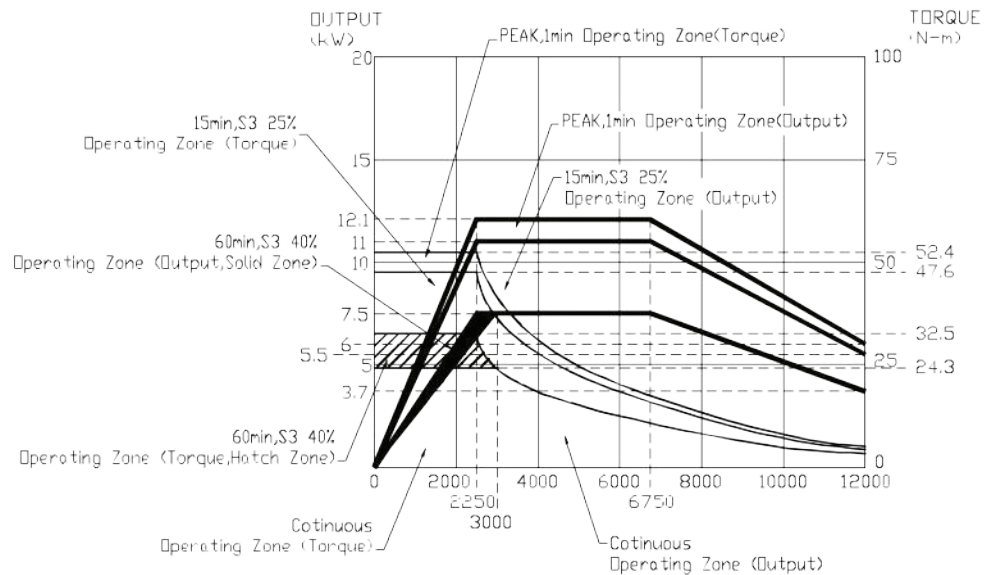
This, combined with high quality Meehanite castings and Japanese THK NR-Type high load linear ways, ensures accuracy and cutting performance.



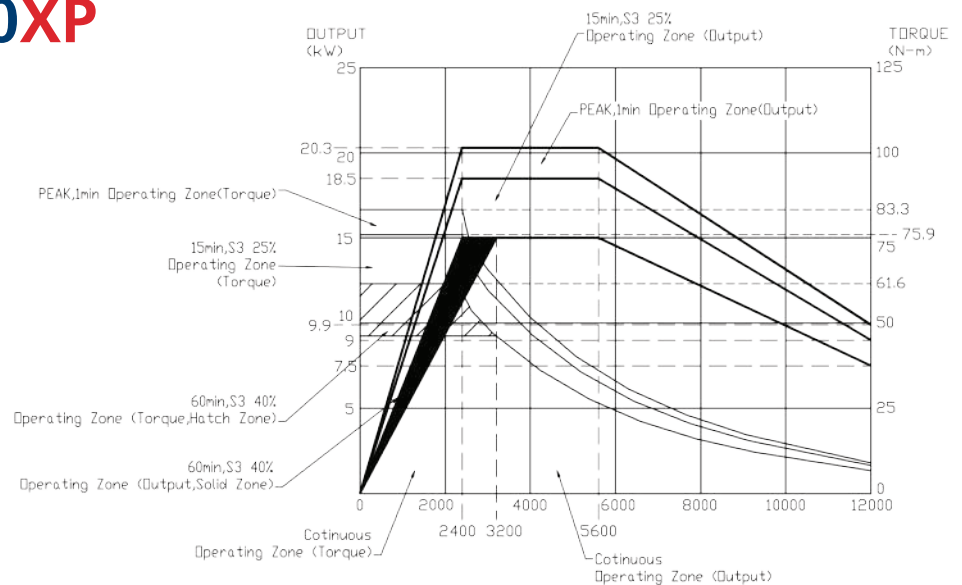
Pneumatic Counter Balanced Head

Z-axis pneumatic counter balance system, replacing the more common counter balance weight system. These pneumatic cylinders are directly mounted to the column and vertically moving head casting, this simple and directly mounted system reduces the need for weights and chains within the column, and can react to the machines vertical movements quickly with lower friction and vibration levels.

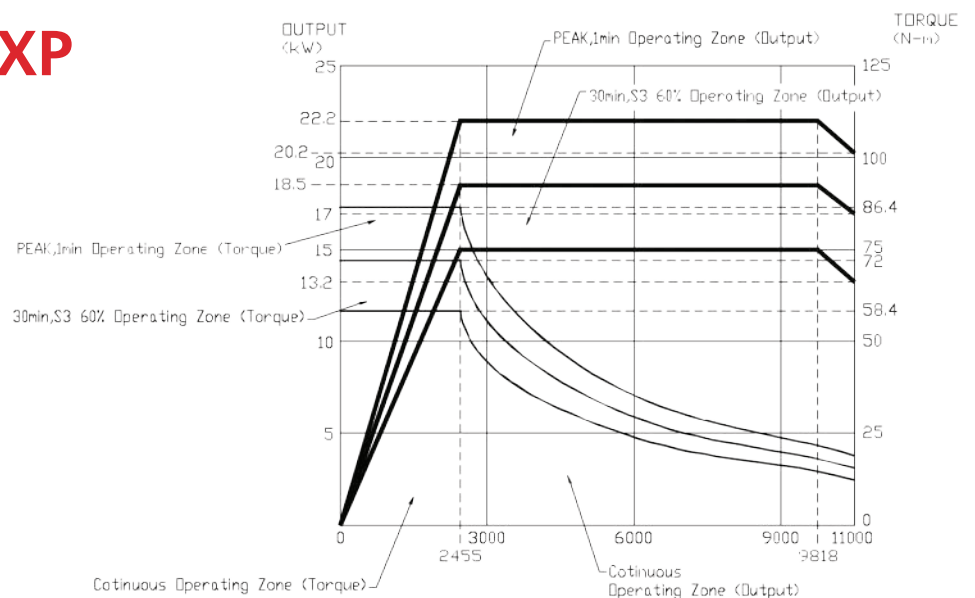
760XP Power Chart



1000XP / 1350XP Power Charts



1600XP / 2000XP Power Charts



	Specification	Dugard 760XP	Dugard 1000XP	Dugard 1350XP	
Travel	X axis travel	760mm	1050mm	1350mm	
	Y axis travel	435mm	540mm	640mm	
	Z axis travel	520mm	560mm	660mm	
	Spindle nose to table	75~595mm	75~635mm	100~760mm	
	Spindle centre to column	460mm	550mm	640mm	
Table	Table size	910 x 400mm	1200 x 480mm	1500 x 600mm	
	T slot	18 x 80 x 4 slots	18 x 80 x 5 slots	18 x 100 x 5 slots	
	Table load	1000kg	1176kg	1800kg	
Spindle	Taper size	BT40/CAT40			
	Speed	20~12,000rpm			
	Max motor power output 30 min	15kW Mitsubishi	27kW Mitsubishi		
Feed	Rapid feed X/Y/Z	44/44/36 m/min	44/44/25 m/min		
	Cutting feed X/Y/Z	15/15/15 m/min (20/20/20 m/min Mitsubishi)			
	Axial motor power X/Y/Z (Fanuc)	1.8/1.8/1.8kW	3/3/3kW		
	Axial motor power X/Y/Z (Siemens)	3.3/3.3/3.3kW	3.25/4.85/3.25kW		
Accuracy	Positioning	0.01mm			
	Repeatability	± 0.003mm			
ATC	Tool storage capacity	28 station - twin arm	36 station - twin arm		
	Max tool diameter	65mm (with 28 ATC)	65mm (with 36 ATC)		
	Max tool length	210mm	250mm		
	Max tool weight	7kg			
	Tool to tool change time	2.2 sec			
General	Tank capacity	250L	350L	400L	
	Air source requirement	7kg			
	Power requirement	20KVA			
	Footprint (W x L)	2696 x 2200mm	3366 x 2238mm	3866 x 2500mm	
	Weight	4400kg	6900kg	8410kg	

Choice of Digital Controls



Fanuc 0iMF Alpha Package

- 10.4" TFT LCD colour monitor
- Background edit
- Manual Guide i
- AICC with 200 block look ahead (opt)



Siemens 828D

- 15" TFT LCD colour monitor
- Shopmill conversational programming
- Super high speed
- USB/PC card storage

Dugard 1600XP	Dugard 2000XP	Dugard 2600XP
1630mm	2060mm	2600mm
850mm		1030mm
815mm		
100~915mm		
865mm		
1750 x 800mm	2150 x 800mm	
18 x 125 x 6 slots		
3450kg	4050kg	4500kg
20~12,000rpm (11,000rpm Fanuc)		
27kW Mitsubishi		
33/33/25 m/min		
15/15/15 m/min (20/20/20 m/min Mitsubishi)		
4/4/4kW		
5.4/5.4/5.4kW		
0.01mm		
± 0.003mm		
36 station - twin arm		
65mm (with 36 ATC)		
250mm		
7kg		
2.2 sec		
640L	700L	900L
7kg		
30KVA		
4820 x 3576mm	5670 x 3576mm	3960 x 6400mm
12,600kg	14,800kg	18,230kg

*Specifications are subject to change without prior notice

Standard Equipment

- **36 station twin arm ATC (28 station twin arm ATC on the 760XP)**
- **35 bar filter type through spindle coolant**
- **THK heavy duty linear ways**
- **Swarf conveyor**
- Rigid tapping
- Helical interpolation
- Heavy duty high quality cast iron frame
- Fully enclosed guarding
- High power cooling system
- 36 x set of pull studs (28 x set 760XP)
- Automatic lubrication

Machine Options

- Fanuc data server
- 4th axis interface with servo board and plug
- 170mm dia 4th axis head with motor, c/w 7" 3 jaw chuck and tailstock
- 210mm dia 4th axis head with motor, c/w 7" 3 jaw chuck and tailstock
- Kawata Touchdex 200mm dia mechanical indexer, c/w tailstock unit and 3 jaw chuck
- Renishaw spindle probe
- Renishaw tool setting probe



Heidenhain TNC 640

- 15" TFT LCD colour monitor
- 21GB NC programme memory
- Intelligent machining
- Fast USB 2.0 interface for increased connectivity

Mitsubishi M830W

- **15" TFT LCD colour monitor**
- **20m/min** feedrate
- **30GB** data server
- **1000 programmes** in editing memory
- **999 sets** tool compensation
- **54 sets** work piece coordinate
- **2700 blocks** look-ahead
- **400 sets** tool life management
- **700 sets** variable command
- **64 bits** microprocessor
- **2048KB** programme memory



DUGARD

75 Old Shoreham Road
Hove
East Sussex
BN3 7BX
www.dugard.com
sales@dugard.com
01273 732286



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