

»»»» XTRON



*Engineered for  
Enhanced Machining Performance*

Series: 544 | 755 | 955 | 1166 | 1366 | 1577



XTRON Series

[www.bfwindia.com](http://www.bfwindia.com)

**BFW**  
Bharat Fritz Werner

## Vertical Machining Center

To match the demand of greater accuracy and total reliability at higher speeds, BFW has developed XTRON Series Vertical Machining Centers. These machines are rigid base C-type machines with moving table for easy access. The high dynamic structure supports rapid axis take-offs with a higher acceleration.

Keeping in mind customer's requirement for reducing total production time, BFW presents Vertical Machining Centers with Auto Pallet Changer as optional. Hydraulic fixture option is available to reduce job setup time. Option of column riser block is available for increased daylight area.

Extensive series range available for small to large size jobs of Automotive, Die Mould & Aerospace Industries.

### Best-in-class features listed below:

TPM friendly

Compact foot print

Better chip disposal with rear chip flow

Superior aesthetics

Powerful spindle with various power & torque options

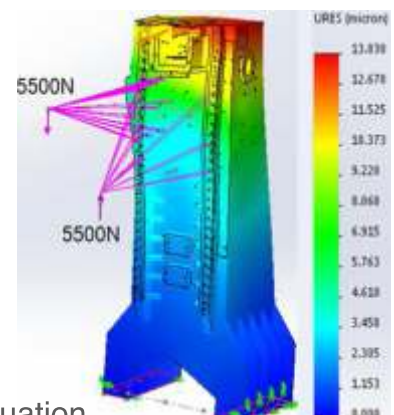


### Precision

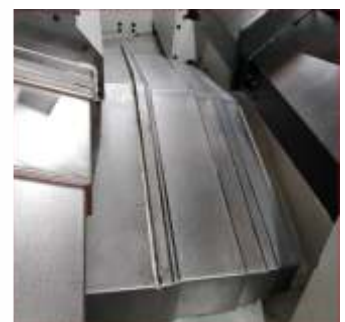
- Thermo-symmetric structures
- Precision Ball-screw

### Rigidity

- Roller type LM Guide-ways
- Optimum stiffness / Weight ratio
- Wider span for LM Guide-ways



Telescopic covers design for effective chip evacuation




## Wide Variety of Spindle Drives



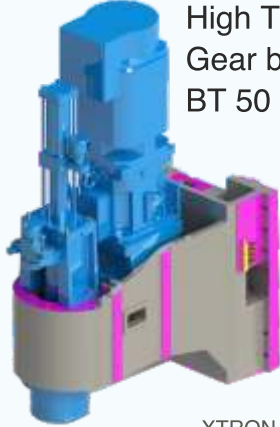
**Standard Belt driven  
BT40/ 50**

XTRON-544 (SP)  
XTRON-755 (SP/ HP)  
XTRON-955 (SP/ HP)  
XTRON-1166 (SP/ HP)  
XTRON-1366 (SP/ HP)  
XTRON-1577 (SP/ HP)



**High-speed In-line (Option)  
BT40**

XTRON-544 (SP)  
XTRON-755 (SP)  
XTRON-955 (SP)

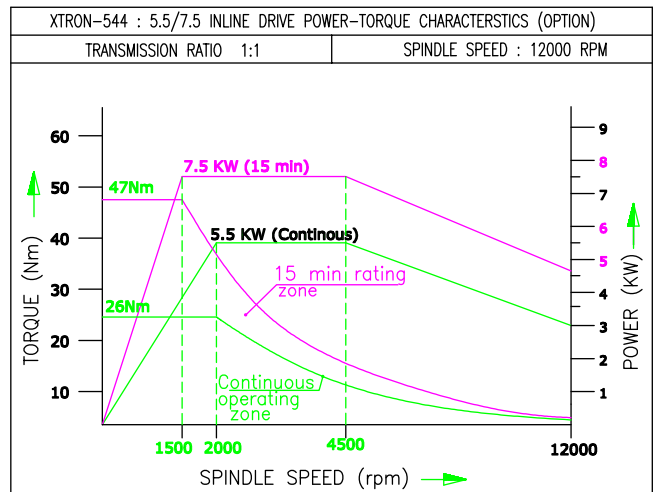
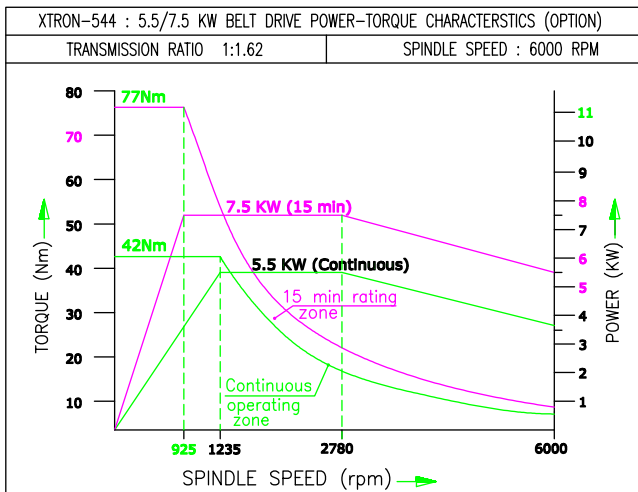
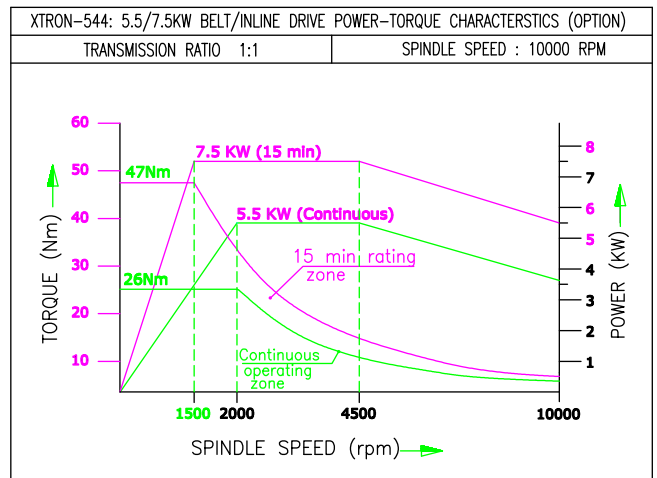
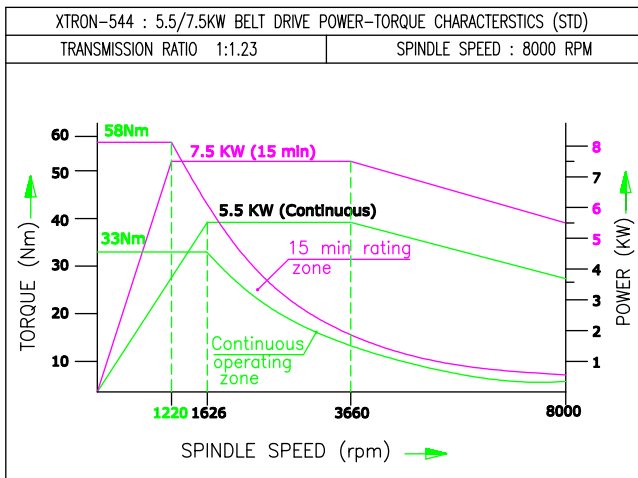


**High Torque Gear box (Option)  
BT 50**

XTRON-1166 (HP)  
XTRON-1366 (HP)  
XTRON-1577 (HP)

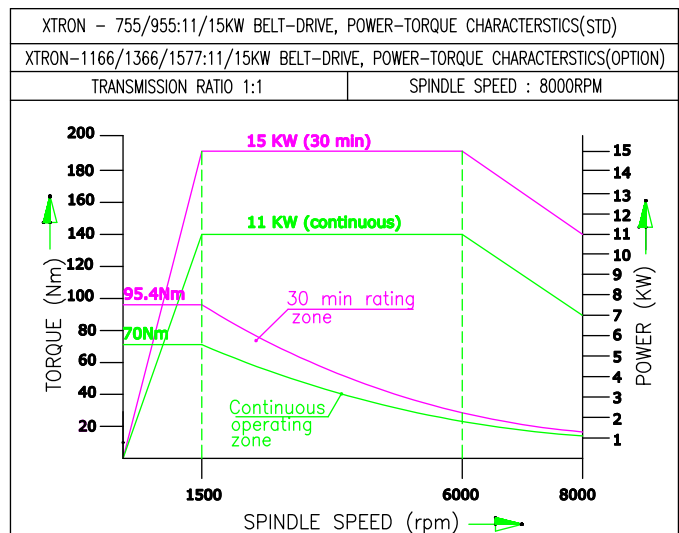
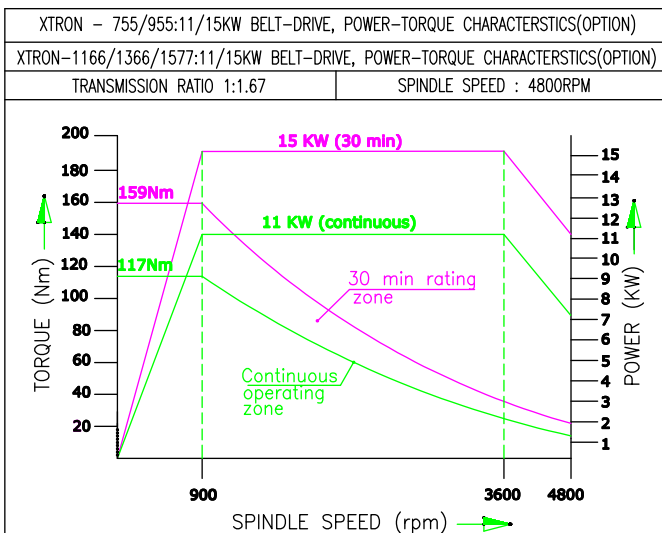
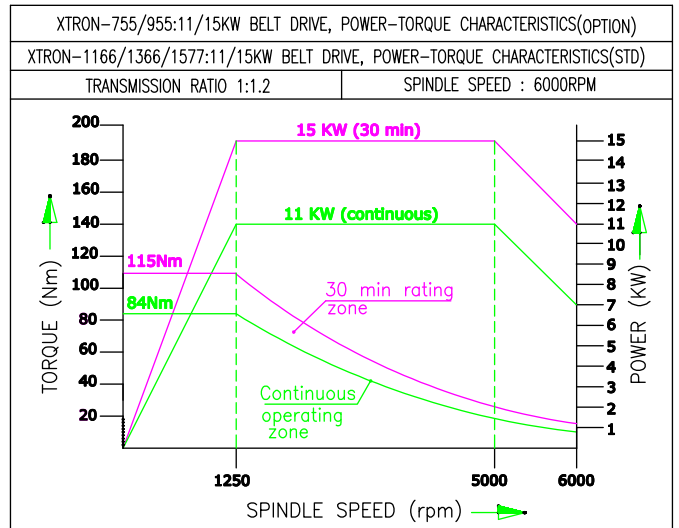
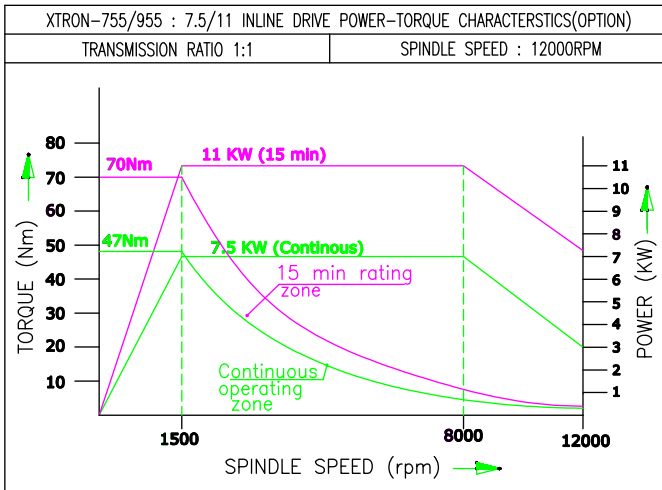
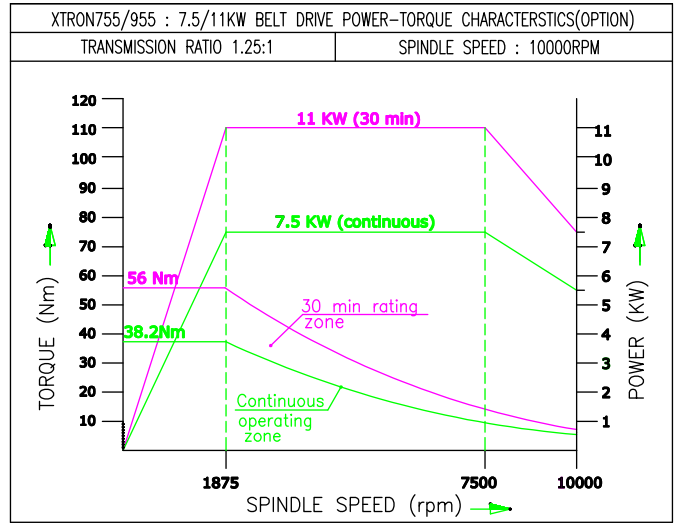
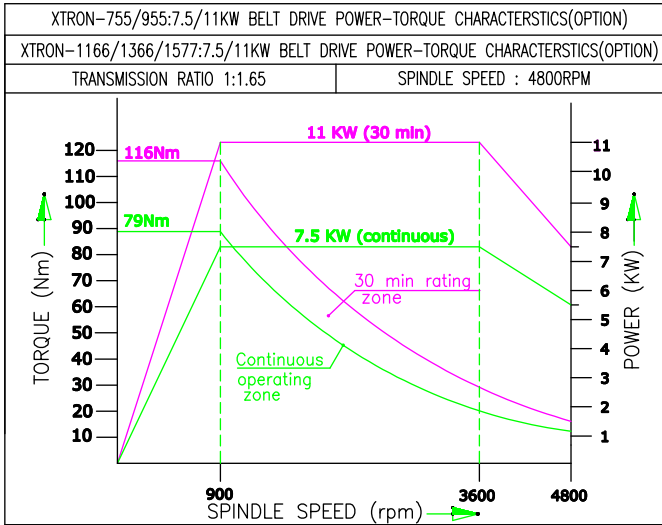
Note: SP(Standard Power) | HP (High Power)

## Spindle Characteristics

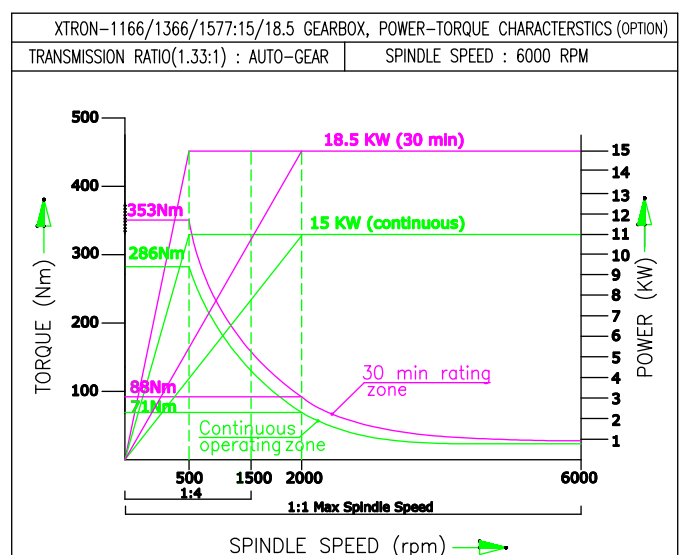
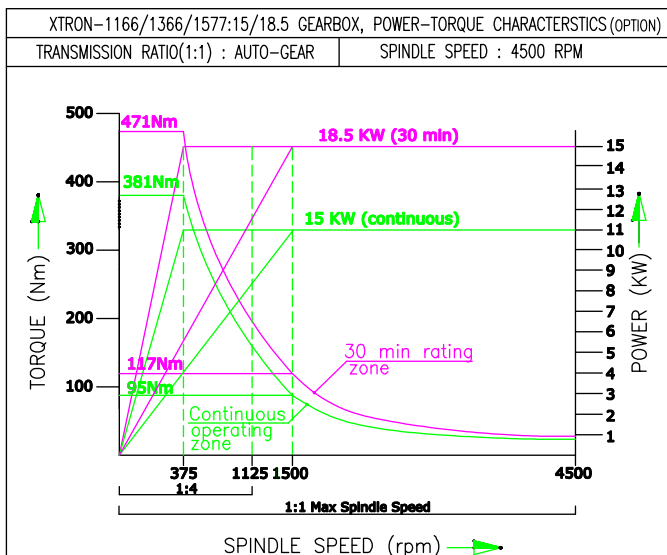
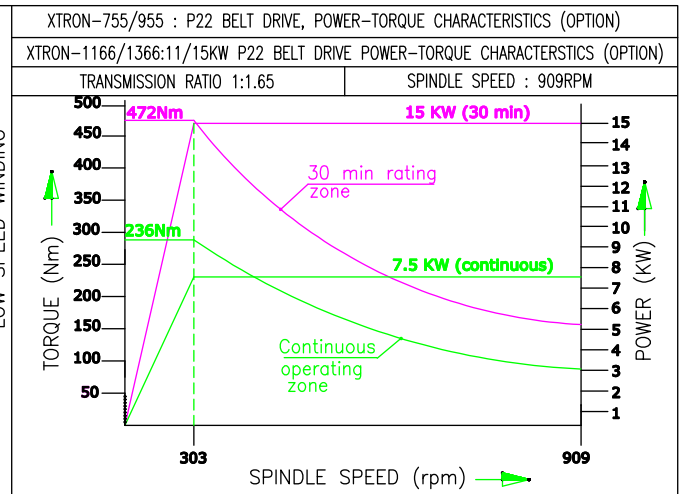
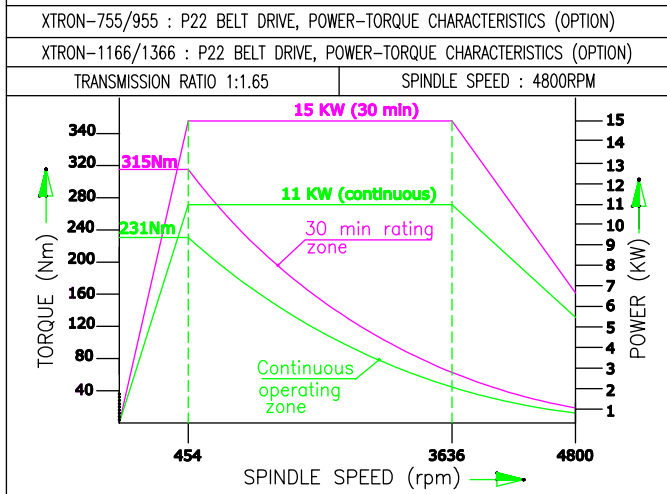
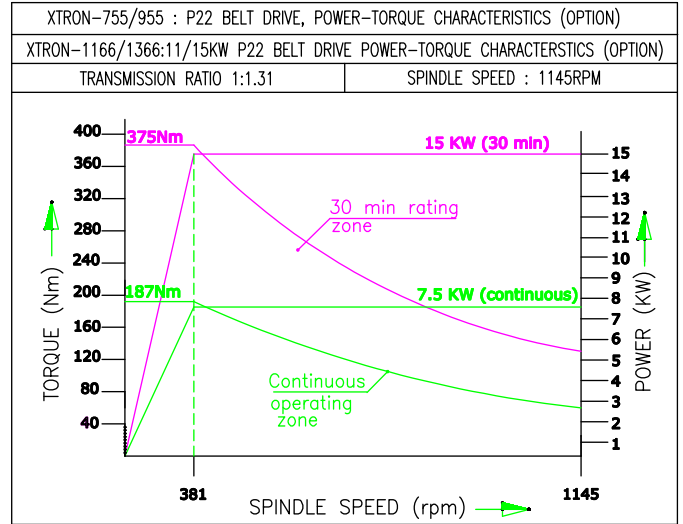
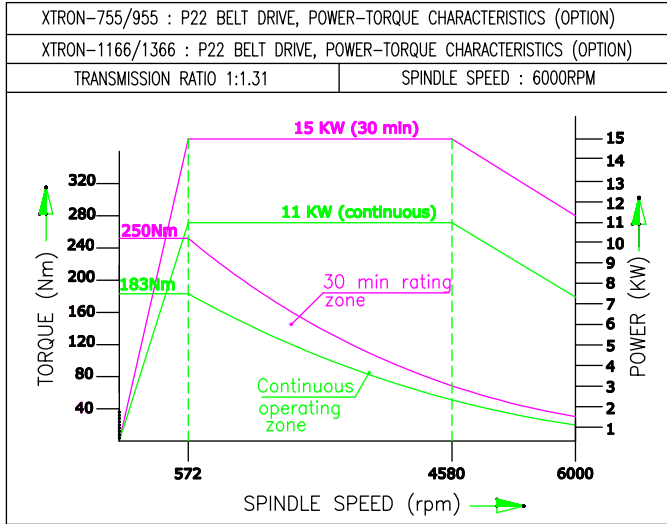


These Characteristics will vary based on maximum spindle speed and make of CNC system

# Spindle Characteristics



# Spindle Characteristics



# Standard & Optional Features

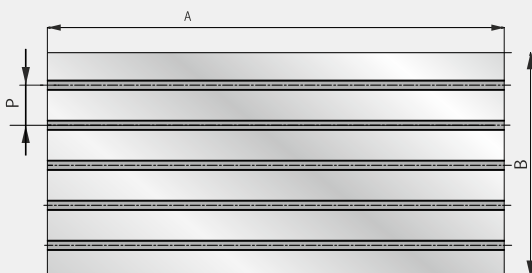
	X Tron 544	X Tron 755	X Tron 955	X Tron 1166	X Tron 1366	X Tron 1577
AC servo drives	S	S	S	S	S	S
AC variable speed spindle motor	S	S	S	S	S	S
LM Roller Guide-ways	S	S	S	S	S	S
Hardened and ground ball screws	S	S	S	S	S	S
Feedback through absolute encoder	S	S	S	S	S	S
Automatic tool clamping-unclamping	S	S	S	S	S	S
Centralised automatic lubrication	S	S	S	S	S	S
Spindle taper air blow	S	S	S	S	S	S
Coolant gun	O	O	O	O	O	O
Air gun	O	O	O	O	O	O
3 tier lamp	O	O	O	O	O	O
Ring coolant around spindle	O	O	O	O	O	O
Rigid tapping	O	O	O	O	O	O
Maintenance tool kit	O	O	O	O	O	O
Front chip disposal	S	S	S	S	S	S
Rear chip disposal	O	O	O	O	O	O
Electronic counterbalance for Std configuration	S	S	S	S	S	NA
Hydraulic counterbalance	NA	NA	NA	#	#	S
Spindle with chiller unit	O	O	O	O	O	O
Higher spindle power	NA	O	O	O	O	O
Chip conveyor in lieu of coolant tank with chip tray	O	O	O	O	O	O
2/ 3 axis linear glass feedback	O	O	O	O	O	O
16/ 25/ 40 bar coolant through spindle	O	O	O	O	O	O
AC for electrical cabinet	O	O	O	O	O	O
Provision for 4th and 5th axis rotary tilting table	O	O	O	O	O	O
4 <sup>th</sup> axis rotary table	O	O	O	O	O	O
Ball screw type auto pallet changer with twin pallets	O	O	O	O	O	O
Voltage stabilizer	O	O	O	O	O	O
Ultra isolation transformer	O	O	O	O	O	O
Increased day light area through column raiser block	O	O	O	O	O	O
Air nozzle	O	O	O	O	O	O
Air nozzle with M code	O	O	O	O	O	O
Automatic front door	O	O	O	O	O	O
Edge finder	O	O	O	O	O	O
Spindle mounted probe	O	O	O	O	O	O
Table mounted probe	O	O	O	O	O	O
Hard part probing (FANUC, Siemens, Mitsubishi)	O	O	O	O	O	O
Belt-driven Spindle	S	S	S	S	S	S
In-line Spindle	O	O	O	NA	NA	NA
Gear box driven Spindle	NA	NA	NA	O	O	O

S for Standard | O for Optional | NA for Not Applicable

# X tron 1166 & 1366 with BT50, Gear box & P22 motor

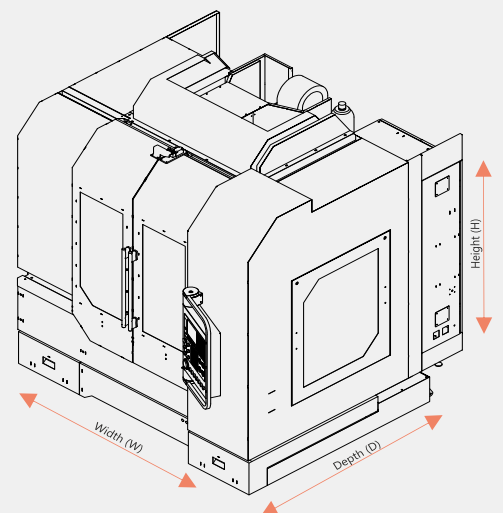
## Table Top Details

Model	X Tron 544	X Tron 755	X Tron 955	X Tron 1166	X Tron 1366	X Tron 1577
<b>A</b>	700	900	1100	1300	1500	1700
<b>B</b>	410	510	510	610	610	710
<b>Pitch</b>	150	100	100	100	100	125
<b>T slots</b>	14	18	18	18	18	18
<b>No of slots</b>	3	5	5	5	5	5



## Machine Dimensions

Model	X Tron 544	X Tron 755	X Tron 955	X Tron 1166	X Tron 1366	X Tron 1577
<b>Width</b>	2050	2500	2500	3100	3600	4000
<b>Depth</b>	2450	2450	2450	2700	2700	2950
<b>Height</b>	2730	2900	2900	3300	3300	3450



## CNC Prospects

CNC FUNCTIONS			
FEATURES	FANUC Oi MF	Siemens 828D	Mitsubishi M80
Display	10.4 inches colour LCD	10.4 inches colour LCD	10.4 inches colour LCD
Maximum feed axes	5	5	5
Number of simultaneously controllable axis	4	4	4
Minimum input increment	0.0001 mm, 0.0001 deg	0.001 mm, 0.001 deg	0.0001 mm, 0.0001 deg
Spindle speed function	5-digit S code	5-digit S code	5-digit S code
Spindle speed override	50 % - 120 % (in steps of 10 %)		
Feed override	200 % (in steps of 10 %) 0-120 % with Siemens		
Feed rate command	4-digit F code	4-digit F code	4-digit F code
Inch- mm conversion	S	S	S
Part program storage length	2 MB	3MB	500 KB
Number of part programs	1000	750	1000
Number of sub-program call levells	10	11	10
Single block, Exact stop, Dry run	S	S	S
DNC operations	Embedded Ethernet/ CF	Ethernet/ CF/Pendrive	RS232C/ SD
Run hour and part count	S	S	S
Help function, Graphic display	S	S	S
Nurbs	NA	S	NA
Embedded ethernet, Front USB interface	S	S	S
Fast ethernet/ data server	O	S	S
Machining condition selection system	S	O	S
Remote diagnosis	S	O	NA
High speed skip or probe function	S	S	S
Dynamic graphic display	S	O	S
CNC FEATURES			
Linear interpolation, Circular interpolation	S	S	S
Helical interpolation	S	S	S
Absolute/ incremental programming	S	S	S
Tool radius compensation	S	S	S
Canned cycles for drilling and milling	S	S	S
Work piece co-ordinate system	54 (300) pairs	51 pairs	54 pairs
Background editing	S	Any time edit	S
Backlash compensation	S	S	S
Pitch error compensation	S	S	S
Bi-directional pitch error componsation	O	O	S
Polar co-ordinate, Scaling, mirroring	S	S	S
History of operator alarms and messages	S	S	S
Look-ahead function	200 STD & 400 Opt	150 STD & 600 Opt	1300 STD
Custom macro B/ parameter programming	S	S	S
Simple tool life management	S	S	S
Multi language display	S	S	S
Program restart/ block search in CF card	S	S	S (in SD / USB)
Program edit in CF card	S	S	S (in SD / USB)
Nano interpolation	S	S	S
Manual pulse generator	S	S	S
Automatic data backup	S	in CF card	S
Cylindrical interpolation	S	O	S
Spline interpolation	O	O	NA
Cutter compensation	S	S	S
4 <sup>th</sup> axis	O	O	O
4 <sup>th</sup> & 5 <sup>th</sup> axis	O	O	O

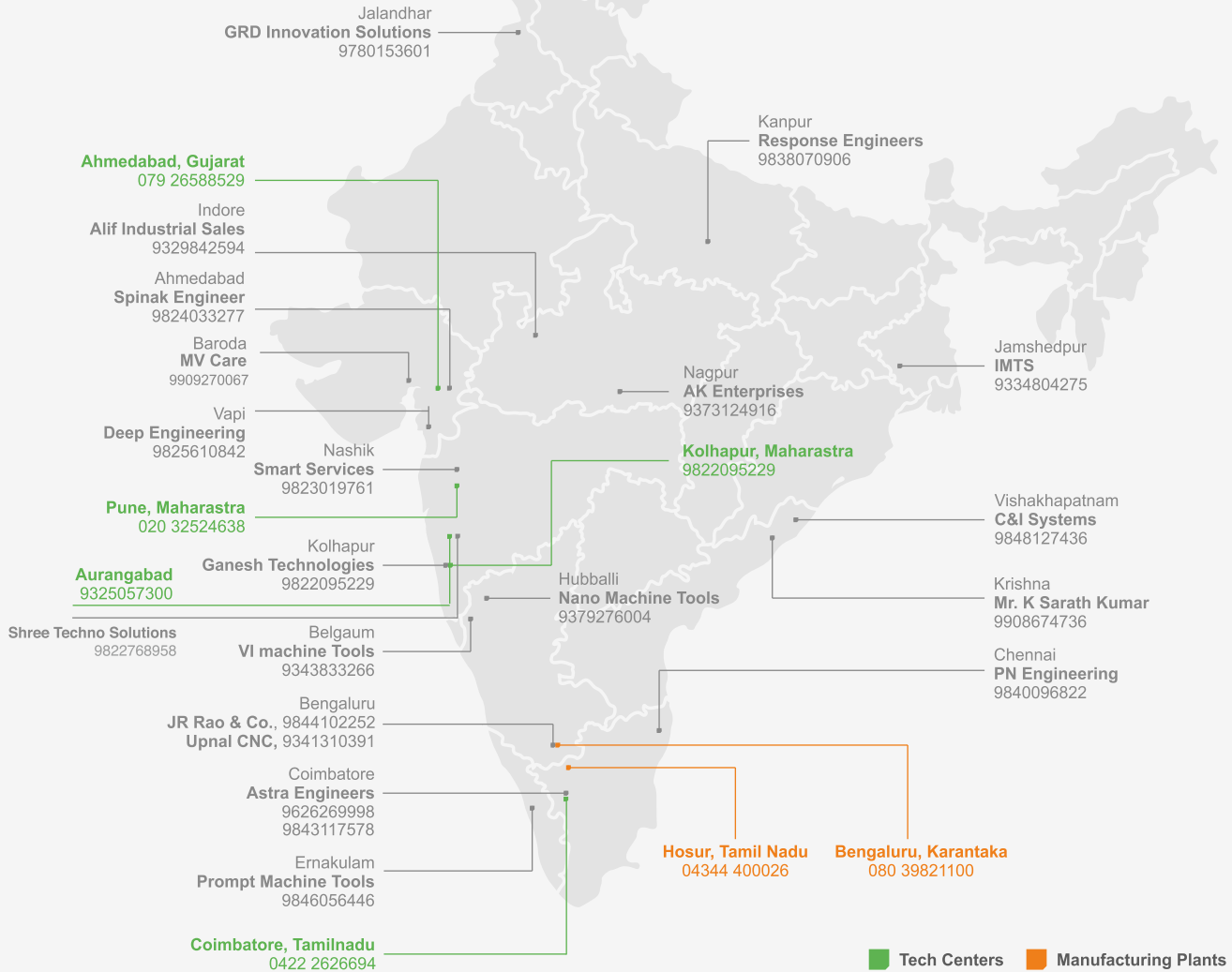
# Technical Specifications

Specifications	Unit	XTRON-544	XTRON-755			XTRON-955			XTRON-1166			XTRON-1366			XTRON-1577			
<b>Capacity:</b>																		
Table Longitudinal travel (X-Axis)	mm	500	700			900			1100			1300			1500			
Table cross travel (Y-Axis)	mm	400	500			500			600			600			700			
Head stock travel (Z-Axis)	mm	400	500			500			600			600			700			
Spindle nose face to table top	mm	150 -550	100 -600			100-600			150-750			150-750			150-850			
Increased daylight area with column height block (Optional)	mm	350 - 750	300 - 800			300-800			350-950			350-950			450-1150			
Distance from floor to table top (front chip disposal)	mm	900	950			950			1000			1000			1050			
Spindle center - column front distance	mm	480	540			540			660			660			735			
<b>Table:</b>																		
Table size	mm	700 x 410	900 x 510			1100 x 510			1300 x 610			1500 x 610			1700 x 710			
T - slot (No./ size/ pitch)	No/ mm/	3/14/ 150	5/18/ 100			5/ 18/ 100			5/ 18/ 100			5/ 18/ 100			5/ 18/ 125			
Maximum load on table standard	kg	500	900			900			1300			1300			1500			
<b>Axes:</b>																		
Rapid traverse - X/ Y/ Z - Std	m/ min	40/ 40/ 40	40/ 40/ 40			40/ 40/ 32			40/ 40/ 40			40/ 40/ 32			32/ 32/ 32			
Feed rate	mm/ min	1-10000	1-10000			1-10000			1-10000			1-10000			1-10000			
<b>Spindle:</b>																		
<b>Belt Driven (Std)</b>	Taper	type	BT 40	BT 40		BT 50		BT 40		BT 50		BT 40		BT 50		BT 40		
	Speed	rpm	8000 (10000)(6000)	8000 (10000) (12000)		6000 (4800)		8000 (10000) (12000)		6000 (4800)		6000 (8000) (4800)		6000 (4800)		6000 (8000) (4800)		
	Fanuc/ Mitsubishi Cont./ 30 min	kW	5.5/ 7.5	7.5/ 11		7.5/ 11		7.5/ 11		7.5/ 11		7.5/ 11		7.5/ 11		7.5/ 11		
	Siemens S1/ S6-40% (Option)	kW	5.5/ 8.3	9/ 13.5		9/ 13.5		9/ 13.5		NA		NA		NA		NA		
<b>Belt Driven High Power (Option)</b>	Taper	type	NA	BT 40		BT 50		BT 40		BT 50		BT 40		BT 50		BT 40		
	Speed (opt 1) (opt 2)	rpm	NA	8000 (6000)(10000)		6000(4800)		8000 (6000)(10000)		6000 (4800)		6000 (8000)(4800)		6000 (4800)		6000 (8000)(4800)		
	Fanuc/ Mitsubishi Cont./ 30 min	kW	NA	11/ 15		11/ 15		11/ 15		11/ 15		11/ 15		11/ 15		11/ 15		
	Siemens S1/ S6/ 40 %	kW	NA	11/ 16.5		11/ 16.5		11/ 16.5		11/ 16.5		11/ 16.5		11/ 16.5		11/ 16.5		
<b>Belt Driven High Power, High Torque (Option)</b>	Taper	type	NA	BT 40		BT 50		BT 40		BT 50		BT 40		BT 50		BT 40		
	Speed	rpm	NA	6000 (4800)		6000 (4800)		6000 (4800)		6000 (4800)		6000 (4800)		6000 (4800)		6000 (8000)		
	Fanuc	kW	NA	P - Series (P22)		P - Series (P22)		P - Series (P22)		P - Series (P22)		P - Series (P22)		P - Series (P22)		P - Series (P22)		
	Taper	type	BT40	BT40		NA		BT40		NA		NA		NA		NA		
<b>In-line Drive (Option)</b>	Fanuc/ Mitsubishi Cont./ 30 min	kW	5.5/ 7.5	7.5/11		NA		7.5/11		NA		NA		NA		NA		
	Siemens S1/ S6-40%	kW	5.5/ 8.3	9/13.5		NA		9/13.5		NA		NA		NA		NA		
	Speed (option 1)	rpm	12000	10000 (12000)		NA		10000 (12000)		NA		NA		NA		NA		
	Taper	type	NA	NA		NA		NA		NA		BT 40		BT 50		BT 40		
<b>Gear box (Option)</b>	Speed	rpm	NA	NA		NA		NA		NA		4500 (6000)		4500 (6000)		4500 (6000)		
	Fanuc/ Mitsubishi Cont./ 30 min	kW	NA	NA		NA		NA		NA		11/15		11/15		11/15		
	Siemens S6/ 40%	kW	NA	NA		NA		NA		NA		11/16.5		11/16.5		11/16.5		
	Taper	type	NA	NA		NA		NA		NA		BT 40		BT 50		BT 40		
<b>Automatic Tool Changer: Twin Arm</b>																		
Number of tools	No	24	24	30	20	24	30	20	24	30	20	24	30	20	24	30	20	
Pull stud - MAS 403	type	P40 T - 1	P40 T - 1		P50 T - 1		P40 T - 1		P50 T - 1		P40 T - 1		P50 T - 1		P40 T - 1		P50 T - 1	
Maximum tool dia with all pockets full	mm	75	75	75	130	75	75	130	75	75	130	75	75	130	75	75	130	
Max tool dia adjacent pockets empty	mm	140	140	140	220	140	140	220	140	140	220	140	140	220	140	140	220	
Maximum tool length	mm	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	
Maximum tool weight	kg	8	8	7	15	8	7	15	8	7	15	8	7	15	8	7	15	
Tool to tool time	sec	2.5	2.5	2.5	4.5	2.5	2.5	4.5	2.5	2.5	4.5	2.5	2.5	4.5	2.5	2.5	4.5	
<b>Automatic Pallet Changer (Optional):</b>																		
Number of pallets	No	2	2			2			2			2			2			
Pallet size	mm x mm	380 x 600	480 x 800			480 x 1000			580 x 1200			580 x 1400			680 x 1600			
T - slot (No./size/ pitch)	No/mm/m	3/14/150	3/18/150			3/18/150			5/ 18/ 100			5/ 18/ 100			5/ 18/ 125			
Distance from Floor to pallet top (front chip conveyor)	mm	1050	1200			1250			1200			1200			1250			
Maximum safe load per pallet	kgs	300	400			500			600			700			800			
<b>Accuracy As per ISO 230-2:</b>																		
Positioning Accuracy	mm	0.01	0.012			0.012			0.016			0.016			0.016			
Repeatability Accuracy	mm	0.007	0.009			0.009			0.012			0.012			0.012			
<b>Installation Data:</b>																		
Floor space (W x D)	mm x mm	2050 x 2450	2500 x 2450			2500 x 2450			3100 x 2700			3600 x 2700			4000 x 2950			
Machine height (H)	mm	2730	2900			2900			3300			3300			3450			
Basic machine weight (Approx)	kg	4000	5000			5200			7900			8200			10000			
Total connected load (Basic machine)	KVA	18	22	28	22	28	22	28	28	28	28	28	28	28	28	28		

Note: Values within parenthesis are options. ATC BT40 TC24 is a Standard  
 # XTRON-544: Std inline is 10000 rpm (cont. duty) However 12000 rpm (Int. duty) is available only with Fanuc & Mitsubishi CNC.



# Network



## International Network

- Bangladesh
- Bahrain
- China
- France
- Germany
- Iran
- Kuwait
- Netherlands
- Oman
- Poland
- Qatar
- Russia
- Saudi Arabia
- Sri Lanka
- South Africa
- Thailand
- Turkey
- UAE



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