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World's #1 International Manufacturing
Technology Show of the year.

 **IMTS2018** | 10-15th
CHICAGO, USA | SEPTEMBER

EAST BUILDING, LEVEL TWO



Marshall

SUPER- OPTIMIZED **TURNMILLING**



TURNMILLING - BETTER THAN TURNING + VMC

TM 400 COMPACT SERIES



**60 Degree
True slant bed Structure
with "Torque Tube" for
additional rigidity**



SPECIAL FEATURES:

- German design, Best compact Turnmill center made in India.
- Very rigid single piece casting of bed.
- Very compact design with floor-space of only 2.1 X 1.25 meter
- Biggest X/Z stroke for this size of machines.
- 60 Degree True slant bed design.
- Small distance between operator and chuck for easy loading.
- Heavy duty roller LM Guideways for Rigidity, Long Life & Accuracy.
- 12 position, fast servo turret (Barruffaldi) for toolchange within 0.2 seconds.

ADVANTAGES OF MILTURN TM 400:

- Turnmilling is an extremely important technology in today's highly competitive environment as it saves manpower and machinery (mostly VMCs) used to drill, mill & tap after turning of component on CNC Lathe.
- Complete job finished in one setup resulting in higher accuracy.
- TM 400 offers German Quality at Indian price.

SPECIFICATIONS

| | |
|------------------------------------|-------------------|
| Max. Swing Diameter | 400 mm |
| Max. Turning Diameter | 280 mm |
| Max. Turning Length | 410 mm |
| Stroke X/Y (Option)/Z | X200/ Z515 |
| Rapid Speed X/Z | 18 /24 |
| Max. Speed | 4000 rpm |
| Chuck Size | 200 mm |
| Spindle Power (Cont.) | 11 KW |
| Spindle Torque | 96 NM |
| Taper in Tail stock Quil | MT 4 |
| Quill Diameter | 60 |
| Stroke Body | 500 mm |
| Number of Tools | 12 |
| Tool Holder | VDI 30 |
| Rotating Tool | 12 |
| Max. Speed of Rotating Tools (Std) | 6000 rpm |
| Max. Speed of Rotating Tools (Opt) | 20000 rpm |
| Weight | 4000 Kg |
| Dimensions | 2.1 X 1.35 X 1.8m |

TMH HEAVY DUTY TURNMILL SERIES

Our design, manufacturing processes & selection of finest machine elements from the best manufacturers in the world ensure the following;

- **RIGIDITY of Bed & Base**
- **RIGIDITY of Head & Spindle Assembly**
- **RIGIDITY of Tailstock**
- **RIGIDITY of LM Guideways**



This Attribute of RIGIDITY is present in even our smallest models because RIGIDITY is vital for:
PRODUCTIVITY | ACCURACY | SURFACE FINISH | TOOL LIFE

SPECIFICATIONS

| MODEL | TMH-20 | TMH-25 | TMH-30 |
|------------------------------------|----------------|------------------------|---------------------------------------|
| CAPACITY | | | |
| Swing Over Carriage Cover (mm) | 595 | 735 | 815 |
| Maximum Turning Dia. (mm) | 350 | 400 | 500 |
| Maximum Turning Length (mm) | 700/1000/1500 | 700/1000/1500/ 2000 | 700/1000/1500/ 2000/2500/3000 |
| MAIN SPINDLE | | | |
| Spindle Nose (Standard) | A2-8 | A2-8 | A2-11 |
| Front Bearing Bore (mm) | 110 | 130 | 150 |
| Maximum Bar Capacity (Std.) (mm) | 63 | 75 | 90 |
| SPINDLE DRIVE | | | |
| Spindle Motor rated power (KW) | 11/15 | 11/15(17/22) | 17/22(18.5/25) |
| Inf. Variable speed range (rpm) | 50-3000 | 50-2800 | 50-2000 |
| RAPID TRAVERSE | | | |
| STANDARD | | | |
| X-axis (m/min.) | 24 | 20 | 15 |
| Z-axis (m/min.) | 24 | 20 | 15 |
| TAILSTOCK | | | |
| Taper in Quill (mm) | MT-5 | MT-5 | MT-6 |
| Adjustable Thrust (Max.) | 600 | 600 | 750 |
| TOOL TURRET | | | |
| No. of Stations (Std.) -Baruffaldi | 12 | 12 | 12 |
| Tool Cross Section (mm) | 25X25 | 32X32 | 32X32 |
| Max. Boring Bar Dia. | 40 | 50 | 50 |
| POSITIONING REPEATABILITY | | | |
| X-axis | ±1.5 Microns | ±1.5 Microns | ±1.5 Microns |
| Z-axis | ±2 Microns | ±2 Microns | ±2 Microns |
| CNC CONTROLS: | | | |
| SIEMENS 828D (SL)/ FANUC Oi mate | | | |
| TD Weight (approx.) (Kg) | 5100/5700/7000 | 6000/7000 | 7500/8500/10000/ 11500/13000/14500 |

Note: Product improvement is a continuous process at "Marshall".
Design & Specifications are therefore, subject to change, without prior notice.

TWINTURN-TM

DOUBLE HEAD DOUBLE TURRET CNC TURNMILL CENTRES



The '2 in 1' Turnmill Centres designed to meet the REAL needs of Component Manufacturers:

- Saving in Space • Saving in Manpower • Saving in Shop Floor Material Movement

SPECIFICATIONS

| MODEL CAPACITY | TWINTURN 8TM | TWINTURN 12TM | TWINTURN XLTM |
|--|--------------|---------------|---------------|
| Swing Over Carriage Cover (mm) | 360 | 430 | 600 |
| Maximum Turning Dia. (mm) | 260/320 | 400 | 550 |
| Maximum Turning Length (mm) with Tailstock (without Tailstock in case of 12T & XL) mm | 350 | 400 | 200 |
| MAIN SPINDLE | | | |
| Spindle Nose (Standard) | A2-6 | A2-8 | A2-11 |
| Front Bearing Bore (mm) | 100 | 130 | 150 |
| Maximum Bar Capacity (Std.) (mm) | 52 | 66 | 90 |
| SPINDLE DRIVE | | | |
| Spindle Motor rated power (KW) | 11/15 | 12/16 | 18.5/25 |
| Inf. Variable speed range (rpm) | 100-3200 | 50-2500 | 30-1800 |
| RAPID TRAVERSE | | | |
| STANDARD | | | |
| X-axis (m/min.) | 24 | 20 | 20 |
| Z-axis (m/min.) | 24 | 20 | 20 |
| TOOL TURRET | | | |
| No. of Station (Std.) -Baruffaldi | 12 | 12 | 12 |
| Tool Cross Section | 25x25 | 32x32 | 32x32 |
| Max. Boring Bar Dia. | 40 | 50 | 50 |
| POSITIONING REPEATABILITY | | | |
| X-axis | ±1.5 Microns | ±1.5 Microns | ±1.5 Microns |
| Z-axis | ±2 Microns | ±2 Microns | ±2 Microns |
| CNC Controls: Siemens 828D (SL)/ FANUC Oi mate TD | | | |
| Weight (approx.) Kg | 6500 | 8000 | 15000 |



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