# TECHNICAL DATASHEET
## CNC – Turning- Milling Machine

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>MAG FMS Drehtechnik Schaffhausen AG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>NDM 450-4-300</td>
</tr>
<tr>
<td>Built</td>
<td>2008</td>
</tr>
<tr>
<td>Control</td>
<td>SINUMERIK 840 D – power line</td>
</tr>
</tbody>
</table>

## Working Area
- Swing diameter over bed: 700 mm
- Swing diameter over X-carriage: 600 mm
- Turning diameter: 450 mm
- Turning length: 3,000 mm

## Main Spindle
- Integrated spindle motor with C-axis
- Positioning accuracy of C-Axis: 0.01°
- Spindle nose DIN 55026 Typ A: Size 8
- Spindle bore: 100 mm
- Spindle diameter in front bearing: 150 mm
- Clamping chuck: FORKARDT 3 QLC/K315
- Drive power (40% ED): 95 kW
- Torque, max. (40% ED): 800 Nm
- Spindle speed, max.: 3,100 min⁻¹
Your address for high quality machine tools

Counter Spindle
integrated spindle motor with C-axis
assembled at lower NC-carriage
positioning accuracy of C-axis 0,01°
spindle nose DIN 55026 Typ A Size 8
spindle bore 100 mm
spindle diameter in front bearing 150 mm
clamping chuck FORKARDT 3 QLC/K315
drive power (40% ED) 95 kW
torque, max. (40% ED) 800 Nm
spindle speed, max. 3.100 min-1
longitudinal travel 3.100 mm
feed max. 30 m/min

turn-mill spindle carrier at upper left carriage
with integrated Y-axis
cross travel (X1) 455 mm
vertical travel (Y1) +/- 75 mm
longitudinal travel (Z1) 2.600 mm
rapid feed X-Y-Z 30 m/min
working feed X-Y-Z 15.000 mm/min

B-axis on that upper left carriage with integrated motor-spindle (indexable)
tool taper HSKA63
spindle speed max. 7.000 min-1
drive power max. (40 % ED) 48 kW
Torque max. (40% ED) 128 Nm
swivel range +/- 105°

Tool magazine
number of tools 40
tool length max. 350 mm
tool diameter max. 100 mm
Longitudinal and cross slide at upper right carriage with 12-fold tool turret with driven tools

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>cross travel (X2)</td>
<td>265 mm</td>
</tr>
<tr>
<td>longitudinal travel (Z2)</td>
<td>3.050 mm</td>
</tr>
<tr>
<td>rapid feed Z-Axis</td>
<td>30 m/min</td>
</tr>
<tr>
<td>rapid feed X-Axis</td>
<td>15 m/min</td>
</tr>
<tr>
<td>max. feed power 100/25%</td>
<td>10/18 kN</td>
</tr>
<tr>
<td>tool taper</td>
<td>VDI 50</td>
</tr>
<tr>
<td>max. speed of driven tools</td>
<td>3.200 min-1</td>
</tr>
<tr>
<td>max. power of driven tools 25%</td>
<td>10 kW</td>
</tr>
<tr>
<td>max. torque of driven tools 25%</td>
<td>100 Nm</td>
</tr>
</tbody>
</table>

NC-carriage lower left

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>equipped with self-centering steady</td>
<td>SMW SLU5</td>
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<tr>
<td>clamping range</td>
<td>50-310 mm</td>
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<tr>
<td>rapid feed</td>
<td>15 m/min</td>
</tr>
</tbody>
</table>

CNC-Control

SIEMENS, SINUMERIK 840 D power line

Equipment, Accessories

- all drives in digital-servo-technology
- coolant system with coolant tank 450 liter, feed pump 5 bar/50l/min,
- high pressure pump 50 bar, band filter
- 2 chip-conveyor
- dust exhausting
- automatic doors