Flexible Drilling and Tapping Solutions

CNC-drilling centers
Drilling - Tapping - Flowdrilling - Countersinking - Milling

3RD series
Drilling upto 42 mm
X/Y 3x0,6 - 10,5x0,6 m
3-axis CNC-control
Dialog + ISO programming
Chipconveyor
Dual-station production

GRD series
Drilling upto 60 mm
X/Y 3x1,2 - 20x4 m
3-axis CNC-control
Dialog + ISO programming
Chipconveyor
Dual-station production
Special sizes on request

Tapping machines
Pneumatic M12 / M20
Hydraulic M18 / M24 / M30 / M45 / M60
Vertical or multi-position

CMA - 3RD
Drilling upto 42 mm
X/Y 3x0,6 - 10,5x0,6 m
3-axis CNC-control
Dialog + ISO programming
Chipconveyor
Dual-station production

More than 500 drilling-centers on 5 continents

CMA - GRD
Drilling upto 60 mm
X/Y 3x1,2 - 20x4 m
3-axis CNC-control
Dialog + ISO programming
Chipconveyor
Dual-station production
Special sizes on request

More than 15,000 tapping machines on 6 continents

www.cmamachines.com
Standard configuration C-frame-type 3RD

OMRON Industrial Touchscreen PC (Windows 7)
Controlled X-, Y- and Z-axis
Linearguides with circulating type bearings on all axis
X-axis with helical rack and pinion, Y-/Z- axis with ballscrew
Automatic toolchanger for 10 tools
Automatic toolcalibrator (touch-off)
Cover around drilling head with laser scanner (working in 2 areas)
Coolant system (emulsion)
Open-table with 3 clamping bars and chip-conveyor
LED-machinelight
Light-curtain safety-barrier on the rear of the machine
RJ45 connection for teleservice, incl. all necessary software

Options C-frame-type 3RD

13,1 kW spindle-motor to increase torque
Internal coolant through the spindle
Spraying systems for minimal lubrication or paste (flowdrilling)
Automatic system for correcting height of the product (Z-reader)
Renishaw system for automatic search of zeropoint
NJWin13 external software for programming on a PC
CAD/CAM software for converting 2D or 3D drawings
4th axis for automatic tube-rotation
Pneumatic clamping systems for single or multiple parts

Technical data 3RD

<table>
<thead>
<tr>
<th>Drilling capacity *</th>
<th>Tapping capacity *</th>
<th>Spindlemotor</th>
<th>Spindle speed rpm</th>
<th>Maximum torque Nm</th>
<th>Spindle type</th>
<th>Distance spindle/table mm</th>
<th>Length of table mm</th>
<th>Width of table mm</th>
<th>T-slots (nr./size/distance)</th>
<th>Stroke X-axis mm</th>
<th>Stroke Y-axis mm</th>
<th>Stroke Z-axis mm</th>
<th>Speed X-axis m/min</th>
<th>Speed Y-axis m/min</th>
<th>Speed Z-axis m/min</th>
<th>Weight kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 versions from max Ø22 upto max Ø42</td>
<td>6 versions from max M16 upto max M27</td>
<td>8,9 kW, option 13,1 kW</td>
<td>6 versions from max 2000 upto max 6000</td>
<td>6 versions from max 57 upto max 170</td>
<td>BT 40 / CAT 40</td>
<td>150-600</td>
<td>3000</td>
<td>580</td>
<td>3 / 20 / 250</td>
<td>3000</td>
<td>600</td>
<td>450</td>
<td>30</td>
<td>30</td>
<td>9.6</td>
<td>3750</td>
</tr>
</tbody>
</table>

* depending on speed, feed and type of tool
3RD – 4506 (XY 4,5 x 0,6 m)

O1234
N10 M7 T2
N20 G52 Q200
N30 G0 G90 G54 X50 Y50 Z50 M3 H1
N40 Z2 M12
N50 G1 G91 G42 X-25 F1000
N60 G2 X0 Y0 Z-1 F3000 L20
N70 G1 G40 X25 F1000
N80 G0 G90 Z50 M13
N90 M30

ISO-programming

Dialog-programming

GRD 3030 (XY 3 x 3 m)

Drilling
Drilling profiles with intermediate rapid-feed
Deep-hole drilling
Tapping
Countersinking
Flowdrilling

www.cmamachines.com
Drilling

Drilling profiles with intermediate rapid-feed

Deep-hole drilling

Tapping

Countersinking

Flowdrilling

Click HERE for video-presentation

3RD – 6006 (XY 6 x 0,6 m)

GRD 9012 (XY 9 x 1,2 m)

GRD 8006-4 (XY 8 x 0,6 m for tubes Ø400 mm)
Standard configuration bridge-type GRD

OMRON Industrial Touchscreen PC (Windows 7)
Controlled X-, Y- and Z-axis
Linear guides with circulating type bearings on all axis
X-Y- axis with helical rack and pinion, Z- axis with ballscrew
Automatic toolchanger for 14 tools
Automatic toolcalibrator (touch-off)
Cover around drilling head
Movable light-barriers on the front of the machine
Fence on the rear of the machine
Coolant system (emulsion)
Open-table with clamping bars and chip-conveyor
LED-machine light
RJ45 connection for teleservice, incl. all necessary software

Options bridge-type GRD

13,1 kW spindle-motor to increase torque
Internal coolant through the spindle
Spraying systems for minimal lubrication or paste (flowdrilling)
Automatic system for correcting height of the product (Z-reader)
Renishaw system for automatic search of zeropoint
NJWin13 external software for programming on a PC
CAD/CAM software for converting 2D or 3D drawings
4th axis for automatic tube-rotation
Pneumatic clamping systems for single or multiple parts

<table>
<thead>
<tr>
<th>Technical data GRD</th>
<th>30--</th>
<th>45--</th>
<th>60--</th>
<th>75--</th>
<th>90--</th>
<th>105--</th>
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</thead>
<tbody>
<tr>
<td>Drilling capacity *</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Tapping capacity *</td>
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<tr>
<td>Spindlemotor</td>
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<tr>
<td>Spindle speed rpm</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Maximum torqueNm</td>
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<tr>
<td>Spindle type</td>
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<tr>
<td>Distance spindle/table mm</td>
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<tr>
<td>Length of table mm</td>
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<tr>
<td>Stroke X-axis mm</td>
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<td>Stroke Y-axis mm</td>
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<tr>
<td>Stroke Z-axis mm</td>
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</tr>
<tr>
<td>Speed X-axis m/min</td>
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<tr>
<td>Speed Y-axis m/min</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Speed Z-axis m/min</td>
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</tr>
</tbody>
</table>

* depending on speed, feed and type of tool
Pneumatic tapping machines

Strong parallel-arm with ball-bearings  
High quality pneumatic motor  
SMC (Japan) air filter – regulator - lubricator  
Spraying system for tap-lubrication (RN-models)  
Quick-change tooling system to DIN-standard  
Tapping under any angle (M-models)

<table>
<thead>
<tr>
<th>Model</th>
<th>RPM</th>
<th>Torque</th>
<th>Chuck size</th>
<th>Radius</th>
<th>Weight</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCN(M) 8</td>
<td>700</td>
<td>10 Nm</td>
<td>1 / Ø19</td>
<td>1800 mm</td>
<td>26 kg</td>
<td>M2-M8</td>
</tr>
<tr>
<td>LCN(M) 12</td>
<td>400</td>
<td>28 Nm</td>
<td>1 / Ø19</td>
<td>1800 mm</td>
<td>26 kg</td>
<td>M3-M12</td>
</tr>
<tr>
<td>RN(M) 12</td>
<td>400</td>
<td>31 Nm</td>
<td>1 / Ø19</td>
<td>1800 mm</td>
<td>26 kg</td>
<td>M3-M12</td>
</tr>
<tr>
<td>RN(M) 20</td>
<td>400 + 115</td>
<td>31 + 85 Nm</td>
<td>2 / Ø31</td>
<td>1800 mm</td>
<td>27 kg</td>
<td>M3-M20</td>
</tr>
</tbody>
</table>

M-models are equipped with multi-position head

Hydraulic model GH 18
the reliable and cost-effective alternative

To avoid the high-energy costs of pneumatic motors we developed a 230V hydraulic machine. Additional advantages are a lower noise-level and more reliability (no wear-parts) compared to pneumatic driving systems.

Advantages compared to electronic driven machines are the far lower costs and simplicity in case of eventual repairs.

In standard configuration the machine is equipped with a separate hydraulic unit. Optionally the machine can be delivered with a cast-iron working table.

<table>
<thead>
<tr>
<th>Model</th>
<th>RPM</th>
<th>Torque</th>
<th>Chuck size</th>
<th>Radius</th>
<th>Weight</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>GH(M) 18</td>
<td>425</td>
<td>80 Nm</td>
<td>2 / Ø19</td>
<td>1800 mm</td>
<td>125 kg</td>
<td>M3-M18</td>
</tr>
</tbody>
</table>

Hydraulic tapping machines

Strong parallel-arm with ball-bearings  
Danfos hydraulic motor  
Adjustable work- and return-speed  
Cast-iron working table  
Spraying system for tap-lubrication  
Quick-change tooling system to DIN-standard  
Tapping under any angle (M-models)  
Programmable tapping-depth D-touch (option)

<table>
<thead>
<tr>
<th>Model</th>
<th>RPM</th>
<th>Torque</th>
<th>Chuck size</th>
<th>Radius</th>
<th>Weight</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>RH(M) 24</td>
<td>+500</td>
<td>140 Nm</td>
<td>2 / Ø31</td>
<td>1800 mm</td>
<td>285 kg</td>
<td>M3-M24</td>
</tr>
<tr>
<td>RHR(M) 30</td>
<td>+125 + 500</td>
<td>255 + 85 Nm</td>
<td>2 / Ø31</td>
<td>1800 mm</td>
<td>290 kg</td>
<td>M4-M30</td>
</tr>
<tr>
<td>RHR(M) 45</td>
<td>+105 + 475</td>
<td>440 + 95 Nm</td>
<td>3 / Ø48</td>
<td>2200 mm</td>
<td>330 kg</td>
<td>M4-M45</td>
</tr>
<tr>
<td>RHR(M) 60</td>
<td>+55 + 275</td>
<td>1100+220Nm</td>
<td>4 / Ø60</td>
<td>2400 mm</td>
<td>355 kg</td>
<td>M6-M60</td>
</tr>
</tbody>
</table>

M-models are equipped with multi-position head

All the hydraulic models can be delivered with a mobile hydraulic unit (GH-series) and with programmable depth control (D-touch).

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