

Flexible Drilling and Tapping Solutions

CNC-drilling centers

Drilling - Tapping - Flowdrilling - Countersinking - Milling



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



3RD series

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



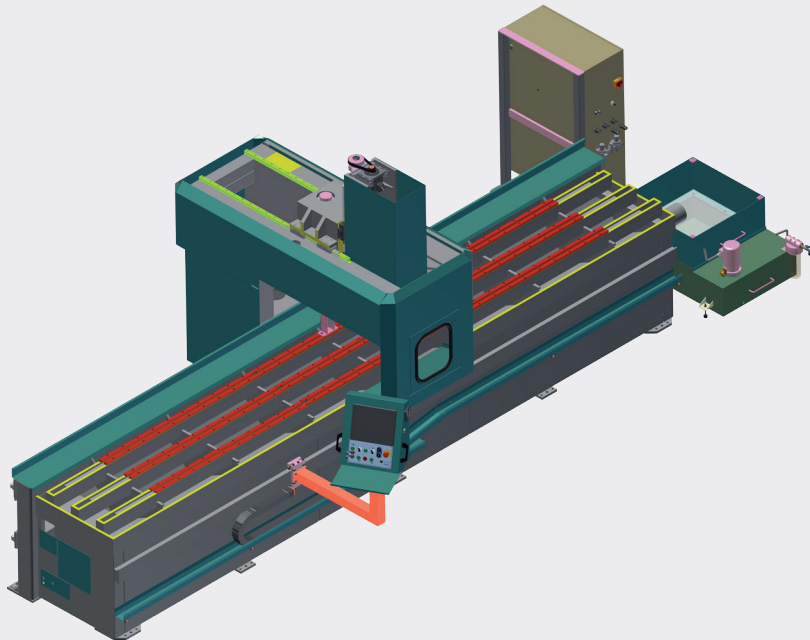
GRD series

Tapping machines

Tapping machines

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





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

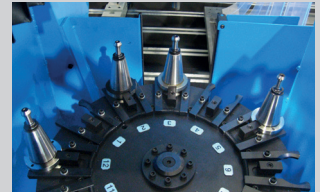
Options C-frame-type 3RD

- 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	3006	4506	6006	7506	9006	10506
Drilling capacity *	6 versions from max Ø22 upto max Ø42					
Tapping capacity *	6 versions from max M16 upto max M27					
Spindlemotor	8,9 kW, option 13,1 kW					
Spindle speed rpm	6 versions from max 2000 upto max 6000					
Maximum torque Nm	6 versions from max 57 upto max 170					
Spindle type	BT 40 / CAT 40					
Distance spindle/table mm	150-600					
Length of table mm	3000	4500	6000	7500	9000	10500
Width of table mm	580					
T-slots (nr./size/distance)	3 / 20 / 250					
Stroke X-axis mm	3000	4500	6000	7500	9000	10500
Stroke Y-axis mm	600					
Stroke Z-axis mm	450					
Speed X-axis m/min	30					
Speed Y-axis m/min	30					
Speed Z-axis m/min	9,6					
Weight kg	3750	4500	5250	6050	6800	7550

* depending on speed, feed and type of tool

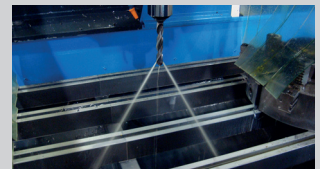
3RD & GRD options & samples



Toolchanger



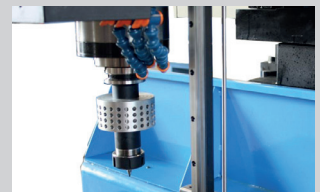
Drilling and milling



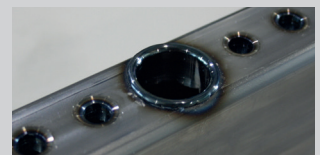
Internal coolant



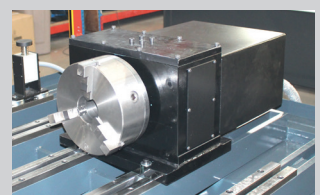
Tapping



Z-reader



Flowdrilling M8 and G1/2



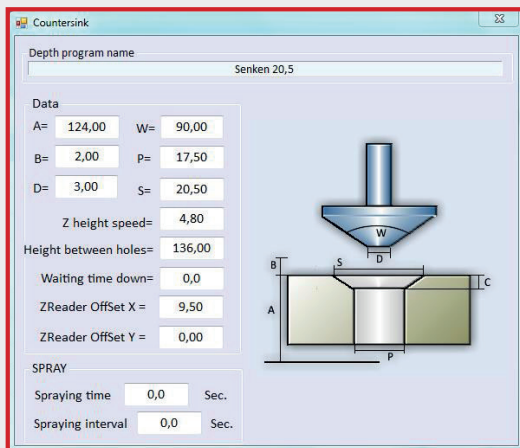
4th axis



Tubedrilling with 4th axis



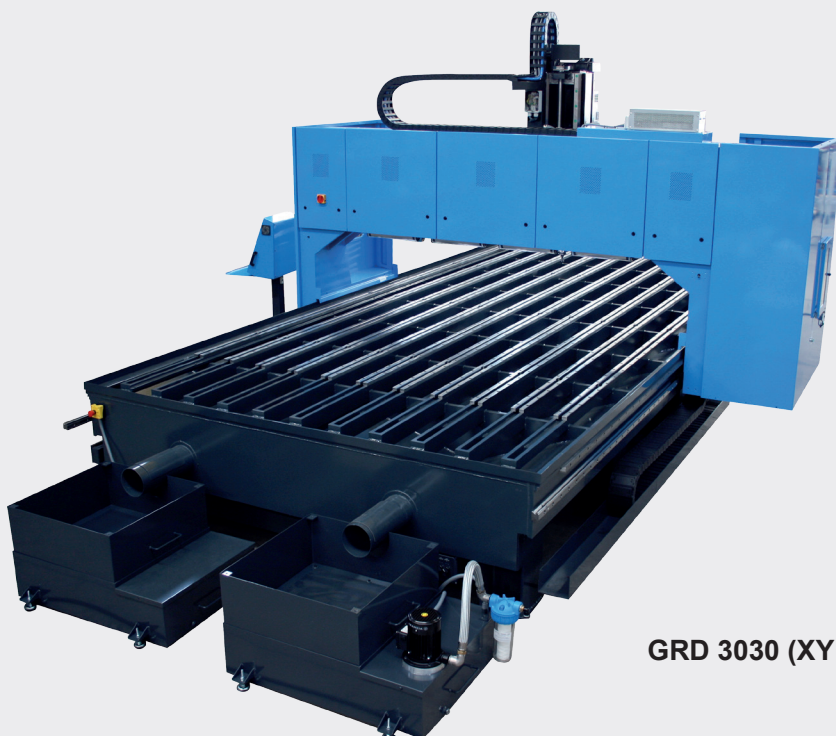
3RD – 4506 (XY 4,5 x 0,6 m)



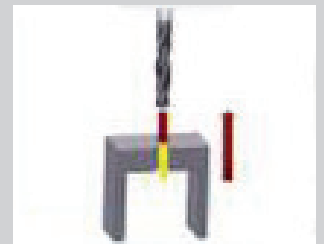
Dialog-programming



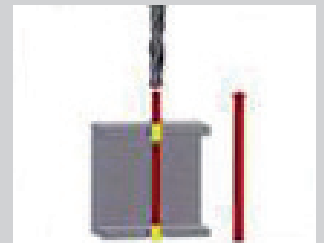
ISO-programming



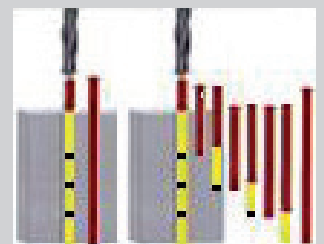
GRD 3030 (XY 3 x 3 m)



Drilling



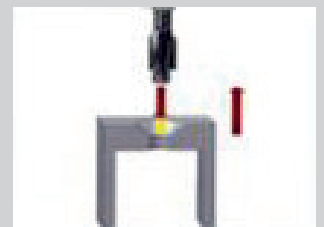
Drilling profiles with intermediate rapid-feed



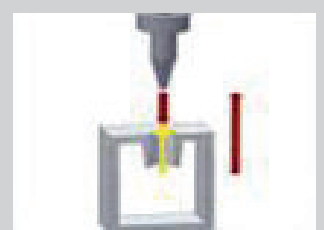
Deep-hole drilling



Tapping



Countersinking



Flowdrilling



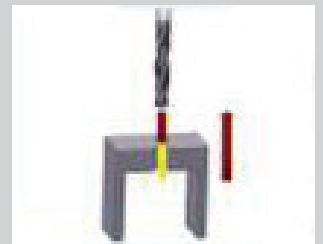
[Click HERE for video-presentation](#)

3RD – 6006 (XY 6 x 0,6 m)

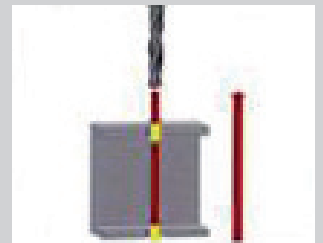
GRD 9012 (XY 9 x 1,2 m)



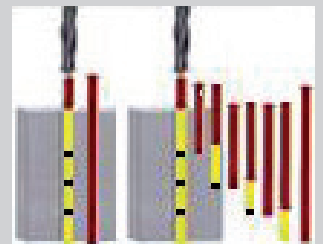
GRD 8006-4 (XY 8 x 0,6 m for tubes Ø400 mm)



Drilling



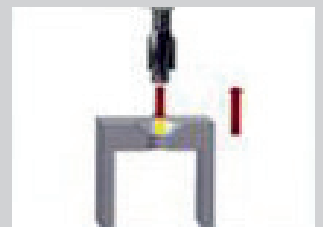
Drilling profiles with intermediate rapid-feed



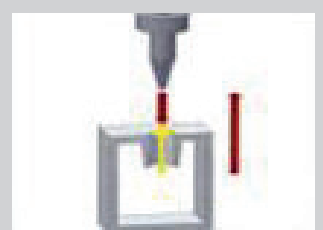
Deep-hole drilling



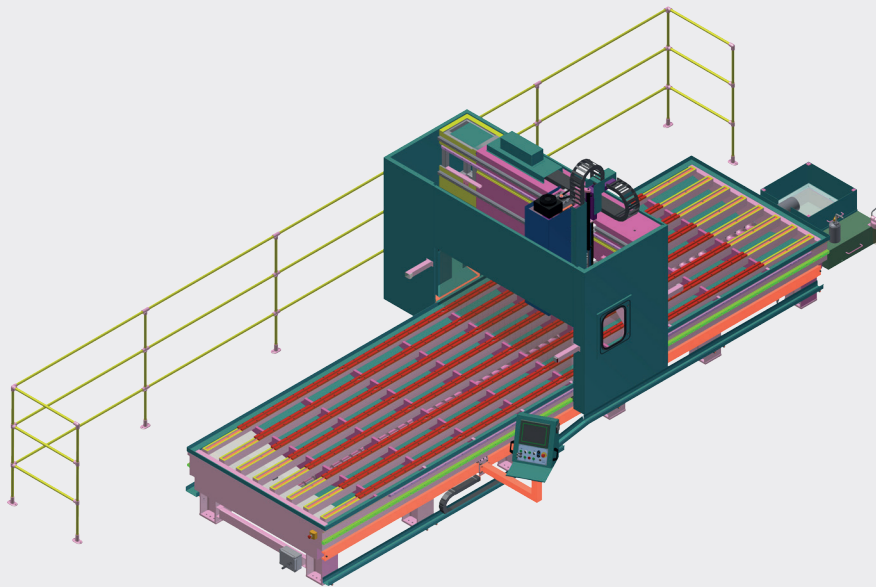
Tapping



Countersinking



Flowdrilling



Standard configuration bridge-type GRD

- OMRON Industrial Touchscreen PC (Windows 7)
- Controlled X-, Y- and Z-axis
- Linearguides 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-machinelight
- RJ45 connection for teleservice, incl. all necessary software

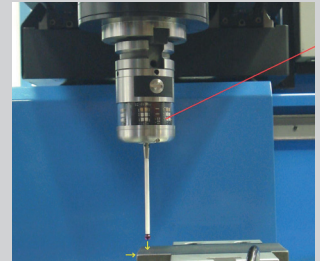
Options bridge-type GRD

- 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

Technical data GRD	30--	45--	60--	75--	90--	105--
Drilling capacity *	6 versions from max Ø25 upto max Ø60					
Tapping capacity *	6 versions from max M18 upto max M45					
Spindlemotor	8,9 kW, options 13,1 kW and ZF-gearbox for high torque					
Spindle speed rpm	6 versions from max 2000 upto max 5000					
Maximum torque Nm	6 versions from max 68 upto max 500					
Spindle type	BT 40 / CAT 40, optional BT 50					
Distance spindle/table mm	120-620					
Length of table mm	3000	4500	6000	7500	9000	10500
Width of table mm	1200 / 1700 / 2400 / 3000 or customized					
T-slots (nr./size/distance)	6-8-11-13 / 20 / 250					
Stroke X-axis mm	3000	4500	6000	7500	9000	10500
Stroke Y-axis mm	1200 / 1700 / 2400 / 3000 or customized					
Stroke Z-axis mm	500					
Speed X-axis m/min	30					
Speed Y-axis m/min	30					
Speed Z-axis m/min	4,8					

* depending on speed, feed and type of tool

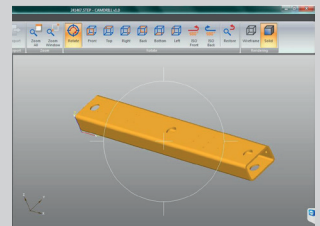
3RD & GRD options & samples



Renishaw probe for 0-point



Helical milling



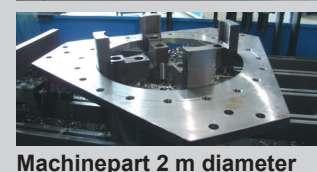
CAD/CAM-programming



Flange in Hardox



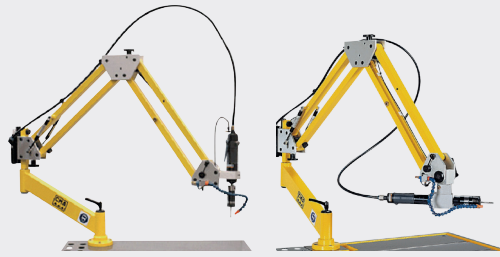
Milling random shape



Machinepart 2 m diameter

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)



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

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.

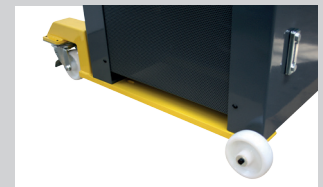
In standard configuration the machine is equipped with a separate hydraulic unit. Optionally the machine can be delivered with a cast-iron working table.



Fast and flexible Tapping



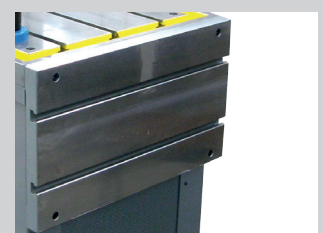
Cast-iron table for pneumatic machines and GH 18



Castors for all machines



Inserts in soft materials



Lateral vertical table



Tapping under any angle



Model	RPM	Torque	Chuck size	Radius	Weight	Capacity
GH(M) 18	425	80 Nm	2 / Ø19	1800 mm	125 kg	M3-M18

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)



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

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).

