



**DONAUMERIC 440**  
**DONAUPORT 540**

**RAPID RADIAL DRILLING MACHINES**

[www.donau-wzm.de](http://www.donau-wzm.de)



# DONAU FLEXIBLE DRILLING



Since 1955 **DONAU** is manufacturing Rapid Radial drilling machines. Thousandfold proven machines from **DONAU** are presenting a fine quality and innovative solutions from the market leader in this sector.

Machine tools from **DONAU** are offering a maximum of innovation. More than 14.000 Rapid Radial drilling machines are serving daily in many different branches of industry around the world.

Our machines have proven themselves in a wide range of applications in the automotive industry, in the machine building industry, the tool and the industry and in many other manufacturing industries and workshops.

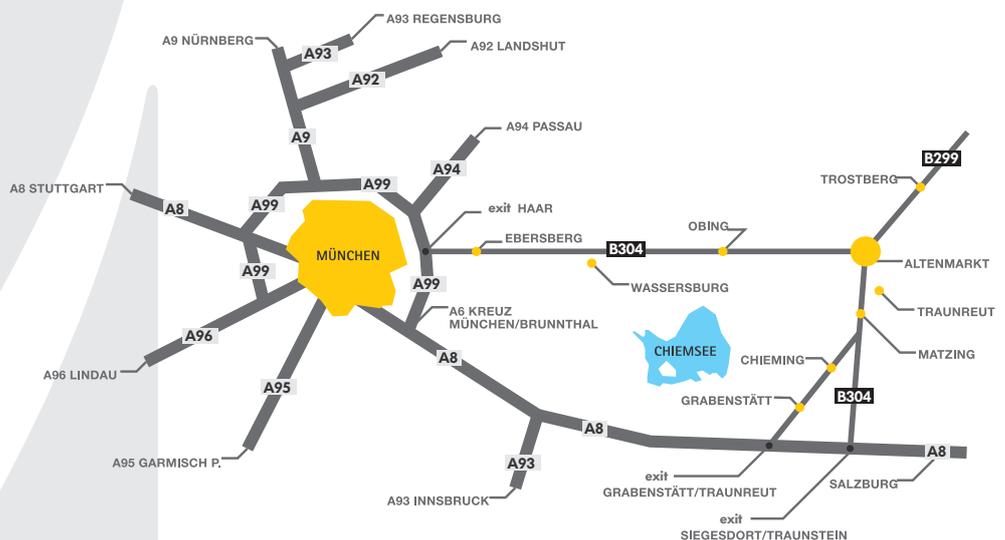
**DONAU** is developing and producing innovative CNC-controlled and manually operated Rapid Radial drilling machines.

Since September 2008 Engineering and Development, Production and Assembly, as well as Marketing, Sales and Service are originating at the **ALZMETALL** Factories based in Altenmarkt/Alz.

We are driven to deliver Precision, Performance and Quality in all our products. For this, **DONAU** is also using advanced know-how of their parent company **ALZMETALL**.

**ALZMETALL** is a Company with international standing and worldwide activities. For more than 6 decades it is leading in Drilling technologies in Milling technologies and in Casting technologies.

Our in-house foundry is not only producing grey-cast iron and spheroidal castings for our own machine tools, but is also a quality supplier for other Machine Tool manufacturers in Germany and abroad.



# DONAUMERIC AND DONAUPORT RAPID RADIAL DRILLING MACHINES

Efficiency is not a matter of a sole machining solution, but the result of many intelligent solutions

**DONAUMERIC 440** and **DONAUPORT 540** are our high-end CNC-controlled Rapid Radial drilling machines for automatic drilling operations with multiple options, up to an automatic tool changer (ATC).



## ADVANTAGES AND FEATURES

You are working at up to 3 working stations, delivering highest flexibility by machining of different workpieces. Single parts, series works, large and small parts, irregular shapes and long parts – with the **DONAUMERIC 440** and the **DONAUPORT 540** you are solving your multiple machining tasks.

At two different working stations, swivel tables enable angled drilling and tapping operations.

Large travel paths of up to approx. 15 m at the X-Axis and workpiece heights of up to 1,5 m at the Z-Axis are distinguishing these machines

Automatic, synchronic 3-axes approach for moving quickly into all machining positions

Time-wasting marking and drawing are obsolete. You are gaining productivity.

An automatic tool change system enables multi-machine operation.

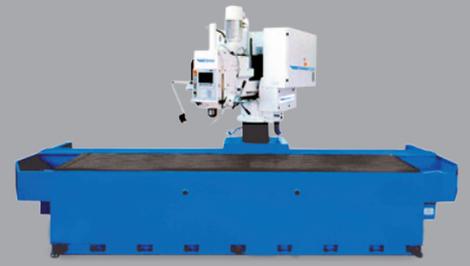
When integrating a 3-D touch probe, you are eliminating time-consuming alignments and you are reducing setup times

Simple workshop-oriented dialogue programming without previous CNC experience. Import of CAD data through a USB interface.

There is the choice to operate in automatic CNC mode or completely manual

**DONAUMERIC 440** - and **DONAUPORT 540** - CNC-Rapid Radial drilling machines are designed to the demand for modern ergonomics and thus provide non-fatigue operation

# MACHINE DATA



TYPE	DONAUMERIC 440	DONAUPORT 540
<b>MACHINING CAPACITIES:</b>		
Drilling capacity (plain) E 335 (St 60)	max. Diam. 40 mm	max. Diam 40 mm
Drilling capacity (plain) EN-GJL 200 (GG 20)	max. Diam. 50 mm	max. Diam. 50 mm
Tapping capacity E 335 (St 60)	max. M 36	max. M 36
Tapping capacity EN-GJL 200 (GG 20)	max. M 42	max. M 42
<b>WORKING RANGE</b>		
Radial arm travel	max. 1050 mm	max. 1050 mm
Modular travel (U-Axis)	-	2600 mm [up to 14 600 mm]
Column height adjustment (W-axis)	max. 410 mm	max. 400 mm
Spindle travel (Z-axis)	max. 200 mm	max. 200 mm
Distance spindle nose to table surface	min. 80 mm max. 690 mm	min. 140 mm max. 740 mm
[Distance spindle nose to Floor plate surface]	[min. 880 mm] [max. 1490 mm]	- -
Drilling radius	min. 540 mm max. 1590 mm	min. 540 mm max. 1590 mm
Angular movement	max. 330° Degrees	max. 330° Degrees
<b>WORKING TABLE</b>		
Clamping surface	1800x600 mm	4000x800 mm [bis 16 000 mm]
T-slots accord. to DIN 650 in X, 18 H9	4x dist. 125 mm	5x dist. 140 mm
Machine table height	900 mm	900 mm
At the reverse side of the machine and at the left side of the machine base, each 2 T-slots	18 H12	18 H12
Operation / Control	4-Axes CNC Control [5. / 6. Axes]	5-Axes CNC-Control [6. Axes]
<b>MAIN SPINDLE DRIVE</b>		
AC-Motor	frequency-controlled	frequency-controlled
Driving capacity (100 % intermitted duty)	max. 5,5 kW	max. 5,5 kW
Torque (100 % intermitted duty)	max. 250 Nm	max. 250 kW
Spindle speed range, stepless variator	15 - 2800 min. -1	15 - 2800 min. -1
Tool system	SA 40 DIN 69871	SA 40 DIN 69871
Tool change	by hand [automatic]	by hand [automatic]
<b>ADVANCE FEED DRIVE</b>		
AC-Servo drive		
Rapid travel (X-Y-Z-W-Axes)	max. 7,5/7,5/7,5/3 m/min	max. 7,5/7,5/7,5/3 m/min
Advance feed speed (Z-Axis)	5 -2000 mm/rev	5 -2000 mm/rev
Advance feed force (Z-axis)	max 12 000 N	max 12 000 N
<b>LENGTH MEASURING SYSTEM IN X-, Y-, Z- AND W-AXIS</b>		
	indirect	indirect
<b>OUTER MACHINE DIMENSIONS</b>		
Height, min.	appr. 2590 mm	appr. 2801 mm
Height, max.	appr. 3000 mm	appr. 2935 mm
Width, min.	appr. 1800 mm	appr. 4190 mm
Width, max.	appr. 2020 mm	appr. 5290 mm
Depth, min.	appr. 2218 mm	appr. 2270 mm
Depth, max.	appr. 2810 mm	appr. 2890 mm
<b>MACHINE WEIGHT</b>		
	appr. 2900 kg	appr. 6500 kg

[Options]

# OPTIONS



Angular table (Pos. 2.30) at the reverse side of the machine with swivable table (2.40) aside



Floor Plate (Pos. 2.10) at the reverse side of the machine, with swivable table (Pos. 2.40) aside



Manual operation, alternatively to the automatic CNC-mode-operation



T-Slot plate (Pos. 2.20) with workpiece



Floor plate ( Pos. 2.10) with clamping cube, swivable (Pos. 2.80) with swivable table (Pos. 2.40) aside



Splash and chip guard (Pos. 11.30), vertically movable, 2-piece unit. Either side can be moved down.



Angular table (Pos. 2.30) with workpiece at the reverse side, swivable table (Pos. 2.40) aside of the machine



Automatic Tool Changing system (ATC) for 5 tools (Pos. 8.10) at the right side of the machine

## DONAUMERIC 440 DONAUPORT 540

### OPTIONS:

- Coolant device
- Floor Plate
- T-Slot plate
- Angular table
- Swivable table
- Intermediate table
- Clamping cube
- Machine table, enlarged
- 3-D Touch Probe
- Automatic tool changer
- Micro-dosing lubrication
- Protective housing
- Special machine lacquering
- 5. / 6. CNC - Axes
- Service-Solutions

# DONAUMERIC 440 WITH 4-AXES- DONAUPORT 540 WITH 5-AXES- CNC-CONTROLLED

## FUNCTIONS - MODERN DATA COMMUNICATION THROUGH CAN-BUS-SYSTEM

TFT Flat screen, backlighted. Display can be switched alternatively between cartesian or polar system. Measurements are displayed as absolute values or incremental values.

Programs are easily created by using the DONAU CLEAR-TEXT-DIALOGUE

The tool administration in the control is being mastered in a Technology Database. For many different machining processes, tools can be chosen. In the meantime material-dependent cutting parameters are recommended.

The tool database can hold up to 500 tools. A material database holds 10 basic workpiece materials.

Ready-made control cycles for centering, drilling, tapping, as well as for reaming and sinking, are enabling a fast program creation.

A free programmable cycle is available for special tools.

Graphical support – for instance for different drill patterns - is assisting the program creation enormously

Sub-programming is shortening the program entry time and the length of programs.

The CNC-Control is mastering functions like Zero-offsetting, rotating and mirroring.

Teach-In function for the X-, Y- and Z-Axes as well as a program interrupt function with the possibility to re-enter in any program position

Reference point determination with a 3-D Touch Probe [Option]

USB Data interface

Graphical simulations for controlling Drill patterns are available to the operator

Optional integration of a 5th respectively a 6th Axis



## PRACTICALITY IN USE, ADVANTAGEOUS IN OPERATION

### Multi-functional, ergonomic and sophisticated

A modern CNC-Control, tailor-made for daily production tasks, that is being handled operator-friendly in both automatic and manual modes. Easy programming assisted by dialogue functions.

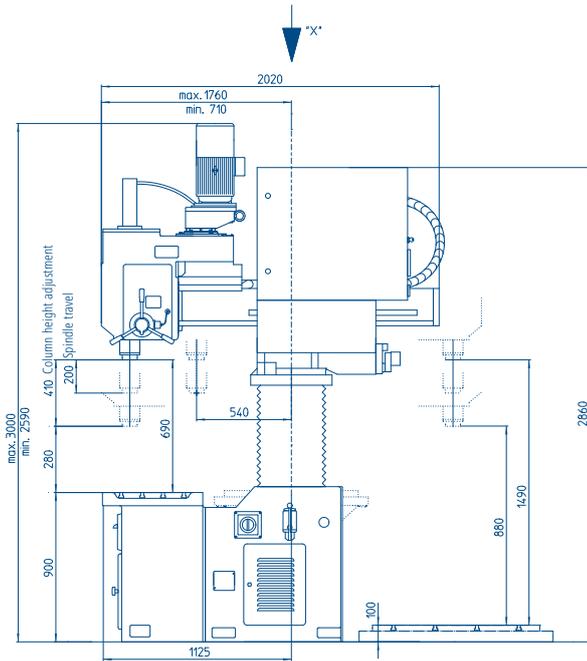
A clear, splash water protected and well readable graphical display together with the operating keyboard is integrated in the front panel of the drill head.



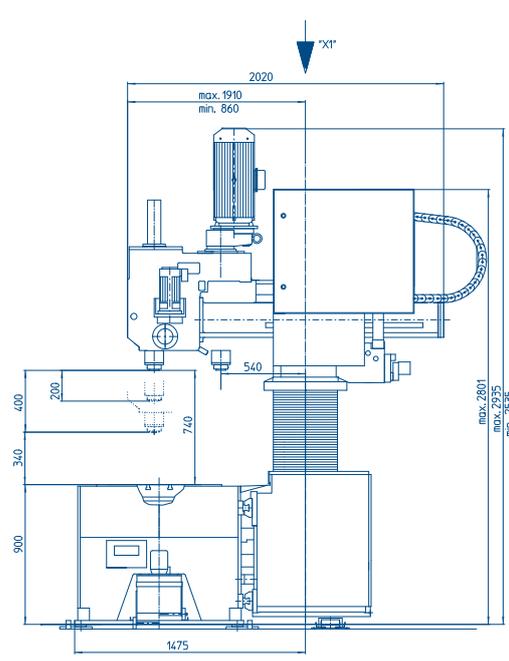
# WORKING SPACE DIMENSIONS

## DONAUMERIC 440

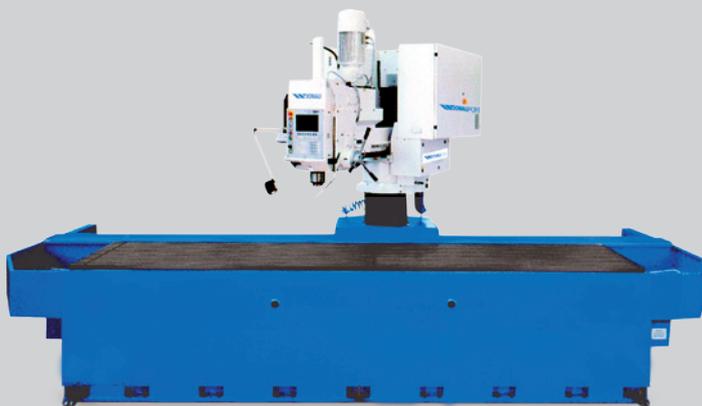
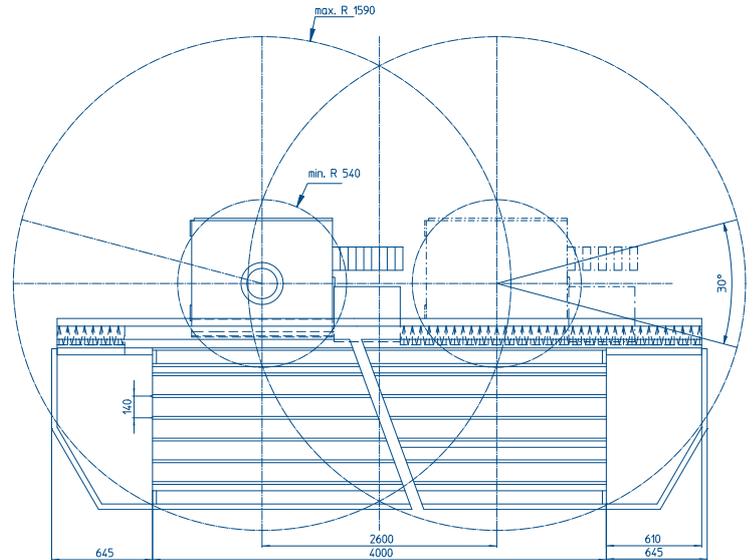
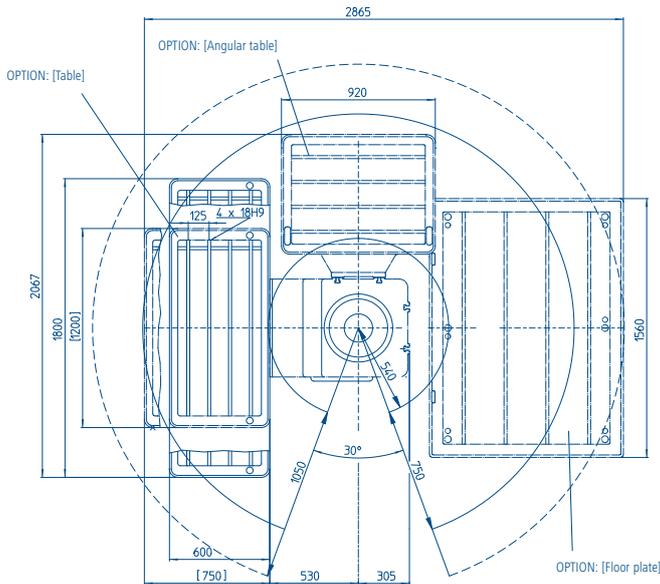
## DONAUPORT 540



view "X"



view "X1"



DONAUPORT 540

### WORKING RANGES

CNC-controlled, multi-functional and practice-oriented.

The **DONAUMERIC 440** with a Table of 1800 x 600 mm and a Radial arm travel of 1050 mm enabling machining of following workpieces

- > Cylindrical workpieces with a max Drilling radius of 1050 mm
- > Workpieces with Drilling dimensions up to 1800 x 770 mm
- > Workpieces with Drilling dimensions up to 2216 x 600 mm

With the **DONAUPORT 540**, is available with ranges of X-Axis up to approximately 15 m.



**DONAU ALPHA**



**DONAU FLEX**



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