

# Machine Tools

D+S, Spain



## General function:

- horizontal machining center

## Hydraulic functions:

- pressure supply and control of the tool clamping

## Special benefits of HAWE products:

- space-saving compact design

## HAWE Components:

Pressure supply: compact power pack FP

Control: directional seated valve NBVP

**Pressure:** 140 bar / 2030 psi

**Flow:** max. 2.1 lpm / 0.6 gpm

# Machine Tools



### General function:

- horizontal machining center DMC 50 H
- pallet size 400 x 400 mm for flexible serial production

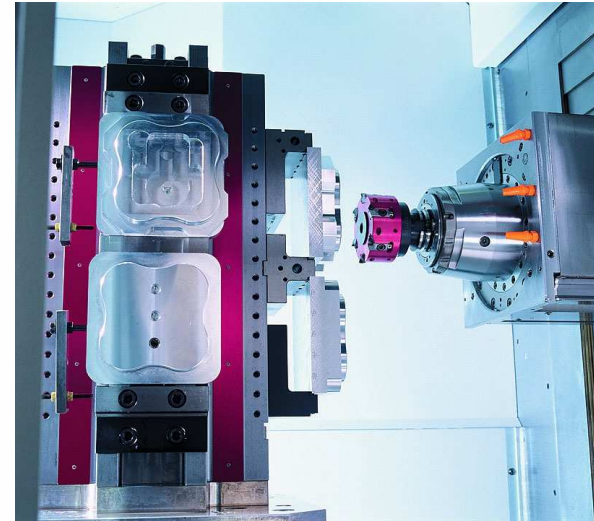
### Hydraulic functions:

- clamping of tools
- clamping and moving of the pallets

### Special benefits of HAWE products:

- space-saving compact design
- good heat dissipation

# Deckel MAHO, Geretsried



### HAWE Components:

Pressure supply: compact power pack HK

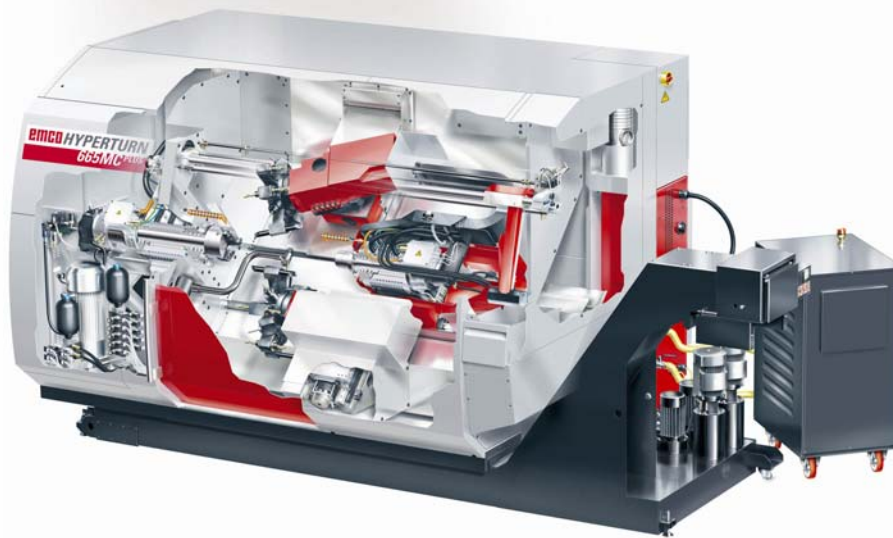
Control: directional seated valve bank BA with NSWP connection block AL21F

Pressure: 90 bar / 1300 psi

Flow: 6.9 lpm (pump only) / 1.8 gpm

# Machine Tools

Emco, Austria



Picture library Fa. EMCO

## General function:

- machining center Hyperturn 665 MCplus Quickmill for turning and milling of complex workpieces in one process step

## Hydraulic functions:

- pressure supply and control for the clamping of tools and workpieces
- pressure supply and control for the tool changer

## Special benefits of HAWE products:

- space-saving compact design
- good heat dissipation

## HAWE Components:

Pressure supply: compact power pack HKF

Control: directional spool valve NSWP  
clamping module NSMD  
connection block AL21  
miniature hydraulic accumulator AC

Pressure: max. 100 bar / 1450 psi

Flow: 11.3 lpm / 3 gpm

Solutions for a World under Pressure

**HAWE**  
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# Machine Tools

Juaristi, Spain



## General function:

- horizontal boring and machining centers with pallet changer

## Hydraulic functions:

- pressure supply and control of the tool clamping
- weight compensation

## Special benefits of HAWE products:

- space-saving compact design
- good heat dissipation of the power pack

## HAWE Components:

Pressure supply: compact power pack HC and HKF

Control: valve bank BA with  
directional seated valve bank BVZP, BWH

**Pressure:** max. 180 bar / 2610 psi

**Flow:** max. 6.9 lpm / 1.8 gpm

# Machine Tools

STAMA Maschinenfabrik, Schlierbach



**General function:**

- milling and turning center for 6-side machining
- complete processing in one fixture

**Hydraulic functions:**

- pressure supply and control for the clamping of tools and workpieces

**Special benefits of HAWE products:**

- space-saving compact design
- complete system solution

**HAWE Components:**

- Pressure supply: compact power pack MP  
Control: directional seated valve bank BVZP

**Pressure:** 250 bar / 3620 psi

**Flow:** 6.1 lpm / 1.6 gpm

Berarbeitungszentrum\_STAMA\_02-06



# Machine Tools



Union Werkzeugmaschinen, Chemnitz

### General Function:

- horizontal boring and milling machines for the manufacturing of large, heavy and bulky components

### Hydraulic Functions:

- supply and control of clamping of the round table, the tools and the milling heads

### Special Benefits of HAWE Products:

- space-saving due to compact design
- zero leakage of the seated valves, CETOP 3 connection pattern

### HAWE Components:

Pressure supply: compact power pack HC, MP

Control: valve bank BA with seated valves according D 7300 with NG6 / CETOP 3 connection pattern

Pressure: 330 bar / 4785 psi

Flow: 2,5 lpm / .66 gpm

# Machine Tools

Danobat, Spain



## General function:

- vertical lathes for wheel rims in the automobile production

## Hydraulic functions:

- pressure supply and control of the tool clamping

## Special benefits of HAWE products:

- space-saving compact design
- good heat dissipation of the power pack
- valves according CETOP 3 pattern

## HAWE Components:

Pressure supply: compact power pack HKF

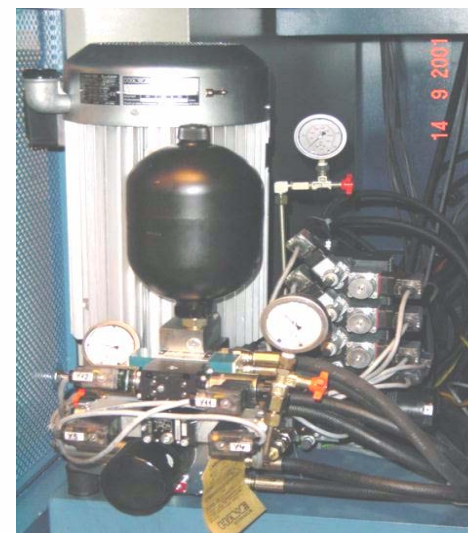
Control: valve bank BA with  
directional spool valve NSWP  
clamping module NSMD

Pressure: 50 - 60 bar / 725 - 870 psi

Flow: 16 lpm / 4 gpm

# マシンツール

Gurutzpe, Spain



## 装置機能：

- 長大ワーク加工用旋盤

## 油圧機能：

- テールストックおよびワーククランプの油圧供給および制御

## HAWE 製品の特長：

- コンパクトデザインによる省スペース
- 省エネルギーと優れた冷却能力

## HAWE Components:

- パワー源： コンパクトパワーユニット タイプ HC, HK
- 制御機器： バルブブロック タイプ BA  
方向切換スプールバルブ タイプ NSWP,  
クランピングモジュール タイプ NSMD,  
方向切換シートバルブ タイプ NBVP 付

圧力： max. 250 bar

流量： 16 l/min

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# Machine Tools

Kiheung Machinery, Korea



**General function:**

- CNC universal milling machine

**Hydraulic functions:**

- clamping of tools

**Special benefits of HAWE products:**

- easy design of control
- zero leakage of the seated valves

**HAWE Components:**

- Pressure supply: compact power pack HK  
Control: directional spool valve SWP, NSWP  
directional seated valve bank BWN  
**Pressure:** 100 - 150 bar / 1450 - 2175 psi  
**Flow:** 10 lpm / 2.6 gpm

Fräsmaschine\_Kiheung 09-02

# Machine Tools



**General function:**

- high speed grinding machine HSG 1400
- grinding of turbine vane tip of engine rotors

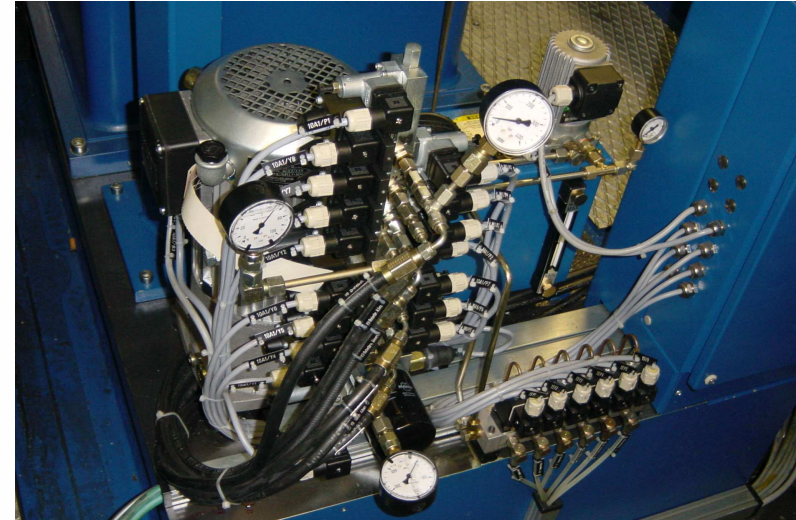
**Hydraulic functions:**

- fixing the brakes
- clamping and pivot the tools and the rotor

**Special benefits of HAWE products:**

- space-saving due to compact design
- high power density

# Reform Maschinenfabrik, Fulda

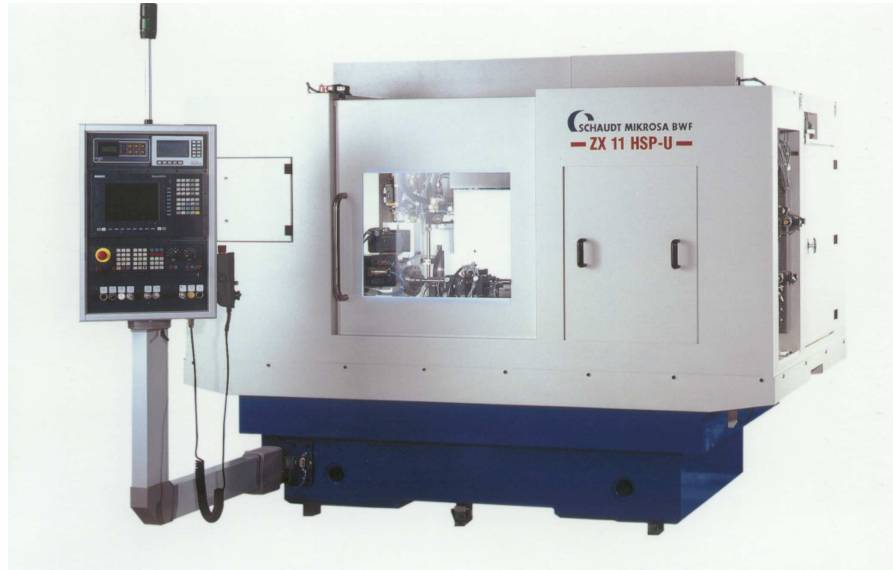


**HAWE Components:**

- Pressure supply: compact power pack HK
- Control: directional seated valve bank BWH  
pressure switch DG
- Pressure: 270 bar / 3910 psi
- Flow: 2,5 lpm / 0.7 gpm

Schleifmaschine\_Reform 09-02

# Machine Tools



### General function:

- compact CNC production grinding machine ZX 11 HSP-U
- flexible external and internal cylinder grinding in one clamping

### Hydraulic functions:

- control of tailstock, measuring head, clamping device and steady rest

### Special benefits of HAWE products:

- given space
  
- good heat dissipation

# Schaudt Mikrosa BWF, Stuttgart



### HAWE Components:

Pressure supply: compact power pack HKL

Control: pressure switch DG

**Pressure:** 40 bar / 580 psi

**Flow:** 4,5 lpm / 1.2 gpm

Schleifmaschine\_Schaudt\_09-02

# Machine Tools

Buck Maschinenbau, Rügland (Nordbayern)



### General function:

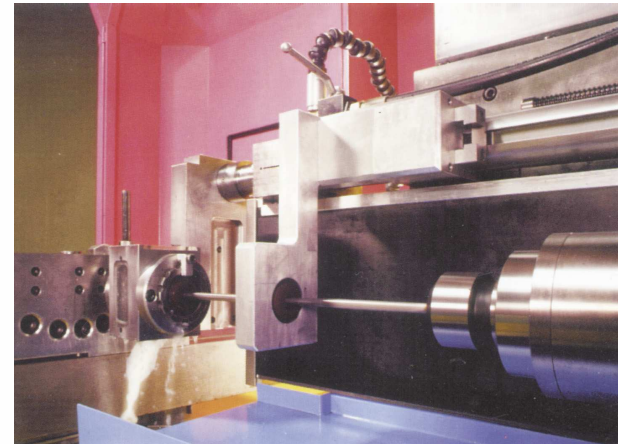
- CNC deep-hole drilling/milling centre of coolant channels, aircsuplies etc.
- all round machining of complex workpieces

### Hydraulic functions:

- pressure supply and control of counterweight, clamping of round table, tools and swiveling axis

### Special benefits of HAWE products:

- space-saving due to compact design
- flexible combination of the valves in a bank



### HAWE Components:

Pressure supply: compact power pack MP  
Control: directional seated valve bank BVZP

**Pressure:** 330 bar / 4780 psi

**Flow:** 2,5 lpm / .7 gpm

Tieflochbohr\_Buck 09-02



# Machine Tools

Herkules, USA



**General function:**

- large roll grinder

**Hydraulic functions:**

- control of clamping

**Special benefits of HAWE products:**

- zero leakage of the seated valves
- space-saving compact design

**HAWE Components:**

Pressure supply: compact power unit HK

Control: valve bank BA

**Pressure:** 170 bar / 2500 psi

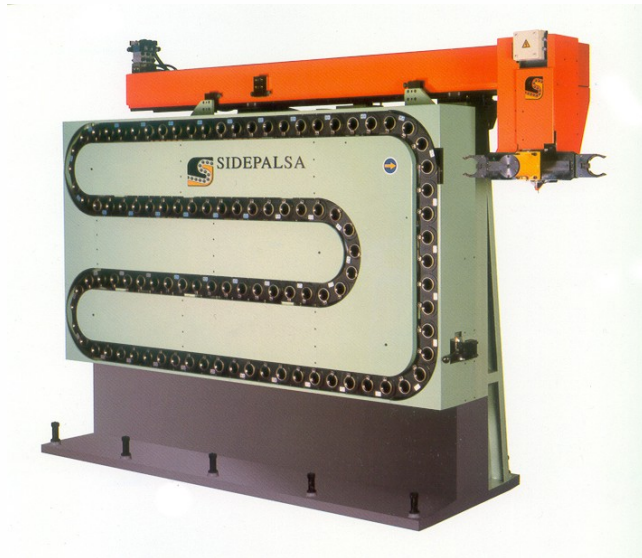
**Flow:** 7.5 lpm / 2 gpm

Walzenschleifmaschine\_Herkules 09-04



# Machine Tools

Sidepalsa, Spain



## General function:

- tool changer

## Hydraulic functions:

- pressure supply and control of the arm movements and of the tool clamping

## Special benefits of HAWE products:

- low leakage of the valves
- good heat dissipation of the power pack

## HAWE Components:

Pressure supply: compact power pack HKF  
Control: valve bank BA with directional spool valve NSWP

Pressure: 80 bar / 1160 psi

Flow: 21 lpm / 5.5 gpm

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