

Setting the pace
in production:
with Hydromat[®] rotary
transfer machines
from Pfiffner

Productivity

Flexibility

Efficiency

Producing worldwide with Swiss precision: with Hydromat® rotary transfer machines from Pfiffner

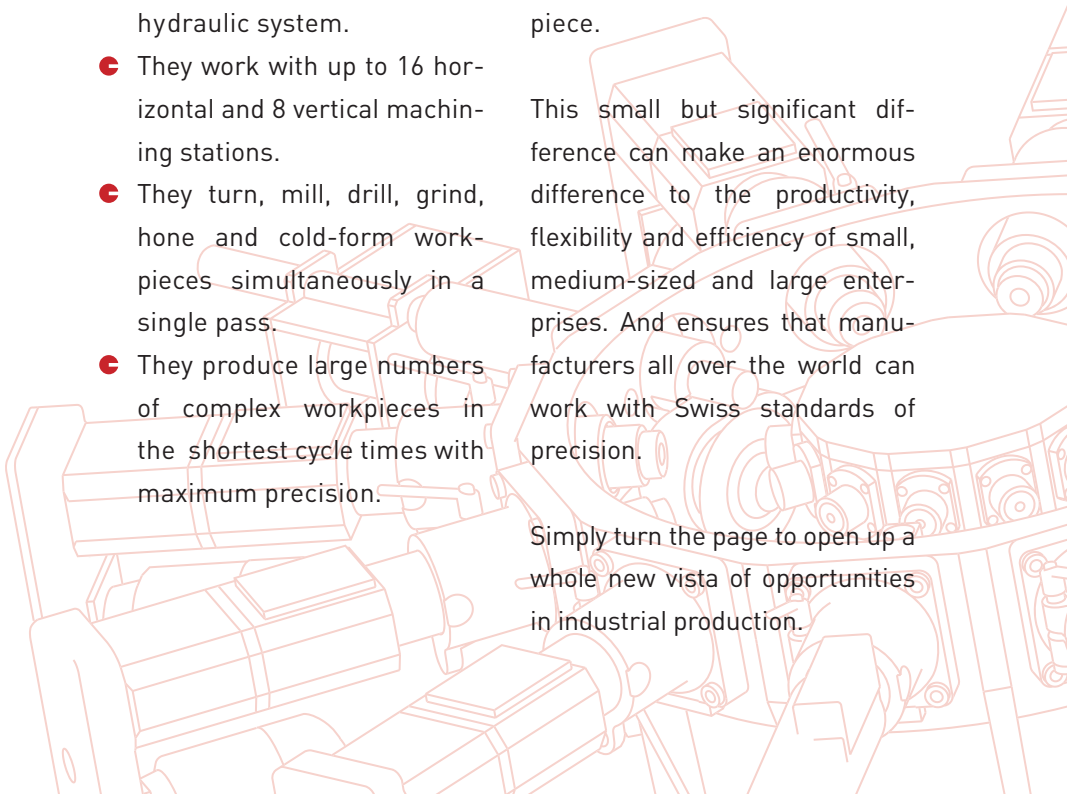
We would like to make one thing clear from the start: you can rely on Swiss precision from Pfiffner. Because Hydromat® rotary transfer machines from Pfiffner are precision products of the highest possible quality. And the name Hydromat® stands for it all.

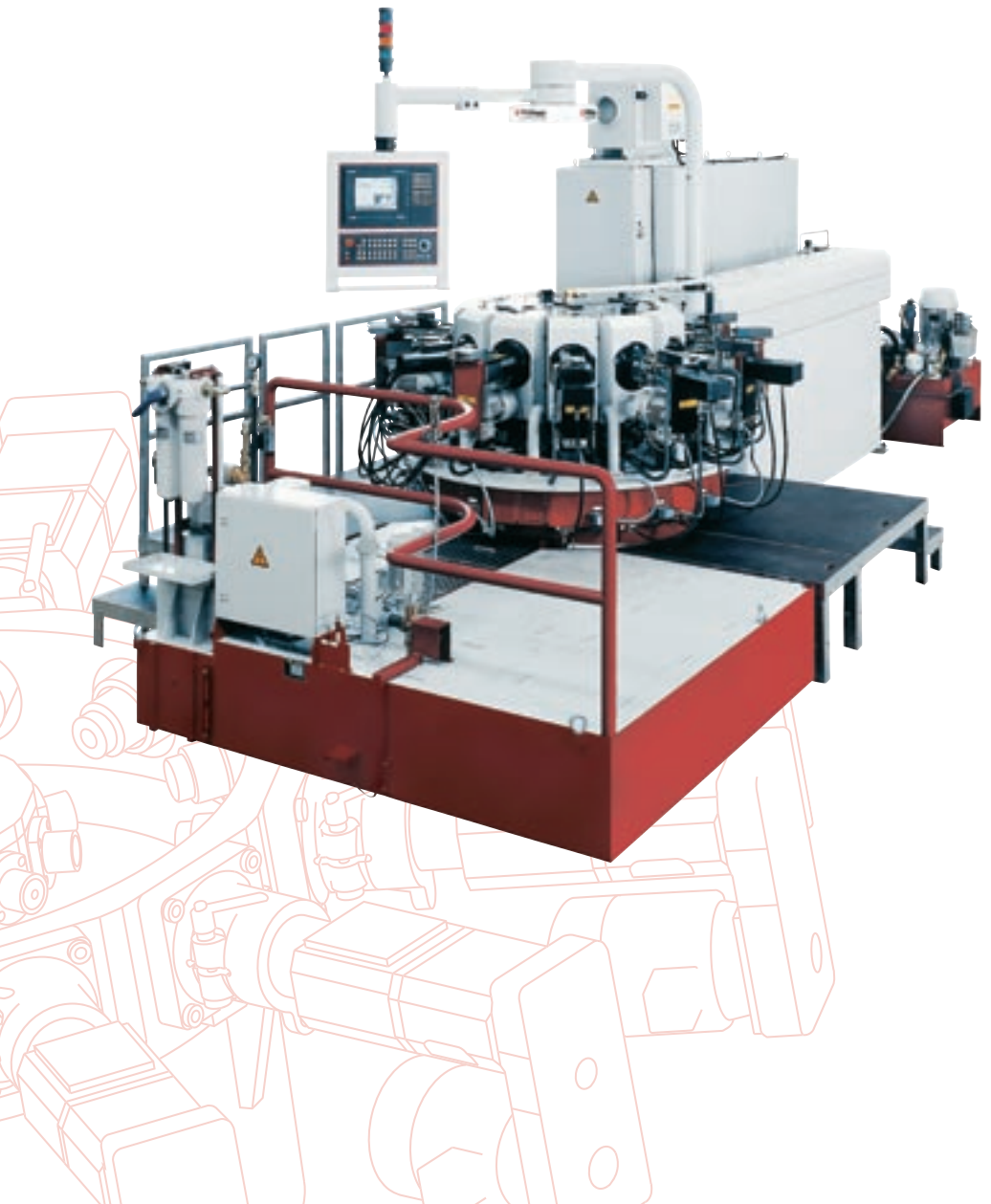
- Our rotary transfer machines are based on an electro-hydraulic system.
- They work with up to 16 horizontal and 8 vertical machining stations.
- They turn, mill, drill, grind, hone and cold-form workpieces simultaneously in a single pass.
- They produce large numbers of complex workpieces in the shortest cycle times with maximum precision.

The quantum leap in industrial production was made possible by the indexing table, which can be fitted with adjustable chucks or collets. This table now makes it possible to machine two to five sides of a workpiece without rechucking. In the case of the Hydromat® it is the tool that moves and not – as in the case of conventional lathes – the workpiece.

This small but significant difference can make an enormous difference to the productivity, flexibility and efficiency of small, medium-sized and large enterprises. And ensures that manufacturers all over the world can work with Swiss standards of precision.

Simply turn the page to open up a whole new vista of opportunities in industrial production.





Success all down the line: with Hydromat® rotary transfer machines from Pfiffner



Loading and sawing



Turning and chamfering



The competition can drill, mill, grind, hone, turn and invert as much as they wish. But Hydromat® rotary transfer machines from Pfiffner dazzle with qualities you will seek in vain elsewhere:

- **Modular set-up.** The principle of the Hydromat® concept is based on a set of modular units, which enables every production station to be used

with any other rotary transfer machine from Pfiffner.

- **Compact design.** The hydraulic concept used in the machines facilitates a compact, space-saving footprint. The work-piece holders are extremely rigid, and eliminate even the smallest vibrations, further enhancing tool life.



Knurling



Recessing



- **Simultaneous machining process.** Depending on your choice of Hydromat®, you benefit from simultaneous machining on up to five sides; in contrast to other production systems, this rules out the need for subsequent secondary operations.
- **Complete machining.** The Hydromat® carries out each step in the process fully auto-

matically and simultaneously, in a single cycle, regardless of whether the piece needs to be machined transversely, vertically or horizontally.

- **Short cycle times.** Simultaneous machining combined with the system's unique all-round approach enable the production of large series in the shortest possible times.



Inverting



Recessing



- **High quality.** The stable machine base, the closed cooling system and the resulting constant temperatures guarantee high dimensional accuracy throughout the entire production cycle.
- **Secure production.** All electrical cables and components are outside the closed machining area. The design of the unit carrier ensures that

any swarf is removed directly from the machining area and cannot fall on nearby workpieces and tools.

For Piffner, the individual is no less important than the machine. Our service is all-inclusive, accompanying customers from the planning stage through to operator training and commissioning of their machines. And once the



Drilling and chamfering



Broaching

production process is running smoothly, our after-sales service kicks in: efficient support when you need to retool for new types of workpiece, short delivery times for spare parts, and rapid retrofitting of software and hardware modules. All in all, Hydromat® rotary transfer machines from Pfiffner are a minor economic wonder: they minimize production costs and waste, op-

imize planning and operating reliability, and maximize your company's productivity and efficiency.

Going for maximum flexibility in production: with CNC from Siemens

Another reason why Hydromat® rotary transfer machines from Pffner have established their worldwide reputation is the fact that they feature computer numerical control (CNC) from Siemens. Any station can be equipped with CNC to meet the demands on the machine or the workpiece to be produced. Thanks to CNC, machining station and tool heads can be combined so effectively that processes involving the machining of up to five sides can be carried out simultaneously.

The SINUMERIK 840D CNC system from Siemens guarantees maximum flexibility for all your production needs.

- It enables rapid changeover from one set of parts to another.
- It is incredibly easy to program because each station is programmed independently,

the control system managing the demands of each CNC unit.

- It carries out machine-specific corrective work and takes care of machining-related tolerance with maximum reliability.

CNC enables Hydromat® rotary transfer machines to grow with the demands of your company, adding a completely new dimension to flexibility in industrial production.



Taking your direction from customers' needs: with three Hydromat® series from Pfiffner

A Hydromat® is not simply a Hydromat®. Every rotary transfer machine from Pfiffner, be it with standard configuration or customized machining stations, has additional functionality in the form of Siemens control tailored to the workpiece it makes. And that is a solution particularly well suited to customers' needs.

For much the same reasons as you would never attempt to cut a steak with a fish knife, the piece you are machining determines the type of tool you use. For Pfiffner, this very reason was enough to offer three different series of Hydromat® rotary transfer machines, each geared precisely to the needs of its customers.

- **The HW/HB series:** classical Hydromat® rotary transfer machines with vertical and horizontal machining stations and hydraulic controls that can be upgraded to CNC at any time. These machines are used primarily to produce rotationally symmetrical parts from bars or blanks.
- **The V series:** Hydromat® rotary transfer machines for vertical, three-side machining up to 300 millimetres, prima-

rily on cubic or irregularly shaped round parts.

- **The HS series:** Hydromat® rotary transfer machines for the complex, simultaneous machining of up to five sides on mainly cuboid parts.

But regardless of whether you are machining symmetrical, eccentric, round or cuboid parts, and whether you use blanks or circular/profiled material straight from the bar, you can

count on the individual design of a Hydromat® rotary transfer machine to remain in control throughout.

If you wish to know precisely which markets benefit from Swiss precision with Hydromat® rotary transfer machines, merely turn the page.

	Type	No. of units		Workpieces			
		H (max.)	V (max.)	Max. clamping Ø	Max. length	Parts group	Machined surface
Horizontal (H)	HW 20/10	10	5	25 mm	100 mm	rotationally symmetrical	
	HW 25/12	12	6	25 mm	100 mm	rotationally symmetrical	
	HB 32/16	16	8	32 mm	150 mm	rotationally symmetrical	
	HB 45/12	12	6	45 mm	170 mm	rotationally symmetrical	
Vertical (V)	V8	12	6	45 mm	300 mm	cubic	200 x 60 x 80 mm
	V12	18	9	45 mm	300 mm	cubic	200 x 60 x 80 mm
Horizontal with chuck index	HS 12	12	6		150 mm	cubic	60 x 60 x 60 mm
	HS 16	16	8		150 mm	cubic	60 x 60 x 60 mm

Profit from the workshop to the executive floor: with Hydromat® rotary transfer machines from Pfiﬀner



Hydromat® rotary transfer machines not only produce high-quality workpieces in steel alloy, brass and aluminium but also put a perfect finish on the balance sheet figures of companies in industries as diverse as automobile manufacture, electronics, telecommunications, fastening technology, hydraulics, pneumatics and mechanical engineering:

- **High-level user-friendliness** in both the machine and the control system eliminates sources of error, minimizes waste, increases production reliability and guarantees quality.
- **Lower personnel costs** as a result of running several machines simultaneously brings down operating expense and creates space for



- new investments.
- **Lower maintenance costs** during operation over the years without significant loss of production takes the pressure off your budget.
 - **High machine reliability** maximizes production and optimizes production costs.
 - **High planning reliability** ensures you are able to meet and satisfy customer demands.
 - **High flexibility** ensures rapid retooling for new types of parts, shortens delivery dates and creates competitive advantages.
 - **High quality** workpieces with minimum concessions increase customer satisfaction and profitability.
 - **High-level reliability** in production, thanks to protected workstations, increases pro-



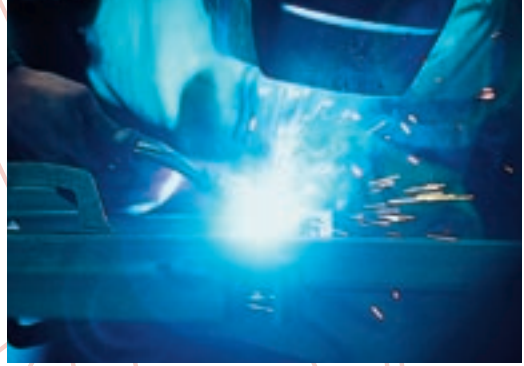
ductivity and secures jobs.

- **High productivity** thanks to unbeatable cycle times increases sales and profitability.
- **All-round advice and service** from planning, installation and commissioning all the way through to the redesign of machining processes increases your return on investment.
- **High compatibility** between machine and control facili-

tates migration and guarantees maximum possible security for your investment.

- **24-hour service support** guarantees high machine productivity.

Last but not least, Pfiffner's ReVest® upgrading and overhaul scheme provides you with a unique form of guarantee on your investment and ensures that each



of your machines can be restored to the cutting edge of technology for many, many years to come.

Small wonder, then, that more and more forward-looking entrepreneurs from a wide range of industries are choosing Hydromat® from Pfiffner: a rotary transfer machine you can count on.



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