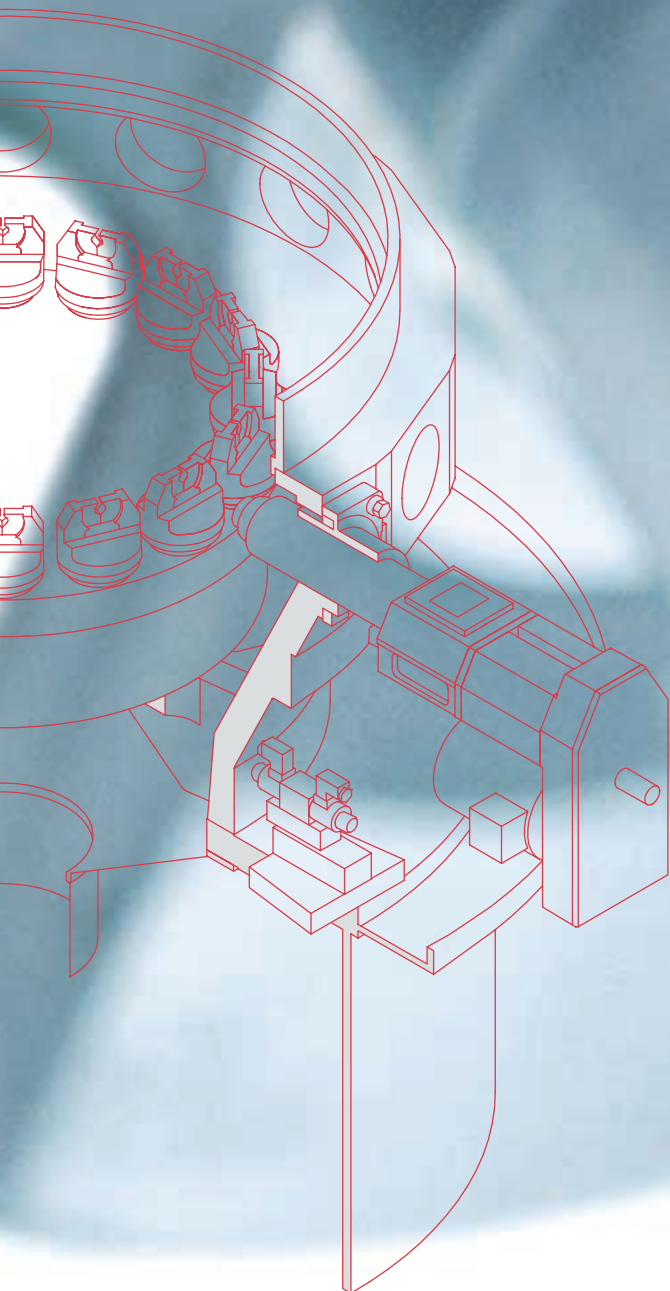


# Pfiffner Hydromat® HS 12, HS 16

## Flexible Rotary Transfer Machines



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Horizontal transfer system

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Simultaneous machining on five sides

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Optimised for function

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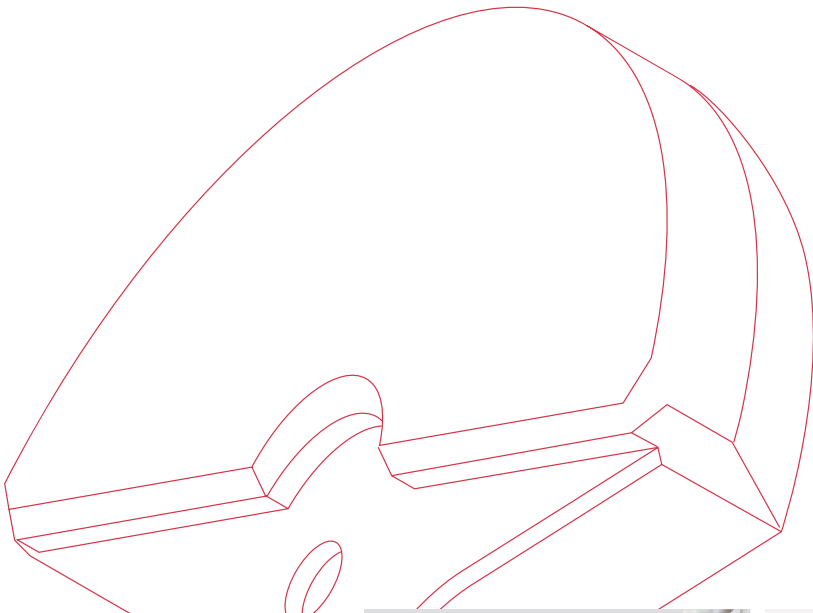


## Hydromat® HS: for high flexibility, productivity and economy

**Pfiffner has been constructing special, highly-developed machinery for the manufacture of mass-produced workpieces since 1976. These electro-hydraulic, rotary transfer machines can be used for machining from bar stock, coil materials, or parts that are fed in automatically. An intelligent module system offers a high degree of flexibility: The construction and equipping of Pfiffner machines are essentially determined by the workpiece to be machined.**

The HS 12 and HS 16 rotary transfer machines can handle the most demanding machining requirements. In addition to the Hydromat® specific rotary index table, machines from the HS range are fitted with swivelling satellite-type chucks. These chucks, 12 and 16 respectively for each model, can be rotated and indexed as you like: Machining is therefore possible from 5 sides without having to re-clamp the workpiece.

The Hydromat® HS 12 can be equipped with 12 horizontal and 6 vertical machining units, whereas 16 horizontal and 8 vertical stations are possible in the case of the Hydromat® HS 16.



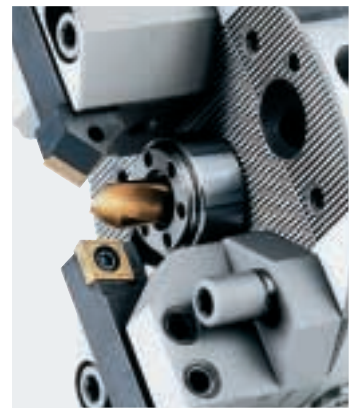
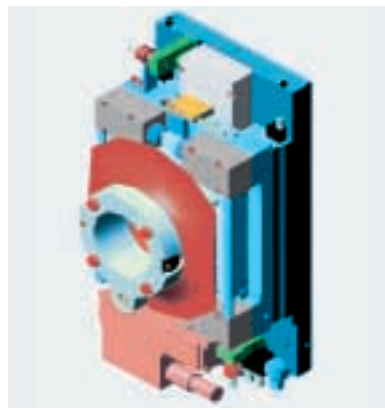
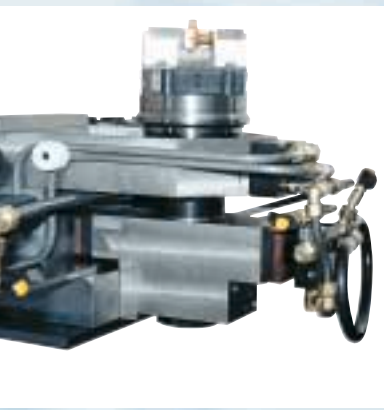
Hydromat®'s own, completely modular concept is also employed in this range of machines. A wide range of different machining units, control valves, tool heads etc., from the Hydromat® module system can be used in all machine ranges, a feature which assures flexibility for the future.

The hydraulic chucks are specifically adapted to suit the workpiece that is to be clamped. The clamping pressure can be infinitely adjusted by means of hydraulics. This allows cubic workpieces up to 100 mm in edge length or bar materials up to 45 mm in diameter and 200 mm in length to be machined without problem.

As is the case in all Hydromat® machines, all movements, advance speeds and rapid motions can be infinitely adjusted by means of the hydraulic control valve assigned to the machining unit. In the electro-hydraulic model, available as an alternative, the machining units can be comfortably set in operation and monitored via the operating panel. This great degree of flexibility allows the Hydromat® to be quickly and economically re-tooled for new production tasks.



Workpieces produced on the Hydromat® HS



Swivel chuck

Vertical support  
for installing vertical  
machining units

CNC flange  
3-D CAD model

Rotary head

## Machine control system

The consistent modular nature and flexibility of the mechanical systems are also reflected in the machine's electrical control concept. The SIMATIC S7 from Siemens forms the basis of the machine control system. The integrated, Hydromat®-specific user screen facilitates the simple, dialogue-led operation and programming of the machine. Repetitive machining tasks can be stored and called up again when needed, a feature which makes re-tooling much easier. In addition, the unified operating concept of all base machine models reduces training expenditure to a minimum.

The machine's control system concept and design are planned to allow problem-free retooling for extended functionality, such as CNC axes etc. In this process, the digital control system, SINUMERIK 840 D from Siemens, takes over the control of the interpolative machining units. With its integrated ASI bus and Profibus, high performance bus systems are available, onto which customer-specific solutions can be easily mounted at a later date. Teleservice, available as an option, facilitates the fast, remote diagnosis and rectification of malfunctions, a feature which reduces stoppages to a minimum.

		<b>HS 12</b>	<b>HS 16</b>
<b>Number of stations</b>		12	16
<b>Number of machining units</b>	Horizontal max.	12	16
	Vertical max.	6	8
	Total units	18	24
<b>Rotary indexing table</b>	Indexing	12-piece	16-piece
	Indexing time	1.0 seconds	1.0 seconds
<b>Clamping devices, hydraulic</b>	Number	12	16
<b>Cubic workpiece</b>	Max. edge length	120 mm	100 mm
<b>Round bar material</b>	Max. bar Ø	45 mm	45 mm
	Max. workpiece length	200 mm	150 mm
<b>Machine weight</b>		Approx. 8,000 kg	Approx. 8,500 kg
<b>Machine dimensions</b>		Length 5.7 m	Width 4.0 m    Height 2.9 m

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