

NEW ITEMS FOR 2005

PK³

patent pending

HYDROPNEUMATIC POWER UNIT



HPS
patent pending

MODULAR SEQUENTIAL STAGES PRESSURE INTENSIFIER

Altomatic



HIGH-PERFORMANCE POWER UNIT

PK3 is a third generation power unit from Alfamatic, representing the absolute latest technology in hydropneumatic systems available today. The coaxial construction of the power cylinders and the independently controlled working stroke control valve offer performances that have never been seen before in common hydropneumatic systems.

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ADVANTAGES OF THE NEW **PK³** POWER UNIT



The 2 in 1 structure

The coaxial structure of the first stage of the unit incorporates both the pneumatic approach and the hydraulic force components. The unit has been designed to provide high-performance working strokes at a very compact size with the following advantages:

- 1** Up to 35% smaller than products currently on the market
- 2** Working strokes of up to **100 mm in the standard configuration**
- 3** Standard magnetic version



Metal seal

The working stroke is operated and controlled by an obturator device with a metal seal. The independently controlled pressurization of the high pressure chamber offers the following operational benefits:

- 4** 50% faster working stroke
- 5** 50% more precise when working with electronic pressing process control systems
- 6** 25% reduction in air consumption
- 7** Built-in return stroke cushion (TDC control) in the standard version

PERFORMANCES

9

models with forces ranging between 17 and 1000 kN

500 mm
of approach stroke

100 mm
of working stroke

ADDITIONAL FEATURES

Can be used in working position 1 and 2 (vertical with the rod facing up or down) by simply rotating the reservoir unit.

Fine hydraulic adjustment of the working stroke available.



HPS

MODULAR SEQUENTIAL STAGES PRESSURE INTENSIFIER

HPS is a new pressure intensifier developed by Alfamatic. Used for compressing gaseous fluids (air, methane, nitrogen, etc.), it is composed of compression modules that can work either independently or in a multi-stage configuration depending upon the volume/pressure that needs to be reached.

The sequential stage functionality of the system, in which the primary and secondary stage precompress the fluid and the last stage provides the nominal peak pressure, offers performance levels that have yet to be reached with the systems currently available on the market.



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ADVANTAGES OF THE NEW HPS SYSTEM

- 1** Ability to supply and control large volumes of fluid at high pressure
- 2** 30 to 70% less motor fluid consumption than conventional systems, depending upon the configuration chosen (2 or 3 stages) and the pressure delivered
- 3** Can work without lubrication
- 4** Can be fitted with an air recycling unit, specifically for the PET blow molding and similar sectors
- 5** Easily customizable to meet specific pressure and volume requirements
- 6** Modular components can be assembled with one, two or three stages for single or combination uses to reach high pressures and volumes

1 STAGE








2 STAGES



3 STAGES



APPLICATION EXAMPLES

-  Use of pneumatic tools (actuators, stopping devices, screwing devices, etc.) at medium and high pressure
-  Refilling tanks and accumulators with methane, CO₂, nitrogen gas cylinders, etc.
-  Increase the force of actuators, pneumatic and hydropneumatic presses, etc.
-  Provide fluids at high pressure for laboratory analyses (seal/structural tests, etc.)
-  Thermoforming by blow molding of PE, PET, technopolymer containers

PRODUCT RANGE AND PERFORMANCES

3 STAGES



BORE mm	OUTPUT PRESSURE	NI VOLUME (PER CYCLE)	NI CONSUMPTION (PER CYCLE)	RATIO CONSUMPTION/YIELD
320	40 bar	190	575	1 : 3
250		116	358	
200		74,5	228	
160		47	146	

2 STAGES (version A)



320	40 bar	95,5	395	1 : 4
250		59	238	
200		37,3	152	
160		23,8	98	

2 STAGES (version B)



320	23 bar	190	395	1 : 4
250		116	238	
200		74,5	152	
160		47	98	

1 STAGE



320	11,8 bar	190	190	1 : 1
250		116	116	
200		74,5	74,5	
160		47	47	
320	18 bar	95	204	1 : 2
250		59	116	
200		37,3	77	
160		23,8	51,4	
320	29 bar	46,7	199	1 : 4
250		28	126	
200		18,5	76	
160		11,5	47	



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