CATALOGUE
hydraulic systems –
application examples
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hydraulic systems – application examples
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ABOUT US

PONAR Silesia Group:
• the leader in power hydraulics elements and systems
• a company with 50 years of experience
• the owner of two large production facilities and many regional branches
• our team consists of professionals, experts in the industry
• we have modern machinery and production lines
• we provide professional Customer service and a full range of training programs

The Company employs:
• experienced engineers and technicians
• professional team of sales engineers, providing full range of services to our Customers and Partners
• we employ more than 400 people, including highly qualified engineers of Research and Development Department, Design and Engineering Department, Technical Service Department, and Sales Department

Putting people first! We are proud of the fact that we can work with the best professionals in the industry. This allow us to maintain high standards and perfect quality of the products offered.
ABOUT US

Main areas of activity

PRODUCTION:
• complete hydraulic systems
• directional control valves
• intrinsically safe directional control valves
• logic valves
• pressure control valves
• check valves
• flow control valves
• cartridge hydraulics
• hydraulic pumps
• proportional elements
• mobile hydraulics
• accessories
• hydraulic cylinders
• subplates, hydraulic manifolds and blocks

DISTRIBUTION:
• vane pumps
• piston pumps
• gear pumps
• hydraulic motors
• hydraulic accumulators and safety blocks
• filters
• coolers, heat exchangers
• hydraulic fittings
ABOUT US

Certificates

PONAR Silesia Group holds a Quality Management Certificate of conformity with ISO 9001:2008 for designing, production, assembly and maintenance of hydraulic and lubrication systems, hydraulic pumps, hydraulic controls, hydraulic cylinders and hydraulic power packs, including equipment for special application in low temperatures.

Our products have also the required certificates for application in many different industries:

- certificate of conformity with the 97/23/EC directive – safety valve type DBD.../...C and AS... accumulators
- certificate of conformity with the Transport Directive 2000/9/EC – safety valve type DBD.../...C
- certificate of conformity with the Intrinsic Safety Directive ATEX 94/9/EC – directional control valves: IWE 6, 2IRE 6, 2IRE 6, 3IRE 6, 3IRE 2 (certificate ATEX Ex I M1 Ex ia I, II 2G Ex ia IIB T4 Gb, II 2G Ex ia IIC T6/T5 Gb)

PONAR Wadowice S.A. has obtained the Environment Management Certificate of conformity with ISO 14001. The company has also been registered in the Eco-Management and Audit Scheme (EMAS). This proves that the company observes the highest standards of environmental protection.

PONAR Silesia S.A. and PONAR Wadowice S.A. provide products for the armed forces, in compliance with AQAP and acceptance procedures of the military representatives.
PRODUCTS AND SERVICES

Hydraulic systems – design, manufacture, assembly

PONAR Silesia S.A. designs and delivers advanced hydraulic and lubrication systems, on Customer’s request integrated with automatics, including the assembly and start-up. Our company delivers hydraulic installations with different connection methods (welding, belling, swelling, cutting ring). The company also provides a wide range of services, from simple cabinets controlling drives of hydraulic power units, to complete control cabinets equipped with PLC drivers, screen display and archiving of the processed data. Our own design and engineering office, logistics, production and service allow us to provide a complete range of services to the Customers of all industries. We undertake not only new projects but also upgrade or repair existing systems.

The significant part of our offer is the export of both hydraulic systems and assembly services.

Thanks to individual approach to each task, we have developed a wide range of hydraulic systems, working in even the most difficult conditions.

Advantages to the Customer:
• high quality of the systems
• reliability of the systems
• individual approach to meet Customer’s requirements
• technical advice
• complete range of services: an idea → design → production → assembly → final product
• quick delivery of spare parts
• warranty and post-warranty services
PONAR Silesia Group maintenance services

Our offer includes a full range of services for hydraulic systems:

• diagnostics and technical inspection
• assembly and installation
• repairs
• upgrades
• start-up and supervision
• installations cleaning and oil filtration
• technical advice
• trainings

PONAR Silesia Group owns special service cars with:

• equipment for hydraulic hose crimping, including a wide range of hoses and fittings
• equipment for proper pipe bending
• oil filtration equipment
• equipment for measuring the cleanliness of oil, according to NAS and ISO standards
• equipment for hydraulic hoses diagnostics of pressure (p), flow (Q), temperature (T)
• a wide selection of hydraulic elements (valves, couplings, etc.)
APPLICATION EXAMPLES

PONAR Silesia in ENERGY INDUSTRY (conventional and renewable)

- lubrication and cooling systems of fan bearings
- electro-hydraulic systems of valves drive
- lubrication and cooling systems of main bearings in water pumps

PONAR Silesia in CHEMICAL INDUSTRY

A hydraulic system of a stirrer drive
APPLICATION EXAMPLES

PONAR Silesia in MINING INDUSTRY

A hydraulic unit powering a filtration press

A hydraulic unit controlling the brakes of an exhaust machine

PONAR Silesia in IRON AND STEEL INDUSTRY

Lubrication unit of a milling machine

A hydraulic unit controlling the billets
APPLICATION EXAMPLES

PONAR Silesia in MACHINERY INDUSTRY

A hydraulic station for powering ferromagnetics presses
A hydraulic unit powering machines producing steel rims
Hydraulic systems used in grinders

PONAR Silesia in MOTOR VEHICLE INDUSTRY

Hydraulic units of a drive shaft production line

PONAR Silesia in OFFSHORE INDUSTRY

A hydraulic unit for controlling the cylinder feeding drill rods
Installations

An indispensable part of each hydraulic system is the connection of a hydraulic unit with executive elements, such as hydraulic cylinders and hydraulic motors. PONAR Silesia Group specializes in construction of pipelines made of carbon steel and stainless steel, based on the Customer’s or our own design. Not only does the company builds the installation, but also provides flushing of pipelines to obtain the required class of cleanliness. The Company also conducts pressure tests of the installation being assembled and takes part in the “cold” or “hot” start-up of the hydraulic system.
## HYDRAULIC SYSTEMS

### STANDARD HYDRAULIC SYSTEMS

<table>
<thead>
<tr>
<th>ITEM</th>
<th>SIZE</th>
<th>PRESSURE (MPa)</th>
<th>FLOW (dm³/min)</th>
<th>CATALOGUE CARD NUMBER</th>
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<tbody>
<tr>
<td>Oil tank type UB</td>
<td>63 - 1250</td>
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<td>63</td>
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<td>67</td>
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<tr>
<td>ITEM</td>
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<td>FLOW (dm³/min)</td>
<td>CATALOGUE CARD NUMBER</td>
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<td>140</td>
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<td>Power pack type UHKG</td>
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<td>WK 576 921</td>
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<td>8 - 30</td>
<td>20</td>
<td>14</td>
<td>WK 576 115</td>
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<tr>
<td>Power pack type UHBZ</td>
<td>-</td>
<td>25</td>
<td>4,8</td>
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<tr>
<td>Piston pumps assemblies</td>
<td>-</td>
<td>28</td>
<td>200</td>
<td>WK 582 332</td>
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<tr>
<td>Cooling/filtration units type UHCH</td>
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<td>-</td>
<td>140</td>
<td>WK 580 075</td>
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<tr>
<td>Gear pumps assemblies</td>
<td>-</td>
<td>25</td>
<td>84</td>
<td>WK 577 206</td>
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<tr>
<td>Vane pumps assemblies</td>
<td>-</td>
<td>16</td>
<td>147</td>
<td>WK 577 236</td>
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<td>Modular control plates type MOD 6</td>
<td>6</td>
<td>30</td>
<td>-</td>
<td>WK 560 520</td>
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<tr>
<td>Modular control plates type MOD 10</td>
<td>10</td>
<td>30</td>
<td>-</td>
<td>WK 560 521</td>
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<tr>
<td>Multi-station manifold block type ULRA 6</td>
<td>6</td>
<td>32</td>
<td>-</td>
<td>WK 450 499</td>
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<tr>
<td>Multi-station manifold block type ULRA 10</td>
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<td>32</td>
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</table>
### HYDRAULIC SYSTEMS

#### NON-STANDARD HYDRAULIC SYSTEMS

<table>
<thead>
<tr>
<th>ITEM</th>
<th>SIZE</th>
<th>PRESSURE (MPa)</th>
<th>FLOW (dm³/min)</th>
<th>CATALOGUE CARD NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lubrication system type UHWP630</td>
<td>630</td>
<td>1</td>
<td>30</td>
<td>WK 583 983</td>
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<tr>
<td>Lubrication system type UHWP200</td>
<td>200</td>
<td>0,8</td>
<td>20</td>
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#### HYDRAULIC SYSTEMS TECHNICAL SPECIFICATION

<table>
<thead>
<tr>
<th>Basic parameters of hydraulic systems</th>
<th>General specification of standard hydraulic systems</th>
<th>Other hydraulic systems (max. parameters as requested)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>With a vane pump</td>
<td></td>
</tr>
<tr>
<td>Working pressure</td>
<td>up to 16 MPa</td>
<td>up to 25 MPa</td>
</tr>
<tr>
<td>Total pump flow rate</td>
<td>up to 60 dm³/min</td>
<td>up to 100 dm³/min</td>
</tr>
<tr>
<td>Motor rotation speed</td>
<td>1500 rev./min</td>
<td>1500 rev./min</td>
</tr>
<tr>
<td>Electric motor power</td>
<td>up to 22 kW</td>
<td>up to 55 kW</td>
</tr>
<tr>
<td>Filtration accuracy</td>
<td>16 µm</td>
<td>16 µm</td>
</tr>
<tr>
<td>Tank capacity</td>
<td>40 ÷ 250 dm³</td>
<td>12 ÷ 630 dm³</td>
</tr>
<tr>
<td>Optimal oil temperatures range</td>
<td>40°C ÷ 55°C</td>
<td>40°C ÷ 55°C</td>
</tr>
<tr>
<td>Allowed oil temperatures range</td>
<td>20°C ÷ 70°C</td>
<td>20°C ÷ 70°C</td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>-15°C ÷ 35°C/50°C *</td>
<td>-15°C ÷ 35°C/50°C *</td>
</tr>
<tr>
<td>Colour</td>
<td>RAL 5010</td>
<td>RAL 5010</td>
</tr>
<tr>
<td>Motor power supply voltage</td>
<td>230/400 V 50 Hz</td>
<td>230/400 V 50 Hz</td>
</tr>
<tr>
<td>Control elements power supply voltage</td>
<td>24 V DC, 230 AC</td>
<td>24 V DC, 230 AC</td>
</tr>
</tbody>
</table>

*50°C – for power packs with a water-oil cooler
## CONTACTS

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<thead>
<tr>
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<th>Contact Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales Department</td>
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</tr>
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<td>tel. +48 32 323 34 45 fax +48 32 323 34 01 <a href="mailto:produkcja@ponar-silesia.pl">produkcja@ponar-silesia.pl</a></td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Department</th>
<th>Contact Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management Board Secretary</td>
<td>tel. +48 33 488 21 00 fax +48 33 488 21 03 <a href="mailto:sekretariat@ponar-wadowice.pl">sekretariat@ponar-wadowice.pl</a></td>
</tr>
<tr>
<td>Import Department</td>
<td>tel. +48 33 488 28 40 - 43 fax +48 33 488 26 01 - 02 <a href="mailto:import@ponar-wadowice.pl">import@ponar-wadowice.pl</a></td>
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<tr>
<td>Logistics Department</td>
<td>tel. +48 33 488 28 50 - 54 fax +48 33 488 26 01 - 02 <a href="mailto:zakupy@ponar-wadowice.pl">zakupy@ponar-wadowice.pl</a></td>
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<tr>
<td>Management Board Office</td>
<td>tel. +48 33 488 21 20 - 21 fax +48 33 488 21 03 <a href="mailto:biuro.zarzadu@ponar-wadowice.pl">biuro.zarzadu@ponar-wadowice.pl</a></td>
</tr>
<tr>
<td>Export Department</td>
<td>tel. +48 33 488 28 20 - 25 fax +48 33 488 26 01 - 02 <a href="mailto:export@ponar-wadowice.pl">export@ponar-wadowice.pl</a></td>
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<tr>
<td>Quality Department</td>
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</tr>
</tbody>
</table>

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oddzial.wroclaw@ponar-wadowice.pl