



Thanks to our experience in branch, responsibility and on-time deliveries, we gained the trust and reputation of the respected and well known manufacturers.





- Precise and high advanced production technology.
- The biggest and well-equipped warehouse in Poland.
- Full offer for small, medium and corporate enterprises.
- 30 years of experience in hydraulic branch and consistent development.





We constantly INVEST, in order to meet your expectations.

#### HYDRO - company's profile Experience and professionality

HYDRO ZNPHS Sp. z o.o. was established in 1988 in Bielsko-Biala, Poland. From the beginning the company was focused on the production, sale and repair of power hydraulics components. Years of experiences and customer's requirements have contributed to the gradual development of our business. As a result the company founded with really small capital and without any place of business, currently takes 6000m<sup>2</sup> of usable area and employs over 100 people.

Nowadays HYDRO focuses its business on sale and manufacturing of the power hydraulics components. Our consistent development policy carried out achievement of high level in sales and the strong market position. Established contacts with well-known and respected leaders in the hydraulic world, the intensive and hard work, technical progress have contributed to make our customer service faster and more professional, with the guarantee of the highest quality.

The very good knowledge of the products sources, direct access to producers and the longterm cooperation with them allow HYDRO to provide high quality goods at very competitive prices. During 30 years the staff of our company has become matured, stable and professional in each section.

During our company's development, our offer increased automatically.

Currently our offer is divided into the following fields:

 own production: hydraulic systems, power packs and mini power packs, hydraulic cylinders, filtration units, hose assemblies;

 distribution: full range of components used in power hydraulics.

HYDRO guarantees the safety of using its products, efficient and durable solutions - manufactured in accordance with international standards.

HYDRO ZNPHS is a dynamically growing, creative and experienced company, focusing on quality, development and modern solutions.

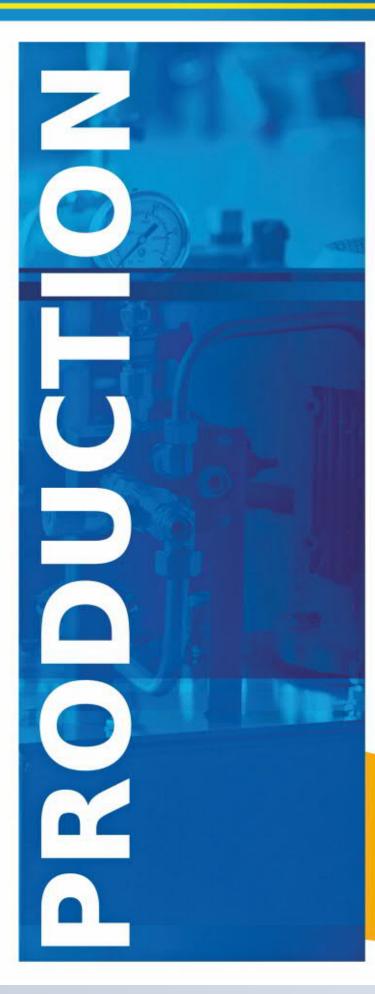


Each new investment is expected to improve the level of customer service





# PRODUCTION



- HYDRAULIC SYSTEMS
- HYDRAULIC POWER PACKS
- COMPACT MINI POWER PACKS
- CYLINDERS ISO 6022, ISO 6020/2
- STANDARD HYDRAULIC CYLINDERS
- HYDRAULIC CYLINDERS WITH
  STROKE LENGHT AND PISTON END
  POSITION SIGNAL
- FILTRATION UNITS
- STEEL TUBE ASSEMBLIES
- HYDRAULIC AND INDUSTRIAL HOSE ASSEMBLIES

Our main aim is to deliver the highest quality products and services to all Customers

# **PRODUCTION** -

#### COMPLETE HYDRAULIC SYSTEMS

#### tel. +48 33 829 56 65; tel. +48 33 829 56 74

Comprehensive solutions for hydraulic power transmission and hydraulic control systems, including consulting, design, implementation and optimization.

Our offer is dedicated to Customers in every industrial sector, such as metallurgy, agriculture, machine building, offshore, mining and many more.



#### HYDRAULIC POWER PACKS



#### tel. +48 33 829 56 65; tel. +48 33 829 56 74

Hydraulic power packs in standard versions and special configurations - according to Customer's request (project and realization) or submitted documentation.

| Flow              | 0,5 - 300 l/min           |  |
|-------------------|---------------------------|--|
| Working pressure  | up to 350 bar             |  |
| Oil tank capacity | 1,5 - 600 dm <sup>3</sup> |  |
| Motor's power     | 0,15 - 37 kW              |  |

Our power packs are designed for hydraulic drives working in every conditions. They can be expanded by any hydraulics equipment and measuring devices, providing high quality and reliability.

#### tel. +48 33 829 56 65; tel. +48 33 829 56 74

Compact and modular design gives the possibility of using in many different applications, keeping minimal size of the power pack and reducing delivery time and costs.

| Flow              | 0,4 - 12 l/min             |
|-------------------|----------------------------|
| Working pressure  | up to 250 bar              |
| Oil tank capacity | 0,5 - 30 dm <sup>3</sup>   |
| Motor's power     | 0,15 - 4 kW                |
| Power supply      | 12VDC; 24VDC; 230/400V50Hz |

#### COMPACT MINI POWER PACKS



tel. +48 33 829 56 65

#### STANDARD HYDRAULIC CYLINDERS -



Hydraulic cylinders made of welded cold-drawn steel tubes, available in two versions: double or single acting cylinder. Produced according to our documentation or customized to the Customer's needs.

| Piston diameter range | 25 - 300 mm             |
|-----------------------|-------------------------|
| Working pressure      | up to 350 bar           |
| Stroke                | 6000 mm                 |
| Material              | steel / stainless steel |

#### tel. +48 33 829 56 65

#### HYDRAULIC CYLINDERS ISO 6020/2 STANDARD

HCD series cylinders: produced in accordance with ISO 6020/2 standard, tie rod cylinders, high quality solution with very good working parameters, high accuracy and reliability.

| Working pressure      | up to 25 MPa  |  |
|-----------------------|---------------|--|
| Piston diameter range | 25 - 200 mm   |  |
| Stroke                | up to 6000 mm |  |

#### HYDRAULIC CYLINDERS - ISO 6022 STANDARD •

#### tel. +48 33 829 56 65

HDP series cylinders, produced according to ISO 6022 standard, are high-quality solution with very good working parameters, high accuracy and reliability.

|   | - | Working pressure      | up to 32 MPa  |  |
|---|---|-----------------------|---------------|--|
| ľ | 1 | Piston diameter range | 50 - 320 mm   |  |
| L |   | Stroke                | up to 6000 mm |  |

#### COMPACT HYDRAULIC CYLINDERS

#### tel. +48 33 829 56 65

HCDU is a series of compact hydraulic cylinders with the following advantages: light alloys body, sufficient durability, homogeneous construction that enables easy installation. They are used mainly in the automation of production process.

| Working pressure      | up to 16 MPa |
|-----------------------|--------------|
| Piston diameter range | 25 - 100 mm  |
| Stroke                | up to 100 mm |



#### HYDRAULIC CYLINDERS WITH CONTINUOUS CONTROL OF PISTON'S POSITION AND PISTON END POSITION SIGNAL

#### tel. +48 33 829 56 65



Our hydraulic cylinders, produced in standard versions and in accordance with ISO standards, can be equipped with inductive transducers of piston position and the end position signals. These solutions enable continuous monitoring of piston position and indicate its extreme positions by electric signal (digital or analogue).

Types of pistons position transducers:

| MV | analogue 0-10V  |
|----|-----------------|
| MA | analogue 4-20mA |
| MS | digital SSI     |
| PV | linear position |

Types of end position signals: SR switch REED SH switch PNP

#### tel. +48 33 829 56 63; tel. +48 33 829 56 68

Mobile filtration and pumping units AGF-15 and AGF-25

#### They have two functions:

Transferring the oil from tank to tank without filtration Transferring the oil with the filtration at the same time, by-pass filter

Filtration unit is an ideal solution for the quick filling of the hydraulic oil tanks, and for the filtration of the contaminated oil.

Our oil cleaning equipment allows to remove water from the oil systems and decrease the contamination level. Compact design, high quality of components, easy to use and competitive price.



# PRODUCTION

# PRODUCTION

#### HYDRAULIC AND INDUSTRIAL HOSE ASSEMBLIES

#### tel. +48 33 829 56 94



- many years of experience in production
- quick order processing
- rubber, teflon, PVC, PU, thermoplastic, UHP HELIX hoses
- assembled hoses for mining industry
- optional marking hoses and/or ferrules
- pressure testing up to 2000 bar
- quality certificate
- complete offer of fittings and ferrules made of carbon steel or stainless acid-proof steel AISI 316L
- steel high-pressure hoses

| Range of diameters   | DN02 - DN102         |
|----------------------|----------------------|
| Max working pressure | up to 2800 bar       |
| Type of hose         | 1, 2, 4 and 6 braids |

#### tel. +48 33 829 56 96

Processing service of hydraulic steel tubes:

- Cutting
- Bending
- Flaring
- Deburring
- · Pre-assembly of cutting rings and nuts

Materials used in production process:

Steel tubes, black

Steel tubes plated with zinc layer

Stainless steel tubes



STEEL TUBE ASSEMBLIES

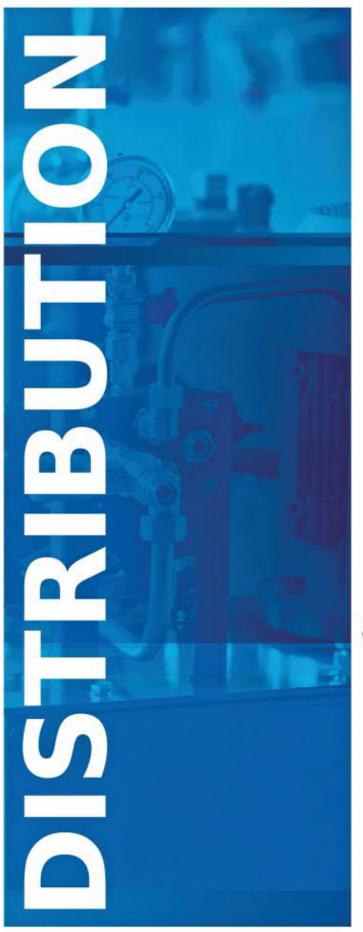
#### HYDRO ZNPHS Sponshorship

In September 2013 we became an official sponsor of the female volleyball team BKS Profi Credit from Bielsko-Biala. Our interest in volleyball has developed gradually for several years. In the beginning we rented sports halls for our employees in recreational purposes. Then we built a beach volleyball pitch on the area of the company. The next step was a decision about sponsoring the sports team. One of the main reasons, that influenced on this decision, was our real passion of volleyball. However, we can clearly notice many similarities in the values of our company and sponsored team - the values that are the guarantee of success in business and in sport, too. But the most important goal of our involvement in sponsoring is to promote

healthy, sport lifestyle, that will bring profits to the company, our employees, their families and the whole local community. Season 2016/2017 will be the fourth year of our cooperation with BKS Profi Credit Team. For last two years the volleyball players have been strongly present in our company's life: they took a part in trade fairs and photo-sessions, that resulted in business gadgets with their images. Now a lot of our employees go to see matches. We also organized the second Tournament in Volleyball for the Cup of the President of the HYDRO, where BKS Profi Credit players also appeared. All that make the relation between our company and BKS Profi Credit Team even stronger.



# DISRIBUTION



COMPONENTS FOR PRODUCTION
OF HYDRAULIC CYLINDERS
ELECTRO-HYDRAULIC VALVES,
DIRECTIONAL CONTROL VALVES,
FLOW DIVIDERS
FILTERS, PRESSURE GAUGES,
COMPONENTS FOR PRODUCTION OF

POWER PACKS

- GEAR PUMPS, PISTON PUMPS, VANE
   PUMPS, HAND AND FOOT PUMPS
- DRIVE COUPLINGS, BELL-HOUSINGS
- HYDRAULIC HOSES, INDUSTRIAL HOSES, FITTINGS, FERRULES, ACCESSORIES
- HOSE PRODUCTION MACHINES
- CHECK COUPLINGS, QUICK RELEASE
- COUPLINGS, CLAMPS, TUBE ASSEMBLIES
- COOLERS, HYDRAULIC ACCUMULATORS



We are the largest wholesaler of power hydraulics in Poland

COMPONENTS FOR PRODUCTION OF

HYDRAULIC CYLINDERS

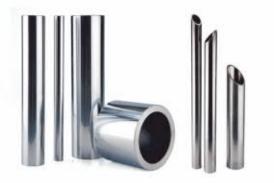
EuroSnodi ES

#### tel. +48 33 829 56 78; tel. +48 33 829 56 68

Our assortment includes wide range of components for production and repair of hydraulic cylinders:

| Components                               | Diameter Ø                              |  |
|--|---|--|
| Pilot bosses                             | from 25/16 to 250/150                   |  |
| Pistons                                  | from 25 to 250                          |  |
| Ends of cylinders                        | from 25 to 250                          |  |
| Seamless tubes for rigid tube assemblies | from 4 to 42<br>thickness from 1 to 4 n |  |
| Clamps                                   |   |  |
| Ball joint ends with bearings, m         | with bearings, made of stainless steel  |  |

#### CHROMED BARS AND CYLINDER TUBES



#### tel. +48 33 829 56 62; tel. +48 33 829 56 72

- chromed bars Ck 45, 20 MnV6, CROMAX 280X
- chromed steel bars 42CrMo4

nm

- hardened chromed bars CK45H
- stainless steel chromed bars AISI
- bars with nickel-chrome coating Ni-CROMAX
- chromed steel tubes for piston rods ST 52.3
- seamless, inside honed tubes H8 ST 52.3
- seamless cold drawn tubes with inside tolerance H9 ST 52.3
- stainless steel tubes honed inside H8 AISI 304

#### NEW!

BAW bars for linear tracks - tolerance h6 and chromed tolerance h7 Cast iron bars

#### tel. +48 33 829 87 30; tel. +48 33 829 87 44

| fabric-rubber seals: TSE, TGO, GT5, GT7, PSE    |  |
|---|--|
| polyurethane seals: TTI, TTS, TTX               |  |
| rings: GIR, GIP                                 |  |
| TPM, TPL, TPS/G, TPS/T, PDE, TDE, PDP, PDH, GT3 |  |
| polyurethane seals: TTU, TTE, TTEW              |  |
| rings: GER, TTO, CUT                            |  |
| polyurethane: GHK, GHW, GHP, GPW, MBW           |  |
| metal reinforced: ZZ, GPA                       |  |
| rings: AGI, AGE                                 |  |
| tapes: PTFE+Br, fabric tape                     |  |
| O-rings, x-rings, GDS polyurethane O-rings      |  |
| PM copper washers                               |  |
| PPM bonded seals                                |  |
| stainless steel and Viton washers               |  |
| GPP, FLS seals for flanges                      |  |
|   |  |



**• GUARNITE** 

SEALS

OISTRIB(

# DISRIBUTION

**OIL COOLERS** 

#### SEALS - KIT BOXES AND ACCESSORIES



#### tel. +48 33 829 87 30; tel. +48 33 829 87 44

O-Ring Kit - BSP (382 pcs.) C-KIT O-Ring Kit - metric (386 pcs.) M-KIT Copper Washers Kit (220 pcs.) PM-KIT

Tongs for mounting polyurethane seals M22 Mitre cutters for straight and 45° cutting UAK004

#### tel. +48 33 829 56 63; tel. +48 33 829 56 74

In our offer you can find:

- air-oil coolers with thermostats (fans 12V, 24V DC and 230/400V AC)
- water-oil coolers

DISTRIBUTION

- · units to by-pass oil cooling, air cooled, with own pump
- special oil coolers



# DIRECTIONAL SPOOL VALVES NG6, NG10, NG16, NG25, NG32

#### tel. +48 33 829 56 79; tel. +48 33 829 56 63

Directional spool valves are designed to control the direction of fluid flow, mounting type NG. Available as electric AC or DC, manual, pneumatic and hydraulic operated valves. The valves are avail able in three or four configurations with two or threespool positions.

| Туре | Flow             | Pressure |
|------|------------------|----------|
| NG6  | up to 80 l/min   | 350 bar  |
| NG10 | up to 160 l/min  | 350 bar  |
| NG16 | up to 300 l/min  | 350 bar  |
| NG25 | up to 700 l/min  | 350 bar  |
| NG32 | up to 1000 l/min | 350 bar  |

## tel. +48 33 829 56 79; tel. +48 33 829 56 63 MODULAR VALVES NG06, NG10

Hydraulic devices used to control the pressure and flow direction. Their modular construction enables installation under directional spool valves with size of NG6 and NG10. Compact solution with high reliability.

#### Main types:

- pressure compensated and flow control valves
- · relief and reducing valves
- check valves
- · pilot operated check valves
- 2-way solenoid valves





#### PROPORTIONAL HYDRAULICS



#### tel. +48 33 829 56 79; tel. +48 33 829 56 63

Wide range of components that allow to control the pressure and flow direction, based on proportional control technique. Ideal combination of hydraulics with electronics systems, which provide faster, smoother and more precise dynamic control system. Proportional valves and devices are compatible with all kinds of mountings:

- sub-plates and manifolds,
- pipes,
- cartridges.

Equipped with proportional solenoids is designed to work with integrated or remote drivers and amplifiers, both in analogue or digital version.

#### tel. +48 33 829 56 79; tel. +48 33 829 56 63

Directional and spool valves in special explosion-proof versions, dedicated to use in hydraulic systems working in potentially explosive areas, such as mining, building machines, oil, gas etc.

Available versions:

- Group II (ATEX, IECEx, Rostechnadzor, C UL US)
- · Group I (ATEX, IECEx)

Stainless steel versions are also available.

#### SPECIAL APPLICATIONS VALVES - ATEX



# DISRIBUTION

tel. +48 33 829 56 63; tel. 3+48 3 829 56 74

#### HYDRAULIC CARTRIDGE VALVES

Full assortment of hydraulic cartridge valves, that minimize the dimensions of the whole hydraulic system without loosing its parameters and functionality.

#### Our offer:

- cartridge valves
- electric control valves
- hydraulic integrated circuit "HIC"
- special execution

### MOUNTING SUB-PLATES AND MANIFOLDS

#### tel. +48 33 829 56 79; tel. +48 33 829 56 63

We suggest solutions for valves and directional control valves with mounting plates; we offer elements which enable to mount tubes, plates, cartridge valves or other sub-plates.

- made of steel or aluminum
- mounting sub-plates NG 6, NG 10, NG 16, NG 25, NG 32
- single-station and multi-station sub-plates and manifolds
- complete manifolds

# VALVES



#### tel. +48 33 829 87 33

Comatr¶l

| Max flow     | 280 l/min |  |
|--------------|-----------|--|
| Max pressure | 50 MPa    |  |

Complete range of valves:

- · ball, relief, sequence, check, shuttle, overcenter valves
- rotary couplings
- flow dividers, flow regulators



#### DIRECTIONAL CONTROL VALVES

tel. +48 33 829 56 84; tel. +48 33 829 87 36 Monoblock or sectional directional control valves, available in standard configurations or versions dedicated to specified purposes, including advanced control systems.

| Control           | manual (lever or flexible remote control)     |
|-------------------|---|
|                   | electric                                      |
|                   | pneumatic                                     |
|                   | hydraulic                                     |
|                   | combined electric-hydraulic with<br>joysticks |
| Flow              | 20 l/min - 180 l/min,                         |
| Pressure on ports | 250 - 320 bar                                 |



#### tel. +48 33 829 56 84

We propose a wide selection of MP FILTRI products. Since 1964 they have been designing, developing, manufacturing and distributing a wide range of filters and accessories for mobile systems and hydraulic industry. MP FILTRI has its representatives all over the world, among others in USA, Canada, Germany, France, Great Britain and in China.

It's our pleasure to inform that we are a sole distributor for MP FILTRI in Poland.

We offer filtration of various substances (fluids, air) with filtration up to 1 micro, for pressure up to 1000 bar. Our low pressure filters are designed for max flow 3000 dm<sup>3</sup>/min.



# DISTRIBUTION

#### IN-LINE CONTAMINATION MONITOR (ICM)



#### tel. +48 33 829 56 84

FILTRATION

Particle counter - in-line contamination monitor uses LED technology, thanks to which measure oil cleanness at the attractive price.

The ICM automatically measures and displays particulate contamination, moisture and temperature levels in various hydraulic fluids.

It is designed specifically to be mounted directly to systems, where ongoing measurement or analysis is required and where space and costs are limited.

#### tel. +48 33 829 87 36; tel. +48 33 829 56 84

| Gear pumps       |                                    |
|------------------|------------------------------------|
| Displacement     | 0,16-86,87 cm <sup>3</sup> /rev.   |
| Working pressure | 160 - 300 bar                      |
| Hydraulic motors |                                    |
| Displacement     | 0,45 - 86,87 cm <sup>3</sup> /rev. |

Single, double, triple and more pumps in any configuration available directly from the stock. Pump bearing supports that protect pumps from damages. Gear pumps KUMA version more compact and without back cover. Reinforced pumps with cast iron covers.

#### GEAR PUMPS AND HYDRAULIC MOTORS



# DISRIBUTION

#### FLOW DIVIDERS



#### tel. +48 33 829 87 36; tel. +48 33 829 56 84

Flow dividers are used in applications where two separate hydraulic circuits are fed by one pump.

Our offer includes:

- gear flow dividers (group 0, 1, 2, 3 and mixed groups)
- valve flow dividers

Flow divided equallye.g: 1:2, 1:3, 1;4...Flow divided asymmetricallyas required

#### tel. +48 33 829 87 36; tel. +48 33 829 56 84

Manifold Instantaneous Auto-compensating Flow Divider with internal system that removes the dependency from the pressure difference between elements. It's a system to distribute and feed with constant and independent flow rates for the various circuit branches. The open architecture of the MIA-FD has been developed to be integrated into different functionality that will follow the customers requirements.

AUTO-COMPENSATING FLOW DIVIDERS

#### ELECTRIC MOTORS

SIEMENS



#### tel. +48 33 829 56 84; tel. +48 33 829 87 36

We offer full range of 3-phase squirrel-cage low-voltage electric motors with power from 0,06 kW to 1250 kW.

The standard SIEMENS' production program includes motors of B5 and/or B35 construction, that can be supplied directly from the grid or frequency converters. Their advantages are: high efficiency, wide range of temperatures in working environment, quiet operation and low vibrations level.

#### tel. +48 33 829 56 84; tel. +48 33 829 87 36

#### Features:

- · high starting torque
- wide speed range
- constant output torque over a wide speed range
- favourable power-to-weight ratio
- very smooth running, even at low speeds
- durable construction capable of standing tough operating conditions



#### tel. +48 33 829 56 84; tel. +48 33 829 87 36

Hydrostatic steering units with displacement up to 1000 cm<sup>3</sup>/rev. Available directly from the stock in various configurations: for open or closed systems (LS), with or without reaction from wheels.

Commonly used in wheel steering systems of low-speed vehicles such as:

tractors

- building machines
- harvesters
- forklifts

- ships
- vessels etc.

HYDROSTATIC STEERING UNITS

#### PISTON AND VANE PUMPS

#### tel. +48 33 829 87 36; tel. +48 33 829 56 79 (Atos)

| Piston pumps          | Displacement                    | Pressure      |
|-----------------------|---------------------------------|---------------|
| Fixed displacement    | 60-100cm <sup>3</sup> /rev.     | 300 bar       |
| Variable displacement | 29-88 cm3/rev                   | up to 280 bar |
| Radial                | 1,7-25,4 cm <sup>3</sup> /rev   | up to 500 bar |
| Vane pumps            | Displacement                    | Pressure      |
| Fixed displacement    | 16,5-150,2 cm <sup>3</sup> /rev | up to 300 bar |
| Variable displacement | 6,8-43 cm <sup>3</sup> /rev     | up to 150 bar |
| Multiple stream       | 8-150,2 cm3/rev                 | up to 350 bar |

#### tel. +48 33 829 87 34; tel. +48 33 829 56 94

Hand pumps for hydraulic systems may be used in standard or emergency operations. They work with single-acting (PMS, PM) and double-acting cylinders (PMI). Available with its own tank (TNK - steel or TNA - plastic-aluminium) or without it - they can use the tank of hydraulic power pack. Two-stage pumps (HPM580) are also available.

Displacement Max working pressure 8-70 cm<sup>3</sup>/cycle 580 bar

On special request, we can prepare a special configurations of our pumps - e.g. additional valves.



#### tel. +48 33 829 87 34; tel. +48 33 829 56 94

HAND PUMPS

Pumps for systems and tasks where free hands of the operator are necessary. Dedicated to single-acting cylinders (FPME) or to work with special tools (e.g. nut cutters) at high pressure (F-HFP25 - two-stage pump). Equipped with own oil tank.

Displacement Max working pressure 12 - 15 cm<sup>3</sup>/cycle up to 700 bar

Specialistic pneumatic-hydraulic pumps are also available.

#### POWER PACKS' COMPONENTS



#### tel. +48 33 829 56 84; tel. +48 33 829 56 68

| Complete assortment of:                                |  |
|--|--|
| Electro-hydraulics                                     |  |
| Valves and control valves, mounting plates (manifolds) |  |
| Gear pumps, piston pumps                               |  |
| Bellhousings, couplings and inspection doors           |  |
| Filters, filters and air breathers, filter caps        |  |
| evel indicators, oil level gauges, thermostats         |  |
| Fittings, quick couplings and hoses                    |  |
| Pressure gauges and check couplings                    |  |
| Tanks, oil-coolers, hydraulic accumulators             |  |
| Damping rods, flat damping bars                        |  |

# tel. +48 33 829 56 84; tel. +48 33 829 87 38; tel. +48 33 829 56 63 HYDRAULIC ACCUMULATORS

EPE Italiana is a leader in production of hydro-pneumatic accumulators in Italy, with over 35 years experience in this branch. In 2009 we became the official partner of EPE Italiana in Poland.

#### Our offer includes:

| Bladder accumulators  |                  |  |
|-----------------------|------------------|--|
| Working pressure      | up to 550 bar    |  |
| Capacity              | up to 55 litres  |  |
| Diaphragm accumulator | S                |  |
| Working pressure      | up to 350 bar    |  |
| Capacity              | up to 10 litres  |  |
| Piston accumulators   |                  |  |
| Working pressure      | up to 375 bar    |  |
| Capacity              | up to 300 litres |  |



Nitrogen charging and checking kits also available from the stock.

#### COUPLINGS AND BELLHOUSINGS



We offer quick selection of the best couplings to pumps from various producers. Our offer includes drive transmission elements for power up to 400 kW:

 Bellhousings: made as monoblock, modular elements or silenced series; made of aluminium or steel.

 Couplings: their unique construction guarantee ideal connection of the motor and the pump, as well as perfect noise reduction during operation. Available in versions: aluminium, cast iron, steel.



**PRESSURE & VACUUM GAUGES** 

#### tel. +48 33 829 87 40

| Diameters   | 40 mm, 50 mm, 63 mm, 100 mm  |
|-------------|--|
| Connection  | radial, back connection, back flange for lower con-<br>nection, front flange for back connect, "U" clamp for<br>back connect |
| Pressure    | from -1 to 4000 bar  |
| Filling     | glycerine  |
| Accessories | brackets, fittings, couplings, flanges, connectors, thermometers   |

On request we can provide PED certificate and certificate of conformity.

#### CHECK COUPLINGS

#### tel. +48 33 829 87 33

We offer test hoses of any length

Measurement kits in various configurations

| Threaded check | couplings type MINIMESS |
|----------------|-------------------------|
| Pressure       | up to 630 bar           |
| Connection che | eck couplings           |

| 1-connection check | coupings         |
|--------------------|------------------|
| Pressure           | 160 - 630 bar    |
| Cap material       | metal or plastic |

#### COUPLINGS

tel. +48 33 829 56 94

#### tel. +48 33 829 87 33

In our offer you can find all kinds of couplings: straights, elbows, T-connections, crosses, connectors, adapters, nuts, cutting rings, plugs and many more.

| Thread type | Cone | Standard  |
|-------------|------|-----------|
| Metric      | 24°  | DIN 2353  |
| BSP         | 60°  | 24        |
| UNF         | 37°  | SAE J514  |
| ORFS        | -    | SAE J1453 |

Made of carbon steel, stainless steel AISI 304, AISI 316, acid-proof steel.

SAE flanges

STECKO couplings

#### QUICK COUPLINGS



Our offer includes:

- poppet and flat-face quick couplings
- screwed couplings
- multi-couplings
- original quick couplings for such machines as CATERPILLAR, JCB

It's our pleasure to announce, that we are the official authorized distributor of STUCCHI in Poland.

| Thread range         | 1/8" to 2" and from M14x1,5 to M36x2 |
|----------------------|--------------------------------------|
| Thread types         | JIC, ORFS, BSP, NPT, DIN             |
| Max working pressure | up to 700 bar                        |

tel. +48 33 829 56 95

HOSE FITTINGS AND FERRULES

# VersionStandard, Multispiral, Inter-Lock, Water BlastRange02 DN- 76 DNMaterialCarbon steelStainless steel acid-proof AISI 316LDKOL, DKL, DKOS, DKR, DKOR, DKR-K,DKR-F, DKN, DKJ, DKJ-K, SAE-OR, DKM, RNR,<br/>RNM, BES, BEL, KARCHER, JIS-KOMATSU,<br/>SFL-3000, SFL-6000, SFL-9000, ORFS<br/>and many more

#### tel. +48 33 829 56 95

#### HYDRAULIC RUBBER HOSES

We offer a wide range of rubber hoses for power hydraulics and high-pressure washing devices.

|                     |   | 4 INTERPUMP ### Hage 220 EN 857 - DN 10 LD. 3/8" - W.P. 330 J  |
|---------------------|---|--|
| Standards           | Accreditation entities  | and the second |
| SAE, ISO,<br>DIN EN | IQNET, GOST, BV, DNV, GL, MED, MSHA,<br>RINA, OBAC, EN81-2                                      | th INTERPUMP III DISCHOSEN 857-25C DW 161D 5/8" WP   |
| Types               | HIPAC, LONGLIFE, WATERBLAST, MEGA<br>JET, MARATHON, POWER LIFT, CELSIUS,<br>COMPRESSOR, TWISTER | 前 INTERPUMP mil Hypress 4SP ISO 3862/EN  |
| Steel braids        | 1, 2, 3, 4, 6   |  |
| Diameters           | ø05 - ø76   |  |
| Working pressure    | 40 - 1200 bar   | HYDRAU ICS   |

#### HYDRAULIC HOSES - ACCESSORIES

#### tel. +48 33 829 56 95



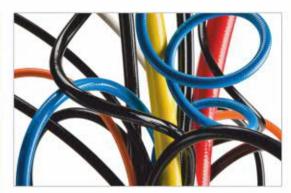


| Steel armour guards        |
|----------------------------|
| PVC and HDPE armour guards |
| Textile protection sleeves |
| Thermal protection guards  |
| Handles                    |
| Seals for flanges          |
| Rubber-steel washers       |
| Copper washers             |
| O-rings and washers kits   |
| Plugs                      |
|                            |

#### THERMOPLASTIC HOSES

#### tel. +48 33 829 56 95

| Types           | SAE 100 R7, SAE 100 R8, SAE 100 R18,<br>1SB, 2SB, VHP, HR8, Micro bore  |  |  |  |
|-----------------|---|--|--|--|
| Versions        | single, twin or triple hoses (on request with electric cable)   |  |  |  |
| Hydraulic ther  | moplastic hoses   |  |  |  |
| Applications    | forklift trucks, aerial lifts, cranes, hydraulic<br>wrenches, safety and rescue equipment,<br>off-shore industry. |  |  |  |
| Industrial them | moplastic hoses   |  |  |  |
| Applications    | greasing, pneumatic control, technical<br>gases, aggressive chemicals, sewer<br>cleaning, LPG, CNG                |  |  |  |





Special performances: NON-CONDUCTIVE, CPLT, LFC, MARINER, EXTRA TOUGH, YACHTING

#### HELIX - ULTRA HIGH PRESSURE

Comprehensive offer of polymer multispiral hoses.

#### tel. +48 33 829 56 95



ISO 9001:2008, ISO 14001:2004

in accordance with TUV

TRANSFER OIL

#### Applications in the industry

Waterjet cutting, cleaning of tubes and heat-exchangers, removing paint and dirt from reservoirs, containers, ships etc., industrial cleaning, checking the pressure of injection in Diesel engines.

Applications in hydraulics

Hydraulic tensioners, testing devices

Advantages

High compatibility of multispiral thermoplastic hoses with fittings and ferrules of our own production.

High resistance to chemicals and against abrasion.

| Diameters           | from DN03 to DN25 |
|---------------------|-------------------|
| Working<br>pressure | up to 2800 bar    |

# tel. +48 33 829 56 95 Applications oil and fuel, water, compressed air, hot water and steam, chemicals, abrasive materials, air-conditioning, gas, food substances, sewer cleaning, sandblasting, plastering Materials PTFE, PVC, PU, PA, UHMWPE, rubber (SBR, NBR, EPDM, NR, Viton, CR)

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#### PIPE & HOSE CLAMPS

#### tel. +48 33 829 87 33

|  | I. Light Series<br>DIN 3015/1  | for tubes with outside diameter<br>from 6 mm to 88,9 mm (1/4" - 3")  |
|--|--------------------------------|--|
|  | II. Heavy Series<br>DIN 3015/2 | for tubes with outside diameter from<br>4 mm to 406,4 mm<br>higher resistance thanks to antioxidant<br>polyamide surface |
|  | III. Twin Series<br>DIN 3015/3 | for assembling two tubes with outside<br>diameter from 6 mm to 42,4 mm<br>all properties correspond to light group L     |

#### PRODUCTS AND ELEMENTS MADE OF STAINLESS STEEL

#### tel. +48 33 829 87 33

- Complete hydraulic systems
- Cylinders
- Hydraulic hoses

 Valves, couplings, quick couplings, check couplings, PPM rubber-metal washers and other components available directly from the stock,

Made of steel AISI 304 or AISI 316



#### MACHINES FOR PRODUCTION OF HYDRAULIC HOSE ASSEMBLIES





#### Types of machines

| Hand and electrical crimping machines                      |  |
|--|--|
| Portable and pneumatic crimpers for air-conditioning hoses |  |
| Cutting machines   |  |
| Skiving machines   |  |
| Machines for testing hydraulic hoses                       |  |
| Machines for marking hydraulic hoses                       |  |
| Other accessories  |  |
|  |  |

#### tel. +48 33 829 56 85

| AUTOMATIC | CUTTING | MACHINES | FOR | CABLES | AND HOSES | ŝ |
|-----------|---------|----------|-----|--------|-----------|---|
|           |         |          |     |        |           |   |

| Cutting methods                               |
|---|
| Weld cut for steel cable                      |
| Shear cut for steel cable                     |
| Smooth blade cut for hydraulic                |
| hose  |
| Inductive annealing for PTFE hose             |
| Knife cut for rubber hose and non-wire tubing |

| Machine types        |     |
|----------------------|-----|
| Manual cutters       |     |
| Semi-automatic cutte | ers |
| Automatic cutters    |     |
| Platforms            |     |
| Feeders              |     |
| Coilers              |     |
|                      |     |



#### **HYDRO** Quality Policy Trustworthy business partner

The purpose of our business is to provide quality power hydraulics products, components and repair services. Requirements and expectations of our Customers determine the direction of our business. Skills supported with experience and implementing relevant remarks from Customers guarantee satisfaction of the current recipients and become a recommendation for the future ones.

Confirmation of these words is our renewal of the ISO 9001:2009 certification, and implementation of environmental management system ISO 14001:2005. These two standards are the most recognizable and provide high quality of our products.

ISO 9001:2009 certification relates to resource management system, knowledge and customer service. Moreover, it ensures the efficient flow of information about the tasks and their implementation, and also it activates the process of continuous improvement of the company.

The implementation of ISO 14001:2005 environmental management system prevents from contamination, minimizes the negative impact on the natural environment and is environmentally friendly.



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We offer high quality with the lowest prices on the market!

Hydro ZNPHS Sp. z o.o. Bielsko-Biala, ul. Strazacka 60, POLAND Reception Desk

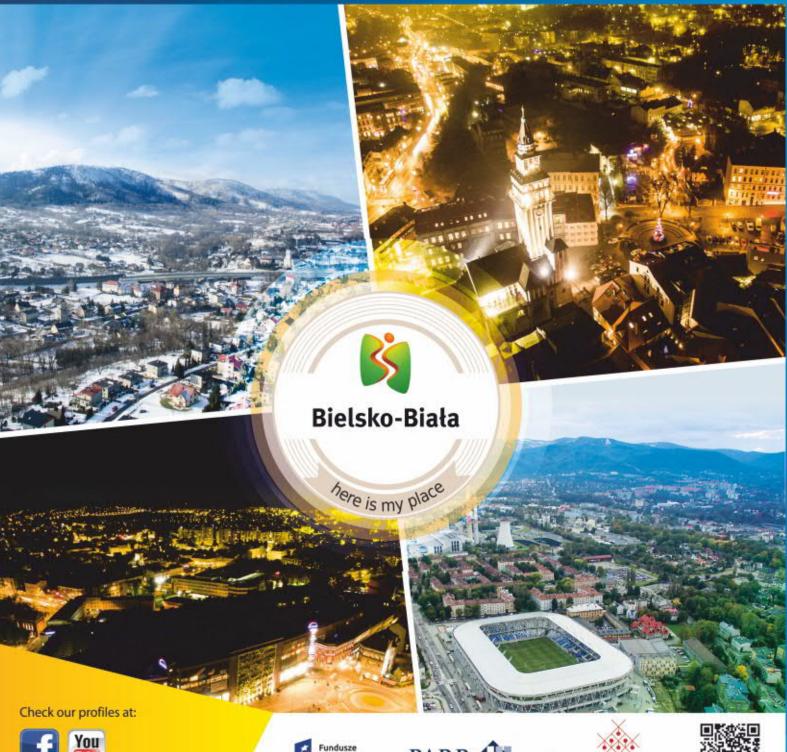
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