

# MAGRA<sup>®</sup>

HIDRÁULICA E PNEUMÁTICA



**Solutions for**  
Motion and Fluid Control



# division MOTION CONTROL



## Devices, components and services for industrial automation

The Motion Control Division provides value-added, efficient and safe components and services for automated machines, processes and equipment across all industrial sectors.



**AUTO  
INDUSTRY**



**PHARMACEUTICAL**



**PULP &  
PAPER**



**FOOD &  
BEVERAGES**



**HANDLING**



**ENTERTAINMENT**



**MACHINERY &  
EQUIPMENT**

# division FLUID CONTROL



## Equipment and components intended for hydraulic and pneumatic applications of low to very high pressure

The Fluid Control Division supplies industries' most diverse sectors with equipment, components and services for controlling pressure, volume, flow and transmission of fluids, such as water, oil and gas. Furthermore, the division develops equipment, tailored to the customer requirements, thoroughly followed-up, from design to the assembly, through testing, training, commissioning and certification.



**OIL & GAS**



**ENERGY**



**MINING**



**FOUNDRY**



**PETROCHEMICAL**



**AVIATION**



**COMPONENTS**



**STABILUS**

## GAS SPRINGS

- For lids and covers' opening and for controlling the most varied movements;
- Standard strokes' lengths up to 500 mm and forces up to 5,200 N (520 kg);
- Built in carbon or stainless steel;
- Traction type and adjustable pressure valve models upon request;
- Standard accessories are available.



**CONTITECH®** **GOOD YEAR**

## AIR SPRINGS

- For actuation and vibration isolation applications;
- Applicable for linear or angular movement;
- Strokes' length reaching 498 mm and forces up to 18,000 kg;
- Models for up to +155 °C and other special models on request.



**ENIDINE**

## WIRE ROPE

- Reduce structural shocks and vibrations;
- Meet international standards: MIL-STD-810; MIL-STD-167; MIL-S-901; MIL-E-5400; STANAG-042; BV43-44 and DEF-STND-0755;
- Support loads up to 2,200 Kg.



**ENIDINE**

## SHOCK ABSORBERS

- Provide controlled and safe moving objects and structures slow down without final impact. Significantly reduce equipment shocks and vibrations;
- Adjustable compression, or self-compensating models;
- Standard accessories for installations;
- Strokes from 6 to 1,900 mm;
- Energy absorption capacity of up to 900,000 Nm/cycle;
- Special models on request.



**SIMPLE ACTION**

**DOUBLE ACTION**

**ENIDINE**

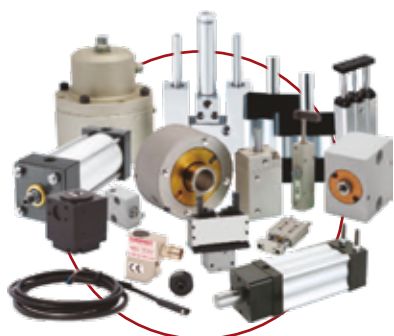
## SPEED REGULATOR

### SIMPLE ACTION

- Strokes 1/2; 1; 2; 3; 4 and 6 inches;
- Propulsion forces up to 5.300 N;
- Maintenance free.

### DOUBLE ACTION

- Traction and compression control;
- Strokes length from 50 to 800 mm;
- Driving forces up to 11.000 N.



**COMPACT**  
AUTOMATION PRODUCTS

## MOTION DEVICES

- Cylinders (Inch, Metric and Clean-Act®);
- Hydraulic Rotary Vane Actuators;
- Workholding (Grippers, Twist Cylinders, Collet Closers, Intensifiers);
- Slides (Guided Slides, Ball Slides, Z-Series, GRC);
- Shaker Cylinder®;
- Turn-Dex®/ Multi-Act® Actuators ;
- Accessories.



**BMC**  
MECANOCAUCHO

## ANTIVIBRATION MOUNTS

- Active and passive vibrations damping in varied equipment and environments, avoiding mechanical fatigue and stress;
- Standard metal/rubber models or provided with helical springs;
- Compression loads of up to 40,000 kg;
- Special models on request.



**CAMOZZI**

## PNEUMATIC COMPONENTS

- Fittings;
- Cylinders (Pneumatic and Electric);
- Air Treatment;
- Handling and Vacuum;
- Valves and Solenoid Valves;
- Fieldbus and Multipole Systems;
- Proportional Technology.

Magral withholds the right to make changes without prior notice.





**COMPLETE SYSTEMS**

## HYDRAULIC AND PNEUMATIC POWER UNITS

### HYDRAULIC POWER (H.P.U.)

- For pressurization of diverse fluids in all industry sectors;
- Mounted with hydropneumatic and / or triplex pumps;
- Pressures up to 100,000 psi;
- Subsea Control Module (SCM) Hydrostatic Testing;
- Hose testing and valves' calibration;
- Valves' Flushing and Signature;
- Modular systems with accumulators;
- Valves' signature panel.

### PNEUMATIC POWER (P.P.U.)

*Equipped with Compressed Air Amplifiers, for pressures up to 855 psi:*

- Pneumatic tests;
- Actuation of valves and pneumatic tools;
- Vacuum generating units, among others.

*Equipped with Gas Booster, Pressures up to 25,000 psi:*

- Gas transfer and hydrostatic tests;
- N2 cylinder loading;
- Diving (SCUBA) tanks fillers, injectors, and many others.



## PROJECTS' ENGINEERING

- With an engineering body formed by highly specialized technicians, Magral designs, details and manufactures the most varied devices, parts and equipment, to meet clients' technical and commercial needs, from conception, to assembly, commissioning and startup.

## HIGH PRESSURE COMPONENTS

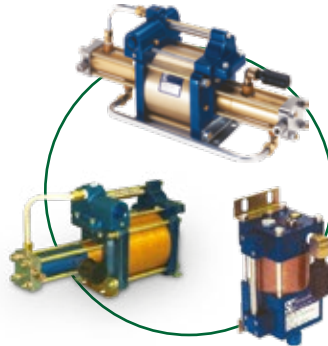
- Intended for instrumentation and equipment assembly;
- Double ferrule and autoclave connections;
- Needle, ball, relief, regulating and actuated valves;
- Thermoplastic hoses and pressure gauges;
- Stainless steel pipes;
- Accessories in general.



**SC**Hydraulic

## HYDROPNEUMATIC PUMPS

- Actuated by compressed air, nitrogen or manually;
- For pressures up to 100,000 psi;
- Flow rates of up to 30 l/min;
- Fluids: plain water, distilled and di-ionized water, solvents, mild chemicals and liquefied CO<sub>2</sub>.



**SC**Hydraulic

## GAS AND AIR BOOSTERS

- *Boosters*: can be used to transfer and pressurize gases without contamination;
- *Compressed Air Amplifiers*: amplify the available air pressure in the line. Ideal for pneumatic testing, valve actuation, pneumatic tools, and painting equipment, among others.



**Parker** **OLAER** **FCH OLAER GROUP**

## HYDRAULIC ACCUMULATORS

- Standard volumes: from 0.07 liters to 100 liters;
- Standard operating pressures of up to 10,000 psi (690 bar);
- Special models upon request;
- Bladder, Diaphragm and Piston Types;
- Standard materials: carbon and stainless steel;
- Parts and Accessories;
- Maintenance, testing and NR13.

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## Who We Are

The Magral Group has held a significant standing in the Brazilian market for three decades, providing high-technology solutions and products for fluids' motion and control. Magral attends from original equipment manufacturers to the aftermarket. It has facilities for equipment manufacturing, and also distributes components manufactured by leading world companies. Counting with highly committed and skilled administrative, technical and commercial teams, we warrant to attend the market, and of our clients' needs.



## Quality Policy

The Magral Equipamentos Hidráulicos e Pneumáticos objective is to attain business sustainability and its clients' satisfaction through a consistent policy that includes:



Attendance of **requirements** and **continuous improvement** of the involved processes



**Respecting** and **establishing partnerships** with suppliers



Promoting employees' **qualification**, **awareness** and **motivation**



Providing the necessary **financial return** for the company **continuous development**



## Certifications



**ISO 9001:2015** - Magral's quality management system is certified to ISO 9001:2015.



The Petrobrás CRC (Cadastral Registration Certificate) - Magral was approved to attend Petrobras requirements, becoming a direct supplier of various products and equipment.



## Entity and Association



## Magral Services

- ✓ Instrumentation
- ✓ Technical Assistance
- ✓ Maintenance and Repair
- ✓ Projects and Dimensioning
- ✓ Hydrostatic and Flushing Tests
- ✓ Start-up, Commissioning and Training



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