

Coating systems

Lord HPC-5C (clear) and HPC-5B (black) elastomer coatings were developed to improve the oil and ozone resistance of various materials used in industrial, marine, and agricultural applications. The coatings offer heat resistance, environmental protection, adhesion to rubber and metal, and the ability to withstand dynamic motions. They cure at room temperature and can protect natural rubber substrate from ozone and from moderate exposure to petroleum oils and fuels.

For more information, circle 1

Hydraulic pumps

Two pump sizes have been added to the PVM line of medium-duty axial piston hydraulic pumps from **Oilgear** for mobile and industrial applications. The PVM-065 offers a theoretical maximum displacement of 3.96 in³/rev (65 cm³/rev), and the PVM-075 provides 4.58 in³/rev (75 cm³/rev). Both pumps offer a maximum peak pressure of 4250 psi (293 bar). Available control options include pressure compensation, adjustable or fixed load sense, and electrohydraulic proportional pressure compensation.

For more information, circle 2



Linear transducer

Penny + Giles' line of noncontact, in-cylinder linear displacement transducers (ICT) was designed for hostile conditions in mobile and static hydro-pneumatic actuators.

Product applications include heavy-duty uses such as steering-position actuators and hydro-pneumatic suspension systems on agricultural and utility vehicles. The ICT range provides analogue position feedback proportional to the cylinder rod position for actuator strokes up to 2000 mm (79 in) and can withstand temperatures from -20 to +200°C (-4 to 392°F) and pressures up to 670 bar (9720 psi). Other features include a limitless life with no electrical sliding contacts to cause wear, a stable output, and a fast response.

For more information, circle 3



Carbon steel wire

FabCO RXR, AWS E70T-1 tubular wire from **Hobart Brothers** was designed for flat and horizontal lap, fillet, and groove welding applications that require

extra deoxidation.

Added deoxidizers allow operators to weld through rust, mill scale, and light oil without pre-cleaning, making the flux-cored carbon steel wire suitable for welding applications on earth-moving equipment. FabCO RXR operates with a shielding gas of 100% CO₂ and is available in wire diameters from 0.045 to 0.125 in (1.14 to 3.18 mm). Other product benefits include a reduction in rework caused by cold lap, cracking, or poor penetration; spray-type transfer; high deposition rates; deep weld metal penetration; and a range of available power settings that make it suitable for single- or multi-pass welding of mild steels and certain alloy steels.

For more information, circle 4



Operator support

The HFC-100 fixed armchair system from **J.R. Merritt Controls** offers improved operator comfort, according to the company, by featuring a high backrest for back and side support. The 80° backrest recline is adjustable in 2° increments, while the seat-cushion tilt adjusts 3 to 11° in four increments to reduce thigh pressure. The seat-cushion depth adjusts forward 2.4 in (61 mm) in five increments. The chair system also offers 5-in (127-mm) wide control consoles that are horizontally adjustable, as are the armrests, which flip back to facilitate operator access. Most of the company's one-, two-, and three-axis joysticks can be configured to fit inside the compact consoles. Amplifier cards with pulse width modulation can be furnished with the joysticks to control most electrohydraulic proportional valves.

For more information, circle 5



Durable joystick

Designed for demanding applications including material handling, agricultural, and construction equipment, the AJ4 joystick from **ITT Industries, Cannon** offers a life cycle of more than 6 million actuations. Featuring flexibility, mechanical strength, and an improved environmental protection level, the aluminum-fabricated joystick can accommodate various standard or custom grips. With a mass of 860 g (30 oz), the AJ4 joysticks are sealed IP67 above gate



with potted electronics and offer an operating voltage of 9 to 16 V dc with output options of 0.5- to 4.5-V dc, 500 Hz for pulse width modulation. Operating temperature range is -40 to +85°C (-40 to +185°F) and maximum torque is 25 N·m (18.4 lb·ft).

For more information, circle 6

Rugged connectors

Cinch Connectors offers the SHS line of sealed headers and wire harness connectors for electronic control units in the commercial vehicle market, particularly construction, mining, agricultural, industrial, on-highway, and recreational applications.



The line is based on 1.5-mm (0.06-in) blade technology and includes 18, 30, 48, and 60 I/O connectors. Other features include push-to-seat terminal technology, tangles terminal, and secondary locking as well as optional inductive filtering and various keying/color configurations in 18 and 30 positions. Jackscrew connector mating and integral protected wire seals offer environmental resistance.

For more information, circle 7

Electrical harness

Phillips Industries has improved the molded collar design on its QCS2 electrical harness system that weatherproofs electrical systems by creating a water-tight seal. Part of the company's line of STA-DRY products designed to address the negative effects of corrosion on electrical components, the seal prevents corrosion by eliminating moisture from traveling through the harness. A tight-fitting collar protects against accidental disconnection, while the modular design reduces socket replacement time.

For more information, circle 8



Circuit breaker

Waytek offers mid-range circuit breakers for use in marine, agricultural, construction, recreation vehicle, chassis, and specialized equipment applications.

Available with 10 to 50 A ratings, the breakers are available in a panel-mount design as either automatic reset or switchable with a manual trip feature to allow opening of the circuit path without disconnection from the power source. The single-pole, thermal-type breakers are rated up to 30-V dc maximum, and 10-32 stud terminals and nuts are included.

For more information, circle 9



Marine breaker

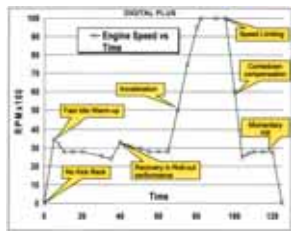
The Series 187 marine-rated circuit breaker (MRCB), from **Bussmann Automotive Products**, a division of **Cooper Industries**, is suitable for use in marine, agricultural, construction, and specialty-vehicle industry applications. The MRCB is a Type 3 manual-reset style circuit breaker with a switching function. An accessible yellow lever on the cover identifies the on-off switching and allows the MRCB to be used as the main circuit breaker in dc electrical systems. Other features include ignition protection, main breaker protection interrupt rating, 5/16-18 electrical termination studs, and a mounting hole clearance designed to allow use of 5 mm (0.2 in) or 10-32 screws. Available in ratings from 25 to 150 A, the MRCB is offered in panel- and surface-mount models.

For more information, circle 10



Ignition system

Walbro Engine Management's Digital Plus ignition system monitors engine operating conditions and reacts by adjusting the ignition curve accordingly. Product benefits include improved operation and engine performance, the company claims. The Digital Plus system monitors engine



rpm, time, temperature, and acceleration, then selects an appropriate sub-routine to tailor ignition operation for optimum performance. A speed-limiting feature provides safety, warranty, and durability benefits, while the engine rpm is prevented from dropping too low during rapid deceleration to avoid stalling. A digital momentary-kill feature stops the engine with a push, then returns to the normal position for trouble-free starting.

For more information, circle 11

Hall-effect sensor

OPTEK Technology, a division of **TT Electronics**, developed a Hall-effect sensor for brushless dc motors and construction, mining, and other specialized vehicles that operate in harsh conditions. The OMH3075B and OMH3075S Series bipolar latching sensors offer accurate position sensing in severe environmental and temperature conditions—operating over a range of supply voltages from 4.5 to 24 V with up to 25 mA of sink current in the on state. A Hallogic monolithic integrated circuit incorporates a Hall element, a linear amplifier, and a Schmitt trigger on a single silicon chip. Operating temperature range is -55 to +125°C (-67 to +257°F).

For more information, circle 12



Torque sensors

Series 4200 rotary transformer torque sensors from **PCB Piezotronics** use noncontact rotary transformers to send excitation voltage to, and receive measurement signals from, rotating strain gage sensors. Product applications include torque studies on pumps, electric motors, engine dynamometers, transmissions, and gearboxes. The maintenance-free transformer design eliminates the need to replace worn brushes and offers a capacity from 11 to 11,300 N·m (8 to 8300 lb-ft) at speeds up to 10,000 rpm. The temperature-compensated units feature 2 mV/V output sensitivity and an integral shunt calibration network and are available with an optional foot-mounted housing.

For more information, circle 13



Solid-state relay

Teledyne Relays' family of HiPak power solid-state relays can be used for plastic or rubber injection-molding machines, packaging machines, industrial ovens, and soldering machines. Available in four basic models, the relays offer removable touch-proof flaps and measure 1.14 in (29 mm) tall. For power wiring, the relays offer direct connection by wire or tips. For control wiring, they offer screw connections up to 50 mm² (0.08 in²) or removable spring terminals. Designed for long life, Series SH relays are available in random turn-on, zero-cross turn-on, and high-voltage models. Switching currents range from 12 to 125 A, while output voltage reaches 690-V ac. Operating temperature range is -40 to +80°C (-40 to +176°F).

For more information, circle 14



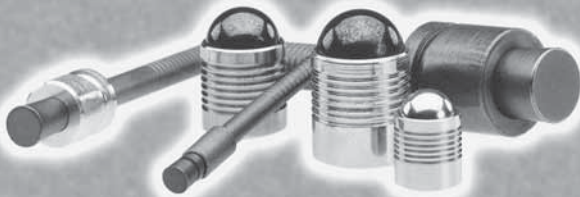
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Grease gun

The SuperLuber cordless grease gun from **Lumax** features a variable electronic speed control trigger switch with electric brake that enables the motor to stop instantly. Controlling the grease output through pressure applied to the microchip trigger switch offers minimal waste and mess. Users can speed up lubrication and control the grease volume without compromising output pressure. Other features include a steady output pressure of 6000 psi (41 MPa); three-way loading with a filler pump, cartridge, or suction; a fully rechargeable battery pack; power transmission; and an ergonomic design for lubricating hard-to-reach fittings. Various accessories meet the requirements of rugged use in most industrial, construction, automotive, and agricultural applications.

For more information, circle 15



CAN module

Used for on- and off-highway equipment, **HEd's** CL-407 CAN module has a variety of I/O to monitor and control a number of functions throughout the vehicle. The CL-407 is suitable for interfacing between joystick controls and components including machine valves and solenoids. Typically configured as a slave module in a CAN system, four additional inputs are available as a stand-alone module or single board controller. A 60 mA, 5-V dc regulated supply provides power to external input devices. Other I/O include two switch-to-battery or 8-bit analog inputs, one frequency input, three 0- to 5-V dc 12-bit analog inputs, and seven 4-A sourcing outputs (pulse width modulation or digital).

For more information, circle 16



Tire technology

Goodyear's DuraSeal commercial tires feature a built-in sealant that allows truck drivers to continue operating after a tire has been punctured. The damaged tire can remain in service until it is retreaded and will last up to six times longer than a conventional medium



truck tire, the company claims. The technology uses a gel-like, solvent-free compound that is built into the inner liner of the tire and is designed to consistently and instantly seal punctures up to 0.25 in (6.35 mm) in the tread area. DuraSeal adds approximately 5 to 7 lb (2 to 3 kg) per tire and offers sealing efficiency from -40 to +100°F (-40 to +38°C). Improved cleanup, reduced fire risk, and no negative impact on performance are among DuraSeal's other features. The technology is suitable for logging, landfill, construction, road building, and other severe service applications.

For more information, circle 17

Push-pull couplings

Holmbury features a push-pull hydraulic coupling in the 0.5-in (12.7-mm) ISO7241-A dimension. The push-pull sleeve design allows for panel mounting and automatic disconnection. The coupling is rated at 3600 psi (25 MPa) working pressure and 25 gal/min (95 L/min) flow with a working temperature range with nitrile seals of -20 to +100°C (-4 to +212°F). Typical applications include situations where the hydraulic hose could be accidentally subjected to excessive force. The push-pull coupling is available in NPT (National Pipe Thread) and BSPP (British Standard Parallel Pipe) threads.

For more information, circle 18



Filtration solution

One Eye Industries' ADD-Vantage 9000 is an industrial filtration solution with magnetic technology that allows transport trucks 1000 h between oil changes. Maintenance intervals of large fixed engines, including generation sets and compressors, can be extended by 25 to 75%. The ADD-Vantage 9000 fuel and oil filters feature reusable, stainless steel filter elements and a choice of absolute micron-rated screens of 10, 25, and 40 µm (394, 984, and 1575 µin). A magnetic filter rod creates multiple magnetic fields that remove ferrous contaminants to sub-1-µm (sub-39-µin) levels and reduce engine component wear. Other benefits of the technology include improved fuel mileage, reduced emissions, and an improved environmental impact.

For more information, circle 19



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