

Custom valves

Fluid Line

Products Inc. offers engineered valves designed for custom applications, and features include improved system performance and cost savings from a reduction in components.



The valves can be used with hydraulic fluid, oil, air, refrigerant, water, chemicals, fuel, and gases for diesel-powered off-highway equipment. Composed of steel, brass, stainless steel, aluminum, or monel, the valves are available in sizes 0.125 to 2 in (3 to 50 mm) and offer a fluid temperature range of -40 to +375°F (-40 to +190°C). Fittings can be installed in any position and feature a cracking pressure of up to 10 psi (0.7 bar) with $\pm 10\%$ accuracy. Most valves offer a flow rate of up to 130 gal/min (492 L/min).

For more information, circle 1

Truck gateway

Version 2.0 of the CANopen truck gateway specification from **CAN in Automation** provides a communication path between a truck's in-vehicle networks and the CANopen networked superstructure. The superstructure network may be a proprietary CANopen network or standardized application profile such as CleANopen, the

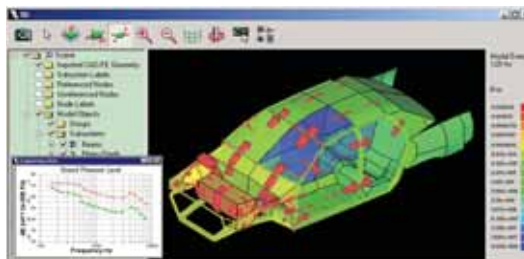


embedded network for garbage trucks. The standard is composed of several parts. Part 1 describes the physical layer definitions including the default baud rate of 250 kbit/s and the connectors, and defines the default PDOs. Part 2 and 3 specify the mapping of the ISO 11992 truck/trailer gateway parameters to the CANopen dictionary. Part 5 was developed in close relation with **VAK** members. Part 6 describes a framework of how to map **SAE J1939**-based networks to the CANopen dictionary.

For more information, circle 2

Noise and vibration simulation

ESI Group's AutoSEA2 2003 addresses the need for the control of broadband airborne noise and sound-induced vibrations. The product uses the Statistical Energy Analysis method to predict higher frequency



and random vibro-acoustic response. It simulates noise and vibration control measures, enabling designers to meet critical quality specifications early in the development process. New capabilities include simulation of vibration damping from acoustic treatment layers, and enhanced thermogram and energy flow diagnostic displays. A new general laminate subsystem with visco-elastic material properties allows engineers to evaluate efficient production measures to increase structural damping for vibration control. It accurately models damping material such as "quiet steel," plastic-coated metal, and laminated glass.

For more information, circle 3

Modular screw assemblies

Nook Industries' streamlined modular screw assemblies are based on predetermined end-machining dimensions. They feature flexibility such as custom travel lengths and accessories including ball nuts, flanges, and EZZE-MOUNT end supports.



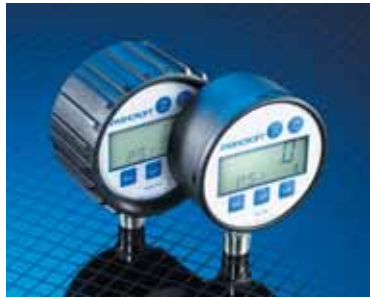
Part numbers for most Acme, ball, and metric screw assemblies are available via the company's linear motion design guide or website. Both resources provide technical information and step-by-step instructions for ordering purposes.

For more information, circle 4

Digital gauge

The Ashcroft Type D1005PS pressure gauge from **Dresser Instruments** offers 0.5% full-scale, terminal-point accuracy including linearity, repeatability, and hysteresis. Other features include a 4.5 digit display with 0.5 in (12.7 mm) character size for improved resolution and readability, nine standard selectable units of measure, availability in ranges from vacuum to 19,999 psi (1379 bar), a peak hold feature for maximum pressure indication, and a backlight for improved visibility. A stainless-steel sensor and socket make it suitable for both dry air applications as well as other media, and the product is configurable for a variety of pressure measurement applications.

For more information, circle 5



Spindle alignment kit

The Microgage spindle alignment kit from **Pinpoint Laser Systems** is a spindle and shaft alignment kit for industrial machinery. The kit consists of a laser that is mounted to the driveshaft, spindle, or a gearbox flange and projects a precise reference beam along the centerline. A digital target receiver catches the laser beam and provides a measurement reading

to show if the receiver is off-center. Angular errors can also be measured and eliminated. The system measures misalignments as small as 0.0001 in and operates over distances of 80 ft for large machinery applications.

For more information, circle 6

Amplifier module

A multi-channel amplifier module from **HBM**, the ML801B, features TEDS (transducer electronic data sheet) identification and requires one keystroke to load a transducer's data and its correct settings. The data in TEDS transducers is stored digitally, then transferred electronically to an amplifier, allowing automatic selection of settings and measurement taking. TEDS transducers use existing cables and require no additional wiring. The ML801B permits the number of sub-channels to be reduced to eight, four, or two as needed, giving corresponding sampling rates of 2400, 4800, and 9600 Hz. All channels are measured simultaneously at a bandwidth of 1 kHz.

For more information, circle 7



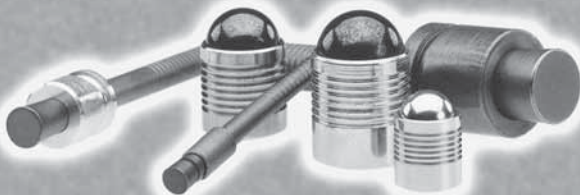
Leakproof Sealing Solution








Koenig Expander Sealing Plugs

OVER
30
YEARS

Koenig is the proven leader for sealing fluid passages in automotive, industrial and off-road hydraulics, and aerospace applications.

From low to high pressures...the right fit for the tight fit!



-  **Reliable and easy to use for a wide range of applications**
-  **Eliminates taps, threads, sealants and reamed holes**
-  **Wide selection for low to high pressure applications**
-  **Sizes in inch and metric**
-  **Special sizes available upon request**
-  **Tested up to 40,000 PSI**
-  **QS-9000**



SHEREX INDUSTRIES, LTD.

1400 COMMERCE PKWY.
LANCASTER, NY, 14086
PHONE: (716) 681-6250
FAX: (716) 681-0270
TOLL FREE: (866) 474-3739
E-MAIL: info@sherex.com
WEBSITE: www.sherex.com

Download the Sherex Catalog at www.sherex.com

Circle 248

Hydraulic testers

STAUFF PPC test and measuring equipment for hydraulic systems enables users to test, store, and process all relevant parameters of the hydraulic system, including pressure, differential pressure, temperature, flow rate, and efficiency. The handheld devices offer several programming functions and feature a large internal memory capacity. Three models with integrated data memories of 60,000 to 250,000 measuring points and sensory inputs of three, four, and six are available. An automatic sensor-recognition feature allows measuring devices and sensory mechanisms to be adjusted to individual conditions. Determined values can be printed or transferred to a PC, and **Microsoft** Windows-compatible software is included.

For more information, circle 8



Emissions-compliant engines

The 1100D Series of engines from **Perkins** features four- and six-cylinder models that meet forthcoming Tier-3/Stage-IIIa emissions legislation. The engines use **Caterpillar's** ACERT technology in the areas of fuel injection, electronics, and combustion to boost engine performance. An advanced

combustion-management system features a controlled, multiple fuel injection strategy using common-rail delivery to improve in-cylinder combustion and reduce NOx and hydrocarbon levels. Power output has been increased by up to 43% vs. the Stage-II engine and torque by 51% to offer more than 186 kW (250 hp) on the top range six-cylinder units. The 1104D and 1106D electronic engines feature a four-valve cylinder head, while the mechanical version of the 1104D includes a two-valve head, rotary fuel injection pump, a single vee-belt design, and optimized inlet manifold temperatures above 75 kW (100 hp). All three engines are offered in naturally aspirated, turbocharged, and turbocharged-aftercooled versions. Bare engine noise has been reduced by up to 5 dB(A), and cold start capability is down to -25°C (-13°F) to permit the use of a range of fuel types.



For more information, circle 9

compressors, commercial vehicles, and buses; a two-stage air cleaner suitable for medium- to high-dust levels such as construction and agricultural machines; and a combination of the single-stage air cleaner and DualSpin pre-separator for use on construction or harvesting machines operating in conditions with high dust levels. DualSpin achieves a pre-separation efficiency of more than 90% with a low-pressure drop, while large open cross-sections prevent clogging of the pre-separator. Four air cleaner diameters, each with three different bowl lengths, generate twelve basic NLG variations. Other features include the injection-molded mounting points with threaded bushings for easy installation, a screw fitting of the secondary element for operational reliability, and an extensive range of accessories including service switches and indicators, air connection pipes, and rain caps.



For more information, circle 11

High-speed camera system

The 1200 hs 10-bit CMOS camera system from The Cooke Corp. uses onboard image memory (up to 2 GB) in the camera head for ultra-fast image recording at 1 GB/s. The 1200



hs has 1.3 million pixels to provide high-speed image capture at 625 frames/s at 1280 x 1024 and 1330 frames/s at 640 x 480. The camera system is adaptable using plug-and-play operation with a choice of standard data interfaces, including FireWire, Camera Link, USB 2.0, or Ethernet. Suitable for imaging high-speed phenomena such as fuel-injection studies, material testing, or spray and particle analysis, the 1200 hs features a double-shot sequence that provides the capture of two full-resolution frames with 100 ns interframe time.

For more information, circle 10

Air cleaner

The NLG air cleaner generation from MANN+HUMMEL features a modular design principle that allows easy and cost-effective adaptation of the air cleaner to various application conditions, installation space, and air requirements. Different configurations cover light-, medium-, and heavy-dust loads, and the product range is designed to handle flow rates from 12 to 50 m³/min (3170 to 13,209 gal/min). The NLG series is offered in a single-stage air cleaner, designed for environments with low dust levels such as mobile cranes, stationary

PHONE 231-879-3372 FAX 231-879-4330



FLEXIBLE DRIVE COUPLINGS
MADE WITH PRIDE
IN
America

LARGE INVENTORY
ON HAND
FOR FAST DELIVERY



HELPFUL AND
KNOWLEDGEABLE
ENGINEERING STAFF




QUALITY SYSTEM
REGISTERED TO
ISO 9001:2000

PRODUCING QUALITY
PRODUCTS FOR OVER 30 YEARS:



FLEXIBLE COUPLINGS
FLYWHEEL COUPLINGS
PUMP MOUNT PLATES
ENGINE HOUSINGS
BEARING SUPPORTED STUB-SHAFTS
DRIVE SHAFTS AND MORE.....



www.hayescouplings.com

Circle 249

Air plasma cutting

Thermal Dynamics Corp.'s Automation CUTMASTER 51 air plasma cutting system is a 40-A machine for cutting thin-gauge metal including thin-gauge production fabrication and HVAC sheet metal work. It is equipped with the SL100 1Torch plasma torch that may be fitted with a range of cutting tips designed for maximum gas management and optimum performance. The advanced torch connector provides quick disconnect for instant change-outs. The system is rated for 0.25-in (6-mm) production capacity and 0.625-in (15-mm) edge-start capacity. It is suitable for cutting materials such as aluminum, stainless steel, and mild steel.

For more information, circle 12



TEDS support

IOtech's WaveBook is a portable and laboratory data-acquisition system that offers transducer electronic data sheet (TEDS) support. Each channel connected to a TEDS-capable device can be configured to use automatic calibration scaling stored in the device. TEDS scaling can be enabled on a per-

channel basis, allowing the mixing of both TEDS-capable transducers and non-TEDS-capable transducers in the same system. TEDS-capable accelerometers from different manufacturers can also be used in the system.

For more information, circle 13



Self-locking nuts

The ESL, ERM, and HCE nuts and locking strips from **Lanfranco** feature a self-locking capability that ensures complete assembly reliability, according to the company. The nuts can be reused up to 25 times. The ESL nuts are suited for both standard and safety assemblies. The ERM nuts use the same self-locking system as the ESL, but also have an integrated conical washer that maintains tension in the assembly. These nuts are recommended for electrical connections, assemblies of several superposed items, and flexible materials such as composites and elastomers. HCE nuts are most commonly used for standard and safety assemblies with several nuts and whose cost must be controlled. The locking nuts offer resistance to temperature depending on the protective coating chosen.

For more information, circle 14



Ventilation system

The ProVent 200 crankcase ventilation system with integrated oil separation from **MANN+HUMMEL** reduces emissions containing oil from vehicles, prevents the buildup of deposits in the intake system, and lowers the oil consumption of diesel engines. The system was designed for the latest generation of turbocharged engines. ProVent 200 filters blow-by gases with a coalescence separator and reduces the residual oil content to a minimal level. An oil separator and pressure regulation unit are integrated in the system. The ProVent 200 protects the turbocharger and components fitted downstream from deposits containing oil and was designed for use with flow rates of 100 to 200 L/min (26.4 to 52.8 gal/min) blow-by gas and up to 350 kW (470 hp). Other features include flexibility with the choice of installation location on or in the engine compartment and an integrated safety valve to prevent high crankcase pressure.

For more information, circle 15



ISO/TS 16949

This plug

is tight!

Our plug (specification HN 8-WD) is tight up to 5600 psi

Because of the integrated sealing ring, made of high-quality material NBR (Nitrile Butadiene Rubber), our plug seals not only against hydraulic and transmission oils and against compressed air. Moreover the plug can be used repeatedly.

Assembly is simple and safe, because no sealing ring is either forgotten or lost. The integrated soft sealing ring, made of high-quality NBR material is useful for temperatures between -35°C and +100°C. For higher temperature applications we recommend FKM sealing rings.

Convince yourself of the functionality and quality of our components. Why don't you ask for a complimentary sample. We look forward to your enquiry.

heinrichs

drehteile

Heinrichs & Co. KG • D-56290 Dommersh.-Dorweiler
Phone +49 6762 93050 • Fax +49 6762 930555 • www.heinrichs.de • info@heinrichs.de

Circle 250