

# **DynaPak™ Sampling System**

The First Sampling System to Offer High Performance and Low Cost in One Small Package



### **DynaPak Sampling Systems**

### **Sampling Accuracy & Simplicity**

When you consider the varying elements of proper sampling such as probe location, consistency with the flow stream, and phase of the sample, it's important that the sampler is simple to understand, operate and maintain. From customer-selectable mode of operation to the ease of installation and start-up, all of the primary elements of the DynaPak System are designed to be easy to use and operate.

YZ has manufactured the DynaPak for over a decade with simplicity and reliability in mind, continually refining the design to provide you with the leading sampling technology in the industry. The DynaPak series uses low-power microprocessor technology offering more versatility and wider range of control and simplicity.



### **Extended Battery Life**

The Z-65 or Z-200 controller runs all electronics and solenoids on four AA sized batteries that can last up to two years. This micro-power eliminates the need for solar panels and bulky lantern batteries. You'll receive an advanced warning when the battery needs to be replaced. The small battery pack is conveniently located under the front cover. This micro-power eliminates the need for solar panels and bulky lantern batteries.



#### **Ultimate Corrosion Protection**

The controllers are completely potted in specially developed epoxy-resin housing. This insulated protection keeps the interior electronic from being exposed to adverse conditions. Gold-plated terminals and contacts enhance connectivity and provide longer field life.



### **Verification Sampling Performance**

At-a-glance inspection of sample strokes can be made using the on-board six-digit counter. Our SmartSite™ constant pressure sample cylinder can provide data on the sampling volume for remote monitoring to your Flow Computer, RTU or SCADA system. Increased data and analysis allows for a new level of productivity in your operation.



The DynaPak Series is not only compact, but simple to select. The DynaPak 2000 Series if a good fit for gas and the DynaPak 3000 fits liquid applications

### The Pump is the Heart of the System

### Reliable Performance, Dependable Maintenance

Our team knows the importance of reliable sampling systems. While that starts with durable equipment, it's completed with high performing and easy-to-service pumps.

The DynaPak probe body is equipped with a solid, one-piece 316 stainless steel casting for maximum strength and rigidity in natural gas and liquid sampling measurement programs. In addition to improved sampling performance, our pump offers approximately 30% fewer pump components. 3 seals, 3 minutes and the DynaPak Pump-2000 can be removed, rebuilt, and returned to service, without probe removal. That means reduced field maintenance and simpler repairs, which will provide a lower cost of ownership.

### **Sample Integrity**

The DynaPak system can be mounted directly to the pipeline. This ensures sample integrity by placing the sample point and the sampling system close together.

The DynaPak pump delivers quality assurance, integrity, and simplicity by offering:

- Micrometer adjustment displacement from 0-.4cc's/stroke
- Easy to read volume/stroke scale
- Positive displacement
- Automatic balance valve
- 0-1500 psi operating range, ANSI 600
- High pressure version operating up to 2350 PSI suitable for ANSI 900



DP-2000 features a new micrometer adjustment with an easy-to-read scale.

### **Reliable Solutions That Simply Work**

The measurement of natural gas & light petroleum liquids has reached the pinnacle of refinement. Electronic flow measurement is the accepted standard for accurate measurement in custody transfer and allocation applications. These accepted standards continue to place importance on proper sampling techniques in the collection of a representative sample from the flow stream.

#### **Features:**

- An on-board six-digit LCD counter
- 2+ year system operation [4 AA sized battery pack]
- Diagnostic test functions
- Sealed switches
- Gold-plated terminals
- Locally mounted wiring assembly
- Optional ANSI 900 DynaPak is rated for a working pressure up to 2350 psi

### DynaPak 2020

The DynaPak 2020 is ideal for situations where an analog flow signal is available and proportional-to-flow sampling is desired. Visual inspection of sample strokes can be made using an on-board six-digit LCD counter. With just four AA-sized batteries, the battery pack provides up to two years of complete system power, including the optional transmitter.



Z-200 Controller
The intrinsically safe and approved
Z-200 is used in the DynaPak 2020.

### DynaPak 2010 & DynaPak 3010

The DynaPak 2010 & DynaPak 3010 are designed around the DP-2000 pump. They both offer an on-line approach for application needs ranging from proportional-to-flow sampling: straight time-based sampling or time-based on/off sampling. Both devices work with the Z-65 controller pictured below. The DynaPak 3010 is considered the most advanced approach for small sample volumes of liquids.



#### Z-65 Controller

Counter mode: 2-digit scaling counter, accepting all types of flow computer pulse inputs. Timer mode: adjustable (1-99 min) recycling timer

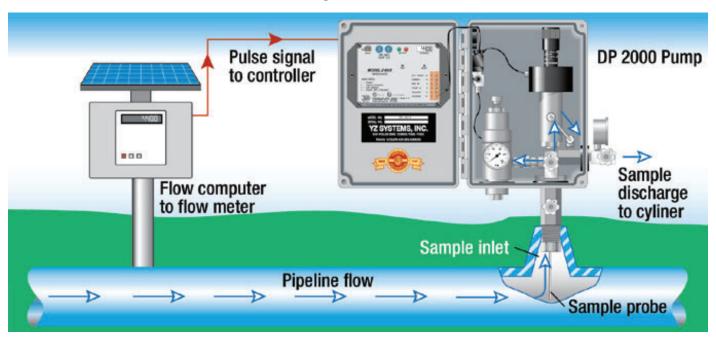


PIM-100 (Pulse Input Module) The optional PIM-100 works with the Z-65 controller and interfaces with a turbine meter's magnetic pick-ups



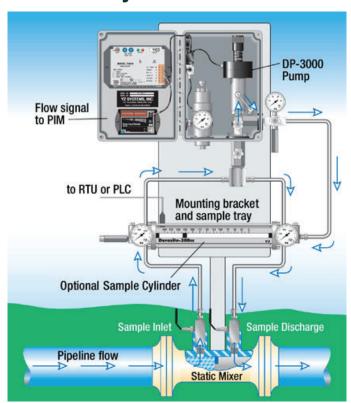
DynaPak 3010 with SlipStream and Constant Pressure Sampler Cylinder.

### The DynaPak 2010



The DynaPak 2010 system is configured for proportional-to-flow sampling.

### The DynaPak 3010 RM



This DynaPak 3010 RM illustration demonstrates the proportion-to-flow sampling configuration using our constant pressure sample cylinder that can provide data on the sampling volume to your Flow Computer, RTU or SCADA system.



HeatPak™



Spun Cylinders



DuraSite™



LinkPlus™

### **DynaPak Accessories & Specifications**

### HeatPak™

The HeatPak<sup>™</sup> is a heated environment for the DynaPak. Engineered to maintain the phase of the sampled flow stream under API 14.1 standards, the HeatPak features an enclosure that is flame retardant to 500°F. Accompanied by a 1500 BTU catalytic heater with a 12 VDC starter, the HeatPak's thermostat reduces the fuel consumption by 50% when the set point is achieved.

### **Spun Cylinders**

Available in 300, 500 or 1000cc capacities, the Spun Cylinder retains an 1800 psi maximum working pressures with 1/4" NPTF connections at either end.

- DOT approved
- Smooth internal bore
- Accessory valves and gauges are available

Part No.		
C6-0002.		300cc
C6-0003.		500cc
C6-0004.		1000cc

### SS Valve Packages

Part No.						
C1-0007.					. 2-Mxl	F
C1-0008.			1-MxF 8	<u> </u>	w/RDisc	C
C1-0009 1	-MxF,	1-MxF	w/R.Disc	& 100ps	si gauge	e
C1-0010 1	-MxF,	1-MxF	w/R.Disc	& 300ps	si gauge	e
C1-0011 1	-MxF,	1-MxF	w/R.Disc	& 600ps	si gauge	е
C1-00121	-MxF	1-MxF	w/R Disc	& 1000n	si nauna	e

#### DuraSite™

The DOT-approved, patented DuraSite Constant Pressure Cylinder features a free-floating piston design which provides for a product and pre-charge chamber.

- Magnetic volume indicator for visual inspection
- Solid 316 stainless steel head integrates the needle valve, rupture disc, gauge port and purge valve in one unit.
- Available ANSI 1500 models are dimensionally identical to standard DuraSite and SmartSite cylinders.

Part No.
DS-150 150cc capacity
DS-300 300cc capacity
DS-500 500cc capacity
DS-1000 1000cc capacity
Call for ANSI 900 & 1500 models and price

### LinkPlus™

LinkPlus provides a direct link between the DynaPak 2010, 2020 or 3010 and your sample vessel. This compact over-pressure device and gauge serves to protect and troubleshoot your system.

- 316 stainless steel
- Includes a pressure gauge, rupture disk and isolation valve.

Part No.		
C1-0002 100	psi	gauge
C1-0003	psi	gauge
C1-0004 500	psi	gauge
C1-0005 1000	psi	gauge
C1-0006	psi	gauge
C1-0120	psi	gauge



YZ BackRack™



Static Mixer Spool



YZ Cylinder Cases

### YZ BackRack™ C0-0233

All it takes is the direct-mount YZ BackRack vessel tray to eliminate the need for an additional 2" mounting pipe, and to minimize the distance between the sample pump outlet and sample vessel inlet. Constructed of 14-gauge stainless steel, this unit bolts directly to the back of the DynaPak 2010, 2020 or 3010. A 300 or 500cc cylinder can be placed into the tray and attached to tubing from the sample to the vessel.

### **Static Mixer Spool**

The Static Mixer Spool Piece assists in obtaining a representative sample from the flow stream by creating a homogeneous mix in the pipeline. The Static Mixer Spool Piece is available in ANSI 600 and 900 versions to meet a variety of applications.

### **YZ Cylinder Cases**

YZ Cylinder Cases exceed all DOT requirements. These cases are constructed of shock-resistant ABS plastic featuring all stainless steel hardware, including a full length piano hinge.

| Part No.

Low-profile security latches

Various sizes available

KK-1										26 x 7 x 5"
KK-2										36 x 8 x 6"
KK-3										26 x 16 x 5"



YZ Systems is part of Ingersoll Rand. Ingersoll Rand (NYSE:IR) advances the quality of life by creating comfortable, sustainable and efficient environments. Our people and our family of brands — including Club Car®, Ingersoll Rand®, Thermo King® and Trane® — work together to enhance the quality and comfort of air in homes and buildings; transport and protect food and perishables; and increase industrial productivity and efficiency. We are committed to a world of sustainable progress and enduring results.

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