



Chemical pumps and accessories • Wellsite and production equipment • Downhole accessories • Pipeline/pigging • ESD's and accessories



## About Plainsman Manufacturing Inc.

Plainsman Mfg. Inc. is a locally owned manufacturing and distribution company operating out of Edmonton, Alberta since 1966.

We manufacture and distribute products for oilfield production, pipeline maintenance, construction and gas and water distribution. Plainsman has an in-house full service manufacturing facility and engineering department that enables us to respond efficiently to customer and industry needs. Our on-site manufacturing facility is equipped with state-of-the-art automation equipment to fulfill customer orders in the most cost efficient manner.

Plainsman is dedicated to providing our domestic and international customers with the best possible service. For this reason, Plainsman operates out of a 44000 sq. ft. facility on the south side of Edmonton that allows us to maintain the level of inventory necessary to meet our customer's demands. Continued registration of our ISO 9001 quality assurance system since 1994 also reflects our commitment to quality and service. At Plainsman, we are constantly seeking out new and better products and services to meet our customer's requirements and the ever-changing demands of the industry.

Over the past 40 years Plainsman has built a solid distribution base which includes oilfield supply stores, OEMs, PC pump suppliers, chemical pump and instrumentation companies and utility companies principally in Western Canada. We are large enough to effectively look after our customer's needs and we're dedicated to providing the kind of personal service and attention our customers deserve.

We pride ourselves on creating a positive company culture that promotes internal career growth opportunities as well as an interesting and enjoyable place to work. What sets us apart from our competition is employee job satisfaction which leads to excellent customer service achieved through the cooperation of all departments.



## Quality Policy Statement

***We provide superior quality products that meet customer and regulatory requirements in a timely, cost-effective manner.***

Our management team sets goals, provides resources and fosters a satisfying environment, enabling us to achieve this.

We demonstrate our commitment to excellence with a Quality Management System that is certified to ISO 9001.

We improve ourselves and our business through lean manufacturing principles and continual improvement.

Our mission is to be our customers' preferred supplier by offering quality products with distinctive value, discovering and acting on our customers' needs, strengthening our relationships, continually improving, and driving out waste.



Lee Makelki  
President



Derek Duncombe  
Vice President of Sales



Mike Kittlitz  
General Manager



Mark Lea-Wilson  
Quality Management  
Representative

# Certificate of Registration

*This is to certify that QUASAR has registered the Quality Management System of:*

## Plainsman Mfg. Inc.

8305 McIntyre Road, Edmonton, AB T6E 5J7

*to the Quality System Standard:*

### ISO 9001:2008

**Initial Registration**  
16 July 2009

**Date of Issue**  
8 August 2012

**Date of Expiry**  
16 July 2015

**Certificate Number**  
Q9165

**Scope:** Design, manufacture and distribution of products for oilfield production, pipeline maintenance and construction, gas and water distribution, industrial applications, pressure fittings and machining services.



A handwritten signature in black ink, appearing to read "J. ...", is written over a horizontal line.

Registrar



Terms and Conditions governing registration and the use of this certificate are defined in the contract between QUASAR and the Holder.  
Contact the certificate holder for further information related to the scope and boundaries of the registration.



The Association of Professional  
Engineers and Geoscientists of Alberta

## PERMIT TO PRACTICE

P09271

### Plainsman Manufacturing Inc.

*Is Hereby Authorized to Engage in the Practice  
of Engineering in the Province of Alberta*



**Start Date:** April 1, 2013  
**Expiry Date:** March 31, 2014  
**Permit Holder Since:** April 11, 2006

*Sean Lawrence*

P.Eng.

President

*A. Schuld*

P.Eng.

Registrar

# Certificate of Authorization Permit

## Quality Management System

Expiry Date: **March 16, 2016**

Reg. No.: **AQP-5081**

### PLAINSMAN MFG. INC.

8305 MCINTYRE ROAD  
EDMONTON, ALBERTA

having complied with the provisions of the SAFETY CODES ACT, is hereby authorized to perform the activities identified in the following table:

	<u>Construction</u>	<u>Repair</u>	<u>Alter</u>
<b>Fittings</b>			
Category C,F,H	Shop	---	---

*As a condition of this permit, the holder is required to participate in interim audits by a safety codes officer to verify that the quality management system is being maintained in a manner acceptable to a safety codes officer.*

Dated at Edmonton, this 15th day of March, 2013




Chief Inspector and Administrator

**Certificate No.: 9102**



**WARRANTY**

## Plainsman Mfg. Inc. Warranty

The purpose of this exclusive warranty is to assure the customer of a free replacement or repair service for an extended period in the event of defects arising with respect to equipment purchased by the customer.

Notwithstanding acceptance of equipment by the customer, Plainsman Mfg. Inc. warrants that it shall repair (or any part thereof) which is not free from defects in material and workmanship at the time of shipment to the customer, provided the customer gives Plainsman Mfg. Inc. notice and the particulars of any claim within 12 months from the date of installation of the equipment or within 18 months from the date of shipping the equipment to the customer, whichever date occurs first.

Upon receiving notice from the customer of a proper claim under this warranty, Plainsman Mfg. Inc. shall with all reasonable speed having regard to the nature of the defect, repair or replace the equipment (or part) pursuant to the terms and conditions hereof. Plainsman Mfg. Inc. may require the customer to return the equipment (or part) transportation prepaid, to establish the claim. No credit or allowance will be given to the customer for any repairs or alterations made to the equipment (or part) without the written approval of Plainsman Mfg. Inc.

The customer's exclusive remedy with respect to the design, materials manufacture, installation and serving of the equipment and Plainsman Mfg. Inc.'s sole liability (including that of its officers, employees and agents) in respect thereof shall in every event be limited to the repairing or replacing of the equipment (or part thereof) in accordance with the warranty. Plainsman Mfg. Inc. shall not be liable for any general, special or consequential damages arising from acts or negligence in respect thereof.

Except as set out in this warranty, there are no representations, warranties, conditions or collateral agreements, expressed or implied, statutory (including, without limitation, the sale of goods act) or otherwise, with respect to any equipment (or part thereof) including, without limitations, with respect to merchantability, quality, design, material, workmanship, description, or fitness for purpose. Any documentation between Plainsman Mfg. Inc. and the customer respecting the equipment will be subject to the terms and conditions provided herein.

As Plainsman Mfg. Inc. has no control over the equipment following delivery, the customer assumes responsibility for all claims by third parties affected by the equipment and for all claims with respect to the equipment used in any off-shore accordance with the provisions of this warranty. All warranty claims are governed by the laws of the Province of Alberta regardless of the location of the equipment. Plainsman Mfg. Inc. shall take out and keep in force comprehensive general public liability insurance with respect to the equipment and the business operations of Plainsman Mfg. Inc. covering bodily injury, property damage and product hazards, with total limits of not less than \$2,000,000. Plainsman Mfg. Inc. shall provide copies of such insurance policies to the customer upon request.

Plainsman Mfg. Inc warrants that it has an unfettered right to sell the equipment and that the customer shall have and enjoy quiet possession of the equipment free of any lien, claim, charge or encumbrance created or caused by Plainsman Mfg. Inc. in favor of third parties.





## Products & Services

### Chemical Pumps & Accessories

Atomizers  
Ball Check Valves  
Ceramic Coated Plungers  
Chemical Injection Pumps  
Chemical Pump Drip Pans  
Chemical Pump Packing  
Chemical Pump Skid Packages  
Drum Gauges  
Line Filters  
Low Emission and Recovery Pumps  
Micro Valve Kits  
Pressure Regulators  
Tank Gauges

### Downhole Accessories

PL5 Centralizing Couplings  
PowerTorq™ Tubing Drains  
Rod Guides  
Shear Couplings  
Sucker Rod Couplings  
ToughTorq™ PL5 Centralizing Couplings  
ToughTorq™ Shear Couplings  
Tubing Plugs  
Type SB Tubing Drains

### Wellsite & Production

Back Pressure Regulators  
Ball Check Valves  
Blow Out Preventers  
Casing Coupling  
Chokes  
Excess Flow Valve  
Flow Cross  
Flow Tees  
Grizzly Environmental Stuffing Box  
Orifice Plates  
Orifice Unions  
Polished Rod Clamps  
Rod Rotators  
Run Ticket Boxes  
Slim Line Dual Pack Stuffing Boxes  
Stuffing Box Packing  
Stuffing Boxes  
Swing Check Valves  
Tank Valve Safety Lockout

### Emergency Shutdown Systems

HiLo-Matic™ Hydraulic Controller  
HiLo-Matic™ PLX™ Switch  
HiLo-Matic™ Pressure Pilot

### Gas Utilities & Water Distribution

Electrofusion Equipment  
Meter Lifts  
Insulating Unions  
Meter Risers  
Meter Swivels  
Polyethylene Casing Insulators  
Polyethylene Fittings  
Safety Flex Marker Posts  
Steel Band Casing Insulators  
Tracer Wire

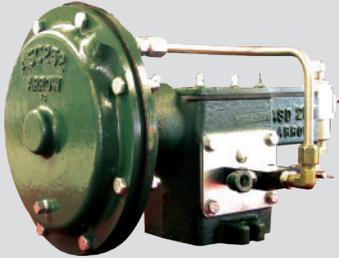
### Pipeline & Pigging

Air Bags  
Bullet Cup Pigs  
Cleaning Pigs  
Combination Pigs  
Construction/Batching Pigs  
Criss Cross Pigs  
End Seals  
Filming Pigs  
Flange Insulation Kits  
Gauging Pigs  
High Density Foam Pigs  
Inflatable Spheres  
ISOJOINTS  
Multi Disc Pigs  
Pig Balls  
Pipe Repair Clamps  
PL Cups and Discs  
Polyethylene Casing Insulators  
Repair Clamps and Sleeve Couplings  
Safety Flex Marker Posts  
Scraper Pigs and Cups  
Soft Density Foam Pigs  
Soluble Pigs & Plugs  
Steel Band Casing Insulators  
Tracer Wire  
Tuff Cup and Tuff Disc Pigs  
Wire Brush Pigs  
Wrap It Mechanical Pipe Seals

**PRODUCTS & SERVICES**

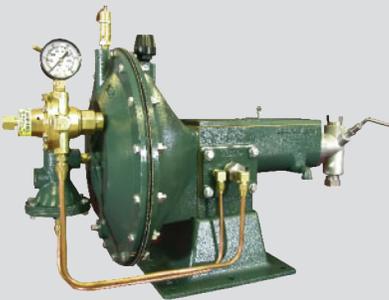


## Chemical Pumps & Gauges



### Arrow 510 Pump

- Proven and reliable pneumatic pump
- Plainsman's patented micro valve assembly for long life
- Discharge pressures to 6,000 psi
- 510 Enviro Pump retrofit kit available for 100% emission recovery



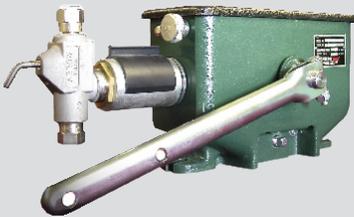
### Arrow 500 Pump

- Volumes up to 600 gallons per day
- High operating efficiency
- Extremely high discharge pressures—up to 12,000 psi



### Arrow 430 Pump

- Electric motor driven, low maintenance
- No plastic internals
- Up to 4 pumps can run off 1 motor
- Convertible to use hydraulic power source



### Arrow 10 Series Beam Pump

- Reliable and versatile under any operating condition
- Works on a cam, no gears
- Single or dual head operation



### Arrow 12 & 13 Pumps

- Gas or air operation
- All stainless steel construction
- Timer adjustable



### Horizon Pumps

- Single or dual head options
- Horizon HD: hydraulically driven
- Horizon ER: pneumatic driven, full recovery or low emission
- Equipped with Plainsman's micro valve assembly



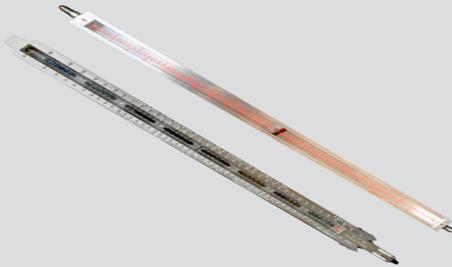
### Solar Pump

- Field Proven with thousands of installations
- Requires no gas, no air or electrical power source
- Wide range of configurations for almost any application



### Ball Check Valves

- Metal to metal seats
- Simple design easy to install, with only two moving parts
- Low cracking pressure suitable for vacuum or low-pressure



### Drum & Tank Gauges

- NPT connections
- Available in a variety of lengths



### Chemical Pump Skids

- Fully assembled
- Capable of multiple injection points with different rates
- Heavy-duty steel beam construction





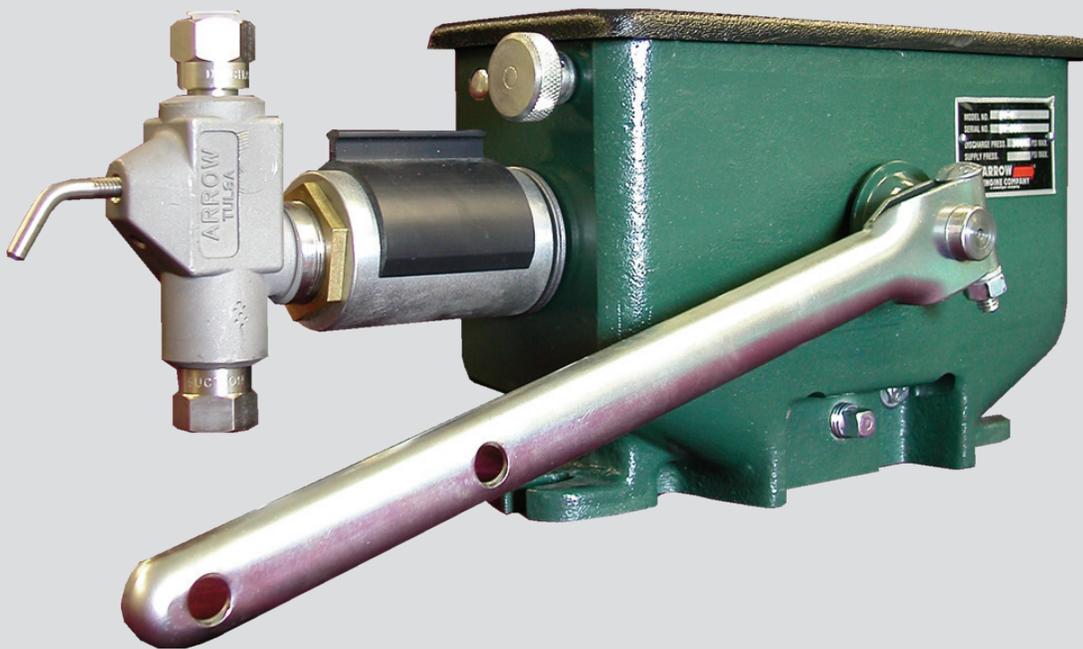
Exclusive Distributor:  
**Arrow Engine Company**  
1-(800)-331-3662  
  
www.arrowengine.com

## Arrow 10 Series

The Arrow 10 Series, or more commonly referred to as the Beam Pump, is a positive displacement pump that is powered by a direct connection with rod, 1/4" pipe or cable to the walking beam or rod line. The 10 Series pumps on the upstroke of the walking beam and then returns to its set position on the downstroke.

### Features

- Maximum flow rate dependent on pumpjack's strokes per minute
- Governing adjustment knob allows for adjustable flow rates
- Head assembly: Single or dual head configurations available
- Plunger sizes: 3/16", 1/4", 3/8", 1/2", 3/4" or 1"
- Packing & O-rings: Any combination of Buna-N, Fluorosilicone, Hard, Kalrez, Teflon or Viton
- Standard injector heads are supplied with ductile iron body and stainless steel trim
- Complete stainless steel configuration is optional
- Metal-to-metal seats available as alternatives to standard injector head parts



ARROW 10 SERIES



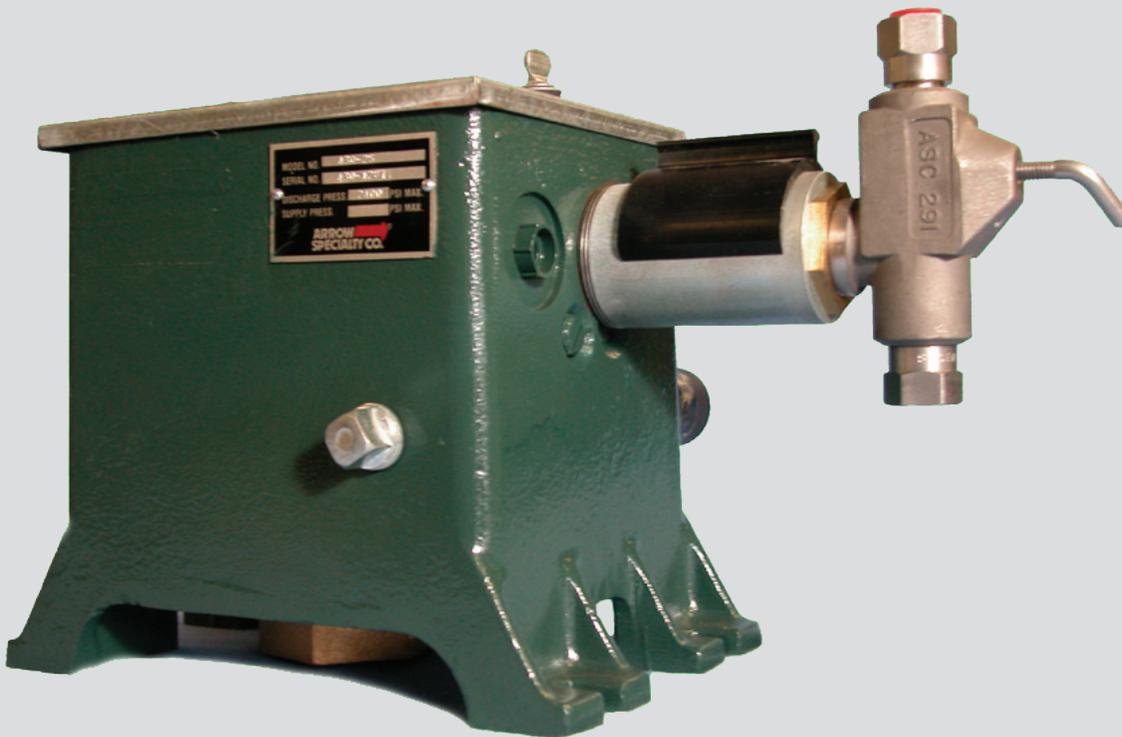
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www.arrowengine.com

## Arrow 430 Series

The Arrow 430 Series is able to handle a wide variety of chemicals used in oil and gas production facilities, pipelines, process plants and other applications where a rugged, easy to maintain, proportioning pump is required. The 430 Series utilizes electric motors, v-belt, pneumatic motors or gasoline engines as a power source.

### Features

- Adjustable flow rate
- Head assembly: 1 to 8 heads (all functioning off one motor)
- Gear ratios: Choice of 25:1, 50:1, or 100:1
- Motor: 110 volt, 12 volt, 12 volt explosion proof, three-phase or hydraulic
- Plunger sizes: 3/16", 1/4", 3/8", 1/2", 3/4" or 1"
- Packing & O-rings: Any combination of Buna-N, Fluorosilicone, Hard, Kalrez, Teflon or Viton
- Standard injector heads are supplied with ductile iron body and stainless steel trim
- Complete stainless steel configuration is optional
- Metal-to-metal seats available as alternatives to standard injector head parts



ARROW 430 SERIES





Exclusive Distributor:  
**Arrow Engine Company**  
1-(800)-331-3662  
  
www.arrowengine.com

## Arrow 12 & 13 Series

The Arrow 12 and 13 Series drum pumps offer a unique solution to chemical injection applications. The 12 Series operates on gas or air at a regulated supply pressure of 15 to 75 PSI. The 13 Series operates on gas or air at a regulated supply pressure of 15 to 85 PSI.

### Features

- Adjustable flow rate from one pint per day up to 54 quarts per day
- All stainless steel wetted parts, piston housing and timer assure minimum corrosion
- No external lubricator required due to plunger packing design
- Plunger size: 1/2" or 1/4"
- Packing & O-rings: Any combination of Buna-N, Fluorosilicone, Hard, Kalrez, Teflon or Viton
- Standard injector heads are supplied with ductile iron body and stainless steel trim
- Metal-to-metal seats available as alternatives to standard injector head parts



ARROW 12 & 13 SERIES





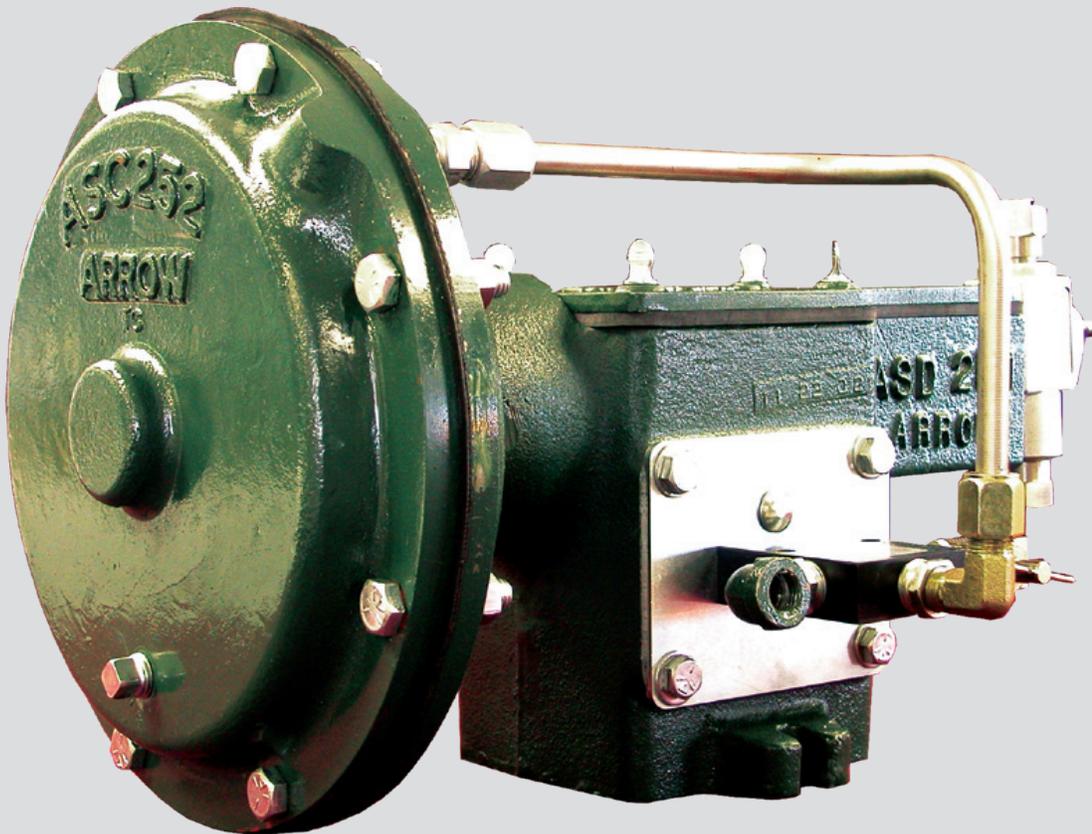
Exclusive Distributor:  
**Arrow Engine Company**  
1-(800)-331-3662  
  
www.arrowengine.com

## Arrow 510 Series

The Arrow 510 Series is powered by a diaphragm motor with a spring return. This chemical injection pump has an adjustable speed, which is controlled by regulating the exhaust gas discharge.

### Features

- Stroke Lengths: 1/3" or 1"
- Plunger sizes: 3/16", 1/4", 3/8", 1/2"
- Output: Up to 100 quarts per day depending on plunger size
- Packing & O-rings: Any combination of Buna-N, Fluorosilicone, Hard, Kalrez, Teflon or Viton
- Standard injector heads are supplied with ductile iron body and stainless steel trim
- Complete stainless steel configuration is optional
- Metal-to-metal seats available as alternatives to standard injector head parts



ARROW 510 SERIES



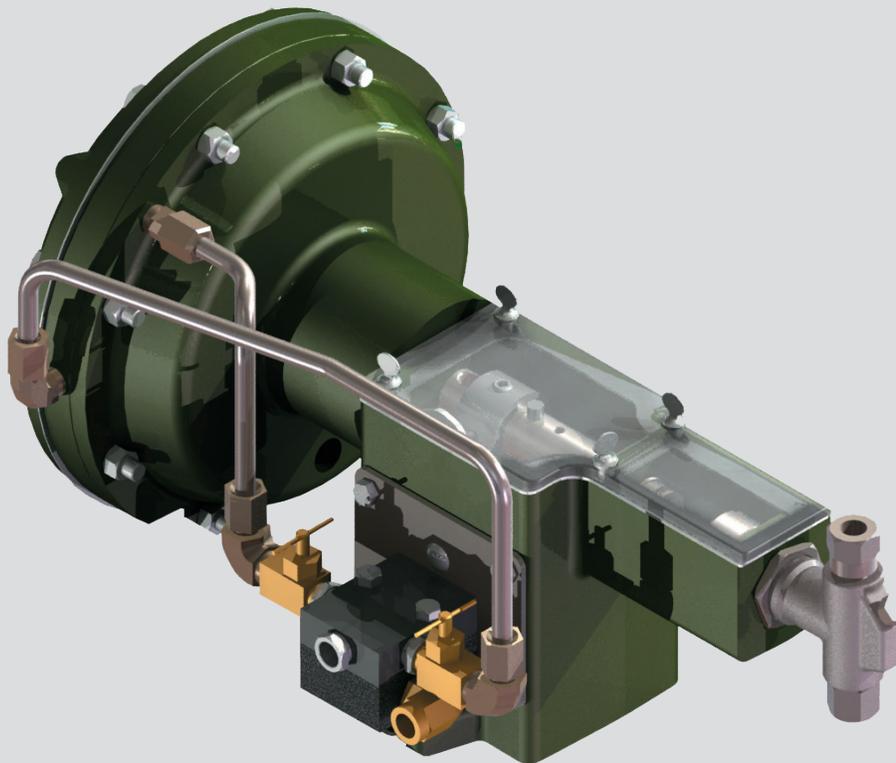
## 510 Enviro Pump

The 510 Enviro Pump kit turns a conventional 510 style pump into a 100% emission recovery pump, economically eliminating GHG emissions from chemical injection. It operates on differential pressures as low as 10 psi and inlet pressures up to 100 psi, with all exhaust gas going back into the pipeline.

- Retro-fit with kit to any existing 510 style pump
- Based on proven 510-style pump
- 100% exhaust recovery

### Features

- Environmentally friendly
- Plainsman microvalve
- Low pressure operation
- Cost effective way to be environmentally responsible
- Simple and easy to work on
- 3/16", 1/4", 3/8" or 1/2" plunger
- Operates on differential pressure
- Inlet pressures up to 100 psi
- Patents pending



510 ENVIRO PUMP



## Horizon HD™ Pump

This hydraulic-driven piston pump is an economical alternative to an explosion proof electric pump. The hydraulic power is supplied by the oil pump on the power unit engine, and discharged back into the oil pan for zero emissions. It can also be driven by a hydraulic system.

### Features

- Oil or hydraulic fluid driven
- Economical alternative to explosion proof electric pump
- Closed loop oil circuit means zero emissions
- 100 psi max supply pressure
- 10 to 50 psi differential pressures
- Proven Arrow fluid end and Plainsman Microvalve
- Inject up to 9 gallons (35 L) per day
- Environmentally friendly
- Single head or dual head
- Temperature range from -30°C to 150°C

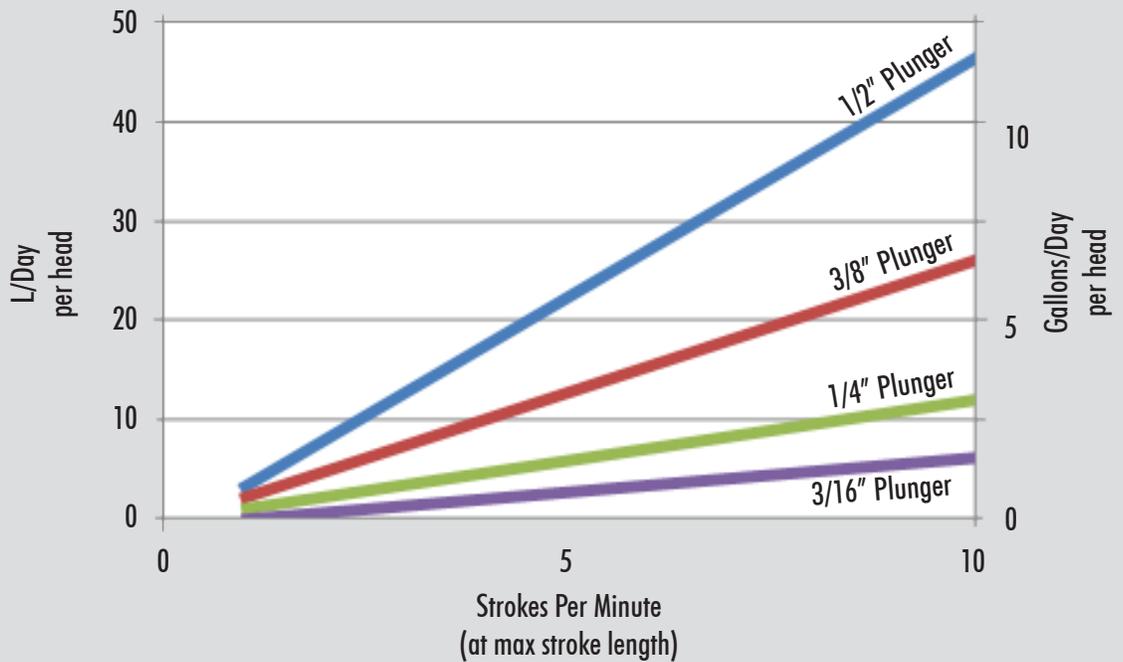


HORIZON HD™ PUMP

# HORIZON HD™ PUMP



VOLUMETRIC SPECIFICATIONS		
Plunger Size	Volume	
	Minimum	Maximum
3/16"	200 mL/day	5 L/day
1/4"	500 mL/day	9 L/day
3/8"	1 L/day	20 L/day
1/2"	2 L/day	35 L/day



MADE IN CANADA



Phone: 780-496-9800 Fax: 780-463-9800 Toll Free: 1-877-448-0586

[www.plainsmanmfg.com](http://www.plainsmanmfg.com)

Specifications subject to change without notice

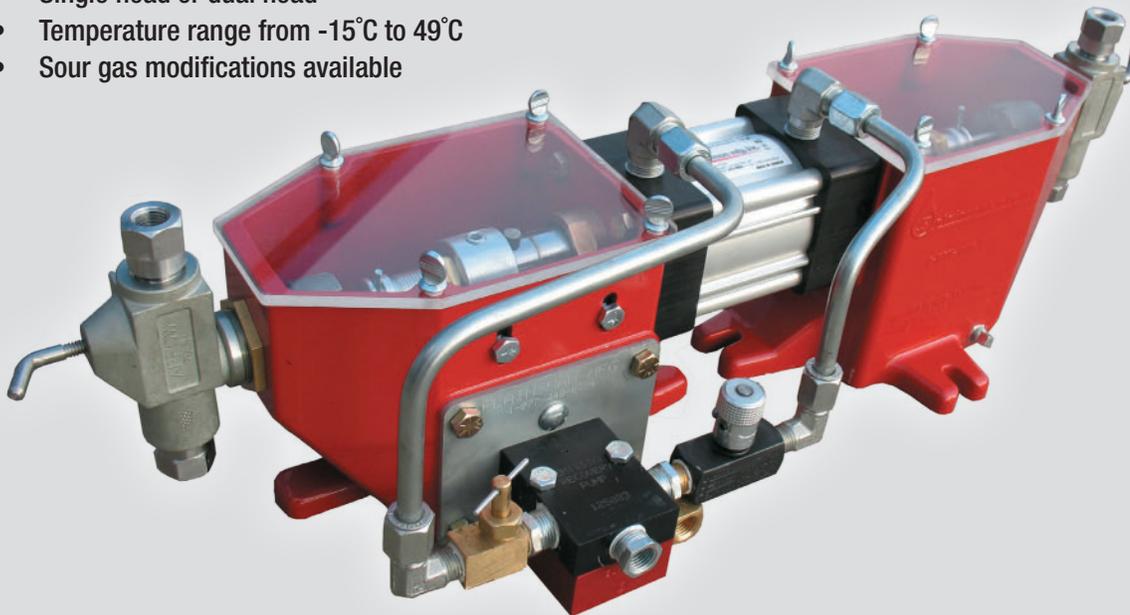
(2), PB-CHER15

# Horizon ER™ Pump

This pneumatic piston pump economically eliminates GHG emissions from chemical injection. It operates on differential pressures as low as 10 psi and inlet pressures up to 250 psi, with all exhaust gas going back into the pipeline. Volume adjustment is simple and versatile with both stroke rate and stroke length adjustments.

## Features

- Recover exhaust gas into pipeline
- 250 psi max supply pressure
- 10 to 100 psi differential pressures
- Proven Arrow fluid end and Plainsman Microswitch
- Inject up to 66 gallons (250L) per day
- No lubricator required
- Environmentally friendly
- Single head or dual head
- Temperature range from -15°C to 49°C
- Sour gas modifications available



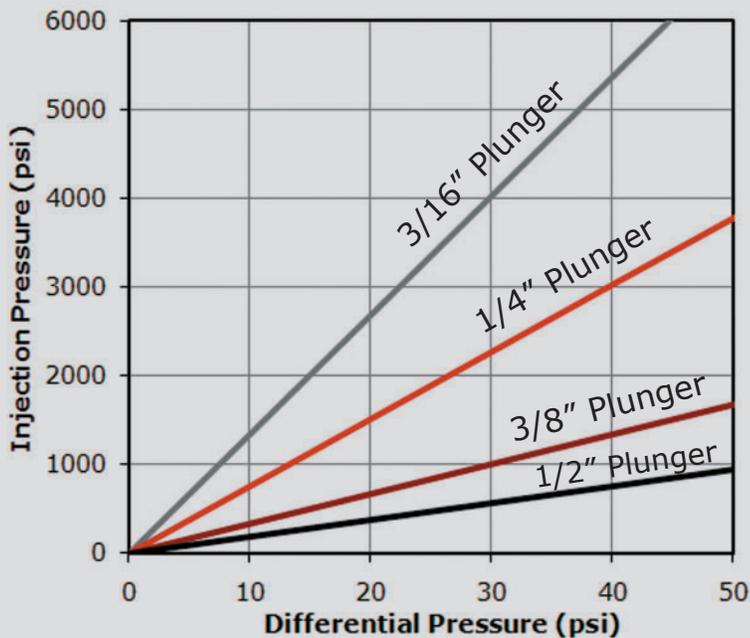
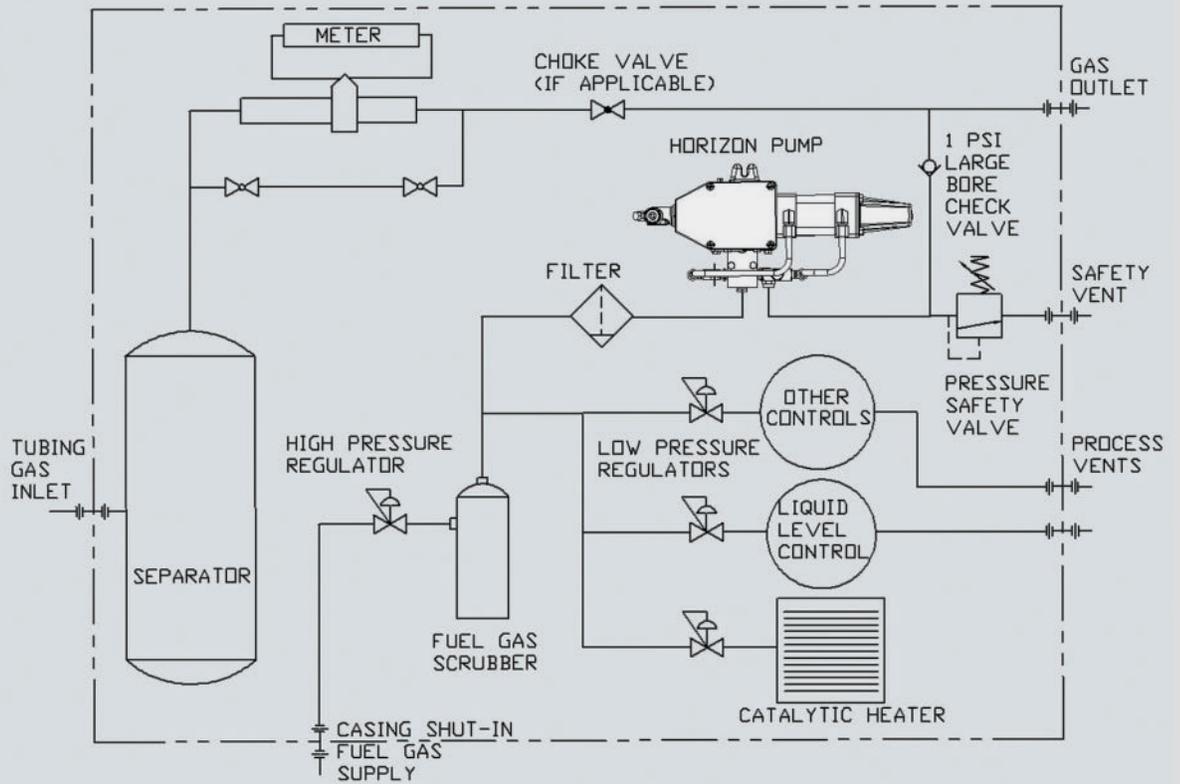
Also available with low emission switch for low pressure and reduced emission operation

### VOLUMETRIC SPECIFICATIONS

Plunger Size	Volume	
	Minimum	Maximum
3/16"	200 mL/day	35 L/day
1/4"	500 mL/day	65 L/day
3/8"	1 L/day	155 L/day
1/2"	2 L/day	250 L/day

# HORIZON ER PUMP

## Typical Installation\*:



## Order Information:

1. Single or Dual Head
2. Chemical being injected
3. Packing/O-Rings
4. Stainless or Ductile
5. Injection Rate
6. Plunger Size
7. Injection Pressure

\*Contact Plainsman for more details

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# Plainsman Chemical Pump Micro Valve Assembly

The Plainsman Micro Valve Assembly includes a patented trigger mechanism and modified micro switch that improves pump performance and extends life. It increases the micro switch life three fold and allows stroke rates below three strokes per minute. The Micro Valve Assembly can also retrofit existing 5100 or 5000 style diaphragm pumps.

FEATURE	BENEFIT
A. Stroke rates below 3 strokes/min	Cost savings due to decreased chemical consumption Pump consumes less fuel gas
B. Trigger plate extends the life of the micro switch	Cost savings due to longer lived micro switch
C. Compatible with Texsteam series 5100, CVS series 51 and Flomore series 5200.	Can retrofit existing pump styles with Plainsman Micro Valve Assembly
D. Also available for 5000 series diaphragm pumps	Can improve different model pumps with same proven technology



Plainsman Model 510B-MV Reverse  
Acting Trigger Plate Mechanism  
U.S. Patent No. 6,263,777  
Canadian Patent 2,294,410

## Example 'A'

- An operator is using a Plainsman pump with a 3/8" plunger operating at 1.5 strokes/min to produce a required 5 liters/day
- Most switches stall at less than 3 strokes/min, which requires an end user to pump more than the required 5 liters/day
- Net savings in chemical is 2 liters/day. Using methanol at a cost of \$1.20 per gallon, savings are \$.60/day
- Net savings in vented fuel gas (148 cubes per day per gallon) \$.50/day

## Example 'B'

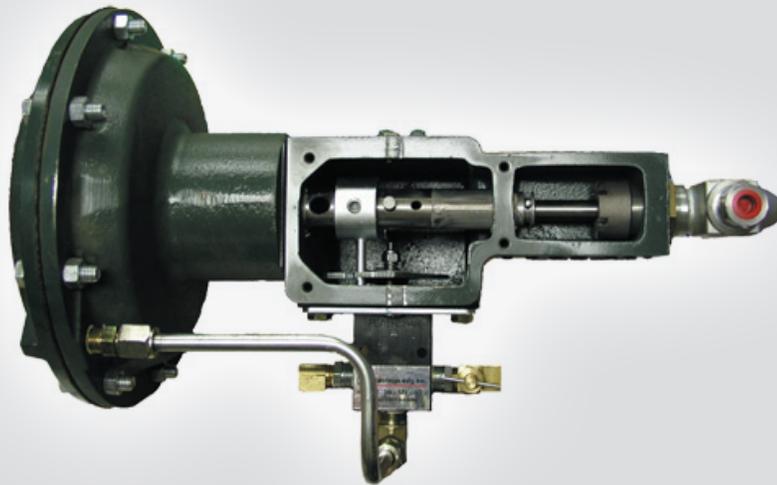
- The Plainsman trigger plate triples the life of a standard micro switch
- Net savings is 2 switches per life cycle plus labor estimated at \$250.00

## Technical Specifications

- Tested to over 16 million cycles
- Maximum Inlet Pressure: Up to 35 psi is the normal operating range (higher supply pressures are accommodated with a regulator)
- Stroke Rate: 0-30 strokes/min. at 35 psi inlet pressure is the normal operating range

## Ordering Information

- Specify the model 510B-MV or 500B-MV assembly kit if you are converting an existing pump
- Special conversion kits are available to convert pumps in the field without removing the rod and diaphragm, please ask our salespeople for more information
- Specify the model 510B or 500B-MV with your choice of head material and plunger size, and the prefix "MICRO" if you are ordering a new pump



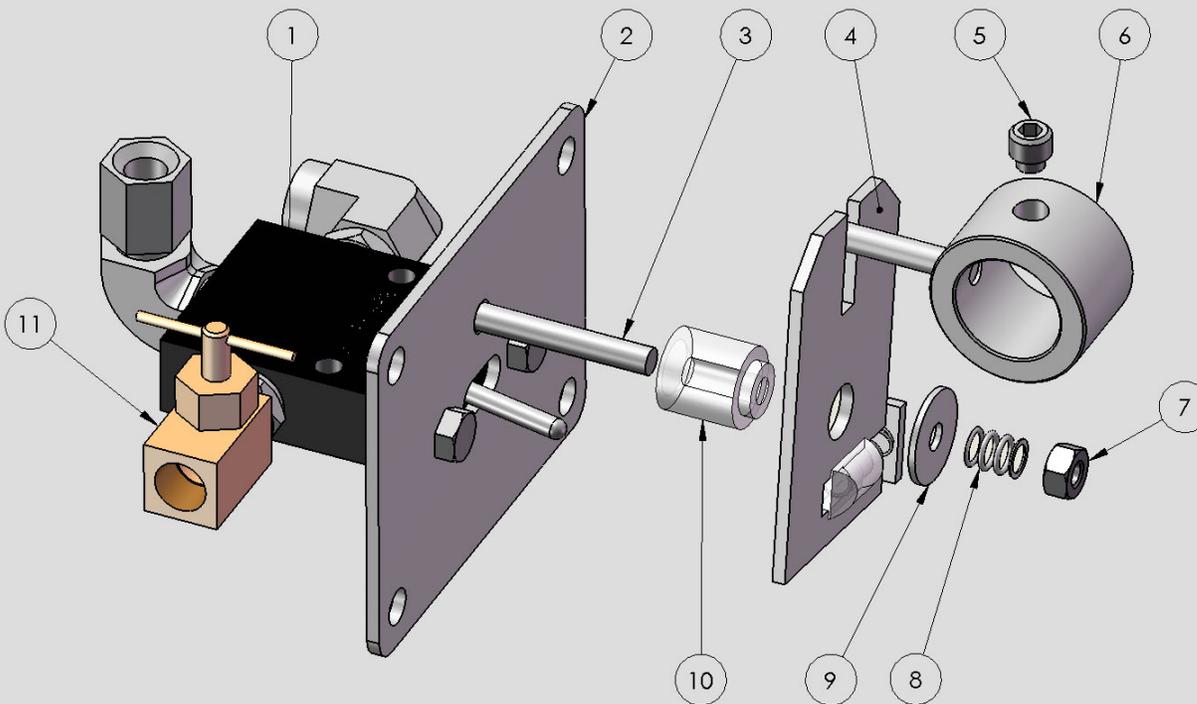
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# Micro Valve Assembly

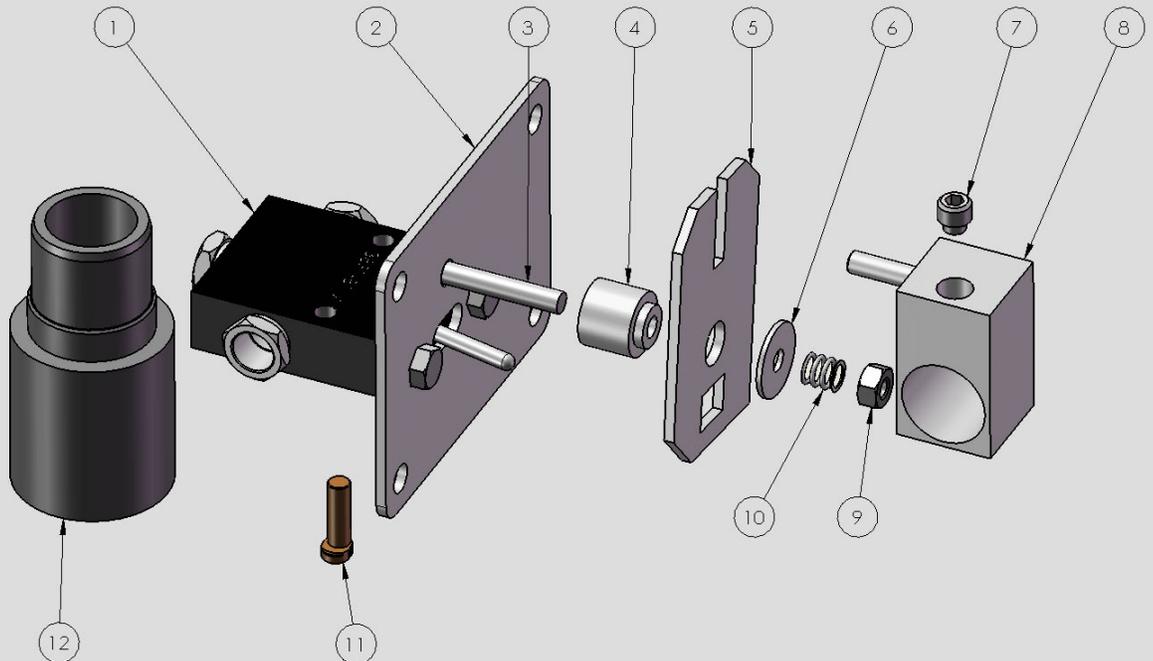
## 510B Parts List

ITEM	PART NUMBER	DESCRIPTION
1	125072	Plainsman Micro Switch
2	125067	Cover Plate
3	125036	Carriage Bolt
4	125040	Trigger Plate
5	125078	Set Screw
6	125063	Trigger Ring
7	125400	Nylock Nut
8	125037	Trigger Plate Mounting Spring
9	125079	Trigger Plate Washer
10	125069	Bearing Spacer
11	125035	Exhaust Needle Valve



## 500B Parts List

ITEM	PART NUMBER	DESCRIPTION
1	125072	Plainsman Micro Switch
2	125068	Cover Plate
3	125087	Carriage Bolt
4	125088	Bearing Spacer
5	125075	Trigger Plate
6	125079	Trigger Plate Washer
7	125078	Set Screw
8	125064	Trigger Block
9	140033	Nylock Nut
10	125037	Trigger Plate Mounting Spring
11	130238	Adjusting Pin
12	125039	Rod Bushing



MADE IN CANADA



## P-5700 Tank Gauge

The simplest most effective way to meter chemicals is by using a Plainsman Tank Gauge. All tank gauges come with a calibrated rate scale and a universal volume height scale.

### Features

- High visibility rate scale
- 1/2" NPT carbon steel connections (stainless available)
- Aluminum construction for corrosion resistance
- Floating sight ball for easy fluid level indication
- Dual calibration (rate and height) standard
- Teflon seals standard
- Available in a variety of lengths
- Retractable mounting bracket included

### Technical Specifications

#### Wetted Parts:

Nipple: Carbon steel (stainless optional)

Seal: Teflon

Glass: Schott duran

#### Other Parts:

Body: Aluminum

Scale: Metric height / rate

### Ratings

Liquid

Height: 1 division = 1 cm

Rate: Measured in litre / 24 hrs, 1 division per minute



P-5700 TANK GAUGE

MADE IN CANADA



# P-5700 TANK GAUGE



## Ordering Information

### Stock:

1) Order using model number from the table below

### Custom:

- 1) Determine height required
- 2) Choose nipple material
- 3) Choose scale type
- 4) Construct model number from system below:

### Model Numbering:

P5700-AA-BB-XYZ (i.e. P5700-52-48-CTM)

AA: overall length

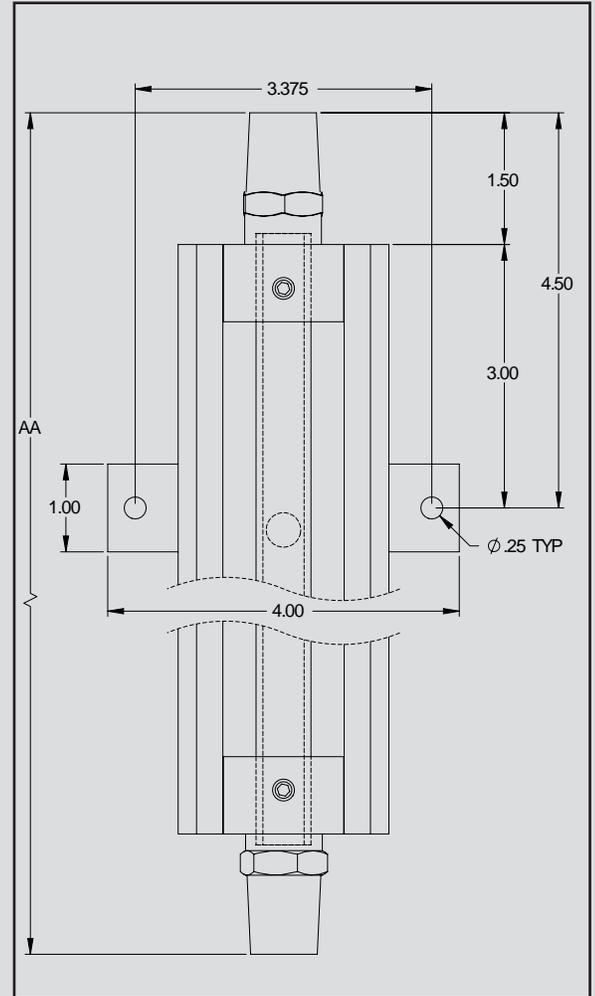
BB: scale length (BB = AA - 4 in.)

X: nipple material (C - carbon steel,  
S - Stainless)

Y: seal material (T - TFE)

Z: scale type (M - Metric Rate/Height,  
R - Rate, H - Height,  
C - Clear, X - Special)

## General Dimensions



MODEL#	LENGTH		MATERIAL		SCALE	PRESSURE RATING (PSI)
	'AA'	SCALE	NIPPLE	SEAL		
P5700-24-20-CTM	24"	20"	Carbon Steel	TFE	Metric R/H	185
P5700-36-32-CTM	36"	32"	Carbon Steel	TFE	Metric R/H	165
P5700-52-48-CTM	52"	48"	Carbon Steel	TFE	Metric R/H	140
P5700-60-56-CTM	60"	56"	Carbon Steel	TFE	Metric R/H	130
P5700-64-60-CTM	64"	60"	Carbon Steel	TFE	Metric R/H	120
P5700-72-68-CTM	72"	68"	Carbon Steel	TFE	Metric R/H	100
P5700-88-84-CTM	88"	84"	Carbon Steel	TFE	Metric R/H	n/a

Pressures at 150° F Max, No Corrosion. Glass is not recommended for use in steam or superheated water applications

MADE IN CANADA



Phone: 780-496-9800 Fax: 780-463-9800 Toll Free: 1-877-448-0586

www.plainsmanmfg.com

Specifications subject to change without notice

(7), PB-GAUT01



**DRUM GAUGE**

## P596 & P779 Drum Gauge

The simplest most effective way to meter chemicals, Plainsman Drum Gauges come calibrated for rate and volume on 55 gallon drums. Choose from a plain P596 gauge or a P779 with a built-in rate testing valve.

### P596 & P779 Drum Gauge Standard Features

- Designed for horizontal 55 gallon drum
- 3/4" NPT Inlet, 1/4" NPT Outlet
- Retaining pin hole not drilled through front of casting to protect operator from overflow spill or spray
- Special seal used in critical seal area instead of o-ring for better seal and longer glass life
- Cast aluminum frame is dual calibrated and serves as a volume and rate gauge
- Floating sight ball for easy fluid level indication
- Optional vent connection

### P596 Drum Gauge Only

- Optional stainless steel nipple

### P779 Drum Gauge Only

- Complete with spring loaded test valve for rate tests
- Optional stainless steel valve
- Optional extra long valve
- Teflon seals in valve

### Ratings

**Volume:** 5 - 55 Gallons, 20 - 205 Litres

**Rate:** 1 - 70 Quarts/Day for 1 min test

1 - 70 Litres/Day for 1 min test



### Ordering Information

#### Model Number

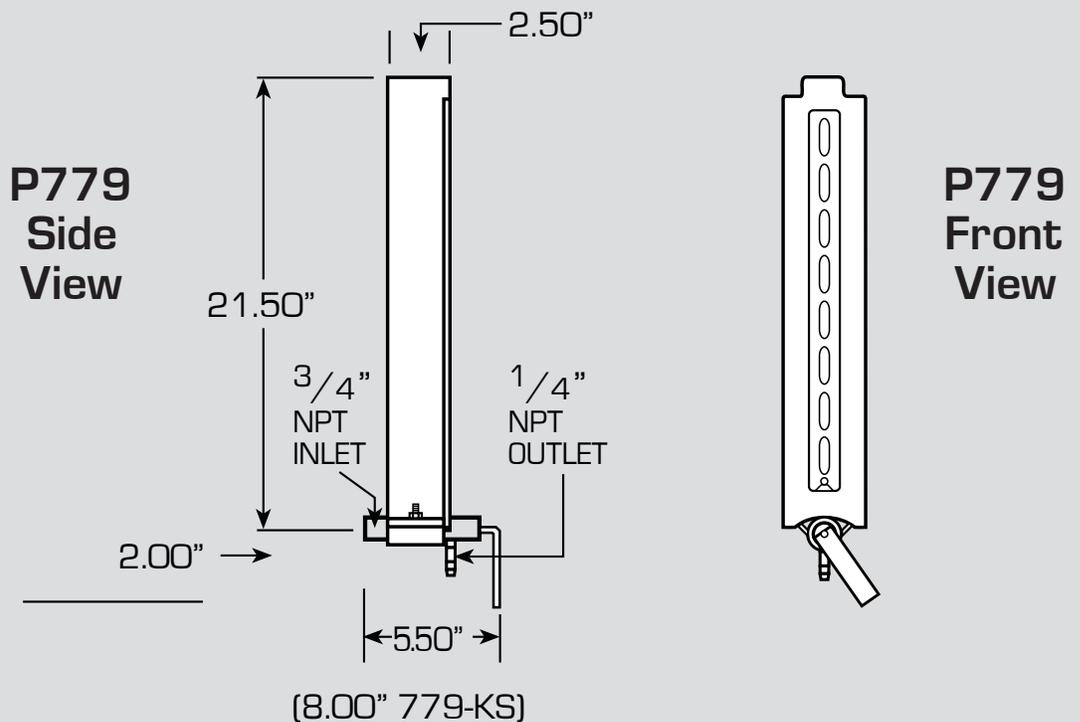
- P596 (Standard)
- P596S (Stainless Steel Wetted Parts)
- P779 (Standard)
- P779-S (Stainless Steel Wetted Parts)
- P779-KS (King Size Valve)
- P779-V (Vented Top)
- Alternate Seal Material (if necessary)



# DRUM GAUGE



PART	MATERIAL			
	779	779-S	779-KS	779-V
Retainer Seal	Viton (Nitrile Opt.)	Viton (Nitrile Opt.)	Viton (Nitrile Opt.)	Viton (Nitrile Opt.)
Valve Shaft	SS	SS	SS	SS
Valve Body	Carbon Steel, Zinc Pltd.	SS	Carbon Steel, Zinc Pltd.	Carbon Steel, Zinc Pltd.
Valve Seat	Teflon	Teflon	Teflon	Teflon
Shaft Seal	Viton (Nitrile Opt.)	Viton (Nitrile Opt.)	Viton (Nitrile Opt.)	Viton (Nitrile Opt.)
End Block Seal	Teflon	Teflon	Teflon	Teflon
End Block	Carbon Steel, Zinc Pltd.	SS	Carbon Steel, Zinc Pltd.	Carbon Steel, Zinc Pltd.
Glass	Schott Duran	Schott Duran	Schott Duran	Schott Duran
Shaft Spring	SS	SS	SS	SS
Vent Bushing	N/A	N/A	N/A	Carbon Steel, Zinc Pltd.



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Specifications subject to change without notice

(3), PB-GAUD01

# Tubular Gauge Glass

Exclusive distributor of Schott Duran Tubular Gauge Glass. Custom lengths available.  
Working pressures up to 600 psi (4100 kPa) & temperature ratings up to 425°F (218°C).

	OD	MAX LENGTH	DESCRIPTION
Standard (Clear)	1/2"	72"	Good for applications such as liquid level gauges, sight flows, low pressure boilers, closed tanks, and hydraulic equipment. Standard glass is economical, with a long service life.
	5/8"	85-1/2"	
	3/4"	72"	
Redline	1/2"	72"	The red line shaded with white lines makes it easier to read the liquid level.
	5/8"		
	3/4"		
Heavywall (Redline)	5/8"	48"	Good for flowmeter applications (crude oil, water or gas). Permits stable and reliable operation while viewing flow rates.
	3/4"		

## Options

ACRYLIC                      72" maximum length  
POLYCARBONATE        96" maximum length

Rubber gasket sizes    1/2", 3/4", and 5/8"



TUBULAR GAUGE GLASS



## Chemical Pump Skid

Designed to be a complete stand-alone package for all your chemical injection needs. The Plainsman Chemical Pump Skid offers versatility, portability and a reliable weather-proof chemical management system. Available with AC, DC, solar, or pneumatic powered pumps, the skid is fully assembled and ready to plumb into your injection point.

### Features:

- Fully assembled
- 500 gallon (1890 L) steel dual wall, vacuum sealed chemical tank
- Plainsman P-5700 tank gauge
- Trusted Arrow chemical pumps with common parts for service
- Capable of multiple injection points with different rates
- Pressure safety release valve
- Chemical drip trays
- Heavy-duty steel beam construction
- Isolatable heads
- Built-in filter

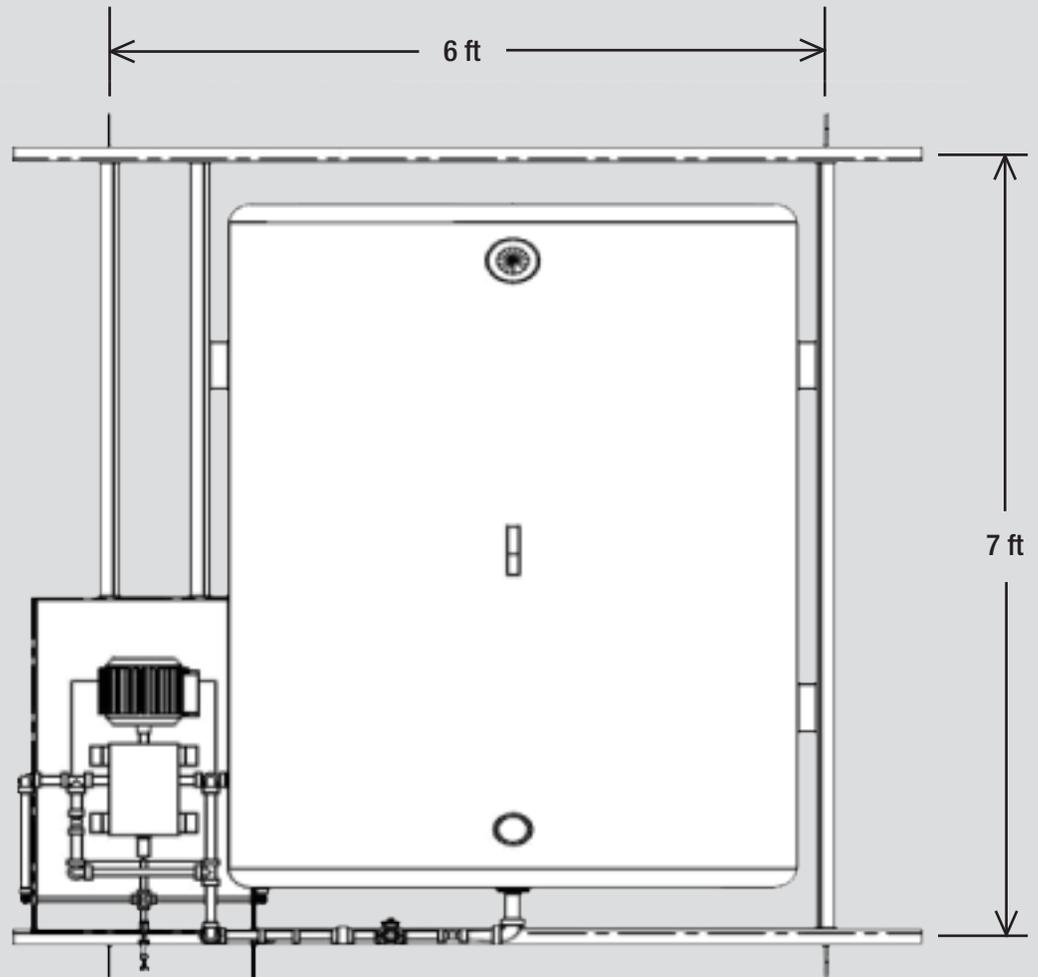


CHEMICAL PUMP SKID

# CHEMICAL PUMP SKID



## Footprint



## Options

- 300 gallon tank
- 2" camlock fill for chemical tank
- 120 VAC, 240 VAC, 12VDC (non-explosion proof or explosion proof), solar, pneumatic
- Various plunger sizes and packing materials for specific applications available

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(1), PB-CHPU01



# PUMP ACCESSORIES

## Model AM 0001 Atomizer

Save chemical costs by using chemicals more efficiently. The Atomizer disperses liquids more efficiently and also acts as a check valve.

### Features

- Accelerates the mixing of liquids or promotes atomization of liquid into gas
- Use for line check or as a backup for line check

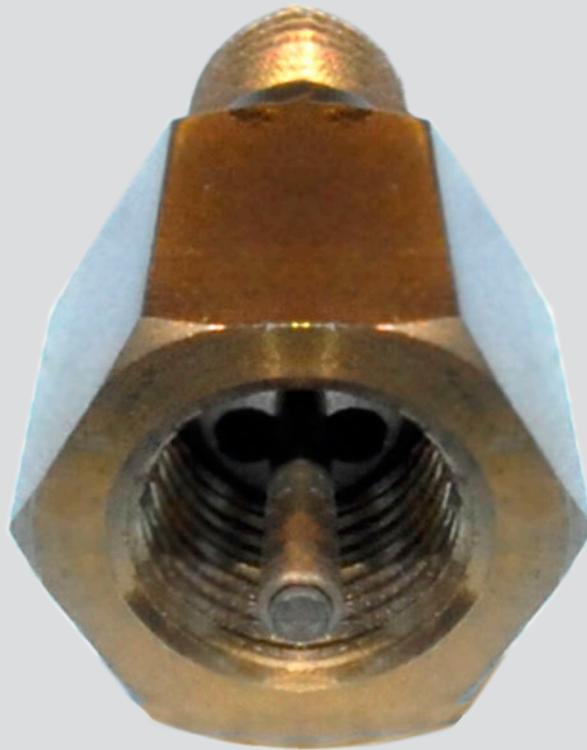
### Specifications

**Inlet:** 1/4" fNPT

**Outlet:** 1/4" mNPT

**Opening Pressure:** 150 to 300 psi

**Rated Pressure:** 6000 psi



## Plainsman Ball Check Valves

Reliable, field proven check valves.

### Features

- Metal to metal seats
- Simple design makes it easy to install and maintain, with only two moving parts
- Low cracking pressure makes it suitable for vacuum or low-pressure applications
- Lower price component to replace the alternatives in the same application
- Designed for manufacturing to keep costs down

### Technical Specifications

**Cracking Pressure:** 3-5 PSI [20-35 kPa]

Viton seals standard

**Temperature Range:** Based on viton seal, -15°F to 400°F (-26°C to 205°C)

**Spring:** Stainless steel (Inconel optional)

**Ball:** Stainless steel

**Spring Retainer:** CF8M stainless

**Note:** Valves without a CRN cannot be used in piping subject to the ALBERTA PRESSURE EQUIPMENT SAFETY REGULATION



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*Specifications subject to change without notice*

## Part Numbers

PLAINSMAN MODEL NO.	CONNECTIONS	CV	MAXIMUM WORKING PRESSURE	STANDARD BODY MATERIAL
CB-25*	1/4" fNPT x 1/4" fNPT	0.69	3000 PSI	12L14 CARBON STEEL
CB-37*	3/8" fNPT x 3/8" fNPT	2.56	3000 PSI	12L14 CARBON STEEL
CB-50*	1/2" fNPT x 1/2" fNPT	3.7	3000 PSI	12L14 CARBON STEEL
CB-75*	3/4" fNPT x 3/4" fNPT	4.86	3000 PSI	12L14 CARBON STEEL
CB-100*	1" fNPT x 1" fNPT	6.73	3000 PSI	12L14 CARBON STEEL
CB-150	1-1/2" fNPT x 1-1/2" fNPT	26.3	3000 PSI	12L14 CARBON STEEL
CB-200	2" fNPT x 2" fNPT	41.11	3000 PSI	12L14 CARBON STEEL
CBM-100	1" mNPT x 1" mNPT	26.3	3000 PSI	12L14 CARBON STEEL
CBM-150	1-1/2" mNPT x 1-1/2" mNPT	41.11	3000 PSI	12L14 CARBON STEEL
SB-25*	1/4" fNPT x 1/4" fNPT	0.69	3000 PSI	316 STAINLESS
SB-37*	3/8" fNPT x 3/8" fNPT	2.56	3000 PSI	316 STAINLESS
SB-50*	1/2" fNPT x 1/2" fNPT	3.7	3000 PSI	316 STAINLESS
SB-75*	3/4" fNPT x 3/4" fNPT	4.86	3000 PSI	316 STAINLESS
SB-100*	1" fNPT x 1" fNPT	6.73	3000 PSI	316 STAINLESS
SB-50 6000*	1/2" fNPT x 1/2" fNPT	3.7	6000 PSI	316 STAINLESS
SB 100 6000*	1" fNPT x 1" fNPT	6.73	6000 PSI	316 STAINLESS
SB-25 10000*	1/4" fNPT x 1/4" fNPT	0.69	10000 PSI	316 STAINLESS
SB-50 10000*	1/2" fNPT x 1/2" fNPT	3.7	10000 PSI	316 STAINLESS
SB-75 10000*	3/4" fNPT x 3/4" fNPT	4.86	10000 PSI	316 STAINLESS
SB-100 10000*	1" fNPT x 1" fNPT	6.73	10000 PSI	316 STAINLESS
MB-200	2 mNPT x 2 mNPT	26.3	3000 PSI	316 STAINLESS

\* Canadian Registration Number (CRN): 0C02533.2

## Ordering Information

Specify the Plainsman model desired.

Model Numbering:

A-XX YYYYY (i.e. SB-25 10000)

A: Material (CB=Carbon Steel, SB=Stainless Steel)

XX: Connection Size (i.e. 25 = 1/4" NPT connection)

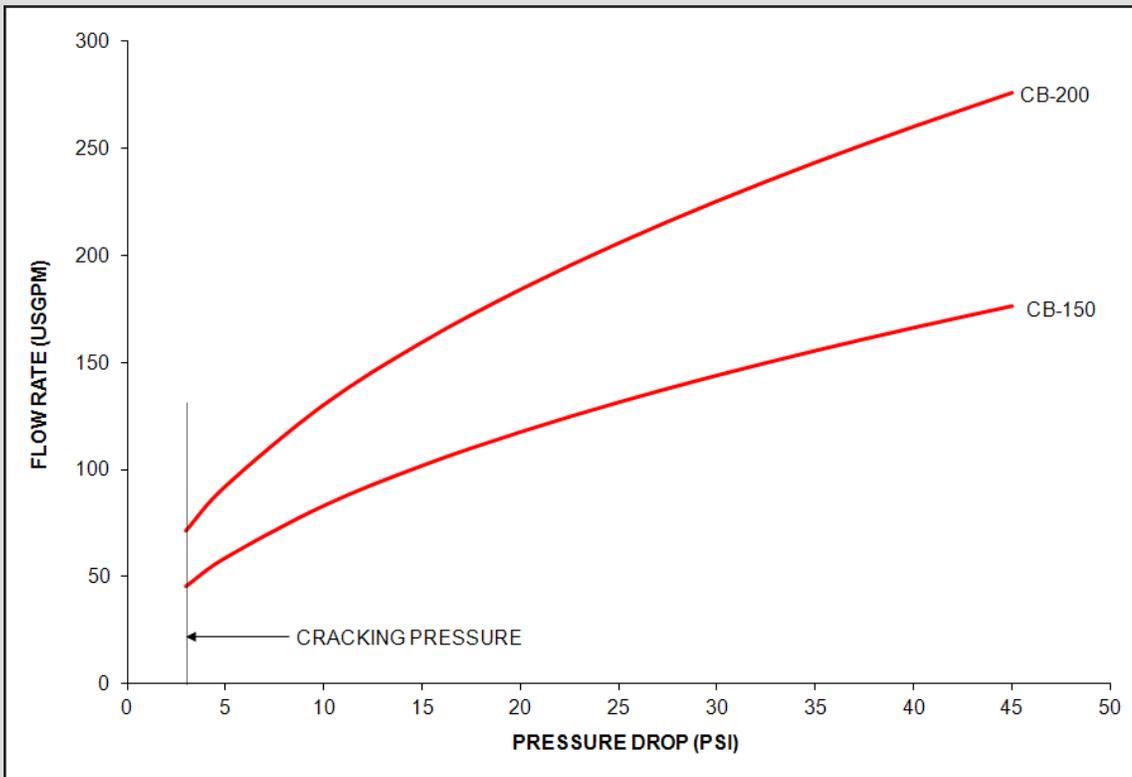
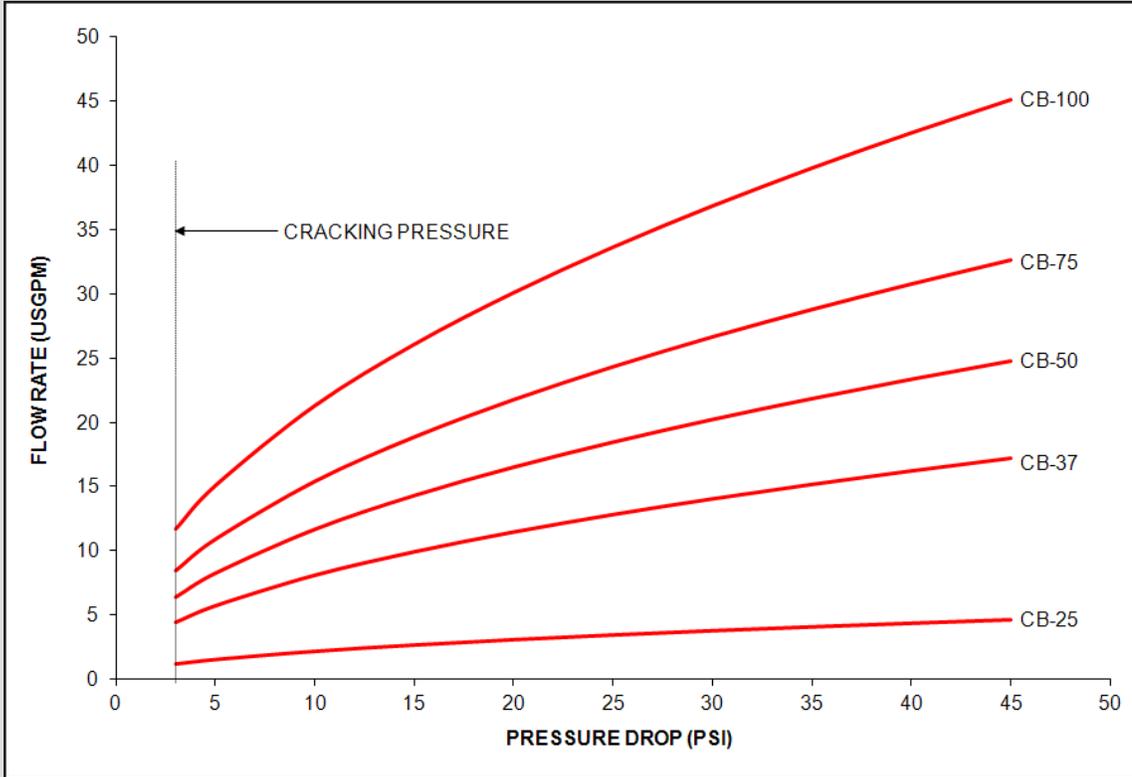
YYYYY: Working Pressure (6000 psi [41.4 MPa] or 10000 PSI [68.9 MPa] models only)



**PLAINSMAN ALSO DISTRIBUTES MODEL ASB-283, ASA-675 AND ASA-676 CHECK VALVES.**

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DRIP PAN

## Model PL 1722 Drip Pan

Avoid environmental contamination with a Plainsman drip pan.

### Features

- Fits all Plainsman chemical pumps
- Leak-free design with liquid-tight welded corners
- Gold zinc plated for chemical resistance to corrosion

### Specifications

<b>Dimensions</b>	17" x 22" x 1", 14 ga. Steel	18.5" x 10.5" x 1.5", 14 ga. Steel
<b>Capacity</b>	6.4 quarts (6.1 L)	5.0 quarts (4.8 L)

Other sizes available on request





INLINE FILTER

# Model PL-250 High Pressure Instrumentation Line Filter

The PL250 is designed to clean instrumentation supply gas, ensuring maximum instrumentation life.

## Features

- Hex construction for easy disassembly
- Lightweight aluminum construction
- Optional drain valve and pressure gauge

## Specifications

Working Pressure : 2150 PSI

Operating Temperature: -40°F to 180°F (-40°C to 80°C)

50 µm pore size HDPE filter element standard

Inlet port: 1/4" fNPT

Outlet ports: 1/4" fNPT (2 ports)

Drain port: 1/4" fNPT



## Model P-39-N Pressure Regulator

The P-39-N is a high pressure, user friendly regulator, capable of stepping down high inlet pressures to lower instrumentation working pressures. It is designed for easy field adjustment and maintenance.

### Features

- Corrosion resistant nickel plating
- Wire mesh filter to keep dirt and foreign objects out
- T-handle for easy adjustment
- 4 seat valve disk block — spare seats can be rotated on job site

### Specifications

**Inlet:** 1/4" fNPT

**Outlets:** 1/4" fNPT (2 ports)

**Vents:** 4

**Inlet Pressure:** 5500 psi (max)

**Outlet Pressure:** 0 to 60 psi

**Temperature Range:** -40 °F to 225 °F (-40 °C to 106 °C)

**Body:** Nickle-plated brass

**Diaphragm:** 302 stainless

**Seat:** PTFE



## Model P-39 Pressure Regulator

The P-39 is a high pressure, versatile workhorse, capable of stepping down high inlet pressures to lower instrumentation working pressures. Its tamper proof design and built-in bronze filter make it a great choice for OEM systems or workshop calibrated systems.

### Features

- Sintered bronze inlet filter to keep dirt and foreign objects out
- Tamper proof cap nut over adjusting screws
- 4 seat valve disk block — spare seats can be rotated on job site

### Specifications

**Inlets:** 1/4" fNPT (2 ports)

**Outlets:** 1/4" fNPT (2 ports)

**Vents:** 4

**Inlet Pressure:** 5500 psi (max)

**Outlet Pressure:** 0 to 60 psi

**Temperature Range:** -70 °F to 225 °F (-57 °C to 106 °C)

**Body:** Forged brass

**Diaphragm:** 302 Stainless

**Seat:** Kel F



## Plainsman Packing

Plainsman offers specialized packing for chemical pumps beyond the standard Buna-N to meet any chemical pumping requirement.

### Buna-N



Buna-N is the standard for chemical injection. The most economical and versatile packing, it can be used for methanol, hydrocarbons, ethylene glycol, water, dilute acids, dilute alkali, salt solutions and much more. It is not recommended for keytones, aromatics, polar solvents, etc.

Buna-N has good wear resistance and temperature resistance from -35°F to 250°F (-37°C to 120°C)

### Hard Packing



Buna-based Hard Packing is suitable for Buna applications requiring higher pressure capabilities (3000 PSI and up)

### Viton



This Fluorocarbon is suitable for higher temperatures (up to 200°C) and aromatics, chlorinated hydrocarbons, etc

### Teflon



Teflon is virtually impervious to most chemicals and has a wide operating temperature range (-150°C to 230°C).

It has less wear resistance than other packing

### Fluorosilicone



Fluorosilicone is resistant to solvents, harsh aromatics and fuels. Temperature range: -60°C to 230°C



## Ceramic Coated Plungers

Reduce grit abrasion with ceramic coated plungers.

### Features

- Coating increases resistance to abrasion
- Excellent for use with crystallizing chemicals or grit
- Ceramic coating extends beyond packing area to ensure the best possible seal

### Specifications

**Plunger:** 316 stainless

**Coating:** Chromium oxide ( $\text{Cr}_2\text{O}_3$ )

**Available for:** 10, 430 and 510 series pumps



## ASA 664 Tank and ASB 871 Gauge

Add a metal tank and gauge to a Plainsman pump skid for convenience.

### Features

- Welded construction
- Integrated gauge - 1/4" fNPT Connection

### Specifications

#### Tank

**Capacity:** 5 gallons

**Material:** Stainless

#### Gauge

**Body:** Stainless

**Seals:** Viton



## Type 50 Pressure Regulator

The Type 50 regulator is a fine-tuning tool for adjusting supply pressures of individual instruments.

### Features

- 40 micron mesh filter to keep debris out
- Integrated Dripwell
- Non-relieving

### Specifications

**Inlet:** 1/4" fNPT

**Outlets:** 1/4" fNPT

**Vents:** 1

**Inlet Pressure:** 250 psi (max)

**Outlet Pressure:** 0 to 120 psi

**Temperature Range:** 0 °F to 160°F (-18 °C to 71 °C)

**Body:** Cast aluminum with vinyl paint

**Diaphragm:** Buna-N



## Downhole Accessories



### Tubing Drains

- Reliably drain fluid from production tubing
- Large drain area ensures fluid is drained faster
- Easily adjustable shear pressure



### PowerTorq™ Tubing Drains

- Design allows for rapid installation with power tongs
- Torque Ring compatible when no-turn tools aren't run
- Designed for multiple thread re-builds



### Shear Couplings

- Reliably separate the rod string from the downhole pump
- Integral key prevents shear of pins in torsion
- Alloy steel for durability and long life



### ToughTorq™ Shear Couplings

- Ideal for PC pump applications in problem wells
- Enhanced flexibility and material toughness with proprietary Ni-Cr-Mo alloy
- Box x Box construction

### PL5 Spin-thru Centralizers

- Reduce wear in deviated PC pump wells
- Field replaceable Nylon rotor
- High temperature rotor (218°C)



### ToughTorq™ PL5 Spin-thru Centralizers

- For use in higher torque applications
- High temperature rotor (218°C)



### Sucker Rod Couplings

- Economical sucker rod couplings
- AISI 8630 material
- Threads conform to API 11B

DOWNHOLE ACCESSORIES

## ToughTorq™ Shear Coupling

### Ideal For PC Pump Applications In Problem Wells

Shear couplings are used to reliably separate the rod string from the bottom hole assembly when the pump seizes or the rod gets stuck. This prevents the costly and environmentally unfriendly process of pulling tubing and rods out simultaneously.

The ToughTorq™ Shear Coupling has an increased resistance to fatigue in horizontal and deviated wells. With the integral ToughTorq™ key, it is ideal for reciprocating and rotating rod applications as well as continuous and conventional sucker rods.



### Features

- Improved internal torque transmitting key design
- Enhanced flexibility
- Improved material toughness using a proprietary Ni-Cr-Mo alloy
- Reduced stress distribution around shear pins
- Improved surface treatment around high stress areas
- Ideal for vertical, horizontal and deviated wells
- Box-by-box construction
- Threads are formed (cold rolled), not cut, conforming to API 11B
- Precisely calibrated shear pin values
- ISO 9001 ensures full material and manufacturing traceability
- Slim hole diameter

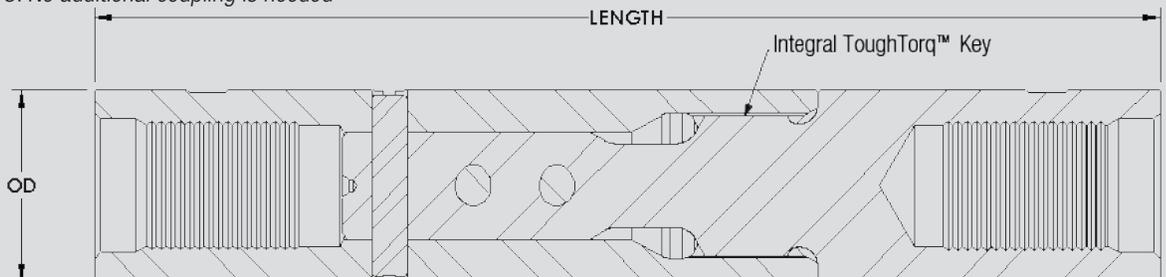
TOUGHTORQ™ SHEAR COUPLING

# TOUGHTORQ™ SHEAR COUPLING



SIZE <sup>1</sup>	OD	MAX TORQUE <sup>2</sup>	LENGTH <sup>3</sup>	SHEAR STRENGTH	PINS	
					#	COLOUR
7/8" (22 mm)	1.63" (41 mm)	1250 LB-FT (1695 N·m)	10.45" (265 mm)	30,000 LBF (133 kN)	2	White
				35,000 LBF (156 kN)	3	White & Black
				40,000 LBF (178 kN)	3	Blue
				45,000 LBF (200 kN)	3	White
1" (54 mm)	2.00" (51 mm)	2,500 LB-FT (3,390 N·m)	11.20" (284 mm)	30,000 LBF (133 kN)	2	White
				35,000 LBF (156 kN)	3	White & Black
				40,000 LBF (178 kN)	3	Blue
				45,000 LBF (200 kN)	3	White
			11.7" (297 mm)	50,000 LBF (222 kN)	4	Blue & Yellow
				60,000 LBF (266 kN)	4	White
1-1/8" (57 mm)	2.25" (57 mm)	3,750 LB-FT (5,080 N·m)	13.6" (345 mm)	30,000 LBF (133 kN)	3	Red & Yellow
				35,000 LBF (156 kN)	3	White & Black
				40,000 LBF (178 kN)	3	Blue
				45,000 LBF (200 kN)	3	White
				50,000 LBF (222 kN)	4	Blue & Yellow
				60,000 LBF (266 kN)	4	White

1. Other sizes available, please contact Plainsman
2. To maximize fatigue life, Plainsman recommends using a .8 service factor
3. No additional coupling is needed



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## Make-up Procedure:

Follow recommended make-up procedure of rod manufacturer for sucker rod grade being used. The ToughTorq™ Shear Coupling is compatible with all sucker rod grades.

For torsional applications, install at least one rod length above the bottom hole pump. Using centralizing couplings on either side of the shear is recommended.

## Coatings

Plainsman provides two\* coating options to prolong the life of the ToughTorq™ Shear Coupling that is available separately or in combination.

CODE	NAME	DETAILS
CT1	HardCoat™	For severe downhole wear/fatigue conditions. This coating case hardens key surfaces without affecting the base metal, improving wear resistance and increasing the shear's life. For easy identification, shears are stamped CT1 and labelled prior to shipping.
CT2	SoftCoat™	For combating abrasion between shear coupling and tubing. Recommended when the tubing has not been hardened. A soft urethane is bonded to the outside of the shear coupling, preventing abrasive particles, like sand, from wearing the interface between the tubing and shear coupling.

\* Other coatings may be available upon request: contact Plainsman.



TOUGHTORQ™ COATINGS

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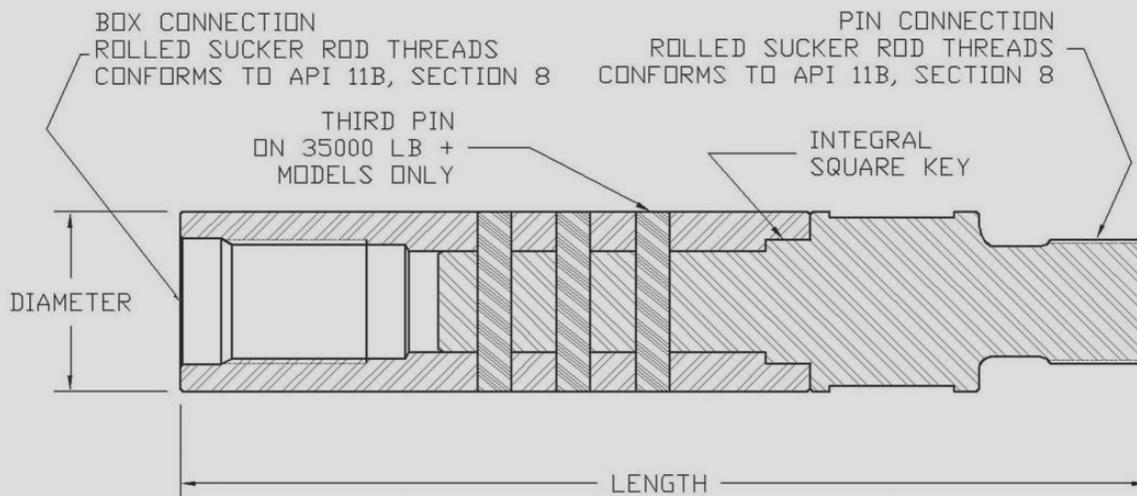
# Shear Couplings

## Features

- Integral square key prevents shear of pins in torsion — excellent for insert, tubing and progressing cavity pumps.\*
- 4340 HTSR construction for durability and long life

## Material Specifications

**Coupling:** 4340 HTSR  
**Shear Pin:** ANSI W1



## Typical API Grade D Sucker Rod Reference Information

ROD SIZE (IN)	MAXIMUM TORQUE (FT-LB)	MAXIMUM TENSILE LOAD (LB)
3/4	460	35,780
7/8	735	48,700
1	1,100	63,625
1- 1/8	1,570	80,500

Tensile load values derived from API 11B, and are for reference only.  
 Torque values are typical from rod manufacturer and are for reference only.  
 Consult rod manufacturer for specifications regarding load and torque.

\* For deviated horizontal, and problem wells, Plainsman recommends referring to the newly designed ToughTorq™ Shear Coupling brochure

# SHEAR COUPLINGS



SIZE (PIN AND BOX) (IN)	OD (IN)	LENGTH (IN)	SHEAR STRENGTH (LB)	MAXIMUM ALLOWABLE STATIC TORQUE (LB-FT)	PINS		
					#	COLOUR	
3/4	1.63	9.36	14,000	1,500	2	Green	
			19,000		2	Red	
			22,000		2	Yellow	
			26,000		2	Black	
			30,000		2	White	
7/8	1.63*	9.50	14,000	1,500	2	Green	
			19,000		2	Red	
			22,000		2	Yellow	
			26,000		2	Black	
			30,000		2	White	
			35,000		3	Black & White	
	40,000	3	Blue				
	2.00	11.75	50,000	4	Yellow		
	1	2.00*	10.75	30,000	2,000	2	White
				35,000		3	Black & White
40,000				3		Blue	
45,000				3		White	
11.75		50,000	4	Yellow			
2.38		12.93	50,000	4		Blue & Yellow	
1-1/8**	2.25	13.6	35,000	3,750	3	Black & White	
			40,000		3	Blue	
			45,000		3	White	
			50,000		4	Blue & Yellow	
			60,000		4	White	

\* Slimhole Coupling diameter

\*\* 1-1/8" available in box x box ToughTorq™ configuration only

\*\*\* For torsional applications, place coupling in straight section of well, minimum of 1-2 rods above rotor, with centralizing couplings

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Phone: 780-496-9800 Fax: 780-463-9800 Toll Free: 1-877-448-0586

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Specifications subject to change without notice

(13), PB-CPLS01



# ToughTorq™ PL5 Spin-Through Coupling

The ToughTorq™ PL5 Spin-Through Coupling† has been specially designed for use with high torque rod applications such as Weatherford® T66/XD and HD sucker rods and Alberta Oil Tool Drive Rods®††.

Spin-through couplings reduce operating costs of progressing cavity pumped wells. The PL5 centralizer reduces rod and tubing wear, work over frequency, lifting costs and maintenance. PL5 centralizers are field replaceable and available with high temperature rotor materials rated to 218 °C.

## Features

- High torque capabilities
- Slim hole diameter maximizes flow path and protects tubing wall
- Pin by pin construction
- Proprietary design maximizes contact strength and improves rotor retention
- Proprietary HTSR alloy steel components
- Formed (cold rolled) box and pin threads, not cut, conforming to API 11B
- Full material traceability stamping
- Manufactured to precisely engineered standards in ISO 9001 facility
- Field replaceable standard (104 °C) and high temperature (218 °C) rotors
- Proprietary blend of rotor materials provides maximum lubricity and wear life
- Available with or without coupling(s)



TOUGHTORQ™ PL5 COUPLING

† Patent pending.

†† Weatherford and Alberta Oil Tool are in no way affiliated with Plainsman Mfg. Inc.

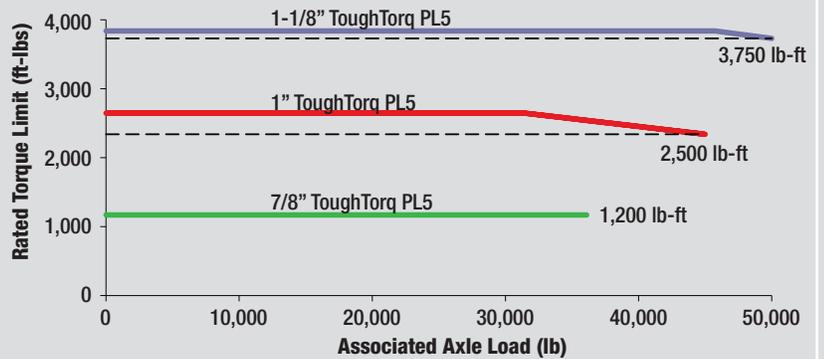
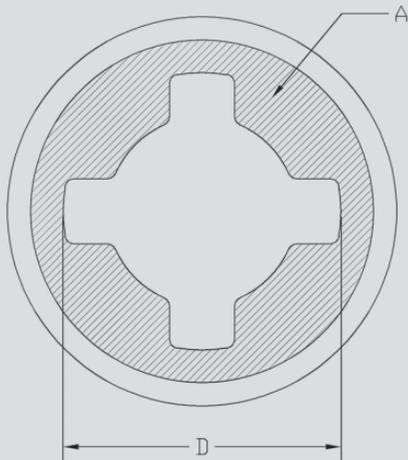
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# TOUGHTORQ™ PL5 COUPLING



ROD SIZE (IN.) <sup>1</sup>	TUBING SIZE (IN.)	ROTOR DIAMETER (IN.)	FLOW AREA A (IN. <sup>2</sup> )		REQUIRED COUPLING	MAXIMUM OPERATING TORQUE (LB • FT) <sup>2,3</sup>		ASSOCIATED AXIAL LOAD (LB) <sup>6</sup>
			MIN <sup>7</sup>	MAX <sup>7</sup>		HIGH STRENGTH COUPLING <sup>4</sup>	REGULAR COUPLING <sup>5</sup>	
7/8" (22 mm)	2-3/8" (60 mm)	1.85 (47 mm)	0.34 (217 mm <sup>2</sup> )	0.87 (561 mm <sup>2</sup> )	SLIM HOLE ONLY	1,200 (1,625 N • m)	875 (1,185 N • m)	30,000 (13,600 kg)
	2-7/8" (73 mm)	2.27 (58 mm)	1.09 (700 mm <sup>2</sup> )	1.53 (985 mm <sup>2</sup> )	SLIM HOLE OR FULL SIZE			
	3-1/2" (89 mm)	2.80 (71 mm)	2.47 (1594 mm <sup>2</sup> )	3.16 (2037 mm <sup>2</sup> )				
1" (25 mm)	2-7/8" (73 mm)	2.27 (58 mm)	0.81 (522 mm <sup>2</sup> )	1.25 (806 mm <sup>2</sup> )	SLIM HOLE ONLY	2,500 (3,390 N • m)	2,000 (2,710 N • m)	40,000 (18,140 kg)
	3-1/2" (89 mm)	2.80 (71 mm)	1.75 (1130 mm <sup>2</sup> )	2.44 (1574 mm <sup>2</sup> )	SLIM HOLE OR FULL SIZE			
	4-1/2" (114 mm)	3.21 (82 mm)	2.41 (1557 mm <sup>2</sup> )	6.48 (4181 mm <sup>2</sup> )				
1-1/8" (29 mm)	3-1/2" (89 mm)	2.80 (71 mm)	1.75 (1130 mm <sup>2</sup> )	2.44 (1574 mm <sup>2</sup> )	SLIM HOLE OR FULL SIZE	3,750 (5,080 N • m)	2,900 (3,930 N • m)	50,000 (22,680 kg)
	4-1/2" (114 mm)	3.21 (82 mm)	2.41 (1557 mm <sup>2</sup> )	6.48 (4181 mm <sup>2</sup> )				



Rated Torque Limit vs. Associated Axial Load<sup>2,3,4,6</sup>

## Notes:

- Other sizes available. Contact Plainsman for details
- Maximum operating torque subject to the following conditions:
  - Do not exceed sucker rod manufacturer's operating torque guidelines
  - All values based on coupling contact areas as follows:
    - 7/8" ToughTorq PL5 Contact Area = 0.573 in<sup>2</sup> (370 mm<sup>2</sup>) or greater
    - 1" ToughTorq PL5 Contact Area = 1.120 in<sup>2</sup> (723 mm<sup>2</sup>) or greater
    - 1-1/8" ToughTorq PL5 Contact Area = 1.451 in<sup>2</sup> (936 mm<sup>2</sup>) or greater
  - Connections to be made-up as per Plainsman's Tough Torq™ PL5 make-up procedure PB-CPLR06
- To maximize fatigue life, Plainsman recommends using a 0.8 service factor
- High Strength coupling with 105 ksi (724 MPa) minimum yield strength in like new condition
- Regular coupling with 80 ksi (552 MPa) minimum yield strength in like new condition
- Associated axial load may be exceeded at lesser operating torques. Refer to graph above.
- Min and max flow areas based on heaviest and lightest API 5CT tubing that the centralizer rotor will fit.

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Specifications subject to change without notice

(3), PB-CPLR05



## Plainsman PL5 Centralizing Couplings

Plainsman PL5 Centralizing Couplings reduce operating costs of progressing cavity pumped wells. The PL5 reduces rod and tubing wear, work over frequency, lifting costs and maintenance. PL5s are field replaceable and available for 5/8" to 1-1/8" rod to fit in 2-3/8" to 4-1/2" tubing. The rotor is available in standard or high performance materials good to 218°C.

### Features

- Reduces tubing wear in deviated and progressing cavity pumped wells
- 4140 heat-treated, stress-relieved mandrel with rolled threads
- Field replaceable nylon rotor
- Regular (104°C) and high temperature (218°C) rotors
- Available with or without attached coupling
- Proprietary blends of rotor materials provides maximum lubricity and wear life
- Field proven and developed over 10 years of running history



PL5 COUPLINGS

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PL5 COUPLING DIMENSION INFO						
Pin Size (in.)	Tubing Size (in.)	Rotor Diameter D (in.)	Flow Area A (sq. in.)		Maximum Torque (lb-ft)	Required Coupling (full size)
			Min <sup>(1)</sup>	Max <sup>(2)</sup>		
5/8	2-3/8" <sup>(3)</sup>	1.86	0.68	1.22	275	5/8" Reg
3/4	2-7/8" <sup>(4)</sup>	2.27	1.08	1.52	470	3/4" Reg
7/8	2-7/8" <sup>(4)</sup>	2.27	0.81	1.25	750	7/8" Reg
	3-1/2" <sup>(5)</sup>	2.79	1.42	2.11	750	7/8" Reg
1	2-7/8" <sup>(4)</sup>	Available in ToughTorq configuration only				
	3-1/2" <sup>(5)</sup>	2.79	1.42	2.11	1000	1" Reg
	4-1/2"	3.21	2.94	6.99	1000	1" Reg
1-1/8	3-1/2"	2.79	1.42	2.11	1200	1-1/8" Reg
	4-1/2"	3.21	2.94	6.99	1200	1-1/8" Reg

## Coupling Dimensions Notes

Make-up Procedure should follow that of Grade D (Type 75) sucker rods as per Section 5 of RP1 1BR, "API Recommended Practice for Care and Handling of Sucker Rods"

- 1) Based on heaviest allowable tubing as per API 5CT, unless specified otherwise
- 2) Based on lightest tubing as per API 5CT
- 3) 1.867 Min. Tubing ID
- 4) 2.323 Min. Tubing ID
- 5) 2.922 Min. Tubing ID

## Material Specification

Mandrel: 4140 HTSR

Rotor: Nylon 6, CL200-001 Proprietary Blend (standard)

Other Rotor Materials Available

Max. Operating Temperature:

104 ° C (Nylon 6 Proprietary Blend)

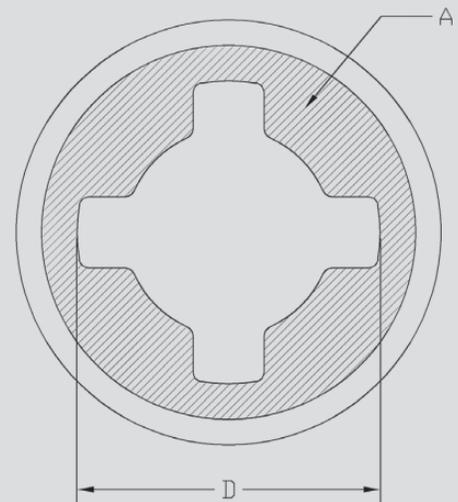
218 ° C (Zytel Proprietary Blend)

## Thread Specification

Rolled to API 11B

## Ordering Information:

- A) Pin Size
- B) Tubing I.D.
- C) Max Temperature of Well
- D) Replacement parts required



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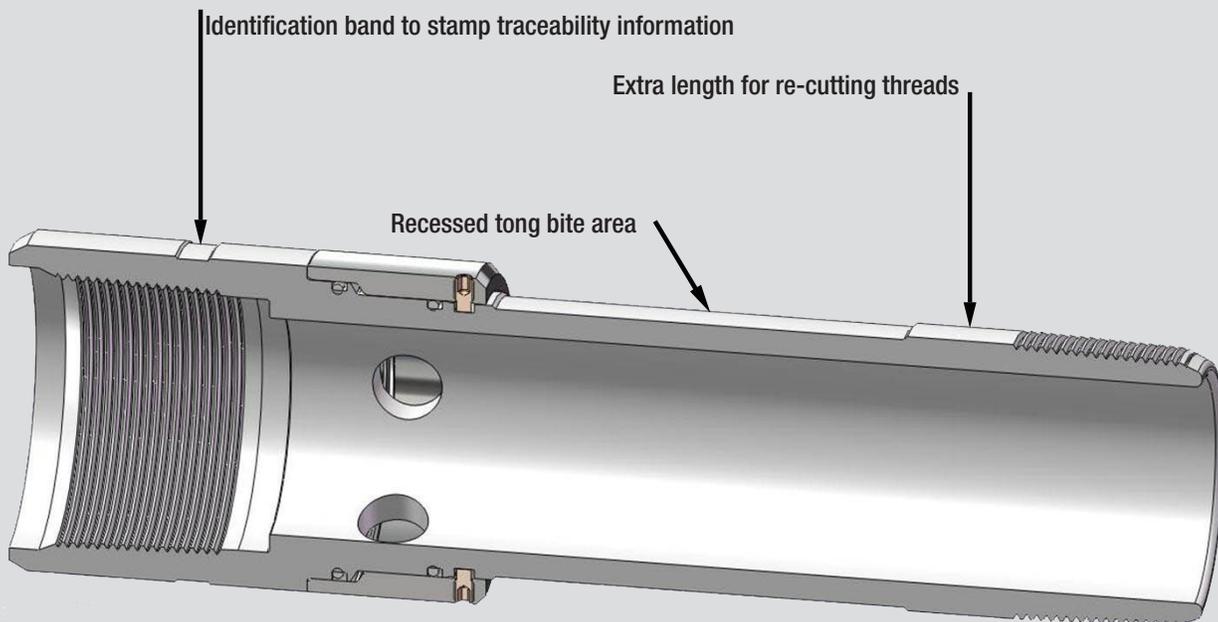
# PowerTorq™ Tubing Drain

Tubing drains allow you to reliably drain the production tubing prior to pulling out of hole. This prevents the difficult and environmentally unfriendly process of pulling wet tubing.

The PowerTorq™ Tubing Drain was designed with rapid well installation and work over in mind without neglecting life cycle costs of operating a well. The compact design allows rapid installation with power tongs, while the thread design allows multiple rebuilds before discarding.

## Features

- Available for both standard and high temperature applications
- Compact design allows rapid installation with power tongs
- Torque Ring compatible when no-turn tools aren't run
- Industry leading thread treatment for prolonged run life
- Box by Pin construction
- Viton seals
- Calibrated brass shear screws provide consistent shear values and reduce wear on steel parts, permitting multiple reuse
- All components precisely manufactured in ISO 9001 environment
- Beveled edges on top and bottom speed up running and pulling tubing, especially when casing patches or other issues are present
- Multiple rebuilds allowed, reducing total cost of ownership



POWERTORQ™ TUBING DRAIN



# POWERTORQ™ TUBING DRAIN



THREAD SIZE	OD (A) (IN)	ID (B) (IN)	LENGTH (C) (IN)	MAX # OF SCREWS	MAX SHEAR PRESSURE <sup>2</sup> (PSI)	SHEAR PRESSURE PER SCREW <sup>2,3</sup> (PSI)	PARTING LOAD IN TENSION <sup>4</sup> (1000 LB)
2-7/8 EUE 2-7/8 NUE	3.88 (99 mm)	2.47 (63 mm)	16.50 (419 mm)	6 7	4,800 (33,100 kPa) 5,600 (38,610 kPa)	800 (5,515 kPa)	105
3-1/2 EUE <sup>6</sup>	4.44 (113mm)	2.97 (75mm)	17.00 (432 mm)	6	4,320 (29,780 kPa)	720 (4,960 kPa)	165
4-1/2 EUE <sup>7</sup> 4-1/2 NUE	5.50 (140 mm)	3.96 (101 mm)	17.15 (436 mm)	10	4,350 (29,990 kPa)	435 (3,000 kPa)	255
5-1/2 LT&C	6.22 (158 mm)	4.97 (126 mm)	20.00 (508 mm)	8	4,000 (27,580 kPa)	500 (3,450 kPa)	225

1. Other sizes available— please contact Plainsman
2. These values will vary ± 10% dues to material and manufacturing tolerances
3. When using less than the maximum # of screws, space them evenly around the sleeve
4. If more than 30% of this load is applied during an intervention, replace Tubing Drain body with a new one
5. Maximum operating temperature: Viton seals - 400°F (205°C), Perfluoroelastomer seals - 572°F (300°C)
6. NUE available on request
7. LT&C available on request

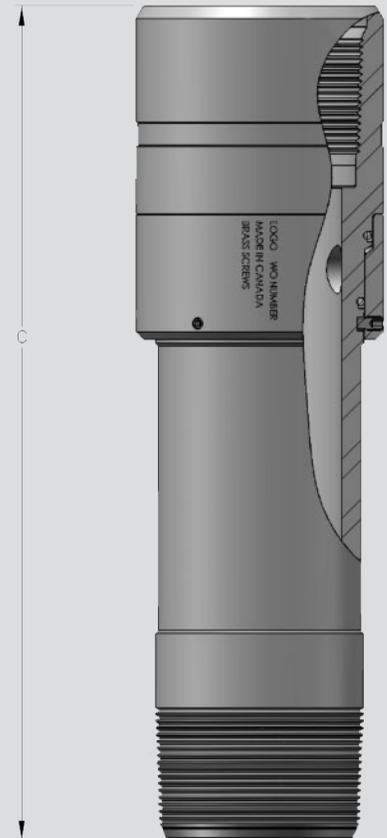
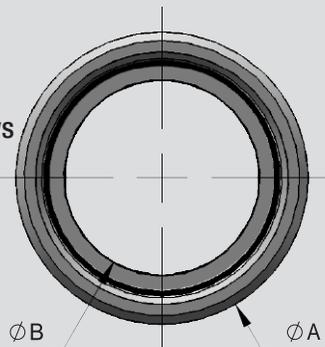
## Materials of Construction

NOMINAL SIZE	BODY MATERIAL	SLEEVE MATERIAL
2-7/8	AISI 1026	AISI 4140-L80
2-7/8 - 7P	AISI 4140-L80	AISI 4140-L80
3-1/2	AISI 1026	AISI 4140-L80
4-1/2	AISI 1026	AISI 4140-L80
5-1/2	AISI 4140-L80	AISI 4140-L80

\* use only authentic Plainsman screws and seals for rebuilding

Brass screws: Proprietary custom grade

- Note:
- Same screws fit in all sizes of drains
  - Use only authentic Plainsman replacement screws
  - Do not use stainless steel screws
  - Installation Torque: 10 lb-in



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Specifications subject to change without notice

(5), PB-TBGD09

## Type SB™ Tubing Drain

Tubing drains allow you to reliably drain the production tubing prior to pulling out of hole. This prevents the difficult and environmentally unfriendly process of pulling wet tubing.

### Features

- Industry standard, economical design
- Viton seals standard (back-up rings not required)
- Brass screws provide consistent and accurate shear values while reducing wear on steel parts, permitting reuse
- Beveled edges on bottom and top to ensure drain slides past casing patches or other casing issues
- Multiple rebuilds allowed, reducing total cost of ownership
- Torque ring compatible

### Dimensions and Operational Info

THREAD SIZE	OD (A) (IN.)	ID (B) (IN.)	LENGTH (C) (IN.)	MAX # OF SCREWS	MAX SHEAR PRESSURE <sup>1</sup> (PSI)	SHEAR PRESSURE / SCREW <sup>1,2</sup> (PSI)	PARTING LOAD IN TENSION <sup>3</sup> (1000 LB)
2-3/8" EUE <sup>5</sup>	3.38	2.06	11.50	6	5400	900	75
2-7/8" EUE <sup>5</sup>	3.88	2.47	12.25	6	4800	800	105
2-7/8"-7P EUE <sup>5</sup>	3.88	2.47	12.25	7	5600	800	140
3-1/2" EUE <sup>5</sup>	4.44	2.97	13.50	6	4320	720	165
3-1/2"-7P EUE <sup>5</sup>	4.50	2.97	13.50	7	5040	720	220
4-1/2" EUE <sup>6</sup>	Available in PowerTorq™ Series						
5-1/2" LT&C	Available in PowerTorq™ Series						

<sup>1</sup> These values will vary  $\pm$  10% due to material manufacturing tolerances

<sup>2</sup> When using less than the maximum # of screws, space them evenly around the sleeve

<sup>3</sup> If more than 30% of this load is applied during an intervention, replace Tubing Drain body with a new one

<sup>4</sup> Maximum operating temperature: 400°F (205°C)

<sup>5</sup> NUE available on request

<sup>6</sup> LT&C available on request



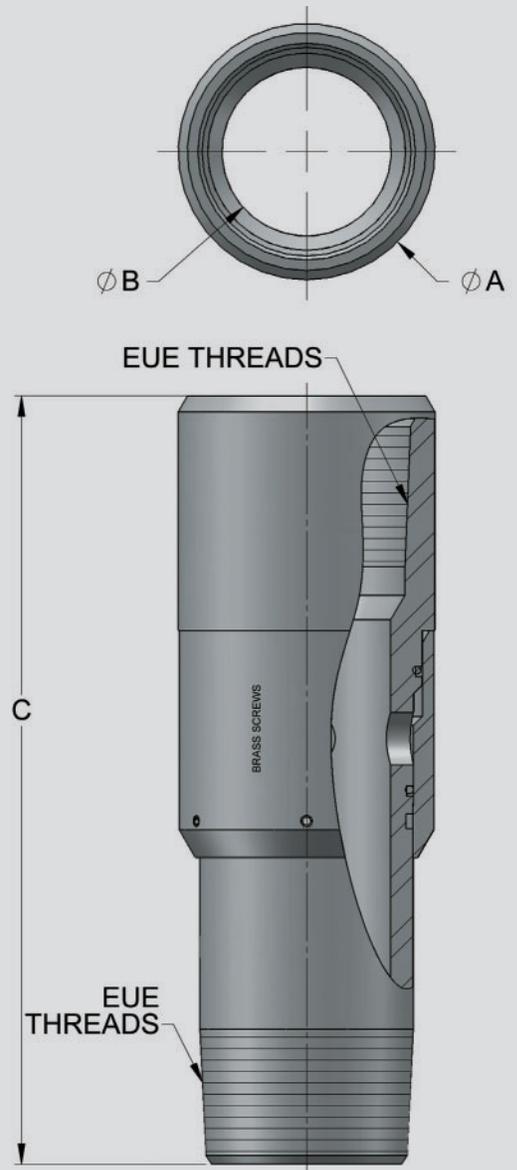
## Materials of Construction

NOMINAL SIZE	BODY MATERIAL	SLEEVE MATERIAL
2-3/8"	AISI 1026	AISI 4140-L80
2-7/8"	AISI 1026	AISI 4140-L80
2-7/8" - 7P	AISI 4140-L80	AISI 4140-L80
3-1/2"	AISI 1026	AISI 4140-L80
3-1/2" - 7P	AISI 4140-L80	AISI 4140-P110
4-1/2"	Available in PowerTorq™ Series	
5-1/2"	Available in PowerTorq™ Series	

Seals: Viton

Brass screws: Proprietary custom grade

- Note:
- Same screws fit in all sizes of drains
  - Use only authentic Plainsman replacement screws
  - Do not use stainless steel screws
  - Installation Torque: 10 lb-in



# Sucker Rod Couplings

## Features

- Economical sucker rod coupling method
- Body Material: AISI 8630
- Threads rolled to API 11B, Section 8 Sucker Rod Connections

## Sizes

STANDARD	OD (IN.)		LENGTH (IN.)
	REG	SLIMHOLE	
5/8"	1.500	1.250	4.00
3/4"	1.625	1.500	4.00
7/8"	1.812	1.625	4.00
1"	2.187	2.000	4.00
1-1/8"	2.375	N/A	4.50
<b>CHANGEOVER</b>			
7/8" x 3/4"	1.812	1.625	4.00
1" x 3/4"	2.187	2.000	4.00
1" x 7/8"	2.187	2.000	4.00
5/8" x 3/4"	1.625	1.500	4.00
<b>POLISHED ROD</b>			
3/4"	1.625	1.500	4.00
7/8"	1.812	1.625	4.00
1"	2.187	2.000	4.00
1-1/8"	2.375	N/A	4.50



SUCKER ROD COUPLINGS



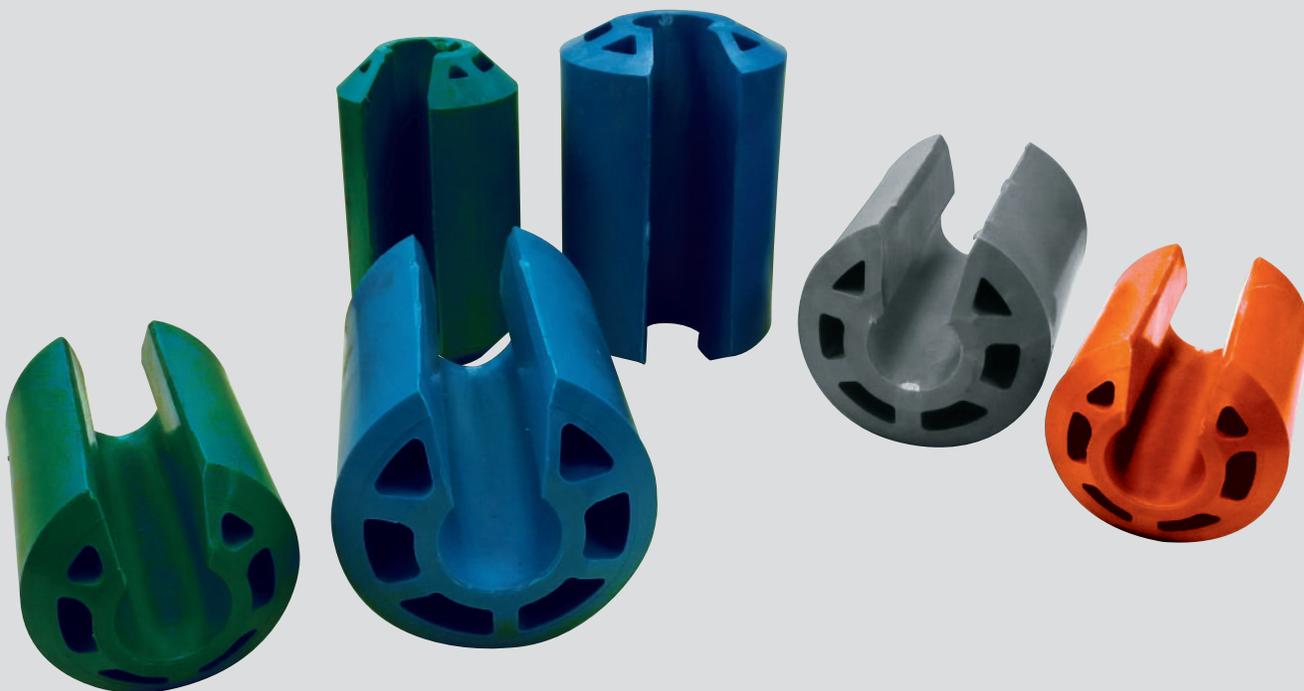
## ToughGrip™ Rod Guide

ToughGrip™ Rod Guides reduce operating costs on pumping wells and are an economical alternative to molded-on and spin-thru centralizers. With our proprietary design, ToughGrip™ Rod Guides have an increased flow area compared to our competitors.

ToughGrip™ Rod Guides are field installed on the rod string with an easy to use installation tool. They reduce rod and tubing wear, work over frequency, lifting costs and maintenance.

### Features

- Industry leading gripping power on sucker rod and continuous rod
- Increased flow area in tubing with unique part cross section
- Proprietary Nylon blend delivers high strength, flexibility, impact strength, lubricity and wear life
- Working temperature rating of 104 °C (218 °F)
- Manufactured and tested to precisely engineered standards in an ISO 9001 facility
- Colour coded by rod size for easy identification
- Rapid field installation with available installation tool down to 0 °C (32 °F)



TOUGHGRIP™ ROD GUIDE

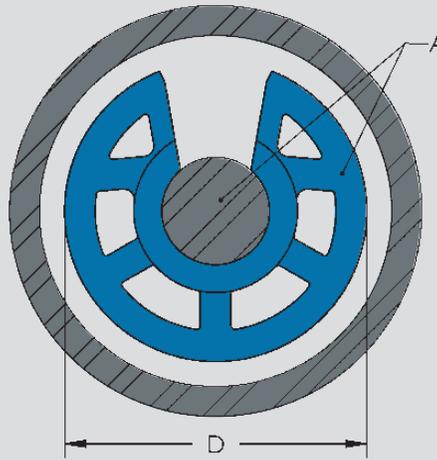


# TOUGHGRIP™ ROD GUIDE

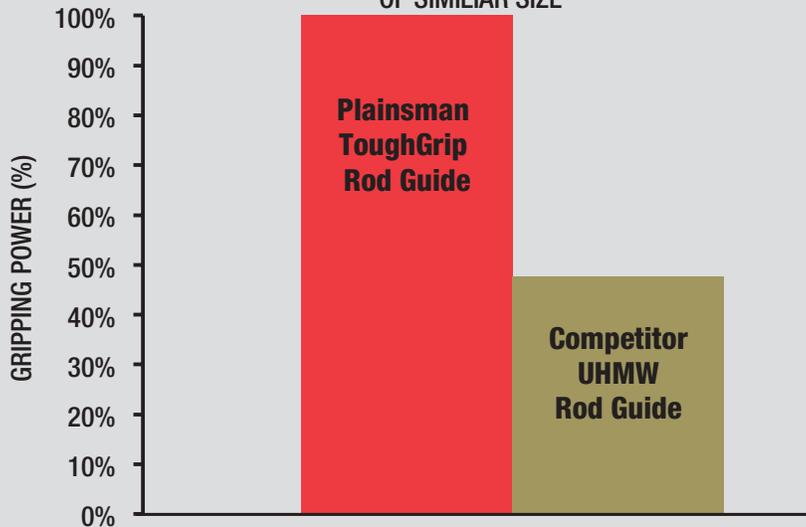


ROD SIZE (IN.)	TUBING SIZE (IN.) <sup>1</sup>	INSTALLED DIAMETER, D (IN.)	ROD GUIDE COLOUR	BLOCKED AREA, A (IN. <sup>2</sup> )	
				PLAINSMAN	COMPETITOR
3/4	2-3/8	1.85	ORANGE	1.96	2.44
7/8	2-7/8	2.15	GREEN	2.50	3.25
1	2-7/8	2.20	BLUE	2.69	3.21
	3-1/2	2.65		3.57	4.91

\*Other sizes are currently being tested and will become available.



COMPARISON OF GRIPPING POWER WITH ROD GUIDES OF SIMILAR SIZE



Notes:

- 1) Please contact Plainsman for details or technical questions.
- 2) Plainsman recommends rod guides are heated to 0 °C (32° F) or higher prior to installation.
- 3) Gripping power based on actual test data.

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# Sleeved Tubing Plug

Sleeved tubing plugs are placed at the bottom of the tubing string in order to provide a temporary seal while pressure testing the tubing and running the tubing into the wellbore. Pressurizing the tubing plug opens the sleeve, allowing fluid to flow into the tubing string.

The Plainsman Sleeved Tubing Plug prevents debris from being left downhole and does not restrict production flow. This tool is practical, low cost and easily rebuildable, providing a cost efficient option for your rod lift applications.

## Features

- No downhole debris as sleeve remains attached to the tubing string
- Slotted body flow area is larger than standard tubing internal area
- Chamfered end-cap prevents hang-ups while tripping the tubing
- Rebuild kits available, which reduce total cost of ownership
- Adjustable burst pressures
- All components precisely manufactured in ISO 9001 environment
- Standard EUE tubing threads

## Specifications

Description	3-1/2" EUE <sup>1</sup>
Maximum Number of Screws <sup>2</sup>	6
Shear Pressure per Screw <sup>3</sup>	720 psi
Default Burst Pressure <sup>2</sup>	2880 psi
Maximum Burst Pressure	4320 psi
Maximum Operating Temperature <sup>4</sup>	205°C

1. Requests for other sizes will be considered - LT&C available on request
2. Default assembly has four screws, when using less than the maximum # of screws, space them evenly around the sleeve
3. These values will vary  $\pm$  10% dues to material and manufacturing tolerances
4. High temperature Perfluoroelastomer seals rated for 300°C available upon request

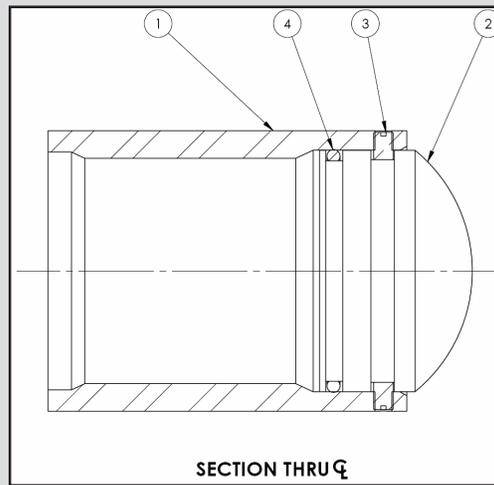


SLEEVED TUBING PLUG

# Tubing Plugs

## Features

- Domed bottom prevents hang ups while tripping pipe
- Adjustable shear values
- Low cost



## Part Numbers

Item	Description	2-7/8" EUE	3-1/2" EUE
-	Tubing Plug Assembly	425193	425084
1	Body	425195	425082
2	Plug	425196	425081
3	Shear Screw (Brass Only)	425079	355027
4	O-Ring	425194	425080

## Specifications

Description	2-7/8" EUE	3-1/2" EUE
Number of Screws	10	25
Shear Pressure per Screw	320 psi	120 psi
Maximum Burst Pressure	3200 psi	3000 psi

## Wellsite & Production Products



### Rod Rotators

- Effectively remove paraffin build up
- Evenly distribute rod and tubing wear
- Two models available:
  - 3020 Gear Driven (240 lb-ft/325 N-m)
  - 2520 Ratchet Table (120 lb-ft/163 N-m)



### Polished Rod Clamps

- Industry leading clamping capacity
- Indentation style; high strength forged steel construction
- Available in single, double and triple bolt sizes to handle every well application



### Stuffing Boxes

- Available in single or dual pack for rod sizes 1", 1-1/8", 1-1/4", 1-1/2", 1-3/4"
- Slimline stuffing box zinc plated for corrosion protection



### Grizzly Environmental Safety Box

- Adapts easily to industry stuffing boxes
- Reduces environmental impact of packing leaks and rod string failure
- Nickel super-alloy coated for maximum corrosion and abrasion resistance



### Adjustable Chokes

- Available for 2000 psi and 3000 psi working pressure
- Forged steel body
- Orifice sizes of 1/2", 3/4" and 1"



### Blow Out Preventers

- Full opening
- Minimize downtime with quick opening end caps
- Bubble tight seal provided with cap o-ring
- Blowout proof threaded ram bolt



### Flow Tees

- 3000 psi (21 MPa) working pressure
- Ductile iron Grade 65-45-12
- Multiple thread combinations available



### Back Pressure Regulators

- Available in cross or tee configuration
- 1/4" NPT pressure port
- Spring ranges available:
  - 10-200 psi (0.1-1.4 MPa)
  - 10-500 psi (0.1-3.5 MPa)
  - 10-900 psi (0.1-6.2 MPa)
  - 10-1500 psi (0.1-10 MPa)



### Swing Check Valves

- Pressure ranges from 300-3600 psi (2-25 MPa)
- Sizes available from 1" (25 mm) to 4" (102 mm)
- Two materials available:
  - Ductile iron Grade 65-45-12 (Black)
  - A216 WCB cast steel (Red)



### Ball Check Valves

- Metal to metal seats
- Simple design easy to install; only two moving parts
- Low cracking pressure suitable for vacuum or low-pressure applications



# Stuffing Boxes

## Features

- Available in single or dual pack
- Cap, glands, body and base made of Grade 65-45-12 ductile iron
- API gauged threads
- Bottom threads available in API tubing [EUE] or LP [line pipe]
- Built-in misaligning feature
- Available for the following rod sizes: 1", 1-1/8", 1-1/4", 1-1/2" and 1-3/4"



## Cone Packing

### Features

- Available for following rod sizes: 1", 1-1/8", 1-1/4", 1-1/2" and 1-3/4"
- Available in a variety of compounds including:
  - Gold Flake
  - Special Lube
  - Soft Cone
  - Teflon Filled
  - High Temperature
- Hydrogen saturated nitrile available for H<sub>2</sub>S service



<b>SOFT</b>	For normal pumping wells. Standard packing in all WNS stuffing boxes for any type polished rod or liner.
<b>HARD</b>	For wells that produce large volumes of water. Use only on hard-faced liner.
<b>SPECIAL LUBRICATED</b>	Self-contained lubricant for wells with an absence of fluid.
<b>HEAVY DUTY</b>	For wells that pump or flow off.
<b>HIGH TEMP</b>	For high-temperature applications to 425°F.
<b>TEFLON FILLED</b>	Longer-lasting for pumping situations such as long stroke, fast cycle, lack of lubrication.
<b>BRASS TEFLON</b>	Combines the longevity of Teflon with the cleaning action of brass. Used on steel polished rods, or hard-faced liners only.
<b>TYPE WN-G</b>	For wells with H <sub>2</sub> S or in CO <sub>2</sub> service.
<b>BOTTOM CLEANER CONES</b>	Helps prevent undesirable deposits on polished rods, or liners.



# Slim-Line Dual Pack Stuffing Box

## Features

- Six larger Chevron style cotton reinforced nitrile packing on each end for longer life
- Zinc plated for corrosion protection
- Brass split bushings
- Packing chamber is easily tightened by hand
- Lock ring sets upper body in place after proper packing compression is achieved
- Lubricating gland for rod lubrication, that also provides pressure on upper and lower gland
- O-ring on lower gland to provide better sealing

## Technical Specifications

DESCRIPTION	PLAINSMAN PART NUMBER	ROD SIZE	MOUNTING SIZE	O.D.	LENGTH	PACKING
Slim-Line Dual Pack Stuffing Box	Model 237-125	1.25"	2-3/8" EUE	3.12"	13.0"	2.5" O.D. x
	Model 237-150	1.50"				1.25" I.D. Lubrikup

Operating Temperature: 121°C/250°F ↔ -35°C/-31°F  
 Max. Operating Pressure: 3000 psi



SLIMLINE STUFFING BOX

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## Parts List

PART	PART NUMBER (1.25")	PART NUMBER (1.50")	MATERIAL
Cap	SB-237-000-10	SB-237-000-10	4140 HTSR
Lock ring	SB-237-000-20	SB-237-000-20	4140 HTSR
Body	SB-237-000-30	SB-237-000-30	4140 HTSR
Top brass bushing	SB-237-125-40	SB-237-150-40	C660 Brass
Bottom brass bushing	SB-237-125-50	SB-237-150-50	C660 Brass
Washer	SB-237-125-60	SB-237-150-60	C660 Brass
Bottom mount	SB-237-000-70	SB-237-000-70	4140 HTSR
Split ring packing*	2-1/2" x 1-1/4" x 3" PKG	2-1/2" x 1-1/4" x 3" PKG	Nitrile with cotton reinforcement
Grease fitting	1/4" NPT NIPPLE	1/4" NPT NIPPLE	Carbon steel
O-ring	228 VITON	228 VITON	Viton
Plug	1/4" NPT SH PLUG ZP	1/4" NPT SH PLUG ZP	Carbon steel

\* Up to 20% sour packing available as custom option

## Ordering Information

1. Specify order is for Model 237-125 or Model 237- 150 Slim-Line Dual Pack Stuffing Box.
2. When ordering parts, specify appropriate model of Stuffing Box and the associated part number from the above chart.

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## Grizzly Environmental Stuffing Box

Reduce environmental impact of packing leaks and rod string failure with our Grizzly Environmental Stuffing Box (GESB). Bolted on to the existing stuffing box, the GESB acts as secondary containment as well as lubrication for the rod string. In case of a break, the flapper shuts closed and prevents any spills on the wellsite, which saves you on production downtime and soil or water contamination.

The versatile GESB can be used with a pressure gauge, pressure switch, sight gauge, or other leak indicator to provide notification that your wellhead needs servicing.

### Features

- Nickel super-alloy coated for maximum corrosion and abrasion resistance
- 2000 psi working pressure, 3000 psi test pressure
- Fits 1-1/4" and 1-1/2" polished rod
- Wear block on flapper, and packing set available in Delrin or Brass
- Bolted top design for easy service
- Material meets NACE MR01-75
- 316 stainless steel flapper and assembly
- Three 1/2" NPT body holes (oil fill, oil drain, & shutdown/ leak detection)
- Adapts easily to WNS and Hercules stuffing boxes
- 2-7/8" EUE bottom connection for added versatility
- All units are made in an ISO 9001 quality system
- Standard packing
  - 1-1/4" x 2-1/4" x 3"
  - 1-1/2" x 2-1/4" x 3"



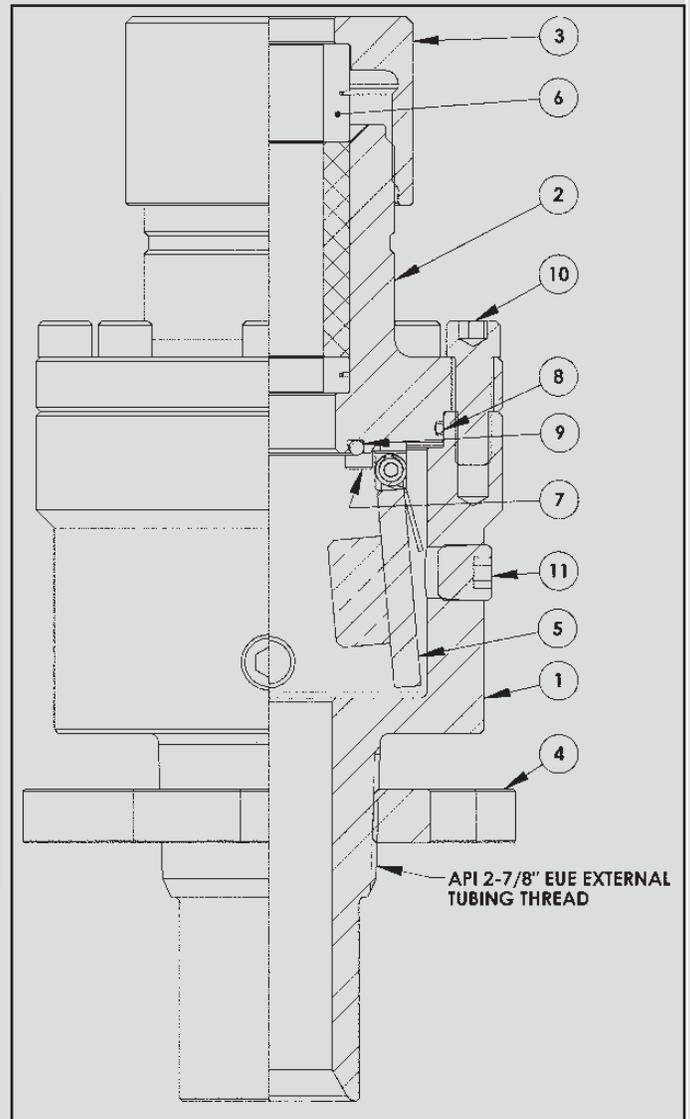
GRIZZLY STUFFING BOX

# GRIZZLY STUFFING BOX



PART DESCRIPTION	PART NUMBER
Grizzly Environmental Safety Box complete with 1 - 1/4" BRASS packing set and flapper wear block	428415
Grizzly Environmental Safety Box complete with 1 - 1/4" DELRIN packing set and flapper wear block	428416
Grizzly Environmental Safety Box complete with 1 - 1/2" BRASS packing set and flapper wear block	428417
Grizzly Environmental Safety Box complete with 1 - 1/2" DELRIN packing set and flapper wear block	428418

ITEM	PART DESCRIPTION	PART NUMBER
1	Lower Body, G-116	428183
2	Upper Body, G-104	428182
3	Upper body cap, G-100	428177
4	Lower body wing nut, G-117	428184
5	Flapper assembly, Delrin	428175
5	Flapper assembly, Brass	428176
6	Packing set, 1-1/4" Brass	428178
6	Packing set, 1-1/4" Delrin	428179
6	Packing set 1-1/2" Brass	428180
6	Packing set, 1-1/2" Delrin	428181
7	SKT head cap screw	425886
8	O-Ring	428186
9	O-Ring	428391
10	SKT Head Capscrew	428185
11	Pipe Plug 1/2" NPT 316 SS	426632



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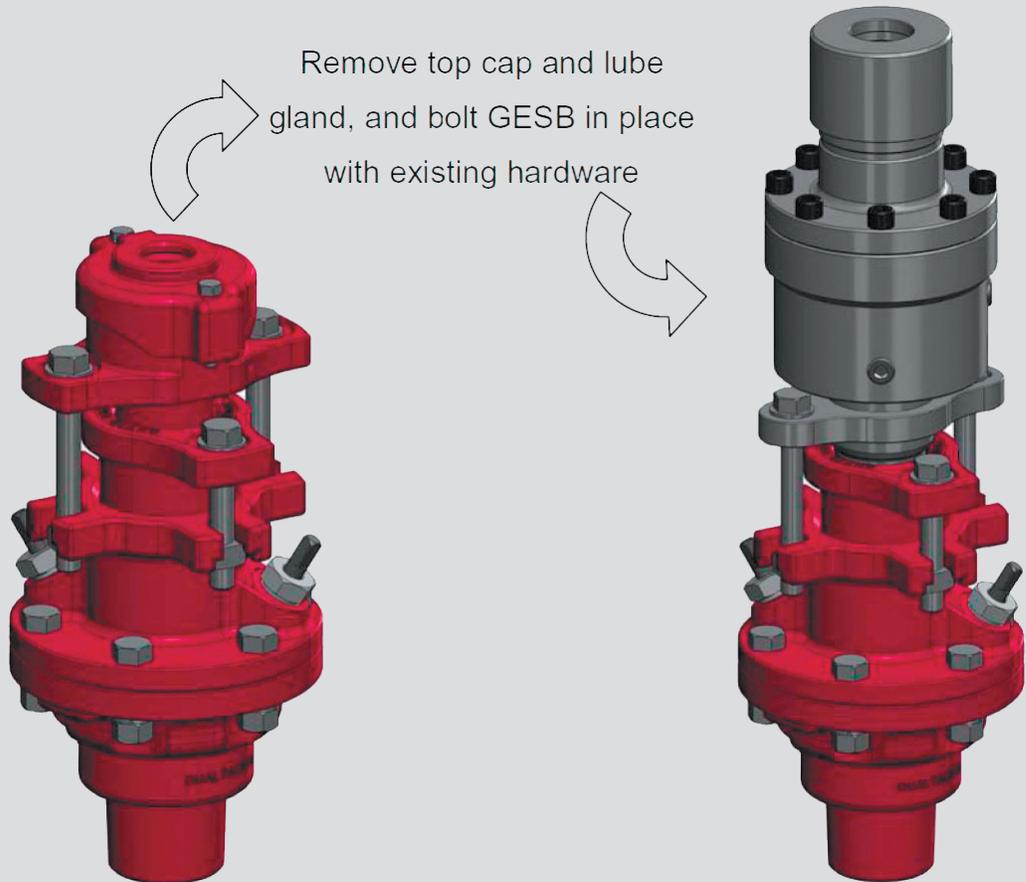
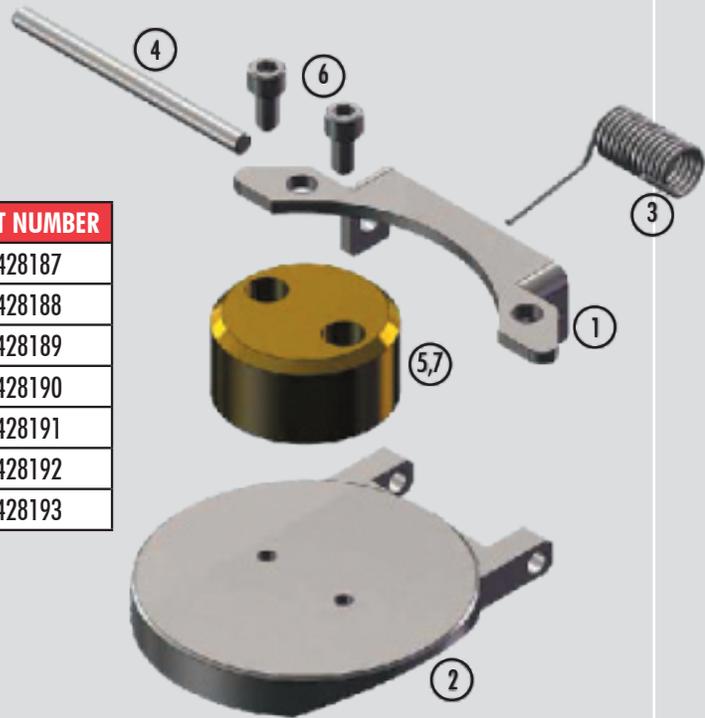
Phone: 780-496-9800 Fax: 780-463-9800 Toll Free: 1-877-448-0586

[www.plainsmanmfg.com](http://www.plainsmanmfg.com)

Specifications subject to change without notice

## Flapper Breakdown

ITEM	PART DESCRIPTION	PART NUMBER
1	FLAPPER BRACKET, G-108	428187
2	FLAPPER, G-112	428188
3	SPRING (FLAPPER) INCONEL, G-111	428189
4	HINGE PIN (FLAPPER), G-110	428190
5	WEAR BLOCK, DELRIN, G-113-D	428191
6	SKT HEAD CAP SCREW	428192
7	WEAR BLOCK, BRASS, G-113-B	428193



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## Flow Tees

### Features:

- Ductile iron construction Grade 65-45-12
- 100% gauging – every thread gauged with API gauge
- Multiple thread combinations available
- Plastic bag packaging for resistance to moisture and other contaminants
- 3000 psi working pressure
- Corrosion resistance coatings available
- Reference chart for available sizes



ITEM ID	MODEL	3000# WORKING PRESSURE	WEIGHT/LBS
390037	FT 120601	2-3/8"EUE X 2-3/8"EUE X 2"LP X 1"NPT FLOW TEE	9
390038	FT 120801	2-7/8"EUE X 2-7/8"EUE X 2"LP X 1"NPT FLOW TEE	13
390039	FT 120807	2-7/8"EUE X 2-7/8"EUE X 3"LP X 1"NPT FLOW TEE	20
390040	FT 120811	3"LP X 2-7/8"EUE X 2" X 1" FLOW TEE	20
390041	FT 120817	2-7/8"X 2-7/8"X 3"X NO BLEED FLOW TEE	20
390042	FT 120901	3"EUE X 3"EUE X 3" LP X 1"NPT FLOW TEE	18
390043	FT 120902	3"EUE X 3"LP X 3"LP X 1" NPT	18
390044	FT 120903	3"EUE X 3"EUE X 2"NPT X 1"NPT FLOW TEE	20
390045	FT 120904	3"EUE X 3"LP X 2"LP X 1" FLOW TEE	18
390046	FT 120905	3"EUE X 2-7/8"EUE X 3"NPT X 1"NPT FLOW TEE	20
390047	FT 120908	3"EUE X 2-7/8"EUE X 2"LP X 1"LP FLOW TEE	20
390048	FT 120921	3"LP X 3"LP 3"LP X 1"NPT	18
390049	FT 120922	3"LP X 3"LP X 2"LP X 1" FLOW TEE	20

**Notes:**

- Pumping Flow Tee has 1" NPT minor side outlets for bleeder ports unless specified otherwise
- Bleeder can be left blank
- Last thread in each series is the major side outlet
- WNS-Coat® Coating: Call for pricing

## Ordering Information

1. Flow line size x tee size x bleeder port size
2. Model number



## Blow-Out Preventers

### Features

- Full opening
- API gauged threads
- Bodies made of ductile iron Grade 65-45-12
- Working pressure of 1500 psi
- Minimizes down time with quick opening end caps
- Bubble tight seal provided with cap o-ring
- Blowout proof threaded ram bolt
- Threads not exposed to the process fluid

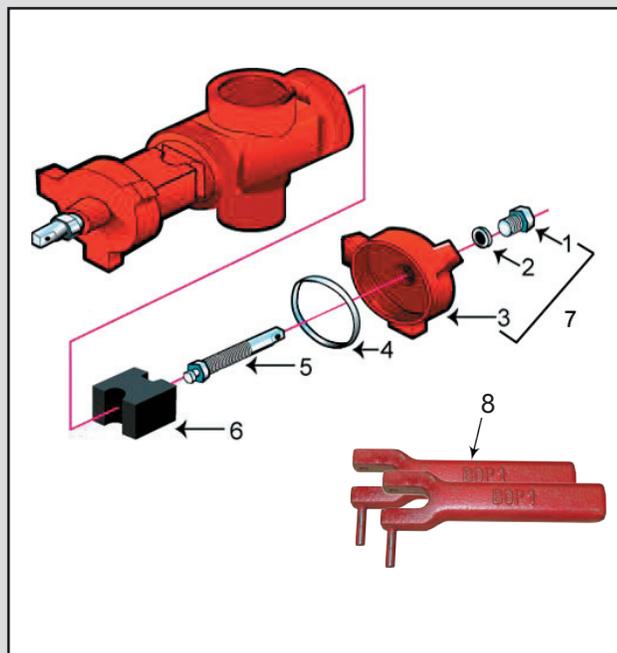


**BLOW-OUT PREVENTER**

# BLOW-OUT PREVENTER

## BOP Part Numbers

BLOW OUT PREVENTER	PART #
2-3/8"EUE x 5/8" Nitrile	425447
2-3/8"EUE x 1-1/4" Nitrile	390001
2-3/8"EUE x 1-1/2" Nitrile	390002
2-3/8"EUE x 1-1/4" Hydrin	426883
2-7/8"EUE x 1-1/4" Hydrin	426884
2-7/8"EUE x 1-1/4" Nitrile	390003
2-7/8"EUE x 1-1/2" Nitrile	390004
2-7/8"EUE x 1-1/2" Hydrin	428014
3"EUE x 5/8"-1" Nitrile	429641
3"EUE x 1-1/4" Nitrile	390005
3"EUE x 1-1/2" Nitrile	390006
3"NPT x 5/8" Nitrile	427338
3"NPT x 1-1/4" Nitrile	390007
3"NPT x 1-1/2" Nitrile	429072
3"NPT x Blind Nitrile	426174



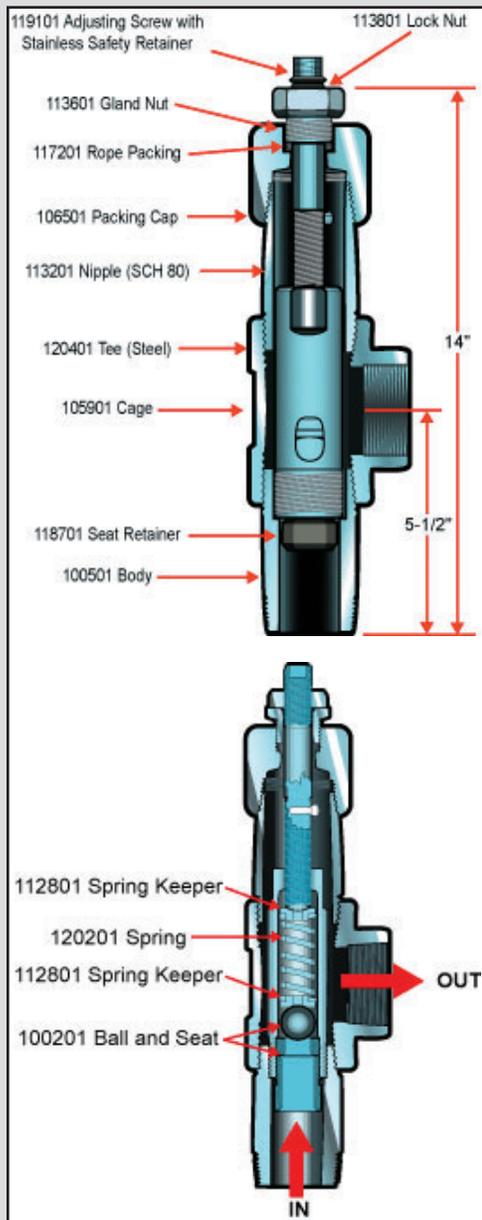
ITEM	DESCRIPTION	PART #
1	Packing Gland	390010
2	Packing Ring	390019
3	Wing Cap	390008
4	O-Ring	390012
5	Ram Screw	390020
6	Ram Set, Blind, Nitrile	390017
	Ram Set, 1-1/4", Nitrile	390015
	Ram Set, 1-1/2", Nitrile	390016
	Ram Set, 1-1/4", Hydrin	390018
	Ram Set, 1-1/2", Hydrin	429462
	Ram Set, 5/8"x 1-1/4", Nitrile	428873
7	Wing Cap Assembly	390009
8	Flip Over Handles (Set of 2)	390011



# 2" Back Pressure Regulator

## Features

- Available in cross or tee configuration
- Spring ranges available: 10-200 psi, 10-500 psi, 10-900 psi and 10-1500 psi
- Reduces paraffin by keeping gas in solution
- ¼" NPT pressure port



PARTS LIST	
PART NAME	2" NPT PART #
Body	100501
Cage	105901
Seat Retainer	118701
Spring 10-200 psi	120201
Spring 10-500 psi	120202
Spring 10-900/1500 psi	120203
Spring Keeper	112801
Lock Nut	113801
Lock Screw	119301
Adjusting Screw	119101
Packing Cap	106501
Gland Nut	113601
Rope Packing	117201
Tee (Steel)	120401
Plug 1/4" F.S.	117501
Nipple (SCH 80)	113201
Ball & Seat	100201
Ball & Seat 1500#	100202

BACK PRESSURE REGULATOR





# Adjustable Chokes

## Features

- Forged steel body
- Hardened alloy trim
- Available for 2000 psi and 3000 psi working pressure applications
- Orifice sizes of 1/2", 3/4", and 1"
- Thumbscrew locks stem in set position
- Standard lubrication for stem



ADJUSTABLE CHOKES



# Polished Rod Clamps

Plainsman's Polished Rod Clamps are a high quality, high strength, yet lightweight and easy to use clamp. Available in single, double and triple bolt sizes to handle every well application. Now with 20% more holding power thanks to a proprietary hard coating that provides abrasion and corrosion resistance to maximize life.

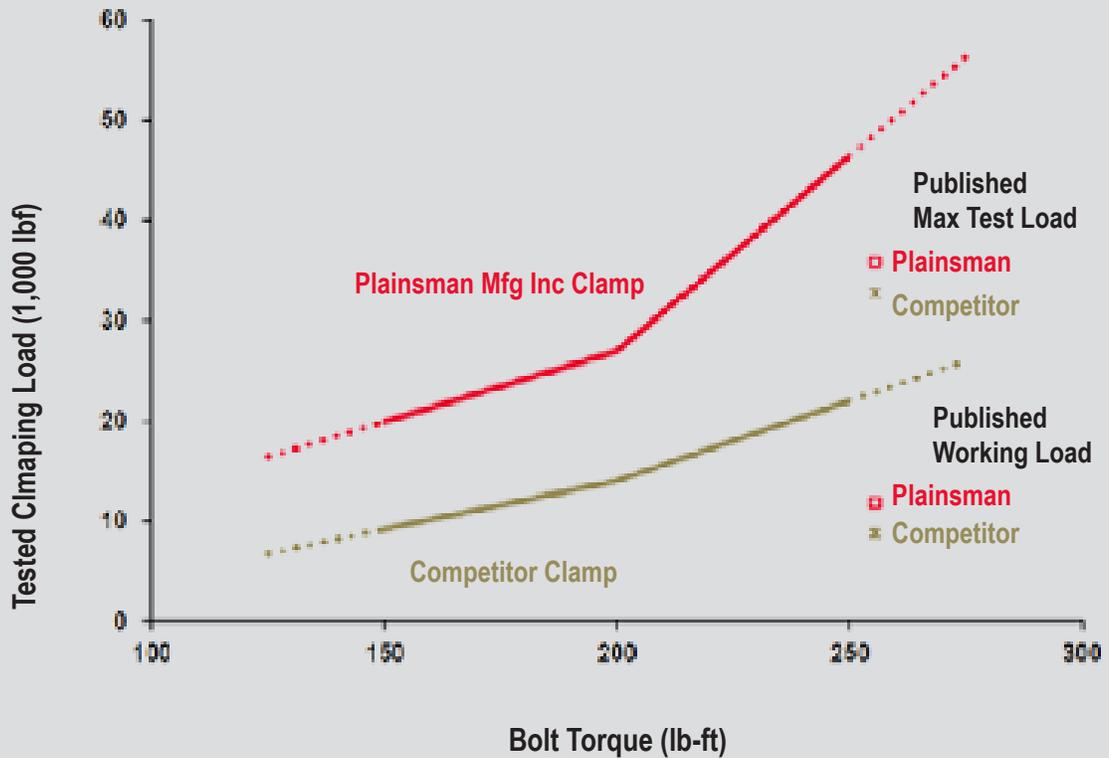
## Features

- Indentation style
- Forged steel construction for high strength
- Precision machined parallel faces and perpendicular rod bore
- Hard black coating
- Industry leading clamping capacity

TYPES	WORKING LOAD	MAX TEST LOAD	SIZES	BOLT TORQUE	HEIGHT	BODY MATERIAL	SHIPPING WEIGHT
Single Bolt	16,000 lb	33,000 lb	1-1/8" 1-1/4" 1-1/2"	250 lb-ft	2.45"	Forged Alloy Steel	4.25 LBS
Double Bolt	32,000 lb	66,000 lb	1-1/8" 1-1/4" 1-1/2"	250 lb-ft	4.90"	Forged Alloy Steel	8.25 LBS
Triple Bolt	45,000 lb	76,000 lb	1-1/8" 1-1/4" 1-1/2"	250 lb-ft	7.35"	Forged Alloy Steel	12.5 LBS



## Clamping Capacity Tests\*



\*Based on actual test results with calibrated equipment, new 1-1/4" single bolt clamps, and new polished rods

### NOTES:

1. Clamping capacity for illustrative purposes only. Always use specified bolt torque and working loads.
2. Do not clamp on hard surfaced, or spray metal sections of polished rods as it may not clamp properly or may damage the rod.

## Ordering Information

1. Determine the working load requirements
2. Specify the polished rod diameter
3. Specify single, double or triple bolt based on working load



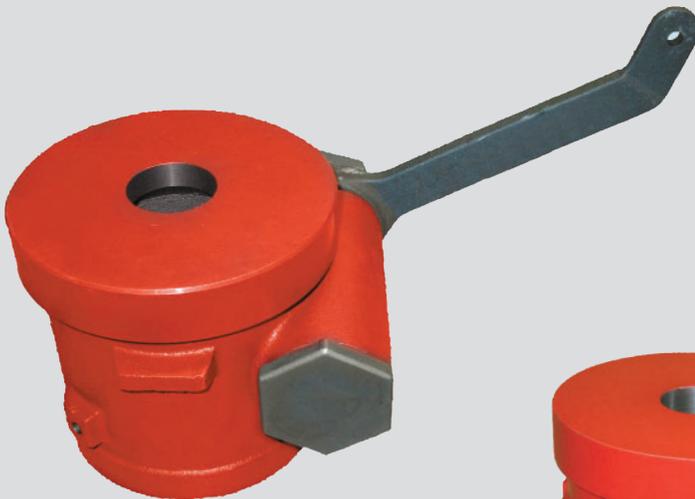
## Rod Rotators

	3020	2520
Max. Torque Output	240 lb-ft	120 lb-ft
Max. Recommended Load	40,000 lbs	33,000 lbs
Polished Rod Size	1-1/8" to 1-3/4"	1-1/8" to 1-1/2"
Shipping Weight	48 lbs	35 lbs
Rotation Type	Helical Worm Gear	Ratchet Table
Body Material	Ductile Iron	Ductile Iron
Rotation per 90° Lever Stroke	<5°	15°

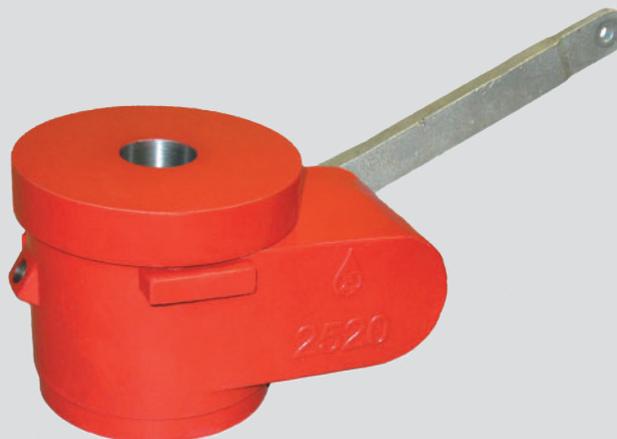
1. Custom cable lengths available
2. Rotators must be under load to operate

### Features

- Effectively remove paraffin build up
- Evenly distribute rod and tubing wear
- Use with Plainsman PL5 centralizing couplings for maximum effectiveness
- Parts interchangeable with existing 302 and 252 rod rotators



**3020 Gear Driven**



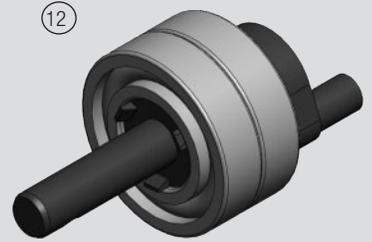
**2520 Ratchet Table**

# 2520 ROD ROTATOR PARTS LIST

## 2520 Rod Rotator Parts List

ITEM	PART DESCRIPTION	PART NUMBER
1	Housing	425765
2	Top Cover	425766
3	Ratchet Table	425769
4	Rod Loading Bearing	325015
5	O-Ring	425761
6	Plug	125001
7	Holding Pawl	425771
8	External Retaining Ring (E-Ring)	425760
9	Holding Pawl Bolt	425772
10	1-1/4" Pilot 1-1/2" Pilot	425774 425775
11	Actuator Pawl	425770
12	Cam Shaft Assembly	427096
13	Cam Shaft	425768
14	Cam Shaft Bearings	425763
15	Cam Shaft Packing Gland	425767
16	Oil Seal (for cam shaft packing gland)	425762
17	Actuator Lever	425773
18	Bolt (for actuator lever)	425764
19	Safety Beam Clamp Assembly	425757
20	Yoke Kit	427102
21	3/16" Galvanized Wire Cable Assembly c/w Ends	425758

Cam Shaft Assembly

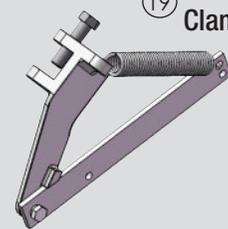


Yoke Kit

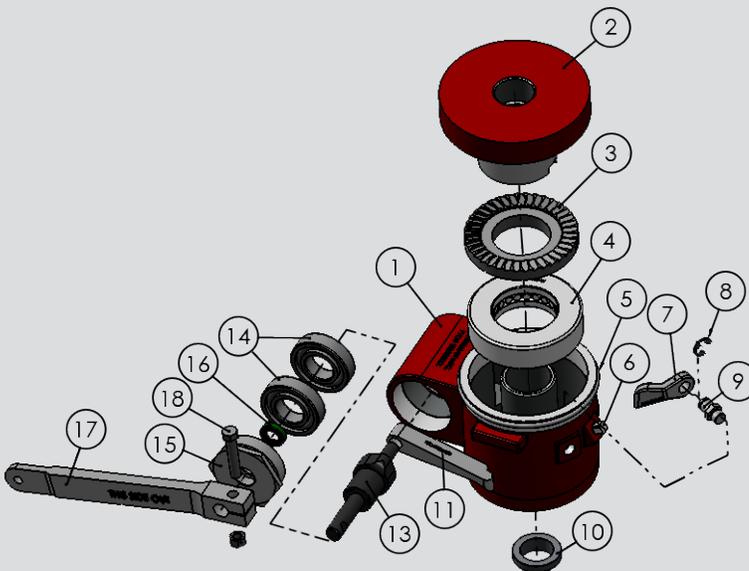


1. 2520 Rod Rotators come complete with all the assemblies and parts as shown below
2. Cam shaft bearings can only be ordered as part of cam shaft assembly

Safety Beam Clamp Assembly



Cable Assembly



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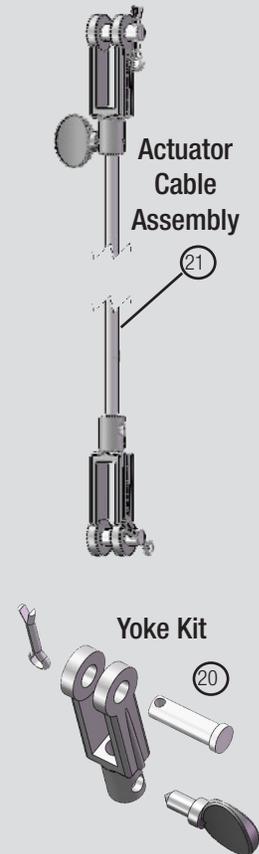


# 3020 ROD ROTATOR PARTS LIST



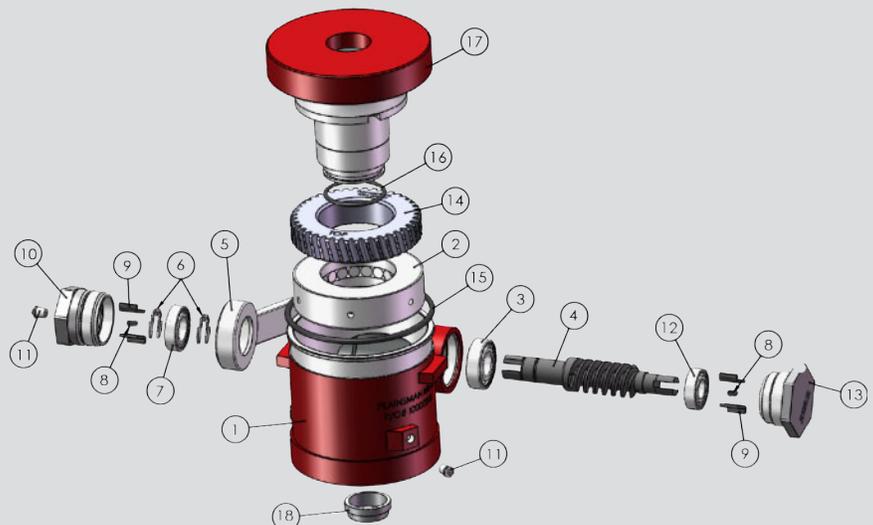
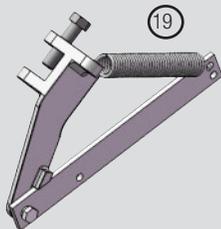
## 3020 Rod Rotator Parts List

ITEM	PART DESCRIPTION	PART NUMBER
1	Body	427852
2	Rod Load Bearing	426144
3	Middle Shaft Bearing	426145
4	Worm Drive Shaft	427849
5	Actuator Lever	427848
6	E-Ring (large)	426168
7	Bearing for Actuator Ratchet	426147
8	Ratchet Spring	426167
9	J-Hook	429071
10	Actuator Ratchet Body	427851
11	Grease Nipple	426148
12	Bearing for Backstop Nut	426146
13	Backstop Nut	427850
14	Worm Gear	427853
15	Large O-Ring (body)	426169
16	Small O-Ring (Pillar Post)	426149
17	Cover cap	427847
18	1-1/4" Pilot 1-1/2" Pilot	425774 425775
19	Safety Beam Clamp Assembly	425757
20	Yoke Kit	427102
21	3/16" Galvanized Wire Cable Assembly c/w ends	425758



1. 3020 Rod Rotators come complete with all the assemblies and parts as shown below

Safety Beam  
Clamp Assembly



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Specifications subject to change without notice

(7), PB-RODR04

## Swing Check Valves

### Features

- Valve body and bonnet made of ductile iron Grade 65-45-12 (Black) or A216 WCB cast steel (Red)
- Materials conform to NACE MR0175
- Pressure ranges from 300-3600 psi working pressure
- Available sizes: 1" to 4"
- 316 stainless steel clapper with Buna-N seal



SWING CHECK VALVES

## Excess Flow Valve

Limit the maximum flow rate in the pipeline with this valve and thereby minimize pipeline abrasion wear. Adjustable with two closing flow rates to accommodate changes in well flow rates as they age.

Also ask about our patented externally adjustable model.

EXCESS FLOW VALVE SPECIFICATIONS	
Canadian Registration Number, CRN	0C08173.2
Material of Construction	A-479 304 Stainless Steel
Closing Flow	300 MACFD or 500 MACFD
Design Pressure	350 psi (2413 kPa)
Hydro Test Pressure	525 psi (3620 kPa)
Maximum Design Temperature	200 °F (93.3 °C)
Minimum Design Metal Temperature	-50 °F (-45.6 °C)
End Connections	2" fNPT
Corrosion Allowance	1/8"



EXCESS FLOW VALVE

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## Closing Flow Rates

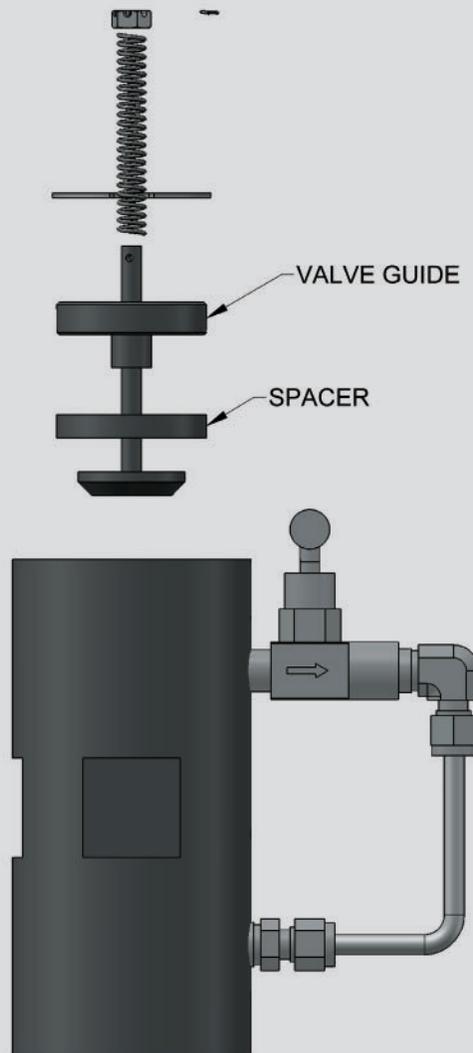
The closing flow rate of the excess flow valve is dependent on the order that the valve guide and spacer components are inserted in the excess flow valve during assembly or maintenance.

### 500 MACFD

Placing the spacer prior to placing the valve guide in the excess flow valve maximizes the travel distance of the poppet head to the valve seat, thus yielding a closing flow of 500 MACFD.

### 300 MACFD

Placing the valve guide prior to placing the spacer in the excess flow valve minimizes the travel distance of the poppet head to the valve seat, thus yielding a constant flow of 300 MACFD.



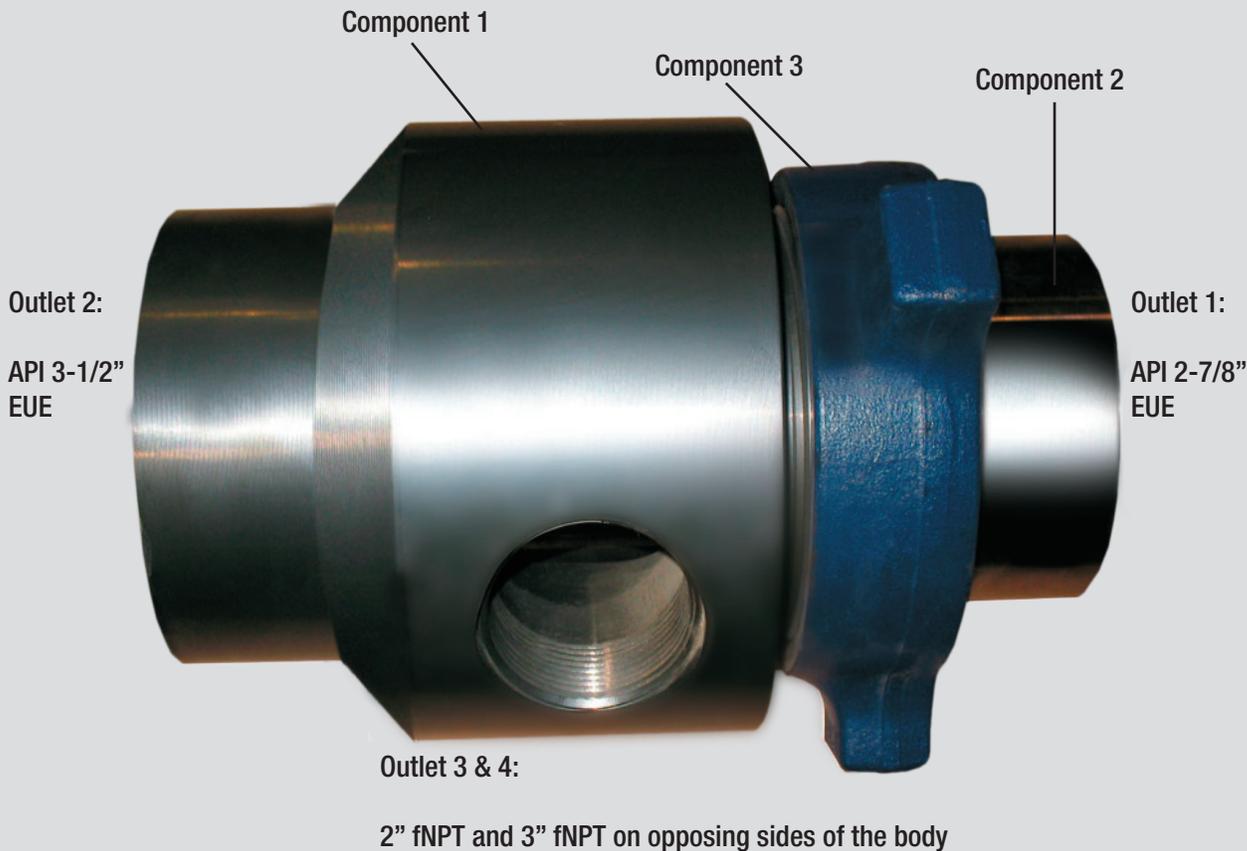
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## Flow Cross

FLOW CROSS SPECIFICATIONS	
Material	1045 Steel
Maximum Working Pressure	2000 psi
Outlet 1 Size	API 2-7/8" EUE
Outlet 2 Size	API 3-1/2" EUE
Outlet 3 Size	2" fNPT
Outlet 4 Size	3" fNPT

COMPONENTS	
Component 1	Body
Component 2	Sub
Component 3	Hammer Union Nut
Component 4	O-Ring





# Plainsman Ball Check Valves

Reliable, field-proven check valves.

## Features

- Metal to metal seats
- Simple design makes it easy to install and maintain, with only two moving parts
- Low cracking pressure makes it suitable for vacuum or low-pressure applications
- Lower price component to replace the alternatives in the same application

## Technical Specifications

**Cracking Pressure:** 3-5 PSI (20-35 kPa) based on Viton seals

**Temperature Range:** Based on viton seal, -15°F to 400°F (-26°C to 205°C)

**Temperature Range for Pressure Equipment and Pressure Piping:** -15°F to 100°F (-26°C to 38°C)

**Spring:** Stainless steel, (Inconel optional)

**Ball:** Stainless steel

**Spring Retainer:** CF8M Stainless

**Note:** Valves without a CRN cannot be used in piping subject to the ALBERTA PRESSURE EQUIPMENT SAFETY REGULATION.



**BALL CHECK VALVES**



## Part Numbers

PLAINSMAN MODEL NO.	CONNECTIONS	CV	MAXIMUM WORKING PRESSURE	STANDARD BODY MATERIAL
CB-25*	1/4" fNPT x 1/4" fNPT	0.69	3000 PSI	12L14 CARBON STEEL
CB-37*	3/8" fNPT x 3/8" fNPT	2.56	3000 PSI	12L14 CARBON STEEL
CB-50*	1/2" fNPT x 1/2" fNPT	3.7	3000 PSI	12L14 CARBON STEEL
CB-75*	3/4" fNPT x 3/4" fNPT	4.86	3000 PSI	12L14 CARBON STEEL
CB-100*	1" fNPT x 1" fNPT	6.73	3000 PSI	12L14 CARBON STEEL
CB-150	1-1/2" fNPT x 1-1/2" fNPT	26.3	3000 PSI	12L14 CARBON STEEL
CB-200	2" fNPT x 2" fNPT	41.11	3000 PSI	12L14 CARBON STEEL
CBM-100	1" mNPT x 1" mNPT	26.3	3000 PSI	12L14 CARBON STEEL
CBM-150	1-1/2" mNPT x 1-1/2" mNPT	41.11	3000 PSI	12L14 CARBON STEEL
SB-25*	1/4" fNPT x 1/4" fNPT	0.69	3000 PSI	316 STAINLESS
SB-37*	3/8" fNPT x 3/8" fNPT	2.56	3000 PSI	316 STAINLESS
SB-50*	1/2" fNPT x 1/2" fNPT	3.7	3000 PSI	316 STAINLESS
SB-75*	3/4" fNPT x 3/4" fNPT	4.86	3000 PSI	316 STAINLESS
SB-100*	1" fNPT x 1" fNPT	6.73	3000 PSI	316 STAINLESS
SB-50 6000*	1/2" fNPT x 1/2" fNPT	3.7	6000 PSI	316 STAINLESS
SB 100 6000*	1" fNPT x 1" fNPT	6.73	6000 PSI	316 STAINLESS
SB-25 10000*	1/4" fNPT x 1/4" fNPT	0.69	10000 PSI	316 STAINLESS
SB-50 10000*	1/2" fNPT x 1/2" fNPT	3.7	10000 PSI	316 STAINLESS
SB-75 10000*	3/4" fNPT x 3/4" fNPT	4.86	10000 PSI	316 STAINLESS
SB-100 10000*	1" fNPT x 1" fNPT	6.73	10000 PSI	316 STAINLESS
MB-200	2 mNPT x 2 mNPT	26.3	3000 PSI	316 STAINLESS

\* Canadian Registration Number (CRN): 0C02533.2

## Ordering Information

Specify the Plainsman model desired.

Model Numbering:

A-XX YYYYY (i.e. SB-25 10000)

A: Material (CB=Carbon Steel, SB=Stainless Steel)

XX: Connection Size (i.e. 25 = 1/4" NPT connection)

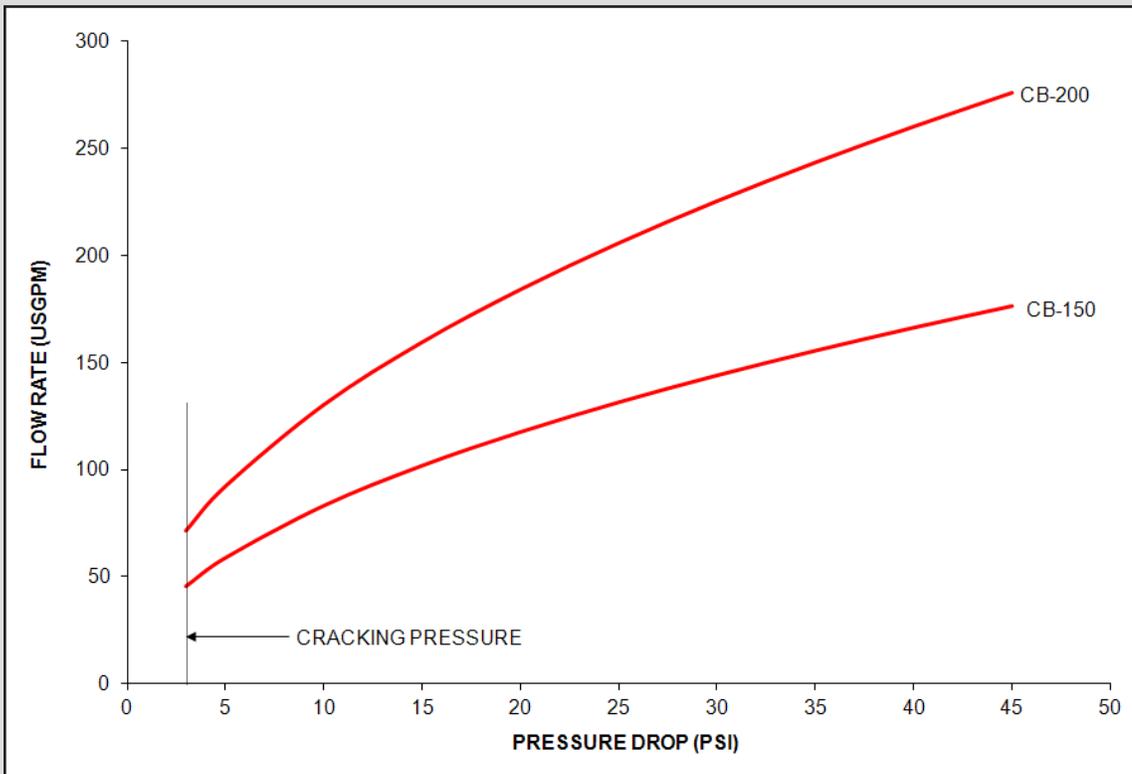
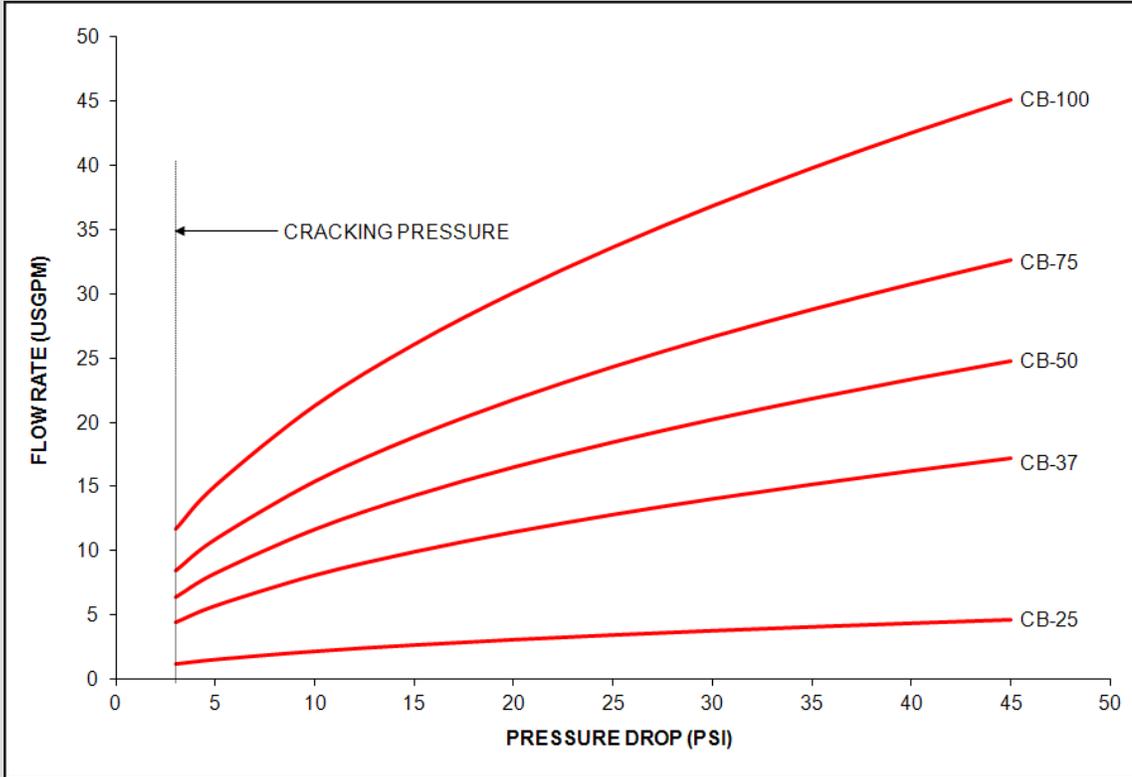
YYYYY: Working Pressure (6000 psi [41.4 MPa] or 10000 PSI [68.9 MPa] models only)



**PLAINSMAN ALSO DISTRIBUTES MODEL ASB-283, ASA-675 AND ASA-676 CHECK VALVES.**

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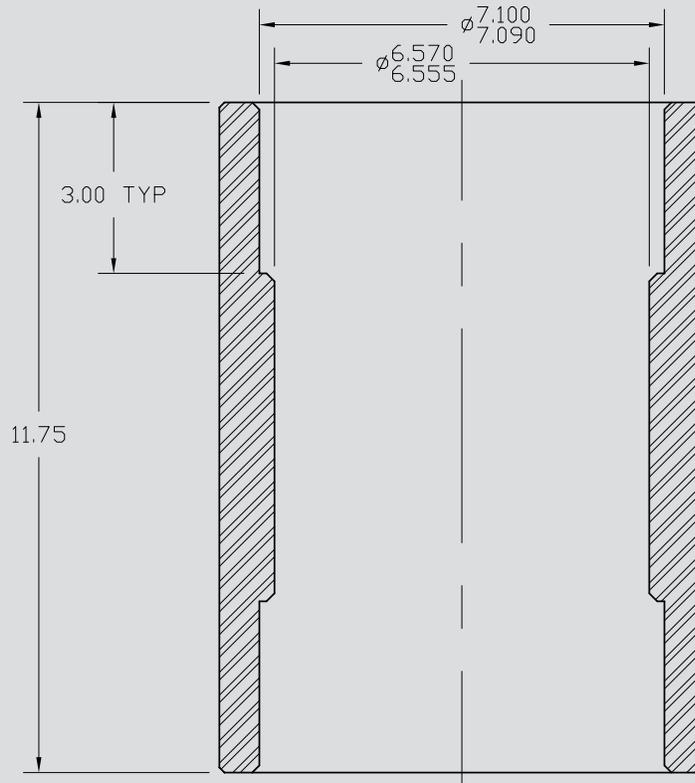
# Plainsman Casing Coupling

## Features

- AISI 1026 construction
- Fits 7" casing with socket weld connections
- Hi-temp flat black coating



## General Dimensions



CASING COUPLING

# Orifice Unions

## Features

- Stainless steel orifice cup
- Forged carbon steel union
- Orifice to customer specification
- Available in five sizes

## Operating Information

Note: Blind operation (i.e no orifice hole) is not recommended to permanently cap a pipe

BLIND PRESSURE RATINGS	
UNION SIZE (NPT)	MAX PRESSURE (PSI)
1/2"	3000
3/4"	3000
1"	3000
1-1/2"	2500
2"	1000

## Ordering Information

1. Specify IPS size: 1/2", 3/4", 1", 1-1/2" or 2"
2. Specify orifice diameter (to nearest 1/64th)





## Run Ticket Box (RTB-1)

The Run Ticket Box eliminates the expense of tracking down lost or unreadable run tickets by keeping the tickets safe, clean and dry at a constant location on the well site. The box is constructed from durable polyethylene and has a plastic see through window for run ticket visibility. The RTB1 features a spring loaded hinged lid which helps keep the lid closed during windy conditions.



**RUN TICKET BOX**

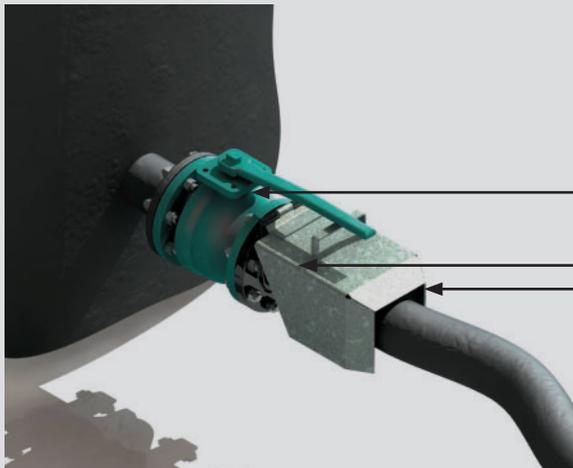


## Tank Valve Safety Lockout

Safety in the oilfield is no accident. The Plainsman Tank Valve Safety Lockout is a heavy duty solution that assures the tank drain hose cannot be removed without the valve handle being in the closed position, assuring no accidental spillage or injury to field personnel. It can be used on any ball valve with different models for the valve handles in vertical, 45 degrees or horizontal position.

### Features

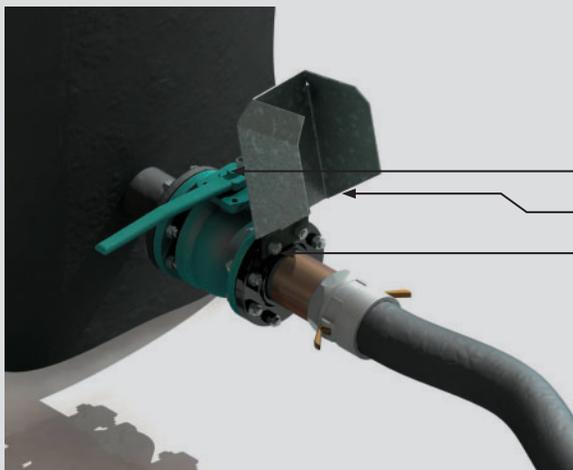
- Prevent unlatching of hose while valve open
- Valve handle denies access to hose cam latches
- Galvanized steel for corrosion protection (other coatings available on request)
- Heavy gauge steel used
- Handles are in different positions dependent on location of valve handle
- Will make to individual situations



Valve open

Tamper-proof stopper welded on at factory

Mitered flanged end prevents access to cam latches and provides rigidity



Valve closed

Cutaway for full access in up position

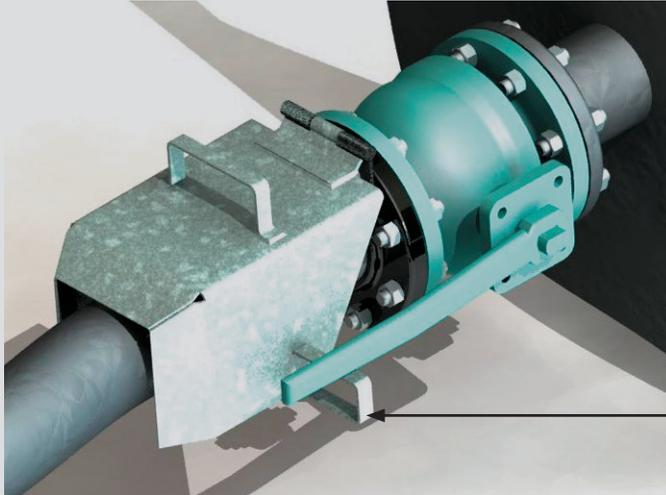
Bolts on with existing studs and nuts

TANK VALVE SAFETY LOCKOUT

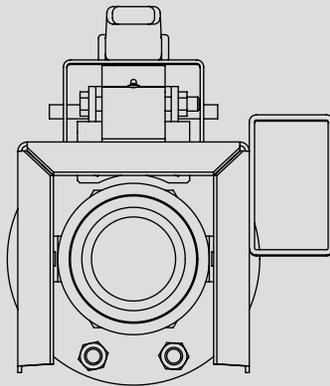
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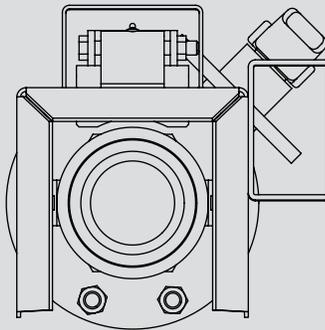
### Different Valve Orientation Optional Setups



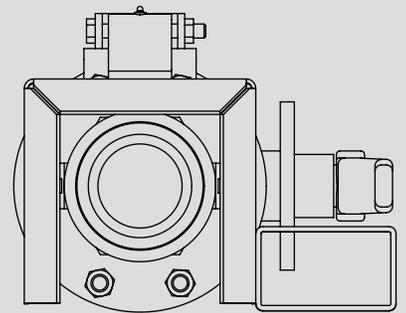
Stopper can be positioned at any height from factory



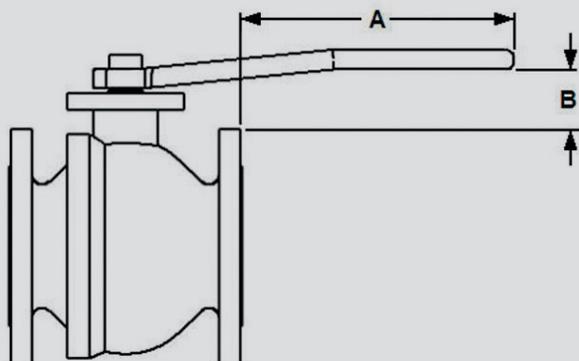
Standard Orientation



45° Orientation



90° Orientation



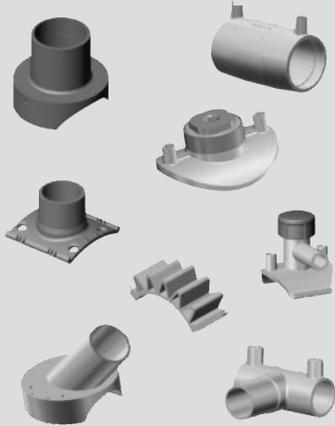
### Ordering Information

Valve Orientation (circle one)	Standard	45°	90°
Handle Length (A):			(in/mm)
Handle Height (B):			(in/mm)
Valve Size:			(in)
Valve Make/Model:			

MADE IN CANADA



# Electrofusion & Butt Fusion Products



### Electrofusion Fittings

- Couplings
- Elbows
- Tees
- Reducers
- Available in 2406 or 3408
- Caps
- Tapping Tees
- Saddles
- Flex Restraints



### Electrofusion Processor

- Proven and reliable
- Available for rent or purchase



### Conventional / Butt Fusion Fittings

- 45° Elbows
- 90° Elbows
- Reducers
- Caps
- Purge Caps
- Available in 2406 or 3408
- Tapping Tees
- Saddles
- Couplings
- Flanges
- PE Ball Valves

FUSION PRODUCTS

# Meter Connection Products

## Meter Connection Products

- Meter Swivels
- Meter Nuts
- Meter Sets



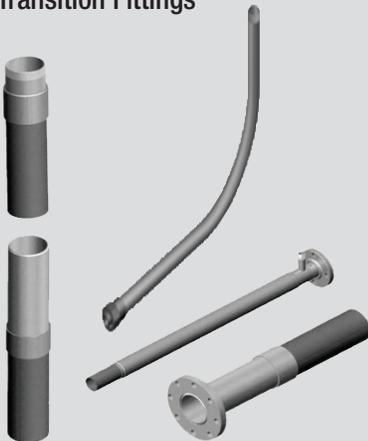
## Ground Joint Insulating Unions

- Available in 150# and 3000#



## Risers & Transitions

- Anodeless Risers
- Riser Accessories
- Transition Fittings



## Tools

- Electrofusion Tools
- Squeeze-off Tools



METER CONNECTION PRODUCTS

# Plainsman Meter Lift

Outdoor Deep-Set Meter Box

## Features

- Weholite profile wall HDPE pipe construction
- Larger inside diameter than other models
- Constant outside diameter--no exterior insulation due to intrinsic insulation properties of profile
- Insulating Plug and Meter Table retrievable without special tools

## Advantages

- Durable HDPE construction reduces damage during handling
- Large inside diameter allows more room to work, as well as attach devices such as pressure reducers
- Deep set foam plug eliminates need for exterior insulation
- No special tools required to retrieve plug or meter table

## Technical Specifications

### Pipe:

18 in. ID Weholite Pipe  
HDPE Profile Wall Pipe

### Plug:

Closed-cell polyethylene foam  
PVC Handle

### Lid:

Galvanized and Stainless Steel  
2000 lb Capacity

### Fittings:

All fittings are NSF Listed waterworks brass

### Tubing:

3/4 CTS Crosslinked Polyethylene (PEX), terminating  
in 3/4 NPT Male Nipples. Max Pressure 160 psi at 23° C

### Weight:

Standard model (no lid): 140 lb  
Lid: 27 lb



METER LIFT

MADE IN CANADA



## Configuration:

### Height:

From 90" [2290 mm] to 120" [3050 mm]  
in 6" [152 mm] increments, 120" standard

### Flow (gpm):

0.25, 0.50, 0.75, 1 (standard), 2.5, 5.0

### Meter Table Fittings:

#### Standard:

- Ball Angle Valve\*
- Angle Dual Check\*
- Elbows\*
- Nipples & Bushings

#### Options:

- Pressure Reducing Valve \*\*
- Y-Strainer
- Tee
- Pressure Gauge

## Notes:

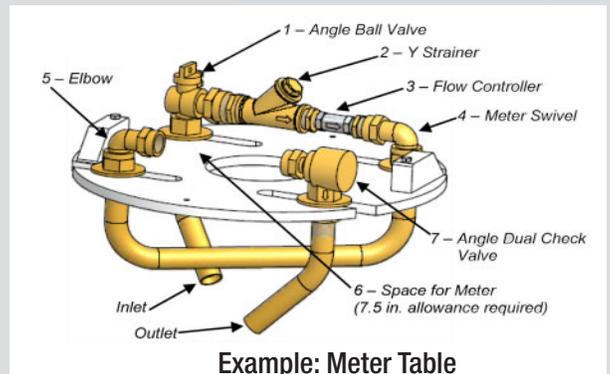
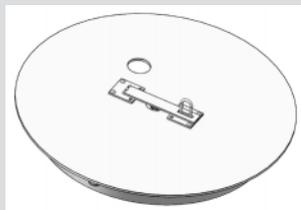
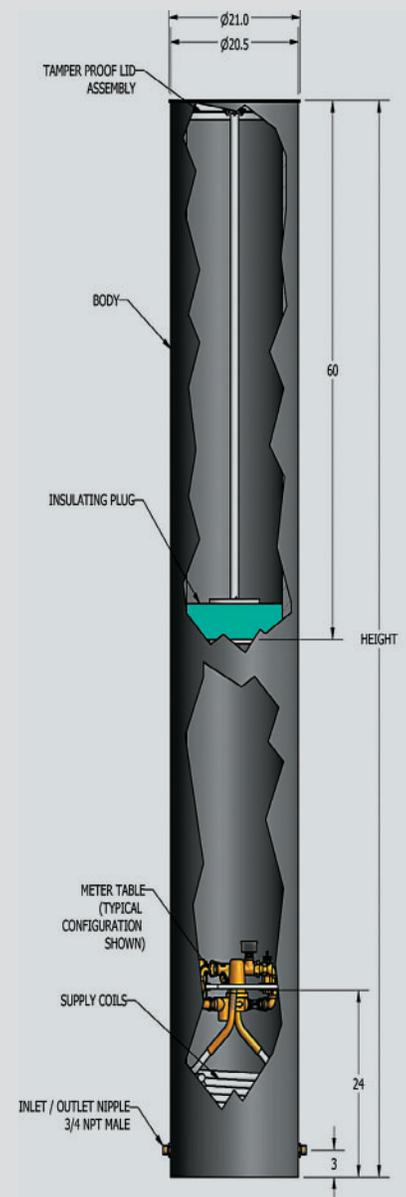
\* Comes with meter swivel connection

\*\* The meter lift inlet pressure must not exceed 160 psi, with or without a PRV. Consult Plainsman's Engineering department if higher pressures are required.

### Additional Customizations:

Customization of Meter Lift is available upon consultation.  
Examples of customizations include:

- Antenna hole and locking hasp on lid as shown below
- Different sized connections (not 3/4")



Example: Meter Table

## For Quotes or Information:

- Specify Plainsman Model 18 Meter Lift
- Indicate Height required
- Indicate inlet pressure
- Indicate fittings required. Be sure to indicate the order of fittings, via list and/or clear schematic.

MADE IN CANADA



## Tracer Wire

Plainsman understands the importance of a quality tracer wire. That is why we recommend a pure copper wire that is annealed for ease of use and protected with a .03" to .045" thick polyethylene jacket. For the tougher jobs that require more strength go with an annealed copper clad that doesn't spring off the reel. Plainsman's tracer wire is easy to handle and has almost twice the strength of a copper line. For directional drilling applications we recommend our **EHS Wire**, which is more than 6 times the strength of a copper line.

### 100 % COPPER TRACER WIRE with .045" Polyethylene Jacket

#### Features

- Insulated with high molecular weight polyethylene (HMWPE) specifically for use in direct burial applications.
- HMWPE is a rugged and durable material considered excellent for moisture and abrasion resistance.
- Manufactured according to Underwriters Laboratory constructions in both 30 volt and 600 volt versions suitable for use at a maximum continuous operating temperature of 75 °C in wet and dry locations.

### COPPER CLAD STEEL TRACER WIRE with .045" Polyethylene Jacket

#### Features

- Combines the high strength of steel with the electrical and corrosion resistant properties of copper.
- Insulated with high molecular weight polyethylene (HMWPE).
- HMWPE is a rugged and durable material considered excellent for moisture and abrasion resistance which produces a product designed for direct burial use in wet or dry locations.
- Manufactured and tested according to industry standards for metal conductors and extruded insulation coatings as specified by UL and ASTM.



STOCK ITEMS					
Type	AWG	Insulation Thickness	spool size M[ft]	Strenth in lbs	Nominal O.D.
Soft* Copper	14	0.045	152[500]/762[2500]	124	.154"
Soft* Copper	12	0.045	1000[3281]	198	.171"
Soft* Copper Clad	14	0.045	762[2500]	487	.154"
Soft* Copper Clad	12	0.045	300[984]	696	.171"

## 100 % Copper Tracer Wire with .030"/.045" Polyethylene Jacket Technical Info

AWG	STRENGTH IN LBS	INSULATION THICKNESS		NOMINAL OVERALL DIAMETER		SPOOL SIZE (M[FT])	
		SOFT*	30 V	600 V	30 V	600 V	152[500]
14	124	.030"	.045"	.124"	.154"	152[500]	762[2500]
12	198	.030"	.045"	.141"	.171"	152[500]	762[2500]
10	310	.030"	.045"	.162"	.192"	152[500]	762[2500]
8	480	.030"	.045"	.206"	.236"	152[500]	762[2500]
6	760	.030"	.045"	n/a	.275"	152[500]	762[2500]

### Standards:

- 2.1 ASTM B-1, B-3, and B-8 for copper conductors
- 2.2 ASTM D-1248 for Polyethylene Extrusion Materials, ICEA S-70-547 Weatherproof Resistant Polyethylene Conductors, ICEA S-61-402 /NEMA WC5 Thermoplastic Insulated Wire&Cable, ICEA S-95-658/NEMA WC70 Non-Shielded 0 – 2kv Cables
- 2.3 UL 1581 Standard for Electrical Wires, Cables, and Flexible Cords

## Copper Clad Steel Tracer Wire with .030"/.045" Polyethylene Jacket Technical Info

AWG	STRENGTH IN LBS			INSULATION THICKNESS		NOMINAL OVERALL DIAMETER		SPOOL SIZE M[FT]	
	SOFT*	HARD	EXTRA HARD	30 V	600 V	30 V	600 V	152[500]	762[2500]
14	170	250	n/a	.030"	.045"	.124"	.154"	152[500]	762[2500]
12	256	380	1150	.030"	.045"	.141"	.171"	152[500]	762[2500]
10	407	575	1804	.030"	.045"	.162"	.192"	152[500]	762[2500]
8	648	886	2586	.030"	.045"	1.88"	.218"	152[500]	762[2500]

### Standards-

- 2.1 ASTM B-227-04, B-869-02, B910/B-910M-06 all for Copper Clad Steel
- 2.2 ASTM D-1248 for Polyethylene Extrusion Materials, ICEA S-70-547 Weatherproof Resistant Polyethylene Conductors, ICEA S-61-402/ NEMA WC5 Thermoplastic Insulated Wire&Cable, ICEA S-95-658/NEMA WC70 Non-Shielded 0 – 2kv Cables
- 2.3 UL 83 Standard for Thermoplastic Insulating, UL 1581 Reference Standard for Electrical Wires

### Ordering Information:

1. Type of Wire required (Copper or Copper Clad)
2. Gauge of wire required
3. Length of wire required
4. Length per spool required

\* The copper is annealed to increase the flexibility and reduce the brittleness

Non-standard colors and custom packaging are available by quotation





# Safety Flex Marker Post

Prevent damage to your signage for underground equipment such as gas/oil pipelines, valves, water/sewer lines, cables and more.

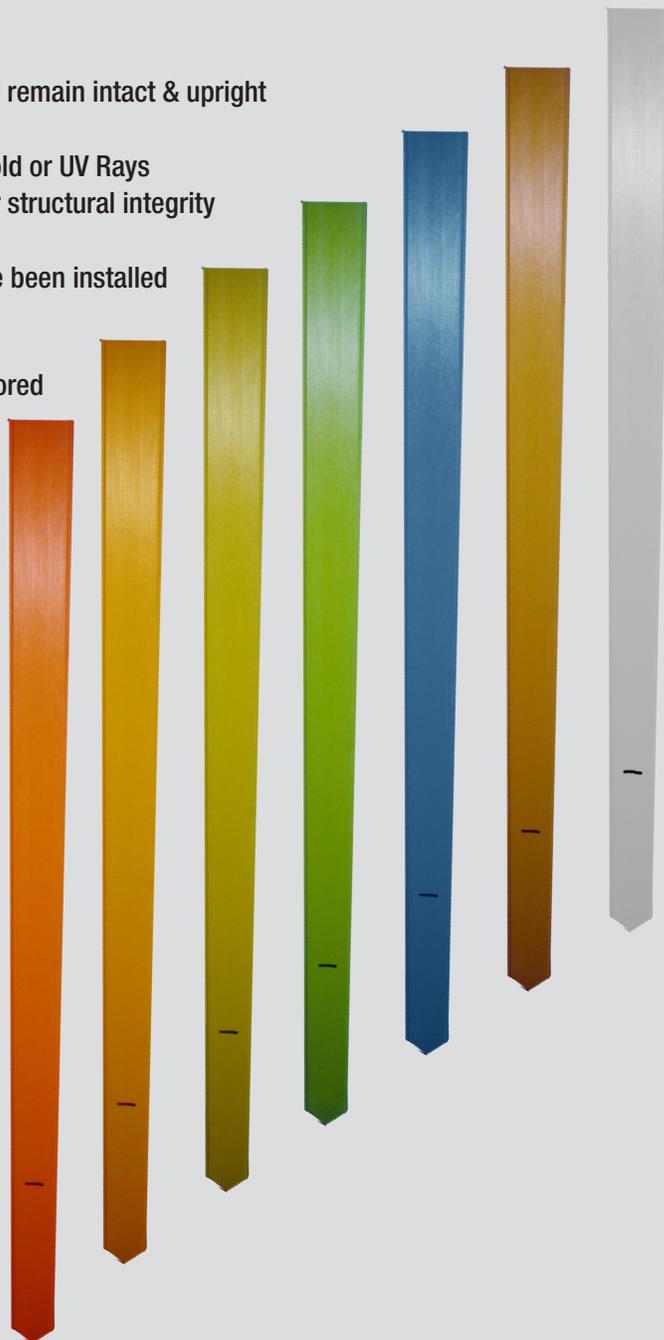
Available in standard seven foot lengths and in seven different colours (red, orange, yellow, green, blue, brown and white)

## Features

- Springs back after impact
- Will withstand countless vehicle impacts and remain intact & upright
- Resists fire and high temperatures
- Will not rust, rot or become brittle from the cold or UV Rays
- Engineered to remain flexible, and retain their structural integrity year after year
- Virtually impossible to remove once they have been installed
- Will install in minutes by one person
- No excavation required on installation
- Easily installed using a driving tool, and anchored in the ground using a barb for permanent installation
- Lightweight and easily transported

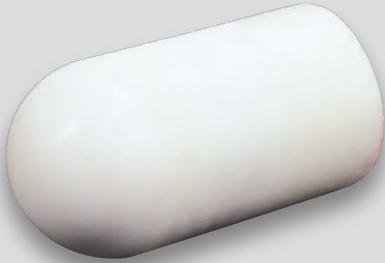
## Ordering Information

1. Quantity
2. Colour
3. Design of signage sticker desired



**SAFETY FLEX MARKER POST**

## Pipeline & Pigging Products



### Bare Hard Density Pigs

- Used for drying and mild cleaning



### Fully Coated Hard Density Pigs

- Withstands 5% presence of H<sub>2</sub>S and CO<sub>2</sub>
- Used for drying and mild cleaning where extended service is required



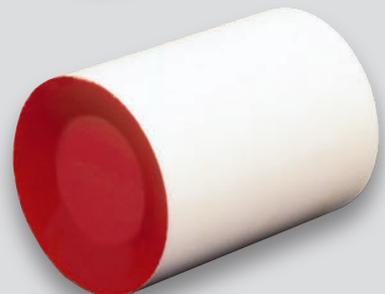
### Crisscross Hard Density Pigs

- Used for wiping or light removal of paraffin and sediments
- Crisscross pattern creates a scraping effect



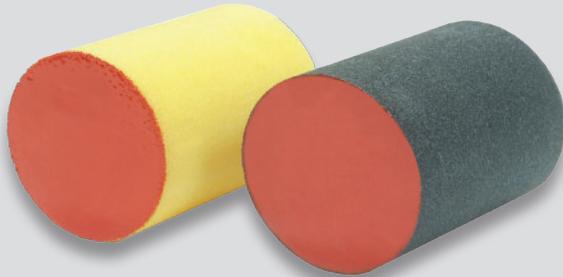
### Scraper Hard Density Pigs

- Equipped with helical bands of silicone carbide or hardened steel brush
- Ideal for removal of paraffin, scale or other sediments



### Bi-Directional Hard Density Pigs

- For bi-directional cleaning applications
- Available in bare, fully coated, crisscross or scraper style



### Soft Density Pigs

- Used for drying or swabbing on short runs
- Can undergo a diameter reduction of 65%
- Traverse all obstructions and bends that occur in piping



### Batching Pigs

- Used for separation or displacement of fluids
- Can be assembled in configurations of all cups, all discs or of any other combination
- Four cup/disc assemblies are recommended for maximum sealing



### Gauging Pigs

- Used to locate obstacles or indents in a pipeline
- Ensures passage of cleaning pigs
- Constructed with two, three or four cups or discs and an aluminum gauge plate



#### Scraper Cups

- Available in different durometers
- Conical or stepped design
- Ether or ester polyurethane base compound for H<sub>2</sub>S or abrasions qualities



#### Filming Pigs

- Ideal for inhibitor applications
- Lead and follower pig ensure proper cleaning of pipeline
- Contains any liquid in a full column form



#### Tuff Disc Pigs

- Polyurethane base
- Easily traverse 90 degree bends
- Used for dewatering and batching
- Disc design allows for easy removal of paraffin and other waste materials



#### Tuff Cup Pigs

- Polyurethane base
- Available in a variety of durometers
- Perfect for dewatering, batching, controlling paraffin buildup and removing waste materials





#### PL Cups & Discs

- Used for cleaning and batching applications
- PL Cups are not recommended for exposure to aromatics or hydrogen sulfide



#### PL Cups & Discs

- Ideal for situations where more than one size of continuous piping requires pigging
- Available with webs, discs and scraper cups
- Primarily used for dewatering and removing other waste materials



#### Bullet Cup Pigs

- Buna-N or neoprene base
- Hollow or filled construction



#### Multi Disc Pigs

- Available with a solid or hollow core, short or long style
- Flexing capability through short radius bends, dents or imperfections



#### Pig Balls

- Available in neoprene, buna-n, natural rubber, urethane and hard density foam



#### Stainless Steel Repair Clamps

- Available in 1/2" to 24" sizes
- Used for applications of up to 400 psi
- Supplied with flame resistant neoprene gasket



#### Sleeve Couplings

- Available in 1" to 12" sizes
- Used in pressures ranging from 800 to 1500 psi
- Can be supplied with fiberglass body or plastic coated steel body

## Polyethylene Casing Insulators

### Features

- Injection molded, virgin high density polyethylene
- Low friction, high abrasion resistance allows the carrier pipe to slide easily and free of damage into the casing pipe
- Low moisture absorption and high insulating value of polyethylene electrically insulates the carrier pipe and protects it from electrical current induced corrosion
- Pipe size range from 2" to 48"
- Custom extended runner heights available to 2-1/2"

### Technical Specifications

Dielectric Strength	450-500 Volts/Mil
Compressive Strength	3200 PSI
Tensile Strength	3100-1500 PSI
Water Absorption	<0.01%



### Max Operating Temperature

225°F

### Nuts & Bolts

- (1) 3/16" NC x 1-1/2" Lg., square drive, round head bolt, carbon steel, zinc plated (c/w hex nut)
- (2) 1/4" NC x 1-3/4" Lg., square drive, round head bolt, carbon steel, zinc plated (c/w hex nut)
- (3) 5/16" NC x 2-1/2" Lg., square drive, round head bolt, carbon steel, zinc plated (c/w hex nut)

### Ordering Information

1. Specify the Nominal IPS or the actual outside diameter of the carrier pipe
2. Specify the Nominal IPS or the actual inside diameter of the casing pipe
3. Specify the spacing requirements or the actual number of units required

# CASING INSULATORS



CARRIER PIPE SIZE (IPS)	MIN. CASING SIZE (IPS)	DIAMETER ACROSS RUNNERS (IN.)	RUNNER HEIGHT (IN.)	NUMBER OF RUNNERS	NUMBER OF SEGMENTS			NUMBER OF BOLTS	INSULATOR WIDTH
					FULL 4 PI	FULL 2 PI	TOTAL SEGMENTS		
2"	4"	3.63"	0.63"	6	--	--	2	4 (1)	3.25"
3"	6"	5.08"	0.79"	6	--	--	2	4 (1)	3.36"
4"	6"	5.75"	0.63"	6	--	--	2	4 (2)	3.25"
6"	10"	8.38"	0.88"	6	--	--	2	4 (3)	3.65"
8"	12"	10.45"	0.91"	6	--	--	2	4 (3)	4.84"
10"	14"	12.45"	0.85"	6	--	--	2	4 (3)	4.82"
12"	16"	14.52"	0.88"	6	--	--	2	4 (3)	4.75"
14"	18"	15.86"	0.93"	7	3	1	4	12 (3)	5.95"
16"	20"	17.86"	0.93"	8	4	--	4	12 (3)	5.95"
18"	22"	19.86"	0.93"	9	4	1	5	15 (3)	5.95"
20"	24"	21.86"	0.93"	10	5	--	5	15 (3)	5.95"
22"	26"	23.86"	0.93"	11	5	1	6	18 (3)	5.95"
24"	28"	25.86"	0.93"	12	6	--	6	18 (3)	5.95"
26"	30"	27.86"	0.93"	13	6	1	7	21 (3)	5.95"
28"	32"	29.86"	0.93"	14	7	--	7	21 (3)	5.95"
30"	34"	31.86"	0.93"	15	7	1	8	24 (3)	5.95"
32"	36"	33.86"	0.93"	16	8	--	8	24 (3)	5.95"
34"	38"	35.86"	0.93"	17	8	1	9	27 (3)	5.95"
36"	40"	37.86"	0.93"	18	9	--	9	27 (3)	5.95"
38"	42"	39.86"	0.93"	19	9	1	10	30 (3)	5.95"
40"	44"	41.86"	0.93"	20	10	--	10	30 (3)	5.95"
42"	46"	43.86"	0.93"	21	10	1	11	33 (3)	5.95"
44"	48"	45.86"	0.93"	22	11	--	11	33 (3)	5.95"
46"	50"	47.86"	0.93"	23	11	1	12	36 (3)	5.95"
48"	52"	49.86"	0.93"	24	12	--	12	36 (3)	5.95"

MADE IN CANADA



Phone: 780-496-9800 Fax: 780-463-9800 Toll Free: 1-877-448-0586

www.plainsmanmfg.com

Specifications subject to change without notice

(5), PB-CAPE01



# Steel Band Casing Insulators

## Band

Steel band is made from two semi-circular pieces of 14 gauge mild steel that is 12" wide. Galvanized after welding to provide rust protection (painted upon request).

## Runners

Runners are HDPE (high density polyethylene)

10-1/2" long x 2" wide for 12" diameter and larger (height depends on application)

10-1/2" long x 1" wide for 10" diameter and smaller (height depends on application)

Tensile Strength = 3500 PSI

Compressive Strength = 4500 PSI

Single runner load capacity: 15 000lbf for 10-1/2" x 2" Runners  
(6x safety factor from ultimate compressive failure)

Single runner load capacity: 7 000lbf for 10-1/2" x 1" Runners  
(6x safety factor from ultimate compressive failure)



STEEL BAND CASING INSULATORS

MADE IN CANADA



## Liner

PVC Liner (Polyvinyl Chloride)

12" wide, 0.100 thickness

Dielectric strength (3.18mm surge test) = 50 000 V min

## Brackets

14 gauge mild steel bolted to the HDPE runners and MIG welded to the steel band

Galvanized after welding to provide rust protection (painted upon request)

Optional risers are 10 gauge mild steel, 10-1/2" wide and MIG welded to the steel band (used to accommodate runners that are greater than 3-1/2" high)

## Nuts & Bolts

**Runner Bolts:** 4 per runner, 1/4"UNC x 2-1/2" long, hex head capscrew, zinc plated carbon steel, c/w zinc plated hex nut

**Steel Band Bolts:** 8 per Insulator, 5/16"UNC x 2-1/2" long, round head, square drive (#4 Robertson), zinc plated carbon steel, c/w zinc plated hex nut

**Note:** Custom engineered sizes, runner heights and positions to accommodate any application

MADE IN CANADA

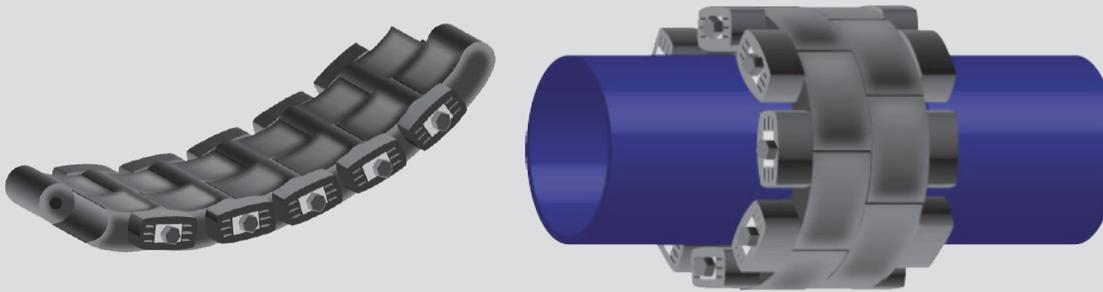


## Wrap-It Links

Wrap-It Links form a mechanical rubber seal between pipes going through walls, floors, vaults, tanks and pipeline crossings. Wrap-It Links make a watertight seal and fire stop seal if UL seals are used. They can also seal the gap between an inner pipe and an outer pipe sleeve or pipeline casing. They seal the gap between electrical conduits and the outer conduits or between electrical conduits and the wall hole they pass through.

Wrap-It Links are designed to make a hydrostatic seal of up to 20 psig and up to 40 ft of head. In addition to their sealing properties, Wrap-It Links help absorb vibrations, shock and sound waves. They also insulate the inner pipe from all outer structures including outer pipe sleeves, pipeline crossings, walls and tanks.

They are also ideal for filling gaps in interior walls and floors, keeping unwanted noise and fumes from invading office space. They have the added benefit of diminishing annoying liquid and turbulence noise.



### Physical Properties

Type	Seal Material	Pressure Plates	Bolts & Nuts	Temperature Range	Applications
WL (Standard)	EPDM Black	Glass Reinforced Plastic	Steel Zinc dichromate	-40°C/121°C (-40°F/250°F)	Suitable in most applications in water, both above ground and direct burial. Provides electrical insulation where cathodic protection is required.
WL-SS	EPDM Black	Glass Reinforced Plastic	316 SS	-40°C/121°C (-40°F/250°F)	Same as WL but with corrosion resistance of stainless steel hardware.
WL-O	Nitrile	Glass Reinforced Plastic	Steel Zinc dichromate	-40°C/99°C (-40°F/210°F)	Resistant to most hydrocarbons, oil, gas, jet fuel and many solvents.
WL-O-SS	Nitrile	Glass Reinforced Plastic	316 SS	-40°C/99°C (-40°F/210°F)	Same as WL-O but with corrosion resistance of stainless steel hardware.

## Tracer Wire

Plainsman understands the importance of a quality tracer wire. That is why we recommend a pure copper wire that is annealed for ease of use and protected with a .03" to .045" thick polyethylene jacket. For the tougher jobs that require more strength go with an annealed copper clad that doesn't spring off the reel. Plainsman's tracer wire is easy to handle and has almost twice the strength of a copper line. For directional drilling applications we recommend our **EHS Wire**, which is more than 6 times the strength of a copper line.

### 100 % COPPER TRACER WIRE with .045" Polyethylene Jacket

#### Features

- Insulated with high molecular weight polyethylene (HMWPE) specifically for use in direct burial applications.
- HMWPE is a rugged and durable material considered excellent for moisture and abrasion resistance.
- Manufactured according to Underwriters Laboratory constructions in both 30 volt and 600 volt versions suitable for use at a maximum continuous operating temperature of 75 °C in wet and dry locations.

### COPPER CLAD STEEL TRACER WIRE with .045" Polyethylene Jacket

#### Features

- Combines the high strength of steel with the electrical and corrosion resistant properties of copper.
- Insulated with high molecular weight polyethylene (HMWPE).
- HMWPE is a rugged and durable material considered excellent for moisture and abrasion resistance which produces a product designed for direct burial use in wet or dry locations.
- Manufactured and tested according to industry standards for metal conductors and extruded insulation coatings as specified by UL and ASTM.



STOCK ITEMS					
Type	AWG	Insulation Thickness	spool size M[ft]	Strenth in lbs	Nominal O.D.
Soft* Copper	14	0.045	152[500]/762[2500]	124	.154"
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## 100 % Copper Tracer Wire with .030"/.045" Polyethylene Jacket Technical Info

AWG	STRENGTH IN LBS	INSULATION THICKNESS		NOMINAL OVERALL DIAMETER		SPOOL SIZE (M[FT])	
	SOFT*	30 V	600 V	30 V	600 V	152[500]	762[2500]
14	124	.030"	.045"	.124"	.154"	152[500]	762[2500]
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8	480	.030"	.045"	.206"	.236"	152[500]	762[2500]
6	760	.030"	.045"	n/a	.275"	152[500]	762[2500]

### Standards:

- 2.1 ASTM B-1, B-3, and B-8 for copper conductors
- 2.2 ASTM D-1248 for Polyethylene Extrusion Materials, ICEA S-70-547 Weatherproof Resistant Polyethylene Conductors, ICEA S-61-402 /NEMA WC5 Thermoplastic Insulated Wire&Cable, ICEA S-95-658/NEMA WC70 Non-Shielded 0 – 2kv Cables
- 2.3 UL 1581 Standard for Electrical Wires, Cables, and Flexible Cords

## Copper Clad Steel Tracer Wire with .030"/.045" Polyethylene Jacket Technical Info

AWG	STRENGTH IN LBS			INSULATION THICKNESS		NOMINAL OVERALL DIAMETER		SPOOL SIZE M[FT]	
	SOFT*	HARD	EXTRA HARD	30 V	600 V	30 V	600 V	152[500]	762[2500]
14	170	250	n/a	.030"	.045"	.124"	.154"	152[500]	762[2500]
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### Standards-

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- 2.3 UL 83 Standard for Thermoplastic Insulating, UL 1581 Reference Standard for Electrical Wires

### Ordering Information:

1. Type of Wire required (Copper or Copper Clad)
2. Gauge of wire required
3. Length of wire required
4. Length per spool required

\* The copper is annealed to increase the flexibility and reduce the brittleness

Non-standard colors and custom packaging are available by quotation





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Prevent damage to your signage for underground equipment such as gas/oil pipelines, valves, water/sewer lines, cables and more.

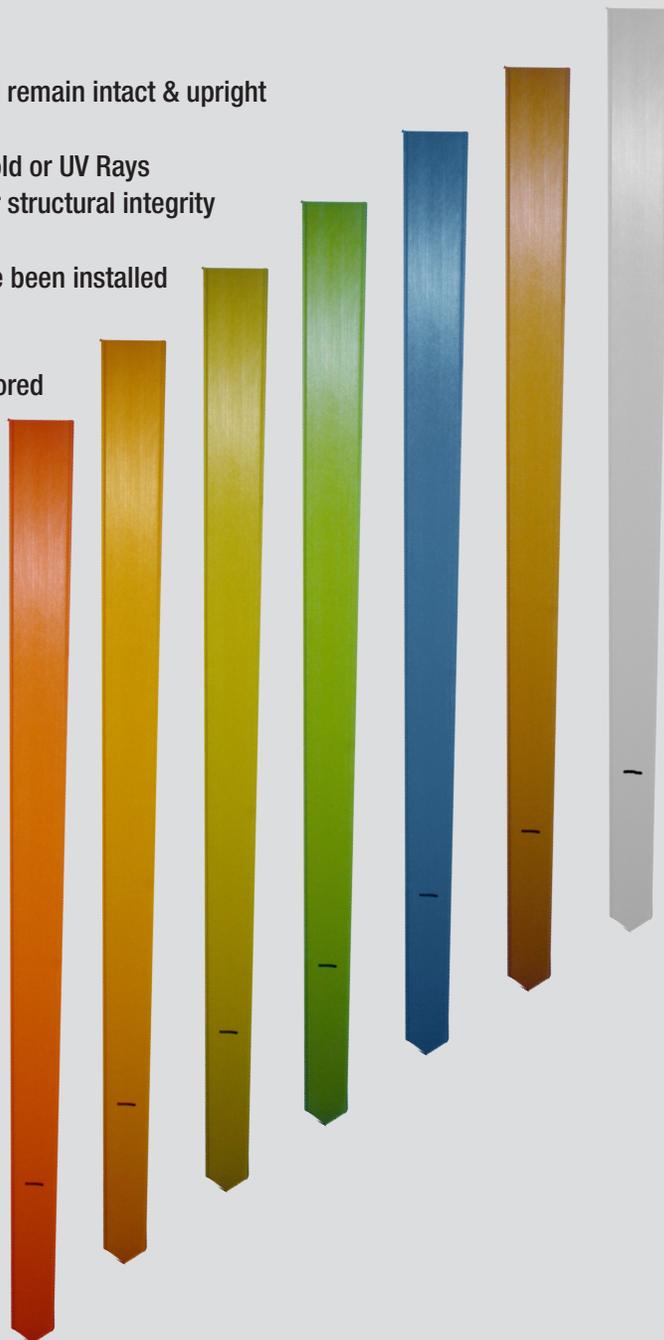
Available in standard seven foot lengths and in seven different colours (red, orange, yellow, green, blue, brown and white)

## Features

- Springs back after impact
- Will withstand countless vehicile impacts and remain intact & upright
- Resists fire and high temperatures
- Will not rust, rot or become brittle from the cold or UV Rays
- Engineered to remain flexible, and retain their structural integrity year after year
- Virtually impossible to remove once they have been installed
- Will install in minutes by one person
- No excavation required on installation
- Easily installed using a driving tool, and anchored in the ground using a barb for permanent installation
- Lightweight and easily transported

## Ordering Information

1. Quantity
2. Colour
3. Design of signage sticker desired



**SAFETY FLEX MARKER POST**



## HiLo-Matic™ Emergency Shutdown System

The HiLo-Matic™ Emergency Shutdown System (ESD) is a self contained, reliable valve shutdown system that does not require external power. Plainsman is capable of providing a complete turn-key system assembled, tested and on site ready for operation.

There are 4 main components of the system, all available from Plainsman:

1. The hydraulic controller
2. The pressure pilot
3. The spring return valve actuator (fail open or fail closed)
4. The valve (ball/gate/globe/plug)

Available for a variety of line sizes and pressures. The ESD can be tailored to each specific application, providing the most economical solution. Custom solutions and components are also available outside of the typical installations outlined below.

### Typical line sizes:

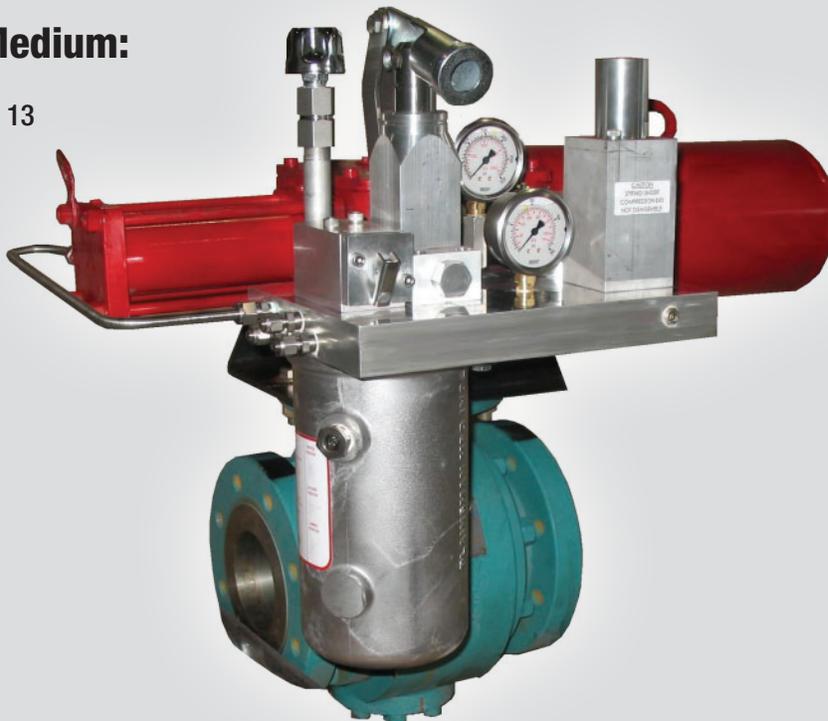
- Available between 1" and 24" and ANSI 150-2500

### Typical line pressures (pressure pilot set-point range):

- Available between 30 and 2300 psi

### Instrumentation Medium:

- Hydraulic oil: UNIVIS HVI 13



## System Features

- Minimum deadband
- Reliable
- Bubble tight design
- Block and bleed design
- Safety vent
- Severe duty
- Raised breather
- Wide range of applications
- Easy installation operation
- Factory set, yet field adjustable pilot
- Corrosion resistant
- Readily available spares/support
- Compatible with most existing ESD systems



## Accessories

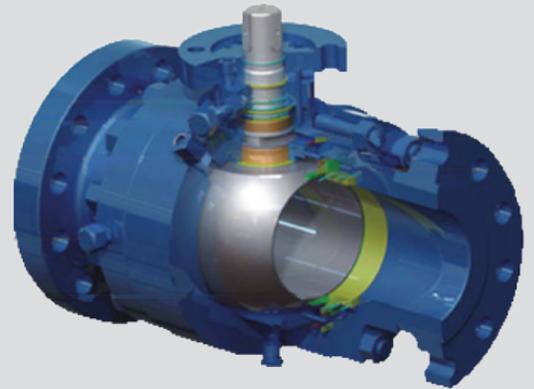
- Electric pressure switch
- Solenoid valve
- Valve position indicator
- SCADA instrumentation
- Flow meter
- Level switch(es)
- Pressure isolation valve
- Vibration sensor
- Sand probe
- Almost any other analog electrical form of monitoring



## Ordering Information

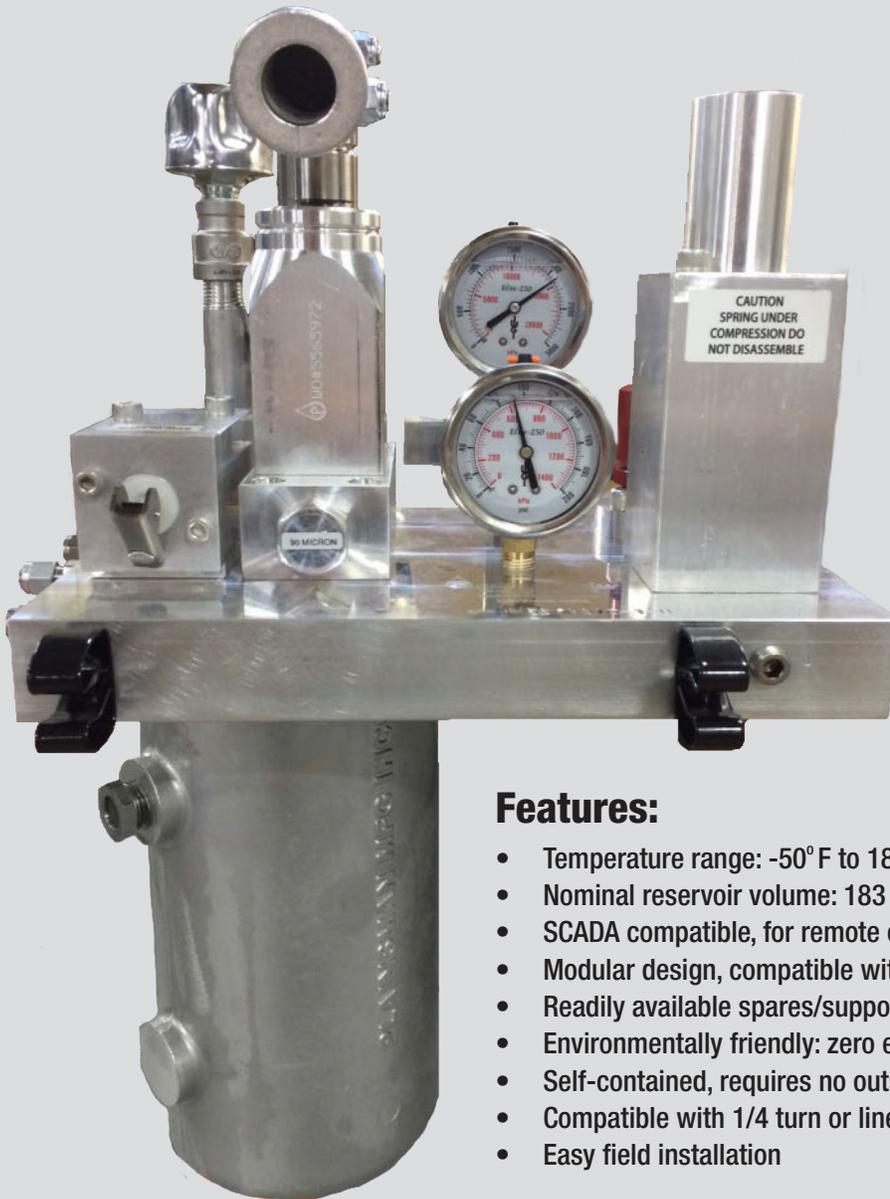
\* Please specify the following

1. Line size and fluid type
2. Flange type/rating
3. Pressure pilot set points
4. Temperature range
5. System preferences/required accessories
6. Dimensional constraints
7. The open/close time requirement, if applicable
8. Any existing equipment



## HiLo-Matic™ Hydraulic Controller

The self-contained HiLo-Matic™ Hydraulic Controller provides reliable emergency valve shutdown capability when external power is unavailable. Essentially, it provides the energy needed to actuate an automated valve. The controller can be supplied alone for retrofit applications or in conjunction with a pressure pilot, actuator and valve to round out a complete emergency shutdown system.



### Features:

- Temperature range: -50° F to 180° F (-46° C to 82° C)
- Nominal reservoir volume: 183 in<sup>3</sup> (3L)
- SCADA compatible, for remote operation
- Modular design, compatible with existing installations
- Readily available spares/support
- Environmentally friendly: zero emissions, recyclable oil
- Self-contained, requires no outside power
- Compatible with 1/4 turn or linear actuators
- Easy field installation

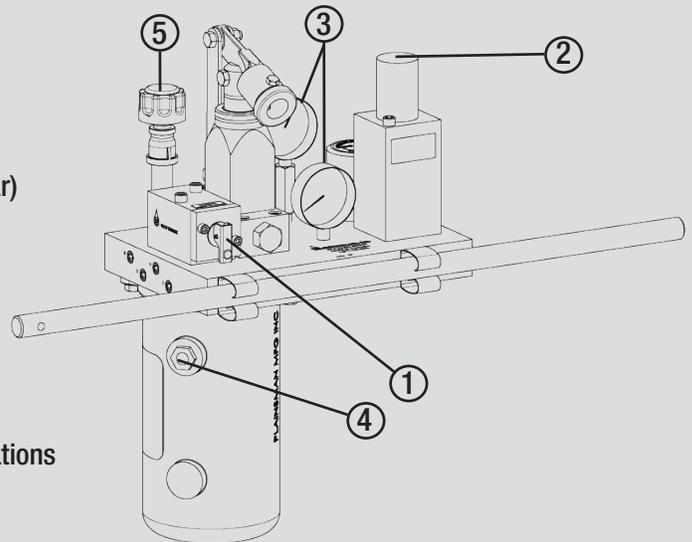
**HILLO-MATIC™ HYDRAULIC CONTROLLER**

## High Pressure Model:

- Maximum actuator pressure:
  - Nominal 2000 PSI (138 bar)
  - Available up to 5000 PSIG (340 bar)
- Maximum signal pressure: 150 PSIG (10 bar)
- Weight: 36 lbs (16kg)

## Features:

- 1. Instant Automatic Mode**
  - A visual cue indicates active status
- 2. Automatic Accumulator**
  - Compensates for temperature fluctuations
- 3. Dual Gauges**
  - Visual indication of system status
- 4. Glass Sight**
  - Will not fog over time
- 5. Raised Breather**
  - Prevents oil contamination (e.g. snow)

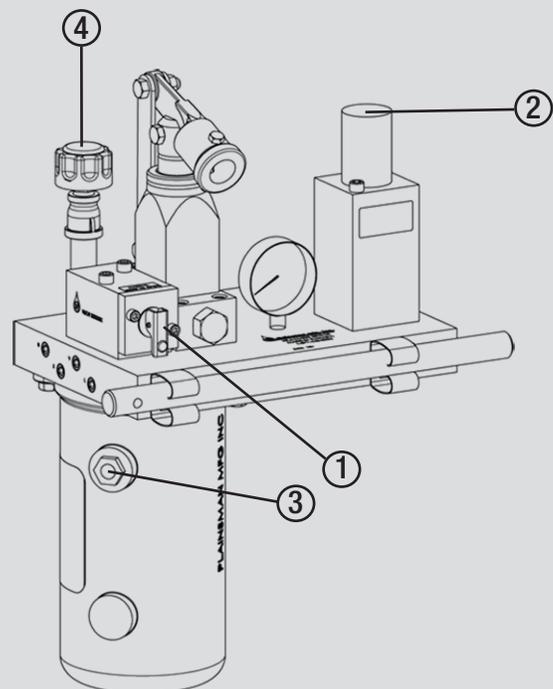


## Low Pressure Model:

- Maximum actuator pressure:
  - Nominal 100 PSI (8 bar)
  - 150 PSIG (10 bar)
- Maximum signal pressure: 150 PSIG (10 bar)
- Weight: 32 lbs (14 kg)

## Features:

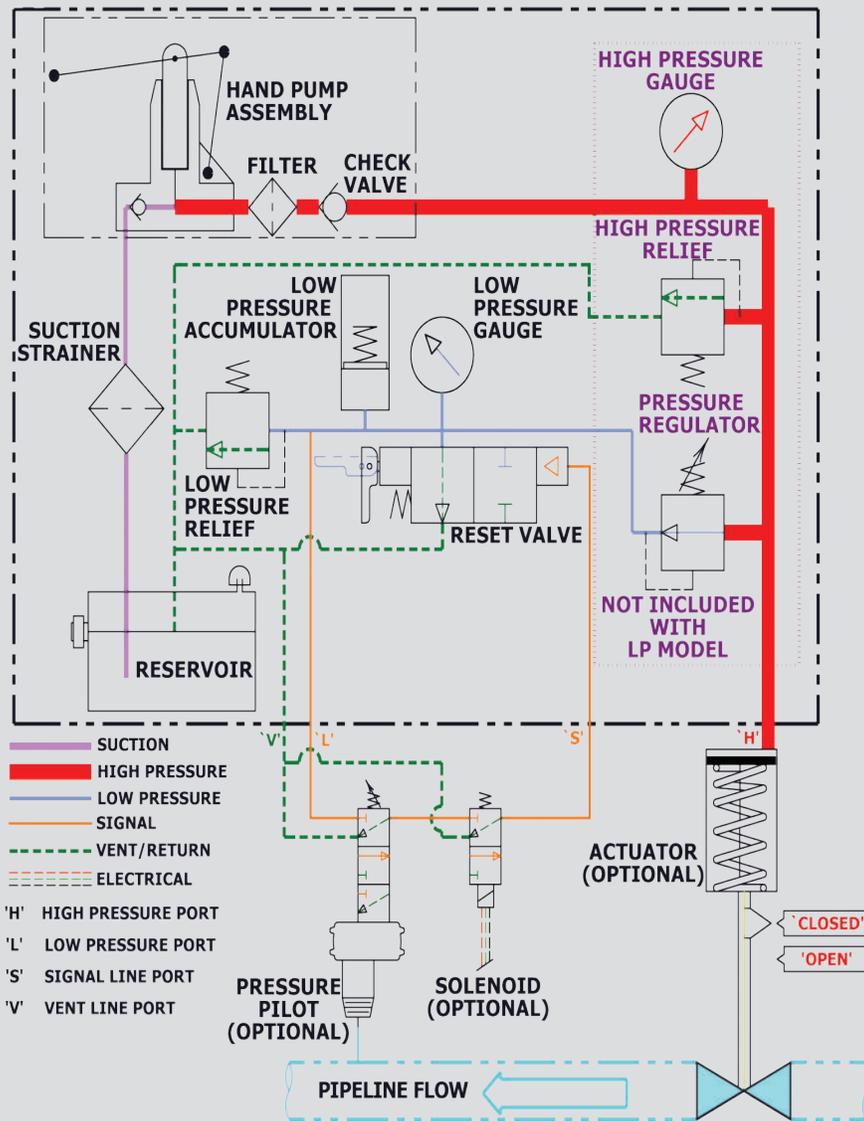
- 1. Instant Automatic Mode**
  - A visual cue indicates active status
- 2. Automatic Accumulator**
  - Compensates for temperature fluctuations
- 3. Glass Sight**
  - Will not fog over time
- 4. Raised Breather**
  - Prevents oil contamination (e.g. snow)



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## Hydraulic Controller Schematic:



SHOWN WITH PRESSURE PILOT, SOLENOID, AND RESET VALVE TRIPPED, AND CONTROL VALVE IN CLOSED POSITION

### To Open control valve:

1. Ensure line is within pressure pilot set-points
2. Energize solenoid
3. Manually latch reset valve
4. Operate hand pump until actuator is open and reset valve automatically arms

### Control Valve will close if either:

- Reset valve is manually pushed in
- Line pressure falls outside of set-points
- Solenoid is de-energized

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## HiLo-Matic™ PLX™ Switch

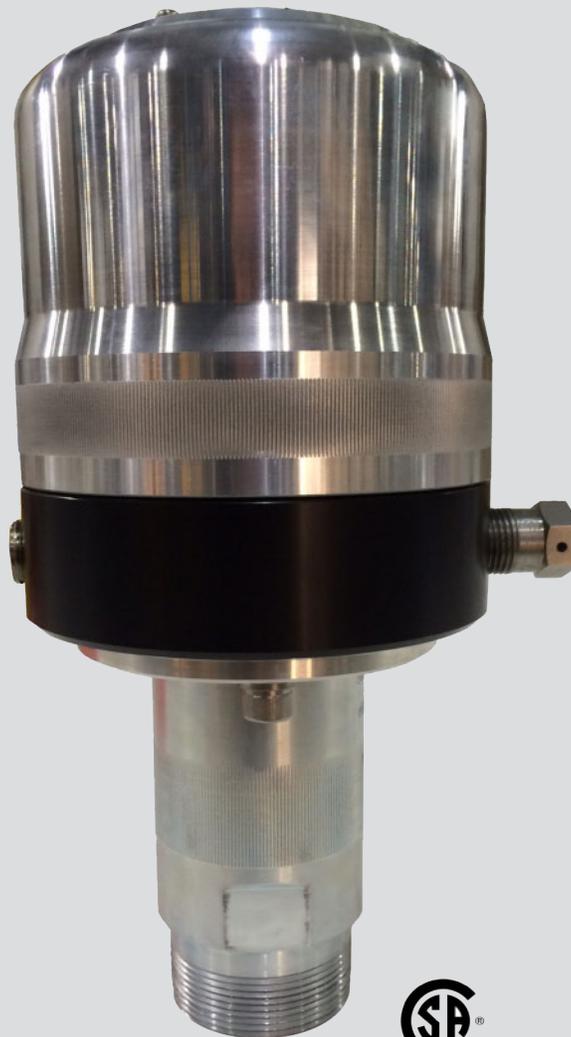
The PLX™ Switch is an explosion proof electrical switch that reliably reacts to pressure input from a pipeline. It is ideal for shutdown, control, and/or monitoring in hazardous or explosive environments. Simple design allows easy field set-point changes while corrosion resistant materials and proven micro switches ensure long life and minimal maintenance.

### Specifications

- Available in Auto Reset (Low/High set-points) or Manual Reset (High set-point only)
- CSA Approved for Canadian and US Process Control Equipment standards:  
Class I, Div 1, Groups C & D, T4
- ABSA CRN: 0F09864.2 et al., ASME B31.3
- Set points: 20–2,500 psi (other ranges on request)
- Maximum working pressure: 0–5,000 psi
- Temperature range: -46°C to 40°C
- Maximum process temperature: 121°C
- 2" mNPT process connection
- 1/2" fNPT cable gland connection
- NACE trim is available
- Precision, snap acting, SPDT microswitch ratings:
  - 15 Amps @ 125/250/480 VAC
  - 1/2 Amp @ 125 VDC
  - 1/4 Amp @ 250 VDC
  - 1/8 hp @ 125 VAC
  - 1/4 hp @ 250 VAC

### Features

- Minimum deadband
- Low maintenance
- Reliable
- Safety vent/seal indicator (dual seal)
- Severe duty
- Wrench flats/knurling
- Easy installation/operation
- Factory set, yet field adjustable
- All aluminum and stainless construction
- CSA approved explosion proof breather
- Compatible with most existing systems
- Can be wired normally open or normally closed



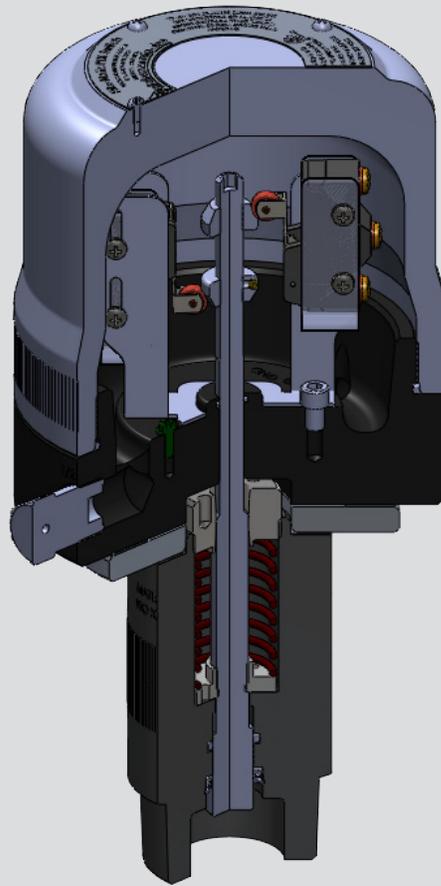
**HILO-MATIC™ PLX™ SWITCH**

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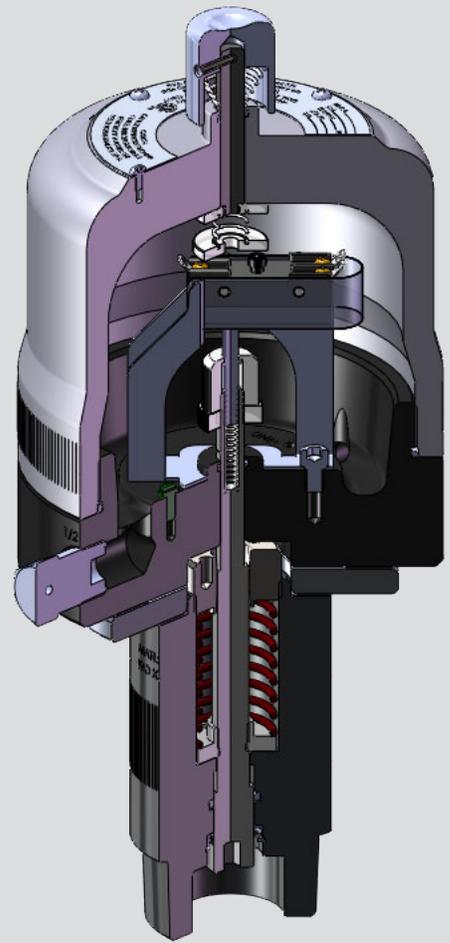


## Materials

- Body—AISI 4130 with corrosion inhibiting coating
- Case/Cover—6061-T6 Aluminum
- Pressure Sensing Piston—316 SS
- Seal—PTFE/302SS
- Snap Ring Retainer—PH15-17MO



Automatic Reset (Low or High)



Manual Reset (High only)

## Ordering Information

Please specify the following:

1. Auto or Manual Reset
2. Low and/or High set-point as required
3. Anticipated pressure range if possible

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## HiLo-Matic™ Pressure Pilot

The HiLo-Matic™ Pressure Pilot is a two position, three-way valve that reliably reacts to pressure input from a pipeline. It is used in conjunction with a hydraulic controller and an actuator/valve combination to provide unmanned emergency shutdown of a pipeline in cases of over or under pressure. Pressure limits can be set for low/high, low only or high only.

The pressure pilot can be supplied alone for retrofit applications or in conjunction with a hydraulic controller, actuator and valve to round out a complete emergency shutdown system.

### Specifications:

- $\pm 1\%$  repeatability
- Pressure set-points available between 25 and 2800 PSI
- Maximum working pressure: 5000 PSIG (340 bar)
- Maximum instrumentation pressure: 150 PSIG (10 bar)
- Compatible with oil/gas/air instrumentation
- ABSA CRN OF09864.2 (also BC.21, SK.23, MB.24, ON.25)
- NACE trim available

### Features:

- Minimum deadband
- Reliable/low maintenance
- Bubble tight design
- Block and bleed design
- Safety vent/seal indicator
- Severe duty
- Wrench flats/knurling
- Easy installation/operation
- Factory set, yet field adjustable
- All aluminum and stainless steel construction
- Readily available spares/support
- Rebuild kit available
- Compatible with most existing ESD systems



**HILO-MATIC™ PRESSURE PILOT**

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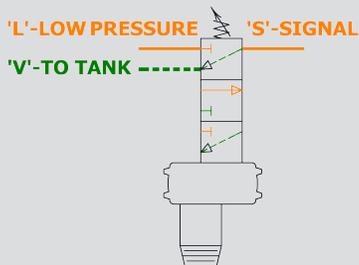
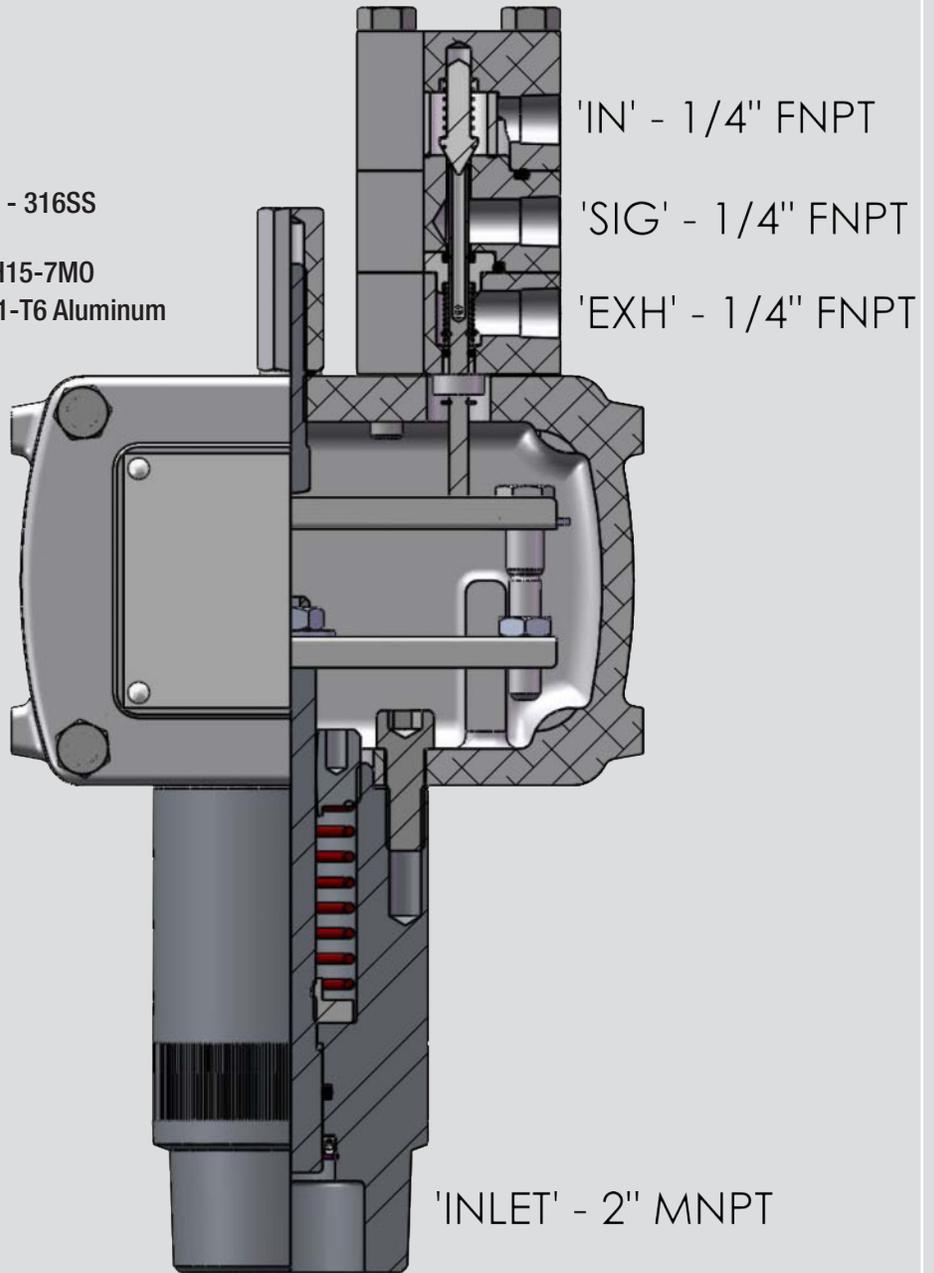


# HILLO-MATIC™ PRESSURE PILOT

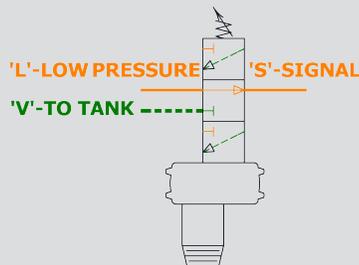


## Materials:

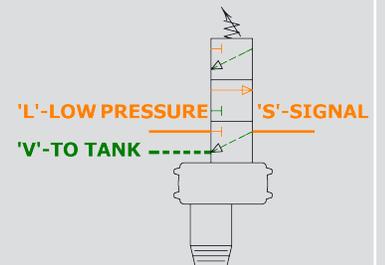
- Body - ASTM 4130
- Case - Tenzalloy
- Pressure Sensing Piston - 316SS
- Seal - PTFE / 302SS
- Snap Ring Retainer - PH15-7MO
- Pilot Block Bodies - 6061-T6 Aluminum



**IN LOW TRIPPED POSITION  
SIGNAL PRESSURE WILL  
RETURN TO TANK**



**IN OPERATING POSITION  
SIGNAL PRESSURE WILL  
SEE 'LOW PRESSURE'**



**IN HIGH TRIPPED POSITION  
SIGNAL PRESSURE WILL  
RETURN TO TANK**

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[www.plainsmanmfg.com](http://www.plainsmanmfg.com)

Specifications subject to change without notice

(3), PB-SSYS03