



PIG-SIG® V

Scraper Passage Indicator



T. D. Williamson, Inc.

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■ Flag Indicator

Description

TDW's PIG-SIG® V Scraper Passage Indicator is a device installed at prescribed intervals on pipelines to detect the passage of a pig or sphere. The most common indicators have a trigger extending into pipelines through a welded fitting, or nipple that has been tapped. When a pig passes, the trigger is tripped which immediately activates a signaling mechanism.

Signaling systems available from TDW include a flag indicator, an electrical indicator or a flag/electrical indicator. All indicators are compatible with all standard THREAD-O-RING™ nipples now in the field and are interchangeable. This makes it possible to order these units as an upgrade conversion kit without nipple, or as a complete PIG-SIG indicator system with nipple.

Features

Built to withstand the most brutal offshore/onshore environments, the PIG-SIG V indicator is weatherproof and corrosion-resistant. All components exposed to pipeline products are completely sealed to prevent leakage and are NACE compatible. Components exposed to the atmosphere are 316 stainless steel. The flag indicator offers high visibility. Because the triggering toggle that extends into a pipe is omni directional, it does not require adjustments after it is set. The flag can be oriented to face any desired direction. The carbon steel nipple is manufactured from easily weldable material. PIG-SIG indicators can be installed on or removed from a pressured pipeline by using a TDW T-101 Tapping Machine and accessories.

Options

The following options are available:

- Flag Indicator with Manual Reset;
- Electrical Indicator with Auto Reset;
- Flag/Electrical Indicator combined.
- Extended models, for installation on buried pipelines, are available in all configurations.
- Omni directional trigger is standard.
- Special materials and O-Ring seals are available.
- Standard model is suitable for environmentally harsh conditions.
- Nipple can be furnished with flanged or threaded mounting.
- "Build your own" PIG-SIG V Assembly from the following charts.

T. D. Williamson, Inc. is committed to providing you with the exact product to assist you in planning, budgeting and meeting the specifications for your individual application needs.

Patent Pending in the United States and in foreign countries.

USA: 1-800-571-7447
England: (44) 1-793-603600



PIG-SIG® V Scraper Passage Indicators

04-3800 -

Indicator Assembly

Indicator Option

0 = Flag with Manual Reset

1 = Electrical with Auto Reset

2 = Flag/Electrical combined

Flag



Shaft Assembly

Shaft Option

0 = Nonextended

1 = 12" Extension

2 = 24" Extension

3 = 36" Extension

4 = 48" Extension

5 = 60" Extension

6 = 72" Extension

7 = 84" Extension

8 = 96" Extension

9 = 108" Extension

Extended Indicator



Plug Assembly

Plug Assembly Option

0 = 316 Stainless Steel Omnidirectional

Omnidirectional



PIG-SIG® V Scraper Passage Indicators

XXXX - Suffix *

O-Ring Material

Material Option

0=Explosive Decompression & Extrusion Resistant Viton

1=Buna-N (Low Temp)

2=Neoprene

3=EPDM

4=Kalrez

5=Buna

"SUFFIX" Pipe Size

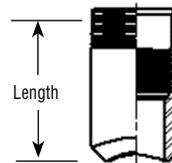
Pipe Size	Pipe Wall		Suffix
	Thickness	Length	
6" & Up	.250 to .500	4.000	-51
6" & Up	.501 to .750	3.750	-52
6" & Up	.751 to 1.000	3.500	-53
6" & Up	1.001 to 1.250	3.250	-54
6" & Up	1.251 to 1.500	3.000	-55
6" & Up	1.501 to 1.750	2.750	-56
6" & Up	.125 to .249	4.250	-64
4"	.189 to .375	4.125	-01
4"	.125 to .188	4.250	-03
5"	.189 to .375	4.125	-12
5"	.125 to .188	4.250	-13
5"	.563 to .750	3.750	-20
Less Nipple			-99

Final Assembly
With Flag Indicator

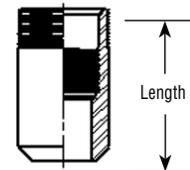


* Please indicate if protection for environmentally harsh conditions is required.

5" & Smaller Pipe



6" & Larger Pipe



THREAD-O-RING™ Nipple part number:
00-1023-0333-SUFFIX

Example: 04-3800-0100-51

is a PIG-SIG with a flag indicator,
12" extended shaft for 6" and larger
pipe with .250" to .500" wall.



PIG-SIG® V Scraper Passage Indicators

THREAD-O-RING™ Nipple Material

Size & Grade:	2 NPS XXS ASTM A 333 Grade 6 seamless steel pipe
Tensile Requirements:	35,000 psi SMYS - 60,000 psi SMTS
Impact Requirements:	13 ft-lbf min Avg 3 Specimens 10 ft-lbf min One Specimen Only
	Impact Temperature -50° F
Chemical Requirements:	Composition, % - Carbon 0.30 max, Manganese 0.29-1.06, Phosphorus 0.025 max, Sulfur 0.025 max, Silicon 0.10 min
Test Report:	Certified Test Reports furnished per ASTM A 530

Pressure Temperature Ratings Pressures are in pounds per square inch, gage (psig). Temperatures are in Fahrenheit.

Piping Code Temp. °F	B31.3	B31.4 F=.72	F=.72	B31.8 F=.60	F=.50	F=.40
-50	3159					
-20 to 250	3159	3743	3743	3120	2600	2080
300	3159		3620	3017	2514	2011
350	3159		3493	2911	2425	1940
400	3159		3369	2808	2340	1872
450	3072		3246	2246	1872	1497
500	2985					

Pressure Temperature Ratings Pressures are in bar. Temperatures are in Celsius.

Piping Code Temp. °C	B31.3	B31.4 F=.72	F=.72	B31.8 F=.60	F=.50	F=.40
-46	218					
-29 to 116	218	258	258	215	179	143
149	218		250	208	173	139
177	218		241	201	167	134
204	218		232	194	161	129
262	212		224	155	129	103
260	206					

Pressures do not include allowance for corrosion. O-Ring material selection must be suitable for service fluids and temperature requirements.

Recommended Spare Parts List

Component	Quantity/Assembly	Quantity/Spares*	Part Number
Oring, Plug	1	1	00-8440-0003-00
Backup Ring	1	1	00-1586-0066-00
Oring, Cap	1	1	00-8144-0001-00
Set Screw	3	3	00-8176-0001-00
1-inch Hex Plug Holder*	1	1	00-8138-0000-00

*If PIG-SIG® V is to be installed or removed under pressure with a T-101 Drilling Machine a new Plug Holder is required. If PIG-SIG V is to be installed or removed with no pressure in the pipeline a 1-inch hex allen wrench is required.



PIG-SIG® V Scraper Passage Indicators

Flag Indicator with Manual Reset

The basic indicator includes 2" (50 mm) THREAD-O-RING™ nipple, plug assembly and indicator assembly

The extended indicator includes the same items as well as an extended length indicator assembly.

Length		Weight		Part Number
In.	mm	Lbs.	Kg.	
Basic		9	4	04-3800-0000
Extended:				
36	900	20	9.0	04-3800-0300
48	1200	25	11.5	04-3800-0400
60	1500	29	13.0	04-3800-0500
72	1800	34	15.5	04-3800-0600
84	2000	39	18.0	04-3800-0700
96	2500	44	20.5	04-3800-0800

Consult the factory for larger sizes.



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5110.001.02 - p6