



Rapid Opening Closure (ROC II)



A closure system that ensures safe, quick and reliable access to pipelines and pressure vessels.

Why are Rapid Opening Closures used:

Rapid Opening Closures are used to provide a safe and quick access mechanism to pipeline pig launchers and receivers, filter vessels and other types of pressure vessel systems.

Product Description:

This rapid opening closure (ROC II patent applied for) provides a lightweight solution for both large diameter pipelines and smaller pipeline sizes and ratings. It is fully code compliant and uses a three piece design comprising, hub, door and locking elements. An integral interlock is available as an option.

This closure makes use of a conical full compression transfer of load from the door to the hub via the locking mechanism. When the locking mechanism is in place it covers 100% of the door circumference giving uniform load transfer and reduced size and weight. In addition, this configuration offers high levels of safety, as any potential retraction of the locking elements will result in a hoop effect within the locking elements which prevents further retraction.

Features of ROC II:

- > Available in all sizes up to 60" and ratings up to 2500#.
- > 100% circumferential locking element contact.
- > Vent screw integrated into the closure.
- > Very quick opening and closing capability.
- > Available in all recognised materials.
- > Fully visible and accessible vent screw seal.
- > Can be supplied with a fully integrated key interlock.
- > Compression load transfer.
- > Incorporates dry lubricant technology.
- > Seal incorporates integral anti-extrusion technology.
- > Integral interlock option.



Closure door being opened



Closure door opened

Benefits of ROC II:

- > Easy to operate by one person without hydraulic assistance and suitable for horizontal, vertical or inclined applications.
- > Extended life capability of up to 50 years.
- > Reduced potential for debris ingress due to 100% circumferential contact.
- > Reduced lubrication schedule due to dry lubricant system.
- > Optimised hinge design and alignment to provide ease of adjustment and single person operation up to maximum size.

Application Areas

Rapid Opening Closures from PE are suitable for onshore, offshore or subsea applications and for pipelines transporting gas, liquid, multiphase, sour or non sour mediums.

PIPELINE ENGINEERING

"Engineered Products for the Pipeline Pigging and Flow Assurance Industry"





TYPICAL DESIGN SPECIFICATIONS

NOMINAL DIAMETER RANGE:	6" TO 60"
ANSI CLASS RATING RANGE:	CL150 TO CL2500
DESIGNED AND MANUFACTURED IN ACCORDANCE WITH:	ASME VIII DIVISION 1, DIV 2, PD5500
	DESIGNED IN ACCORDANCE WITH ASME VIII AND MEETS ALL CRITERIA AS SPECIFIED IN UG35
DESIGN TEMPERATURE:	-50 TO +200 DEG C
DESIGN PRESSURE:	UP TO 425 BARG
TAG PLATE:	316 STAINLESS STEEL
MOUNTING:	HORIZONTAL / VERTICAL
INTERLOCK SYSTEM:	OPTION
HINGE ORIENTATION (WHEN VIEWED FACING CLOSURE):	LEFT / RIGHT SIDE
MECHANICAL SAFETY FEATURE:	VENT PLUG / 100% CIRCUMFERENTIAL LOCKING HOOP
APPLICATIONS:	PIG SCRAPER, LAUNCHERS AND RECEIVERS FILTER VESSELS ANY VESSEL, HORIZONTAL, VERTICAL OR INCLINED / DECLINED WHERE QUICK ACCESS IS REQUIRED.
MECHANICAL SAFETY FEATURE:	VENT PLUG / 100% CIRCUMFERENTIAL LOCKING HOOP

MATERIALS

FORGING MATERIALS – HUB:	A350 LF2
FORGING MATERIALS – DOOR:	A350 LF2
SEGMENTS:	SA240 31803 DUPLEX
BRACKETS AND HINGES:	EN 10025 S355
VENT PLUG:	316 STAINLESS STEEL
SEALS – SELF ENERGISING LIP SEAL:	VITON

MATERIAL ALTERNATIVES / BUT NOT LIMITED TO:

FORGING MATERIALS – HUB:	ASTM 105, A350 LF2, SA765GR 4, A694 F52/F60/F65/F70
FORGING MATERIALS – DOOR:	ASTM 105, A350 LF2, SA765GR 4, A694 F52/F60/F65/F70
SEALS – SELF ENERGISING LIP SEAL:	EDR VITON, NITRILE, ETHYLENE PROPYLENE, ELASTOLION

OPTIONS

ORIENTATION:	CLIENT SPECIFIC ORIENTATION
CONNECTION:	CLIENT SPECIFIC WELD PREP
SAFETY:	INTEGRAL INTERLOCKS
IDENTIFICATION:	CLIENT OR PROJECT TAG NUMBERS
PRESERVATION:	TRANSIT PRIMER OR CLIENT / PROJECT SPECIFIC
ACCREDITATION:	U1 OR U2 IF APPLICABLE CE / PED H & H1 IF APPLICABLE
HYDROTEST:	RELEVANT DESIGN CODE
INSPECTION:	CLIENT OR AUTHORISED REPRESENTATIVE WELCOME TO PE FACILITY WITH FULL ACCESS TO INSPECT EQUIPMENT ON OUR PREMISES. NDE UNDERTAKING TO CODE REQUIREMENTS AS A MINIMUM, ALSO TO ADDITIONAL CLIENT SPECIFICATION IF REQUIRED.

ABOVE IS THE BASIC DESIGN AND CAN BE SUPPLIED IN A RANGE OF MATERIALS RANGING FROM A105 TO HIGH YIELD MATERIALS.