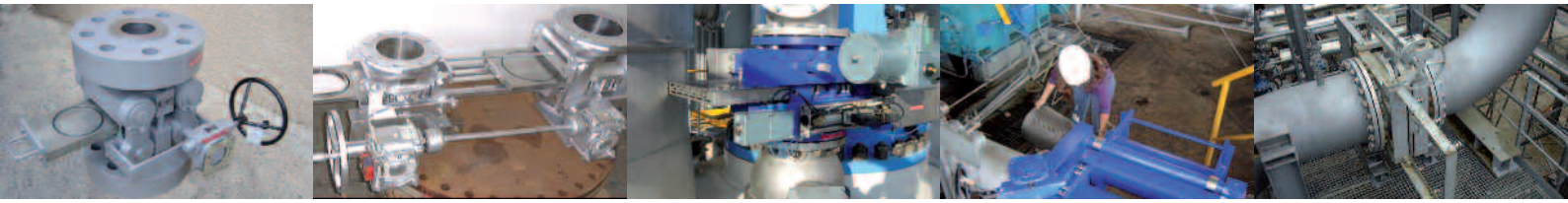
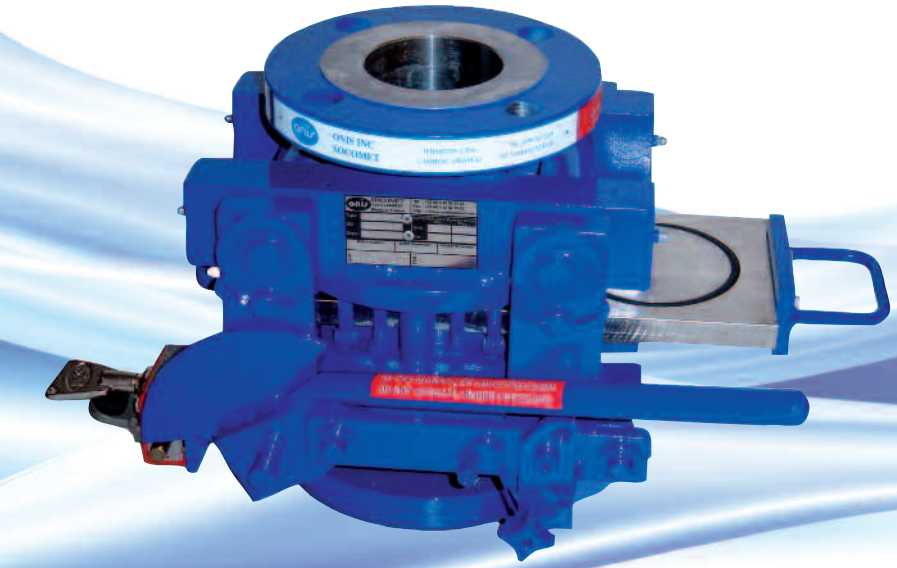
Line Blinds

Engineered for critical applications
to minimize downtime
and improve safety

Quick-Action Lineblind Technology



Onis Line Blinds replace spectacle, slip, and figure-8 blinds



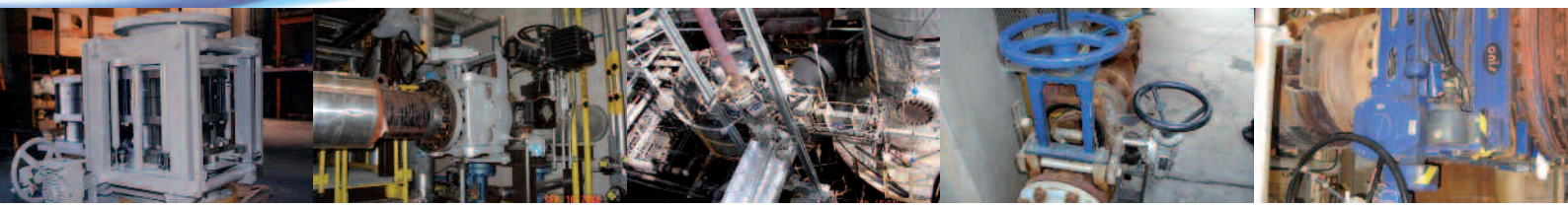
**One person, Zero Tools,
and blinded in minutes.**

Reduce Dowtime
Improve Safety
Sizes: 1/2” to 50” / DN12 to DN 1250
Temperatures:
-155°F to 1400°F / -104°C to 760°C
Pressure: Vacuum to 6100 psig (420 barg)

www.line-blind.com

CE PED 97/23/CE TÜV 1637

SAAR CERT TÜV ISO 9001:2008 N°71 100 J 124

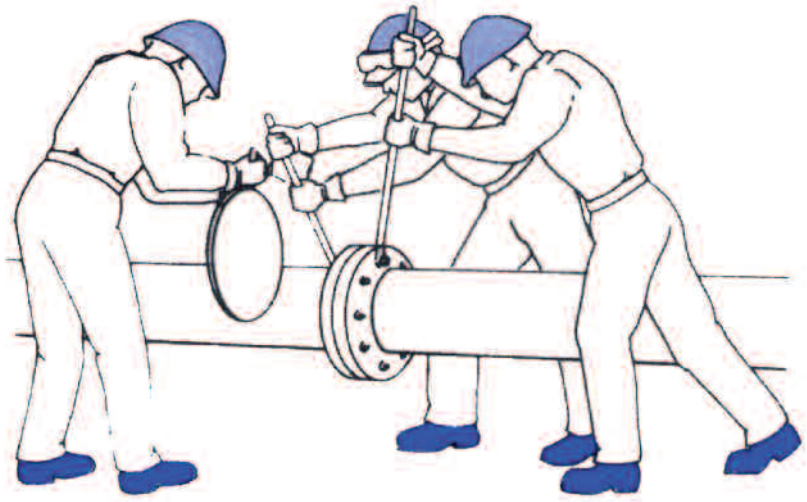


Positive Isolation for Gases, Powders, Liquids, and Viscous Liquids

MV Fluids Handling
Marven House, 1 Field Road
Reading
RG1 6AP
United Kingdom
Tel: +44-(0)118 9503707 - Fax: +44-(0)118 9504066
www.mvfh.co.uk - onis@mvfh.co.uk

HOW THE ONIS BLIND EVOLVED

In the mid 70's Edmond Onis invented the first generations ONIS Lineblind. Together with his stepson Jean-François Favreau-ONIS, he went on to develop the highly successful ONIS Quick-Action Lineblind which is now regularly specified by most of the major companies worldwide.



The ONIS Lineblind is designed and manufactured to suit customer applications. The specialised demands of the petrochemical and oil industries over the years have brought about a line blinding device that is simple yet highly effective in providing ultra safe line isolation.

To evaluate an ONIS system properly, one must first understand the alternative methods of blinding. The most basic method utilises a metal plate (or "spectacle" blind) that is inserted manually between two flanges. This approach is obviously labour intensive, giving rise to potential dangers around heavy piping and exposure to residual hazardous chemicals. The traditional "figure-eight" or "spectacle" blind can only be swung once the coupling flanges have been forced open with brass wedges which is uncontrolled or using jacking bolts that are prone to corrosion.

All in all, the traditional blinding methods have significant disadvantages :

- Uneven seal compression
- External-bolt corrosion
- Cumbersome gasket maintenance

ONIS technology overcomes these traditional blinding problems, and improve blinding in respect of environmental release, productivity and personnel safety.

1

Traditional blinding methods are slow, prolonging downtime and often hazardous

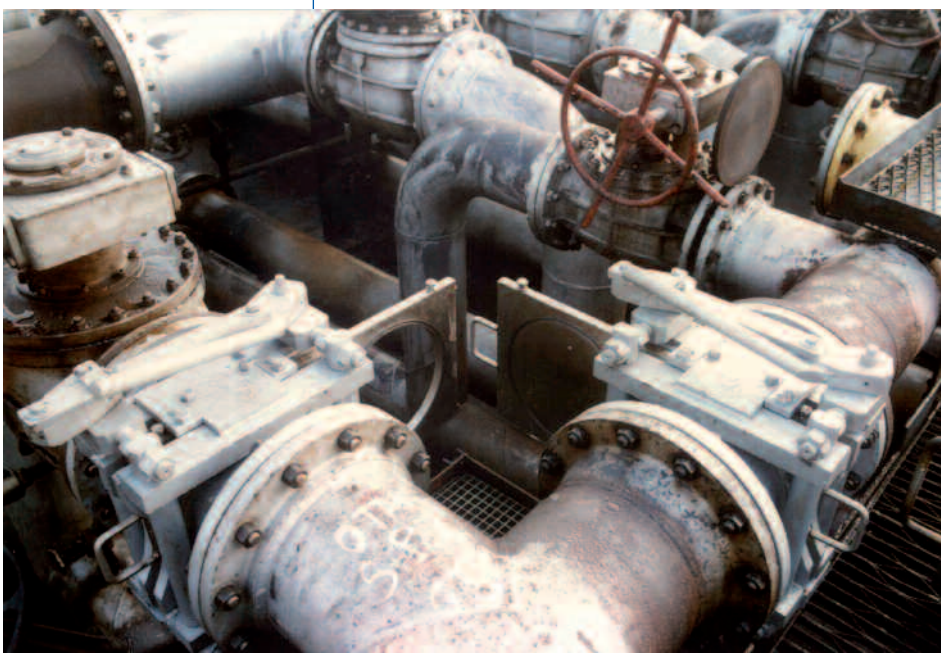
2

ONIS Quick-Action Lineblinds reduce downtime dramatically in many routine maintenance procedures

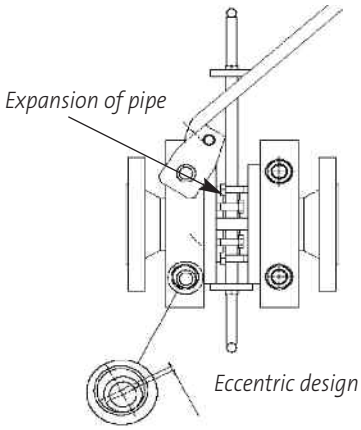
3

The ONIS device offers a significantly higher degree of safety and performance than traditional blinding methods

2 ONIS 10" 150# - on refinery pump station - TOTAL FEYZIN - France

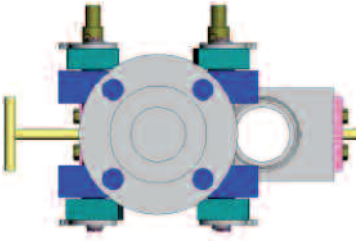


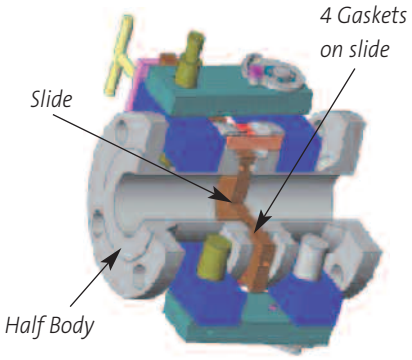
ONIS Lineblind is composed with two half bodies connected by a mechanical system and a slide gate. The Lineblind has a great stiffness and permits to one person to isolate a 10" line in seconds.



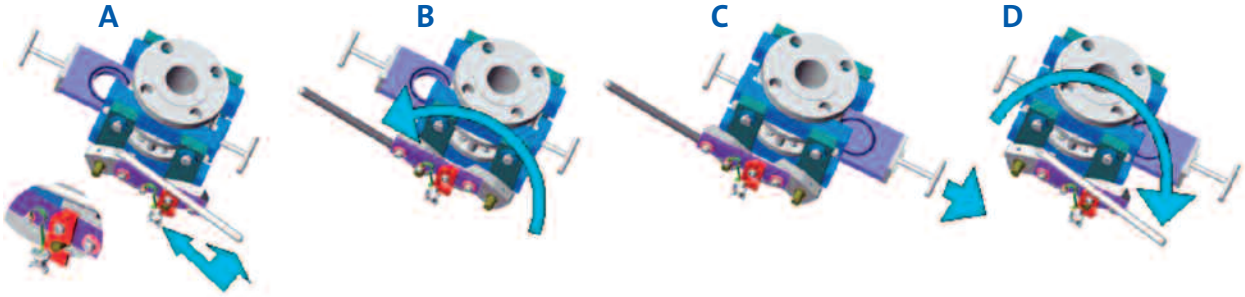
ONIS Lineblind operating cycle :

- Push the locking device (A),
- We are able to operate the lever (B) to spread the half bodies, and then liberate the slide, centered by the lifting system. The expansion of the line is 3 to 5 mm (value less important that the normal expansion for the line during the winter/summer transition).
- Slide is guided and centered by the lifting system, and can be operated from the closed position to full bore position (C).
- The lever is operated to clamp the two half bodies and lock the lineblind in position (D). Lineblind is now online with the chosen position.





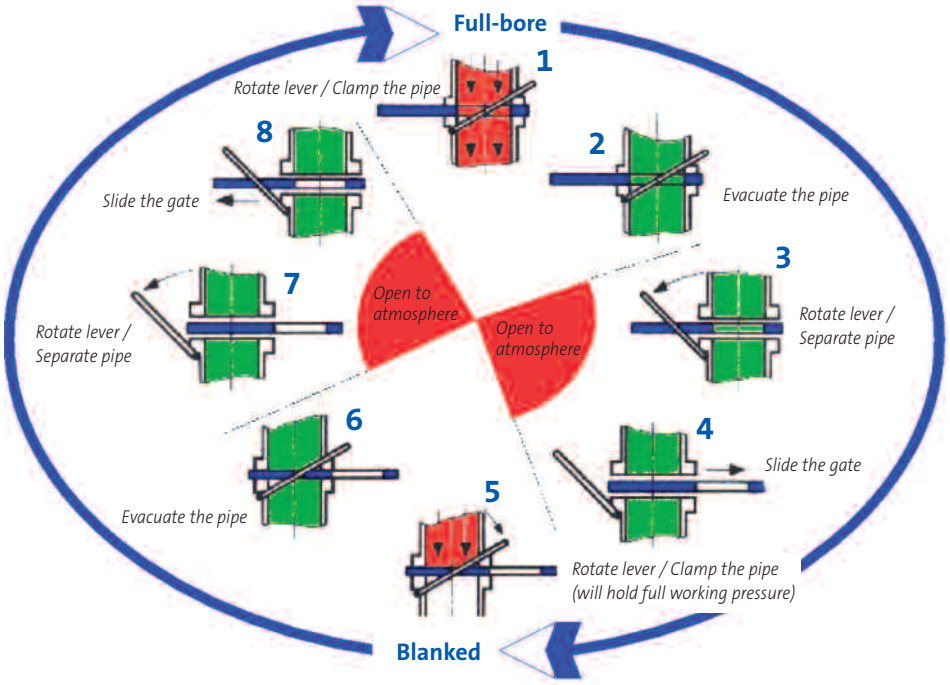
The Gaskets can be easily replaced while lineblind is in operation, without parts disassembling.



Lock for lever manual operated lineblind

Step by step sequence of the ONIS lineblind

- Positions 1-5 is the change-over from full-bore/open to positive-isolation/ blanked.
- The procedure mirrored to re-gain full-bore.



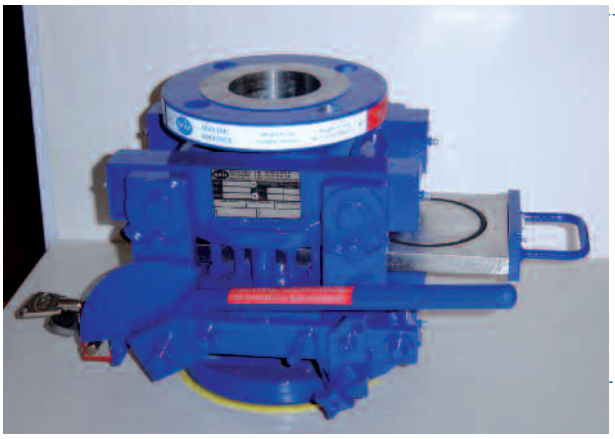
PL SERIES LINEBLINDS

- The simple and reliable ONIS Blind can be operated easily by one person

► Less than 30 seconds 1" thru 10"

► Less than 3 minutes 12" thru 50"

- Adaptable for liquid, gases, powders, and viscous fluids
- Available in special steels (carbon steel, stainless steel, Ni-Alloys...) for a wide range of temperatures, pressures and mediums
- Available fire safe with graphit gaskets



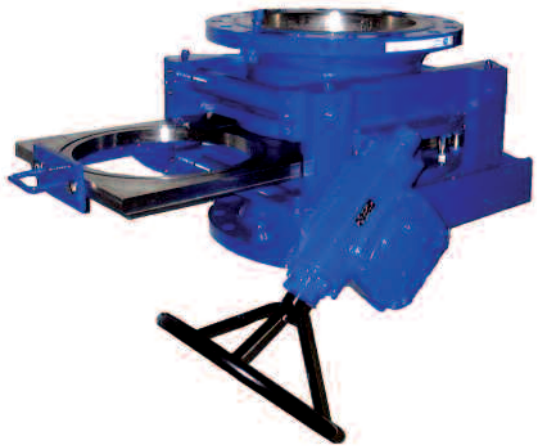
Model PLB : 1/2" - 10" / DN 12 - 250

Lever operator

Manual slide

4-point clamping

Slide guiding system, with additional rollers above 3"



Model PLR : 10" - 30" / DN 250 - 750

Gear operator

Manual Slide

4-point clamping

Slide guiding system with rollers

For graphite gasket, model PLR for dimension above 3"

Model MPL : 32" - 50" / DN 800 - 1250

Gear operator

Manual wheel operator slide

6 - 8 - 12-point clamping with lateral clamp system

Slide guiding system with rollers

- Principle:

This ONIS Vannobturator is a combination of an ONIS Lineblind and one or two ball valves.

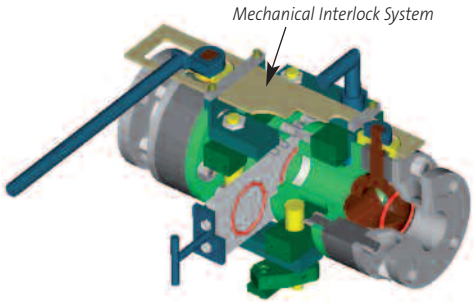
- Two models of ONIS Vannobturator :

► Model 1V1 : Single block and bleed lineblind system, with one ball valve

► Model 2V1 : Double block and bleed lineblind system, with two ball valves

- Available in special steels (carbon steel, stainless steel, Ni-Alloys...) for a wide range of temperatures, pressures and mediums

- Available fire safe with graphit gaskets



ONIS Vannobturator 2V1 2" 150#

Advantages

ONIS Vannobturator offers reduced flange to flange dimension, as ball valve is part of the ONIS

As the dead chamber decreased, the media loss during operation is lower

Less gaskets in line

Safety Mechanical Interlock between the Lineblind and valves, to prevent an operation of the lineblind if the ball valves are opened.

Drain plug included

ONIS Vannobturator 1V1 8" 150#
ARCELOR - France

Characteristics

Bodies and flanges : Carbon steel, Stainless steel...

Slide of the lineblind : stainless steel, Ni-alloys...

Manual lever or gear operator

Pneumatic or electrical actuator

Interlock systems, safety locks

ONIS Vannobturator 2V1

ONIS FILTER LINEBLIND MODEL PLF

Use

This ONIS Filter Lineblind was designed first to optimize filter changing on crude oil line.

In traditional operation, filters are inserted between two flanges in the pipe, which demands to unbolt flanges, pull out the pipe part with the filter using heavy lifting material, replace the filter, and put in place the pipe part with the new filter, and bolt the flanges. Taking into account the line dimension, traditional operation induces a process shut-down of several hours, with a extremely important production loss .

ONIS Filter 16" 150# - PDVSA - Venezuela

Conic screen

The ONIS Filter Lineblind is a solution to minimize downtime, exposure time and reduce the risk of pollution.

Spread and clamp operation are the same as a classic lineblind, except that slide is replaced by a special filter holder. When one filter is in line, the second can be cleaned process in line.

Use of this ONIS Filter Lineblind is large, with possibility to adapt to a lot of media, liquid or gas.

Advantages

Screen replaced with no tool

Downtime process is reduced to a minimum

The second screen can be cleaned or replaced while the process runs

Screen is set in position without being damaged during the operation

Characteristics

3" 150# to 24" 600#

Bodies : Carbon Steel, Stainless Steel

Slide : Stainless Steel

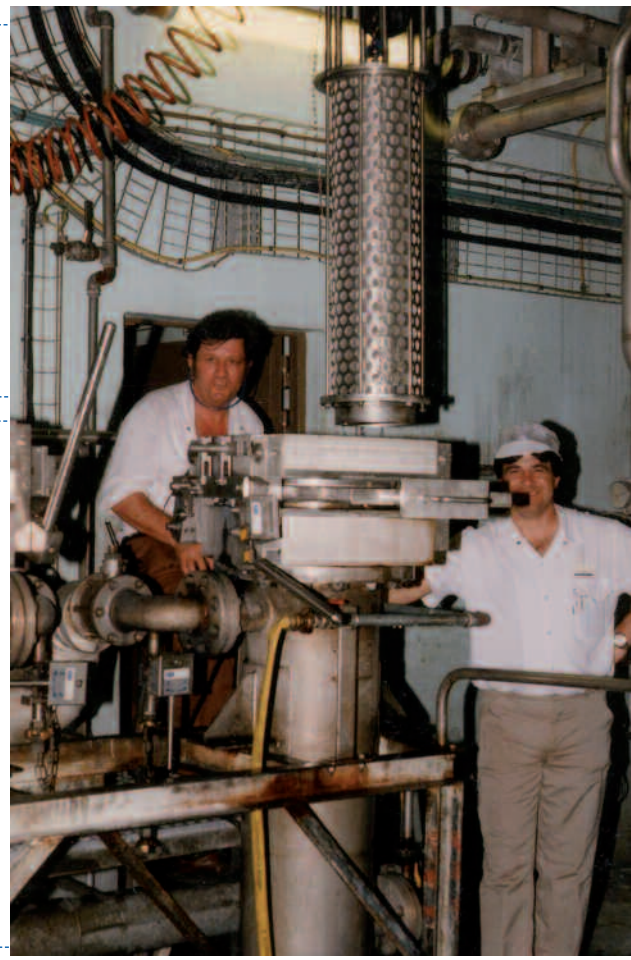
FKM O'ring gaskets, special gaskets on demand

Filter in Stainless Steel

Manual gear operator or actuator

Manual slide or manual gear operator slide

Special dimensions, ratings, or filter adaptation on demand

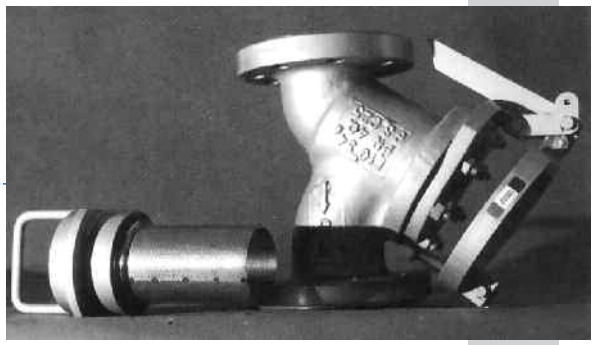


ONIS Filter - NESTLÉ France

ONIS COUPLING DEVICES

Use

Model RRF : for "Y" or "T" cartridge filters.
Model RRA-RRB : for quick coupling on processes horizontal lever RRA or vertical lever RRB



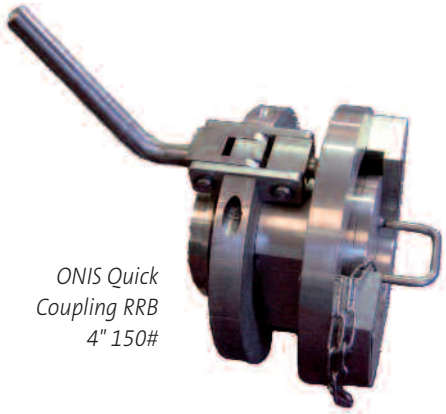
ONIS RRF 3" 150# with SARCO Filter housing

Advantages

Self centered
Operated easily in seconds
No tools are needed
Blanked flange can be furnished

Characteristics

All part in contact with product : Carbon Steel, Stainless Steel, or other
FKM o'ring gasket, food grade or other special gaskets on demand
Dimensions from 1"1/2 to 8" Ratings 150# - 300#
Specific adaptation and coupling on demand



ONIS Quick Coupling RRB 4" 150#

ONIS CUSTOM BLINDING SYSTEMS

Slide Gate Hydraulic Lifting System

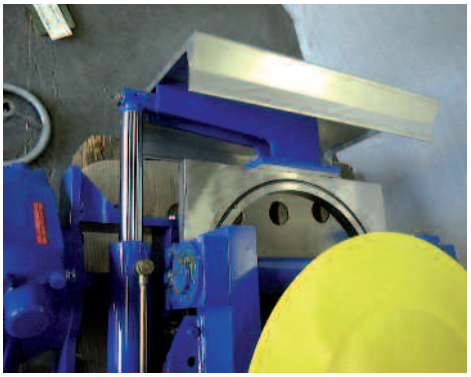
When the lineblind can be assembled on the installation only with a vertical movement of the slide gate, it may be equiped with an hydraulic lifting system.

This system is hydraulic, and is composed of a jack for the translation of the slide gate, and of a manual hydraulic pump.

The lifting system is equipped with safety devices on the hydraulic command (non-return valves).

The slide gate can be provided with a top cover, to protect the gaskets from the external environment in duty.

ONIS Lineblind 16" PN 10 with hydraulic lifting system - ARCELOR MITTAL - France



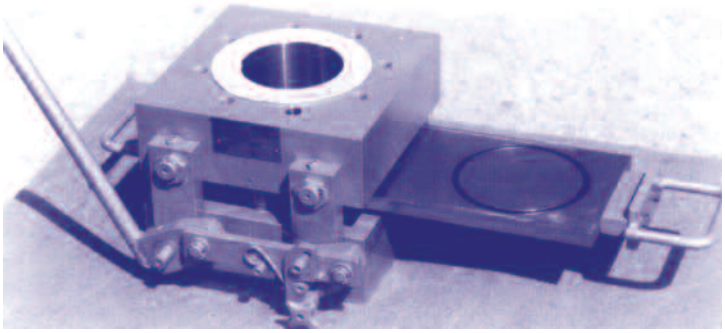
The ONIS Lineblind concept can fit with customer specific requirements.

ONIS Lineblind can be used as safety rupture disks changer. In that case, one disc is in line, and when pressure blow out the disk, the lineblind is operated to put in line the second disk. Then broken disk can be replaced while the process runs.

ONIS Lineblinds can be manufactured with special metallurgy and overlays, in regards with the process.

We manufacture Lineblind with Monel 400, Nickel overlay, or with PTFE inserts.

For special cases, ONIS Lineblind can be equipped with special threaded flange design (Model PLC), to reduce the flange to flange dimension.



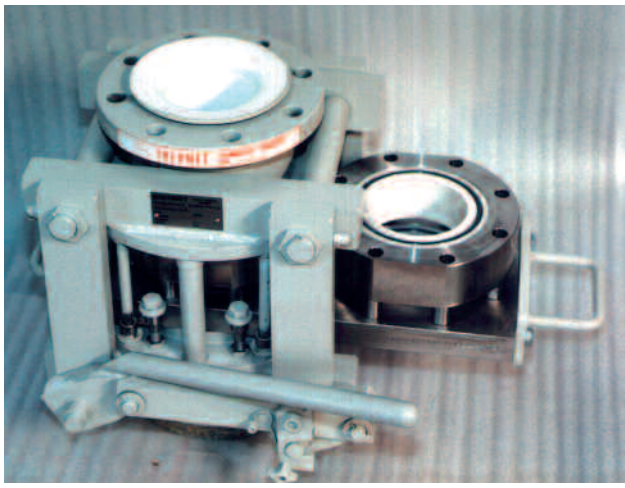
ONIS Lineblind PLC 4" 150#

ONIS full automatized Lineblind in coffee beans boiler - FOLGERS COFFEE - USA

ONIS lineblind can be adapted to be a custom loading blind. Such application has been made for coffee loading, with full automatized lineblinds.

ONIS Lineblind can be used as orifice-plate changer, to control the product flow. Orifice-plate can be available with 2, 3, 4, etc ... orifice positions. Change-over time less than two minutes without tools.

ONIS Twin Lineblinds 6" 150# with safety rupture disks - SANOFI SYNTHELABO France

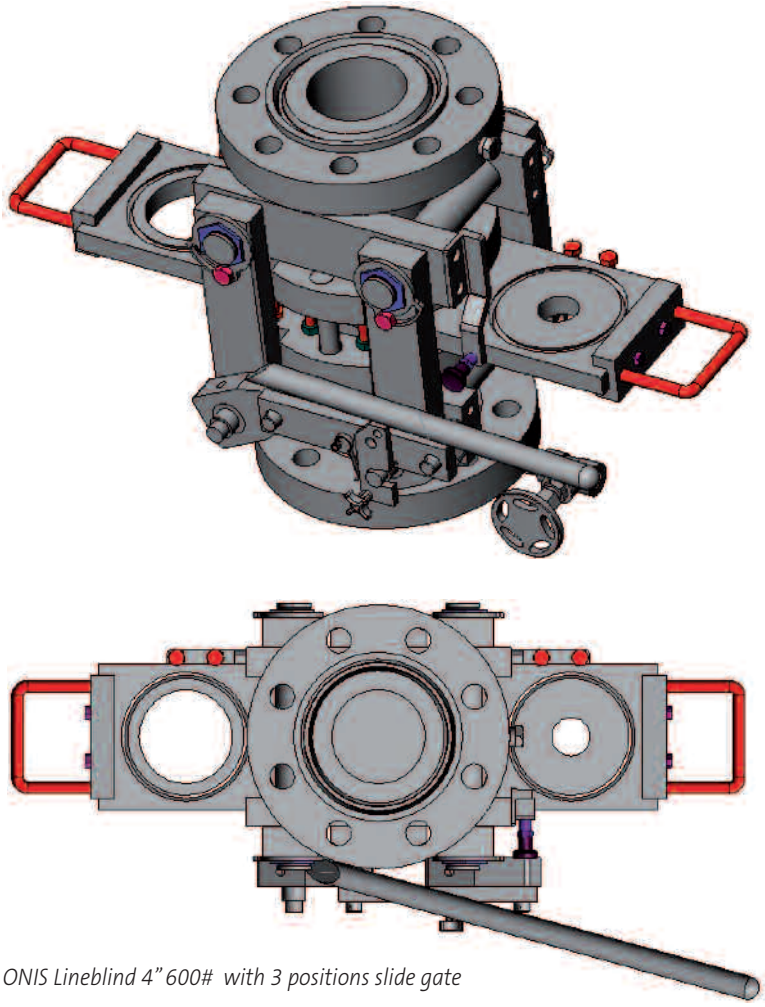


ONIS Lineblind with PTFE inserts

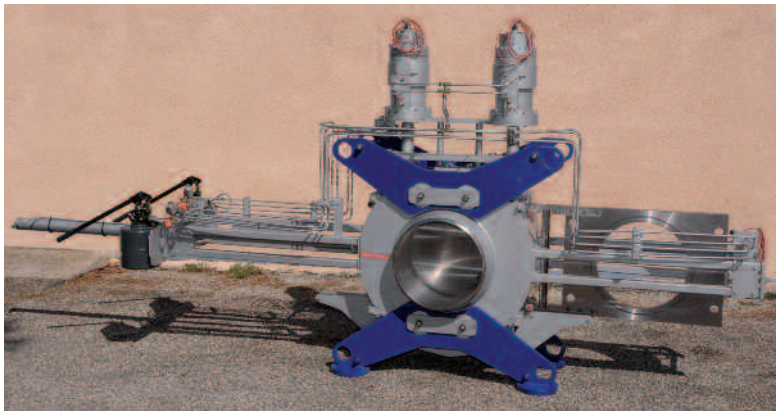
Lineblind with 3 positions slide gate

This lineblind is equipped with a particular slide gate, with three positions. In addition to the traditional positions full bore and blanked, the lineblind has a reduced passage, to create a pressure loss or to control the flow for a given application, like an orifice plate.

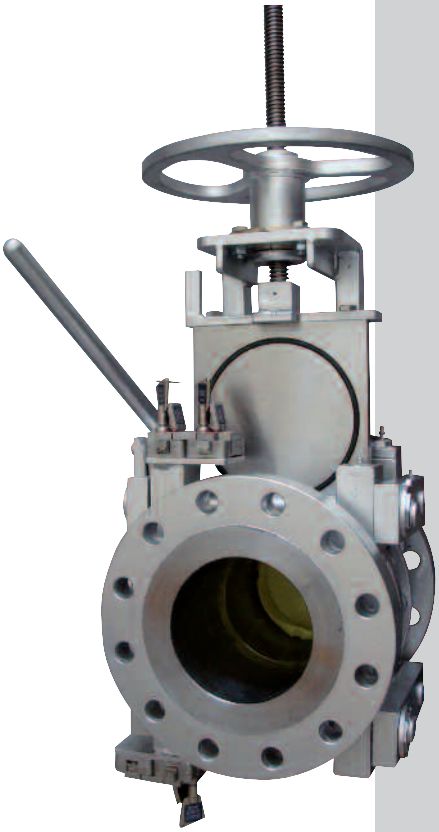
The diameter of the reduced bore is machined according to customer's specifications.



ONIS Lineblind 4" 600# with 3 positions slide gate



ONIS PL2V 18" 300# Fully Hydrolic remove operation - FFCU transferline



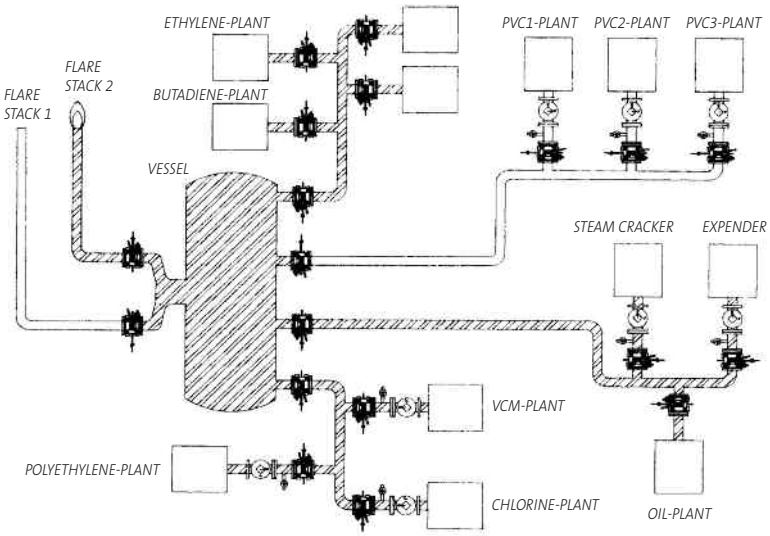
ONIS PLB 8" 150# with vertical slide and safety locks

ONIS LINEBLINDS ON A FLARE STACK NETWORK

The diagram represents ONIS lineblinds PLB 100 (4") to MPL 900 (36") within a flare stack network, protecting the units that produce plastic.

Two flares stacks are connected with a principal vessel, diameter 1200 (48") and isolated by two ONIS Lineblinds MPL 900 (36"). This configuration provides a proven means of quick and safe maintenance isolation for one flare stack while the other remains online.

A mechanical interlock system insures that the two Lineblinds are never in the blind position at the same time.



The ONIS Lineblinds PLR 700 (28") can be used during maintenance or within the security circuits of the flare stacks.

All the units are connected to the vessel by ONIS Lineblinds at the inlets (PLR 400 –16", PLR 600 –24", PLR 650-26") which enables isolation of each unit whenever needed.

ONIS blinds at the inlets of the main vessel are fitted on the basis of operating at ten-year intervals for planned shutdown to allow for metallic-corrosion inspection.

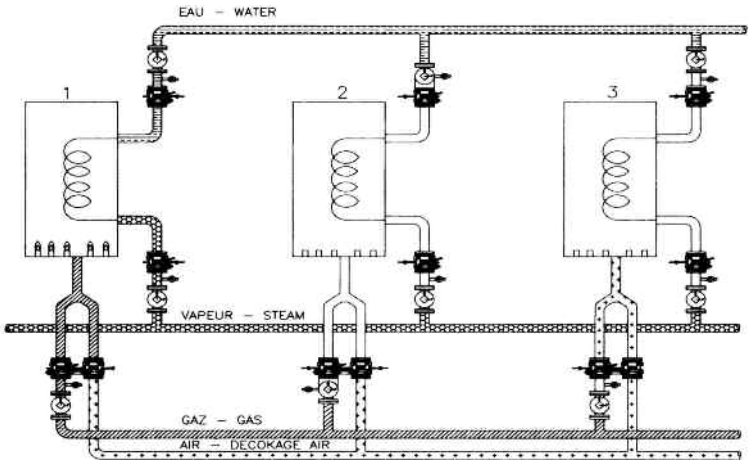
This is an insurance-type application in case of accident or corrosion damage giving the refinery the means to react quickly to isolate a unit or process. The off-site ONIS blinds, as well as the vessel blinds, can be operated at any time for maintenance or process needs.

SHELL - Flare Stack Network - France

2 ONIS MPL 48" 150# - TOTAL Gonfreville - France

ONIS PLR 28" 150# High Temperature on hydrocracker flare stack network - DEA - Germany

ONIS LINEBLINDS ON ETHYLENE STEAM CRACKER OR BOILER



Furnace 1 in service

Supply of water line	*Full bore position*
Steam line	*Full bore position*
Supply of gas line	*Full bore position*
Air line	*Blind position*

Furnace 2 in maintenance

Supply of water line	*Blind position*
Steam line	*Blind position*
Supply of gas line	*Blind position*
Air line	*Blind position*

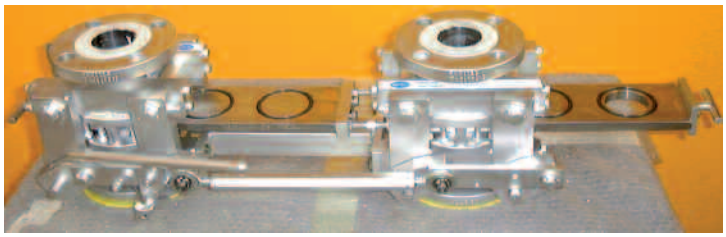
Furnace 3 in decoking

Supply of water line	*Blind position*
Steam line	*Blind position*
Supply of gas line	*Blind position*
Air line	*Full bore position*

The diagram above represents the use of ONIS Lineblinds: ONIS Twin blinds and ONIS combi Series, fom 2" to 8" in an olefin plant or steam plant.

Water Inlet : By using a valve and an ONIS Lineblind, water inflow into the furnace can be controlled.

Steam Inlet : Same principle and material as for the water inlet.

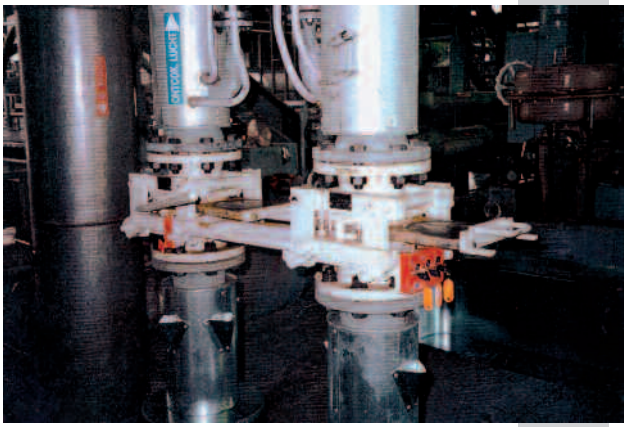


ONIS Twin Lineblind 2" 150# with three positions slide

Gas Inlet and Decoke Air Inlet : the traditional practice of manual "elbow" switching to ensure gas or air only-and never the two together-is labour intensive and results in unnecessary plant downtime, and thus affecting the end-product profitability.

By replacing this traditional practice with the ONIS twin blinds system, it is possible to switch from one line to the other with total confidence in seconds, and also to have a safety blanking position on both lines to process or maintenance needs. Cost savings are thus considerable and personnel safety heightened.

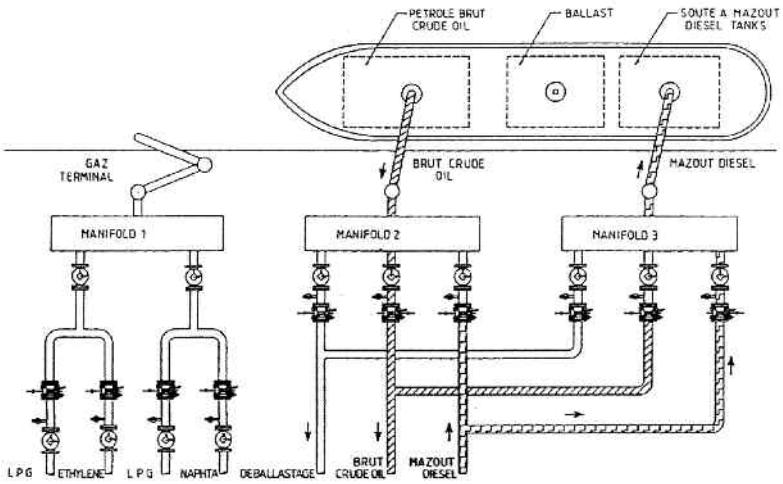
PLR DN 10" 150# - Steam Cracker
Arkema Lavera - France



ONIS Combi Series DN 3" 150#

ONIS LINEBLINDS IN A LOADING TERMINAL OR PUMP STATION

The diagram below represents the possibility of using ONIS Lineblinds within a loading terminal for rapid and positive line isolation. Same possibility within an hydrocarbon pump station.

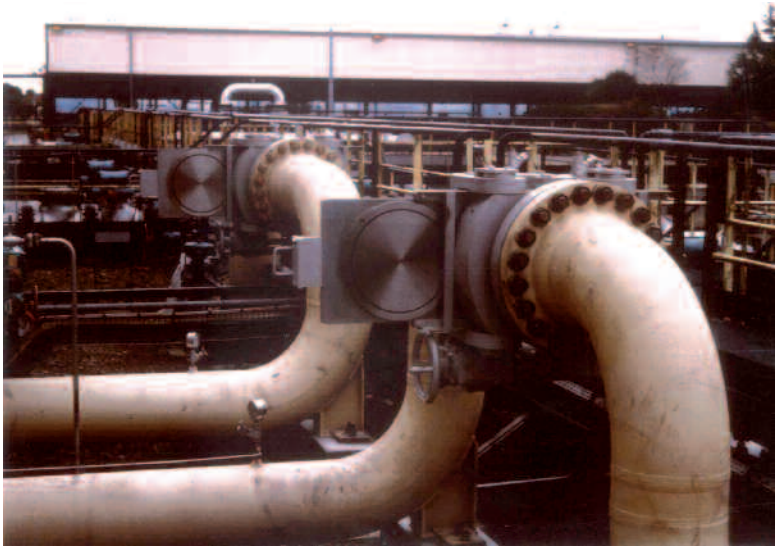


In this case, only diesel can be loaded from the manifold 3, crude oil line and unballast line are in blind position.

Brut crude oil can be unloaded from manifold 2, unballast and diesel lines are in blind position.

In this case, the use of ONIS Lineblinds avoids the possible contamination, and permits to isolate lines for maintenance operation.

Installing the ONIS Lineblinds on the manifold's bottom outlets avoids contamination between the different products, and dams up the collector.



ONIS PLR 400 (16") and PLR 450 (18") on Stocking Station - TIGF - LUSSAGNET

ONIS PLR 400 (16") on Naphta loading arms

ONIS Lineblind PLB 8" 600# and " 600# - Gas plant TIGF Barbeira

In a pump station, each pump is protected by ONIS Lineblinds - upstream and downstream.

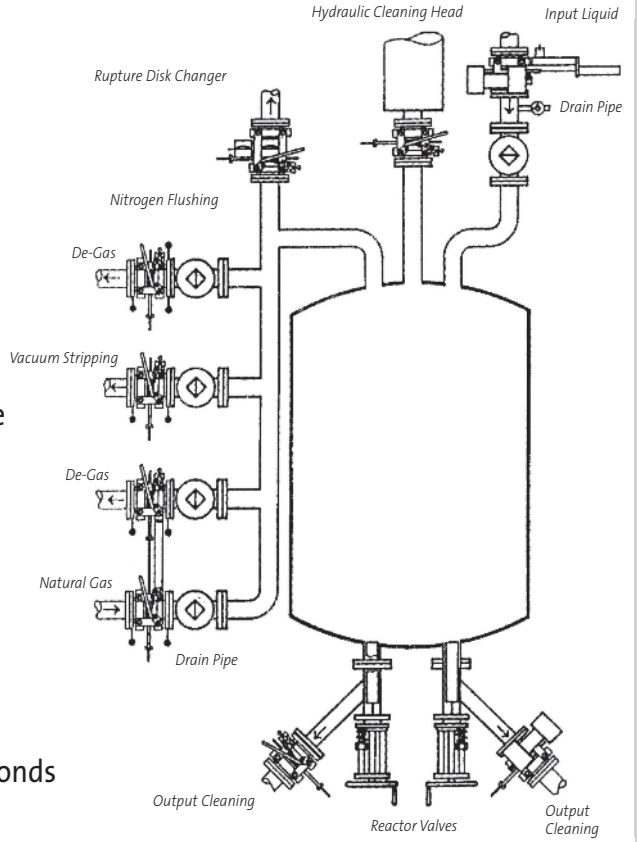
In that case, a pump can be completly isolated and be taken down for maintenance, without stopping the pump station and loss production.

ONIS LINEBLINDS IN PRODUCTION AND MAINTENANCE OF REACTORS

ONIS Benefits

- Downtime savings
- Security improvement
- Production and quality improvement

Typical use of ONIS technology on reactor



ONIS Quick-Action lineblind

- Loading lines of products
- Off-loading line of product : ONIS on reactor valve
- Vacuum line
- Inert gas line
- Degassing line
- Cleaning head introduction
- Cleaning flush : ONIS on reactor valve

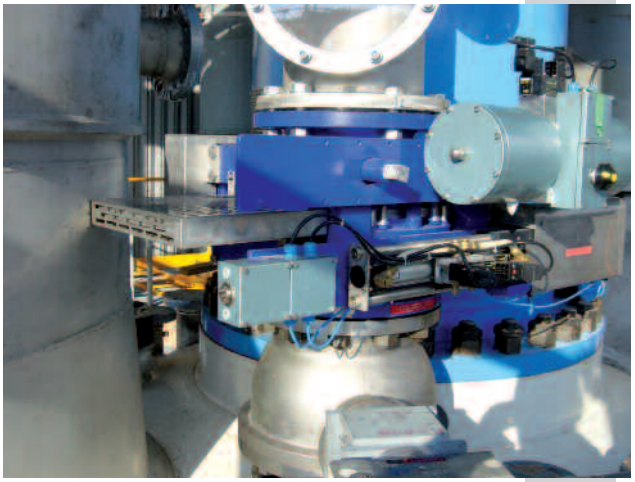
ONIS Quick-Action Rupture Disk Changer

- A safety rupture disk can be replaced inline in seconds and without tool.

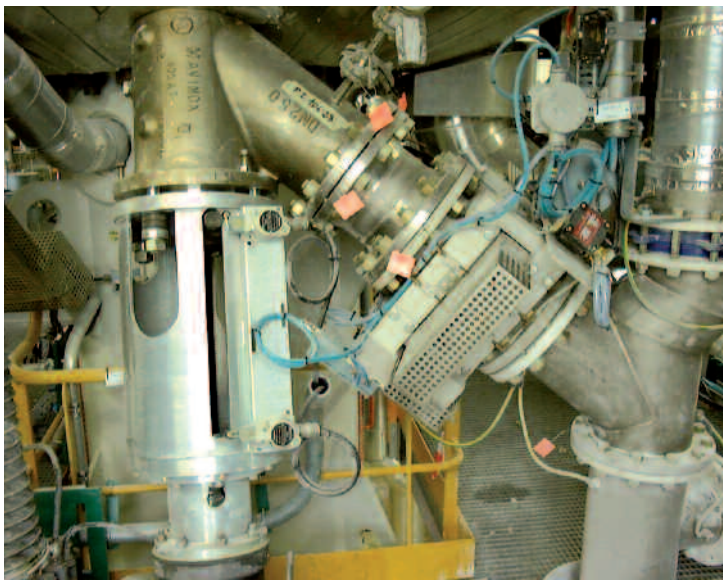
ONIS Quick-Action Orifice Plate Changer or Strainer

- Simple and quick inspection or replacement of process orifice plates for precise flow control.

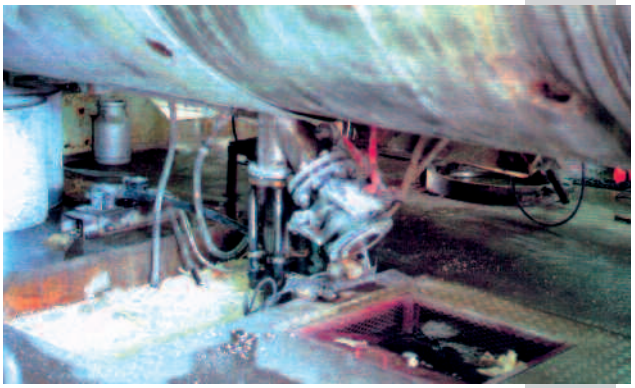
The ONIS Quick-Action lineblinds can be applied in ABS, polypropylene, polyethylene, synthetic rubber, VCM, PVC, and PTA processes.



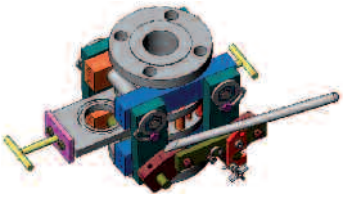
ONIS PL2V 6" 150# - Use on loading line on CVM Reactor - ARKEMA - France



ONIS PL2V 10" 150# - ARKEMA - France



ONIS PLB 8" PN 25 - ARKEMA - France



Standard Specifications

- Body in Carbon steel A350 LF2
- Raised Face Flanges
- Slide in Stainless Steel (304L or 316L)
- 4 FKM O'ring gaskets
- Self-lubricated bearings, grease fittings
- Bodies Spread Movement:
  - Manual lever operator thru 10"
  - Manual gear box operator from 12"
- Manual Slide Movement

ONIS Lineblinds answers your specifications

Material

Bodies and Slide

- High temperature Alloy Steel
- Exotic Steel : Monel 400, Nickel 200, Duplex,
- Overlays : Inconel, Nickel, Monel 400, PTFE, ...

Gaskets

Slide gate gaskets

- FKM O'Ring
- Graphite gaskets
- FKM overlay PFA or FEP O'ring Gaskets
- Special gasket material on demand

Flanges

Bodies

- Following standards : EN 1092-1, B16-5, B16-47
- RF, RTJ
- Butt weld
- Threaded NPT
- Special fitting on demand

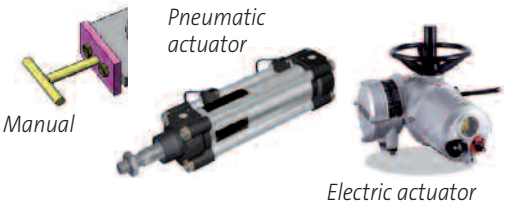
Miscellaneous

Lineblind

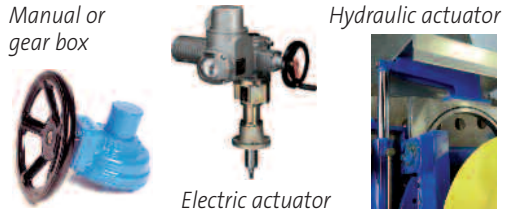
- Drain plug
- Operating extension
- Safety lock
- Mechanical Interlock
- Stainless Slide cover
- Rupture disc changer
- Twin lineblinds

Slide Movement *

Movement parallel to ground

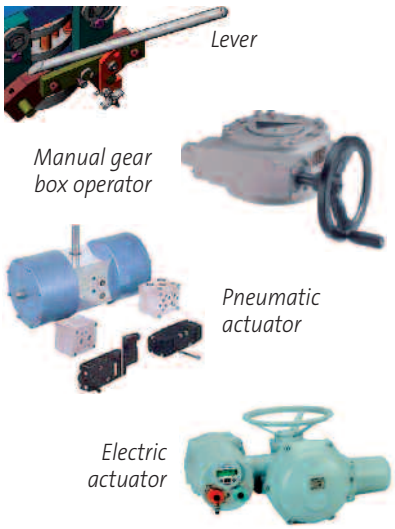


Movement vertical to ground



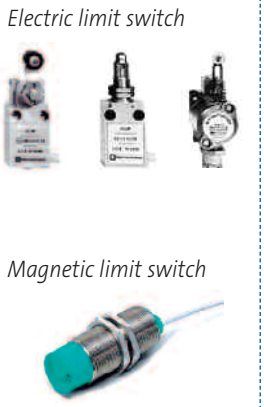
Bodies spread/unspread movement

Options



Limit Switch

Options



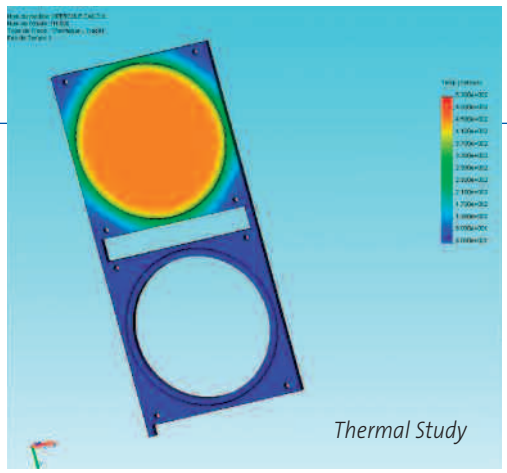
* *Lineblind with slide movement vertical to ground must be equipped with a special accessory. Consult your ONIS distributor.*

TECHNICS AND CERTIFICATIONS

ONIS Lineblinds are designed using the latest techniques, like the CAD, finite element analysis for stress and thermal calculations, from the conception to the verification of our products.

ONIS Lineblind have the CE marking (TÜV Agreement 1637) following the PED 97/23/CE module H, and can be designed, on specific demand, Fire Safe following the API 607 IV.

ONIS Lineblinds are manufactured under an ISO 9001:2008 quality system, for each step of the manufacturing.

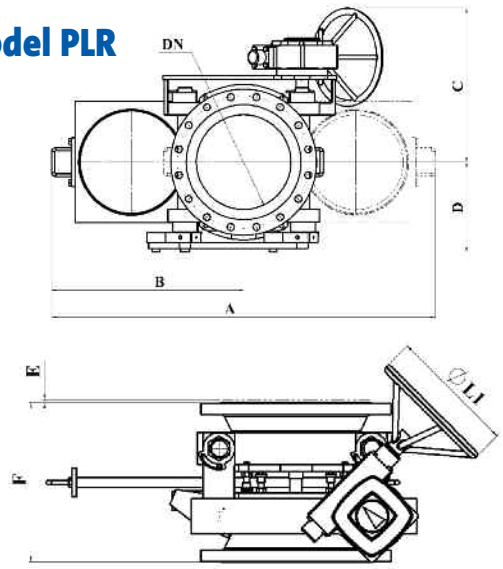


CE PED 97/23/CE
TÜV 1637

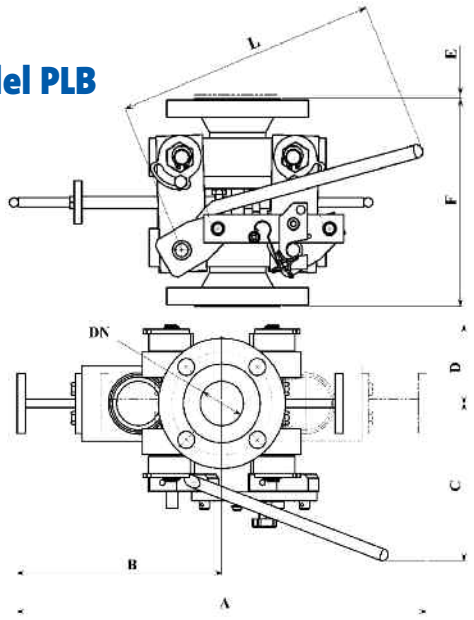
SAAR CERT TÜV ISO 9001:2008
N°71 100 J 124

TECHNICAL SPECIFICATIONS

Model PLR



Model PLB



Dimensions in mm (Rating ANSI 150#)								F (Face to face)[1]			F (Butt Weld)	Weight (Kgs)	L	L1
Ref	DN	DN Inches	A	B	C	D	E	150#	300#	600#	ANSI 150#	ANSI 150#	150#	150#
PLB 15	12	1/2	284	142	119	56	3,7	170	178	216	160	8	255	NA
PLB 20	20	3/4	284	142	119	56	3,7	170	178	216	160	8	255	NA
PLB 25	25	1	284	142	119	56	3,7	170	178	216	160	8,5	255	NA
PLB 40	40	1 1/2	490	245	184	92	3,7	218	226	292	200	26	280	NA
PLB 50	50	2	490	245	184	92	3,7	218	226	292	200	28	280	NA
PLB 80	80	3	558	279	215	112	3,7	256	268	356	220	43	300	NA
PLB 100	100	4	662	331	205	125	3,7	256	280	438	220	52	306	NA
PLB 150	150	6	822	411	300	165	3,7	290	302	438	280	90	380	NA
PLB 200	200	8	952	476	280	185	3,7	330	350	533,5	280	118	390	NA
PLB 250	250	10	1212	606	408	235	3,7	406,4	500	550	400	230	520	NA
PLR 300	300	12	1342	671	405	260	3,7	406,4	550	596	400	295	NA	350
PLR 350	350	14	1492	746	586	342	3,7	500	550	786		475	NA	400
PLR 400	400	16	1572	786	630	370	3,7	500	680	786		550	NA	400
PLR 450	450	18	1827	914	670	407	3,7	500	700	786		638	NA	400
PLR 500	500	20	2072	1036	756	427	3,7	500	860	960		730	NA	500
PLR 600	600	24	2550	1275	800	480	3,7	600		1100		1025	NA	500
PLR 650	650	26	2800	1400	825	505	4,5	600		1370		1045	NA	500
PLR 700	700	28	3000	1500	830	520	4,5	600						
PLR 750	750	30	3200	1600	880	530	4,5	800						
MPL 900	900	36	3300	1650	942	760	4,5	900						
MPL 1000	1000	40	3742	1871	925	840	4,5	900						
MPL 1200	1200	48	4352	2176	998	950	4,5	1000						
MPL 1250	1250	50	4780	2426	1252	932	4,5	1010						

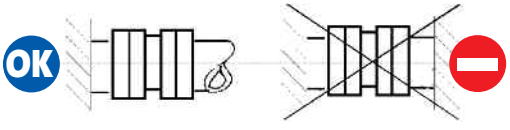
Consult your ONIS Distributor to obtain datas on these lineblinds

All data included must be confirmed by ONIS before use

[1]When using graphite gaskets, consult ONIS distributor for F dimension

INSTALLATION

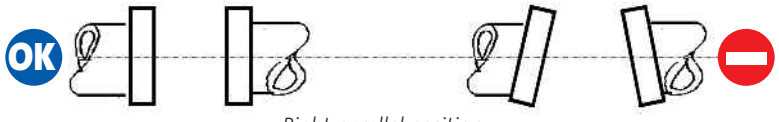
- Follow manual rules for mechanical equipment
- Reduce pipe stress to a minimum
- ONIS Lineblind must be closed during installation
- Check the oil or grease level for ONIS Lineblind with gear operator
- Pipework must have allowance for axial movement



Flexibility on 1 or 2 sides ONLY REQUESTED

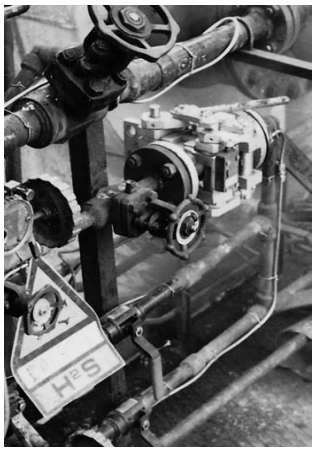
Standard Fitting Rules

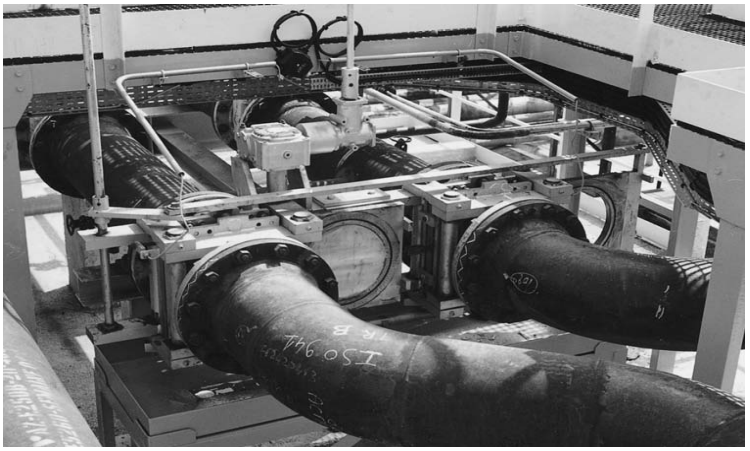
Right position of pipes



Right parallel position

Clearance between flanges equal to the length of the lineblind with seals





Additional Features:

- Fully Automated
- Limit Switch Options
- Extended Gear Options
- Steam Jacketed
- Splatter-proof Enclosures

FAX RESPONSE CARD – SEND TO 0118-939 32 22

Onis Concept Applied

Please send me documentation on the following products:

- ❑ **ONIS "Quick-Action" Lineblind**
- ❑ **Single "COMBI" Block & Bleed System**
- ❑ **Double "COMBI" Block & Bleed System**
- ❑ **Twin (Parallel) Lineblinds**
- ❑ **Quick-Action Rupture-Disk Changer**
- ❑ **Quick-Action Orifice-Plate Changer**
- ❑ **Quick-Action Filter Changer**
- ❑ **Wafer-Style Lineblind**

Surname: _____
Initial(s): _____
Company: _____
Road/Street: _____
City: _____
Postal Code: _____
Phone: _____
Fax: _____
E-mail: _____

Application / Interest:

_____
_____
_____
_____
_____
_____
_____
_____

Authorised Distributor

MV Fluids Handling

Marven House, 1 Field Road, Reading, RG1 6AP United Kingdom
Tel: (0118) 950 3707 Fax: (0118) 950 4066 Intern'l(44-118-No)
www.mvfh.co.uk e-mail: onis@mvfh.co.uk

MV06/01