# MODEL EX

ORBINOX
VALVULAS-VALVES

## WAFER STYLE KNIFE GATE VALVE

The **EX** model knife gate is a uni-directional wafer valve designed for general industrial service applications. The design of the body and seat assures non-clogging shutoff on suspended solids in industries such as:

- Pulp and Paper
- Wastewater treatment plants
- Food and Beverage
- Mining
- Power plants
- Chemical plants
- Bulk handling
- etc.

**Sizes:** DN 50 to DN 1200 (larger diameters on request)

**Working pressure:**

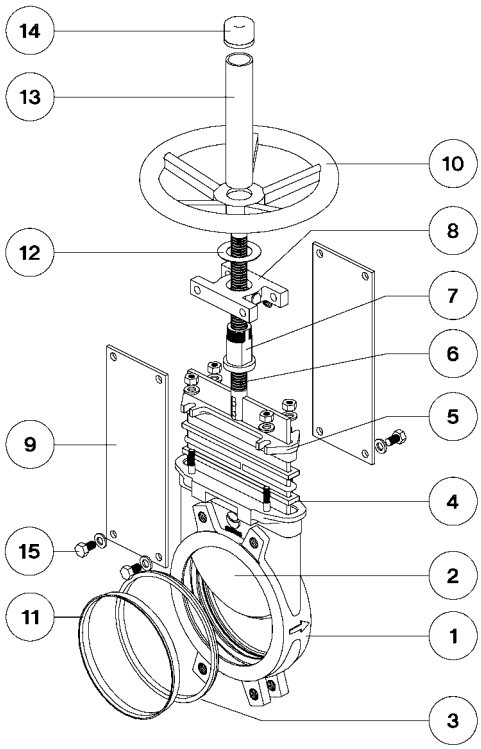
| | | |
|---|---|---|
| DN 50 to DN 250: | 10 (kg/cm²) |
| DN 300 to DN 400: | 6 (kg/cm²) |
| DN 450 : | 5 (kg/cm²) |
| DN 500 to DN 600: | 4 (kg/cm²) |
| DN 700 to DN 1200: | 2 (kg/cm²) |

**Standard flange connection:** DIN PN 10 and ANSI B16.5 (class 150)

**Note:** other flange connections are available on request such as:

DIN PN 6 DIN PN 16 DIN PN 25
BS "D" and "E" ANSI 125

All valves are tested prior to shipping in accordance with the standard developed by the Quality Control department at ORBINOX.




## STANDARD PARTS LIST

| Part: | Cast Iron: | Stainless Steel: |
|---|---|---|
| 1- Body | GG25 | CF8M |
| 2- Gate | AISI 304 | AISI 316 |
| 3- Seat | Metal or Resilient | |
| 4- Packing | AH | NT |
| 5- Gland Follower | Aluminum (DN 50 to DN 300)<br>S.G. Iron<br>(DN 350 to DN 1000) | CF8M |
| 6- Stem | AISI 303 | |
| 7- Stem Nut | Bronze | |
| 8- Yoke | Carbon Steel (DN 50 to DN 150)<br>S.G. Iron (DN 200 to DN 1000) | |
| 9- Support Plates | Carbon Steel - Epoxy Coated | |
| 10- Handwheel | Cast Iron | |
| 11- Seat Retainer Ring | AISI 304 | AISI 316 |
| 12- Thrust Washer | Bronze | |
| 13- Stem Protector | Carbon Steel - Epoxy Coated | |
| 14- Cap | Plastic | |






ORBINOX, S.A. Pol. Ind. s/n-20270 ANOETA (Spain) Apdo. 80 - 20400 TOLOSA (Spain)
Tel: 943 - 69 80 30* Fax: 943 - 65 30 66 e-mail:orbinox@orbinox.com

# MODEL EX

ORBINOX
VALVULAS-VALVES

## DESIGN FEATURES

**BODY:**
Wafer style cast **monoblock** with raised face, with reinforced ribs in larger diameters for extra body strength.
Internal cast-in gate wedges and guides allows for tighter shut-off.
Full port design for greater flow capacity and minimal pressure drop.
Internal design avoids any build up of solids that would prevent valve from closing.

**GATE:**
Standard stainless steel gate.
Gate is polished on both sides to avoid jamming and seat damage.
Bottom of the gate edge is machined to a bevel to cut through solids for a tighter seal in the closed position.

**SEAT:** (resilient)
Unique design that mechanically locks the seat in the internal of the valve body with a stainless steel retainer ring.
Standard EPDM also available in different materials such as Viton, PTFE, etc.

**PACKING:**
Long-life packing with several lines of braided fibre plus an EPDM o-ring, with an easy access packing gland ensuring a tight seal.
Long-life braided packing is available in a wide range of materials.

**STEM:**
The standard stainless steel stem offers a long corrosion resistant life.
A grease nipple is fitted located on the handwheel assembly to lubricate the stem whilst operating the valve for easier operation and a longer life.
For rising stem handwheel actuators only, a stem protector is provided for additional protection against dust while the valve is in the open position.

**ACTUATORS:**
All actuators supplied by Orbinox are interchangeable, and supplied with a standard mounting kit to allow for installation on site.

**YOKE & SUPPORT PLATES:**
Made of EPOXY coated steel (stainless steel available on request).
Compact design makes it extremely robust even in the most severe conditions.

**EPOXY COATING:**
The epoxy coating on all **ORBINOX** cast iron and carbon steel valve bodies and components is electrostatic applied making the valves corrosion resistant with a high quality finished surface.
The **ORBINOX** standard colour is RAL-5015 **blue**.

**GATE SAFETY PROTECTION:**
**ORBINOX** automated valves are provided with gate guards in accordance with EU Safety Standards.
The design feature prevents any objects from getting caught accidentally while the gate is moving.

# MODEL EX

ORBINOX
VALVULAS-VALVES

## OTHER OPTIONS

**Bonnet (Fig.1):**
Assures tight sealing to atmosphere for use with hazardous gas or fluids.
Reduces packing maintenance.

**V-port:**
60 degree and pentagonal port design.
Selection depends on type of fluid control desired.

**Flush ports:**
Allows for cleaning of solids trapped within the body cavities that can obstruct the flow or prevent the valve from closing fully.
Purging can be with air, steam, liquids, etc. depending on the process.

**Other materials of construction:**
Special alloys such as AISI 317, 254SMO, Hastelloys, Titanium, etc.

**Fabricated valves:**
Orbinox is equipped for in house fabrication of special valves. Depending on the design, diameter, pressures, material of construction, etc.,

**Full lug design (EXT):**
Modified version of the EX model with full lug design for end of line applications.
Standard flange connection from DIN PN 10, ANSI 150, to AS "D".
Sizes available up to DN 600.

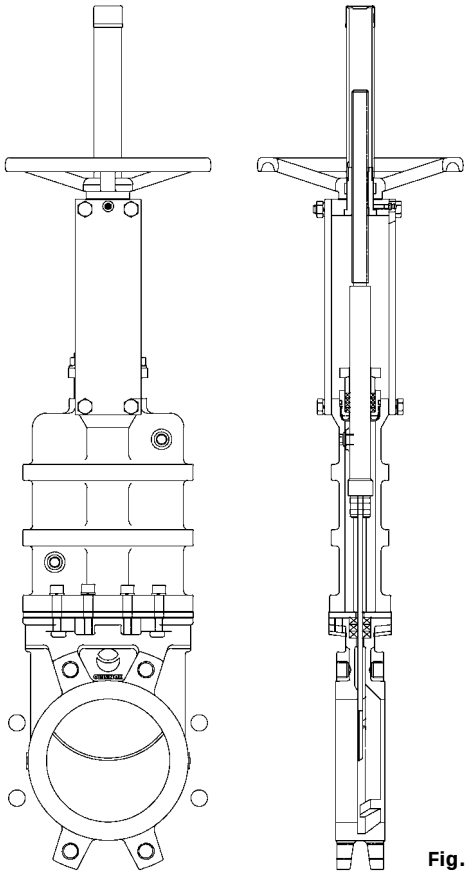
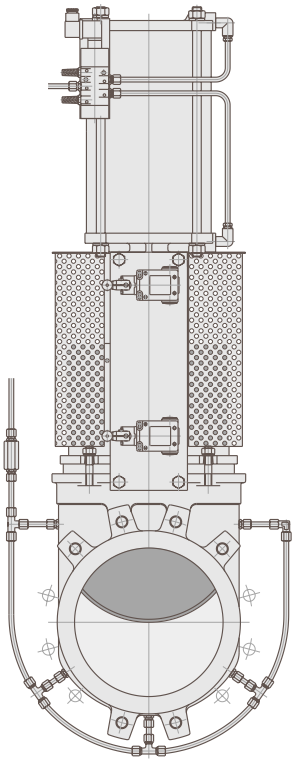


Fig.1



## SURFACE TREATMENTS

Valve components can be protected or coated for a longer life expectancy, depending on the application and the service conditions.

At Orbinox, S.A. we can offer treatments and coatings for the valve components to improve the properties against abrasion (stellite, polyurethane....), corrosion (Halar, Rilsan, galvanised....) and adherence (polishing, PTFE....).

We recommend to consult our technical department.

# MODEL EX

ORBINOX
VALVULAS-VALVES

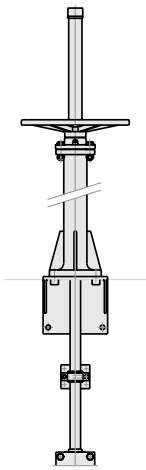
## ACTUATOR TYPES

- Handwheel (rising & non-rising stem)
- Chainwheel
- Lever
- Bevel Gear
- Others (square nut....)
- Electric
- Double Acting Pneumatic
- Single Acting Pneumatic
- Hydraulic

All actuators supplied by ORBINOX are interchangeable.

### Accessories

- Mechanical Stops
- Actuator manual override
- Positioners
- Electric controls
- Stem extensions
- Locking device
- Solenoid valves
- Limit Switches
- Floor stands



Wide range of valve extensions available.

Please consult our technical department.

Standard Handwheel
(Rising Stem)

Handwheel
(Non Rising Stem)

Pneumatic
Double Acting

Electric

Lever

# MODEL EX

ORBINOX
VALVULAS-VALVES

## SEAT / SEALS

| Material | Max.Temp.(ºC) | Aplications |
|---|---|---|
| Metal/Metal | >250 | High temp. Low tightness. |
| EPDM (E) | 120 | Acids and non mineral oils. |
| Nitrile (N) | 120 | Resistance to petroleum products. |
| Viton (V) | 200 | General chemical service. High temperature. |
| Silicone (S) | 250 | Food service. / High temperature. |
| PTFE (T) | 250 | Corrosion resistance. |

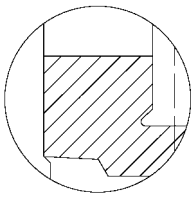
More details and other materials under request.

## PACKING

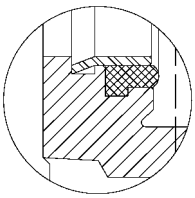
| Material | Max. Temp. (ºC) | pH |
|---|---|---|
| Tallowed cotton (AH) | 50 | 6 - 8 |
| Dry cotton (AS) | 50 | 6 - 8 |
| PTFE impregn. natural fibre (NT) | 120 | 4 - 12 |
| PTFE impregn. synth. fibre (ST) | 240 | 2 - 13 |
| Braided PTFE (TH) | 260 | 0 - 14 |
| Graphited (GR) | 300 | 4 - 12 |
| Ceramic fibre (FC) | 1200 | — |

NOTE: all types include an elastomere O-ring (same material as seal), excluding TH, GR and FC.

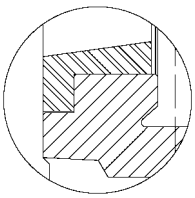
## SEAT TYPES



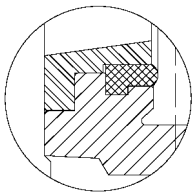
**METAL / METAL**
- High temperature
- High density media application
- Positive shut off



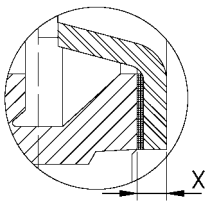
**RESILIENT, TYPE "A"**
- Standard resilient seat.
- Temperature limitations according to seat material selected. Consult the above chart or our technical department for more information.
- Replaceable seat retainer ring.



**TYPE "B" SEAT** (metal / metal)
- High temperature
- High density media application
- Positive shut off
- Replaceable design without dismantling the valve



**TYPE "B" SEAT** (resilient)
- Temperature limitations according to seat material selected. Consult the above chart or our technical department for more information.
- Replaceable design without dismantling the valve




**DEFLECTION CONE "C"**
- Deflects the media away from any internal exposed parts of the valve such as gate guides, seat, etc....
- Different types of material available such as AISI 316 stainless, CA15, Ni-Hard, etc....

Face to face dimensions increase:
DN 50 to DN 250 = 9mm
DN 300 to DN 600 = 12mm

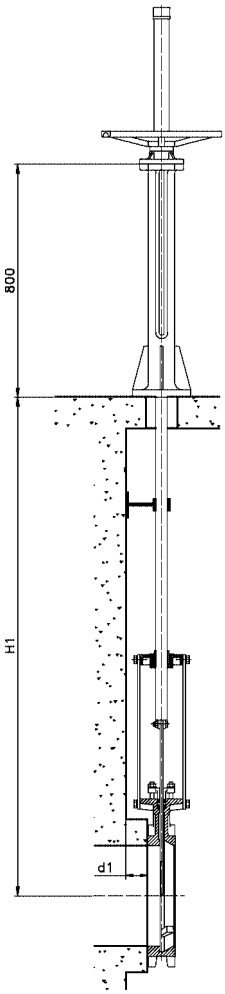
# MODEL EX

ORBINOX
VALVULAS-VALVES

## VALVE EXTENSIONS

The extension on a valve allows the operator to open or close the valve from a distance. Different types of extensions can be used depending on the application and the distance from the gate to the actuator.

### 1.- Floor stand.




Mainly used to facilitate the operator in opening and closing the valve at normal operating level.

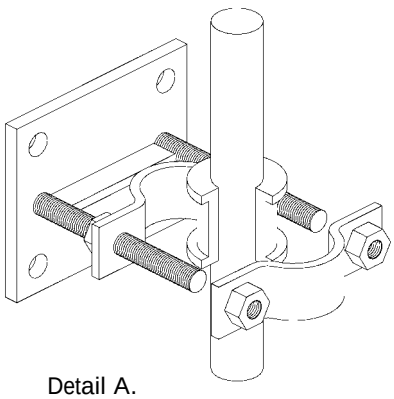
Required dimensions:

H1 - distance from centre line of the pipe to the base of the floor.

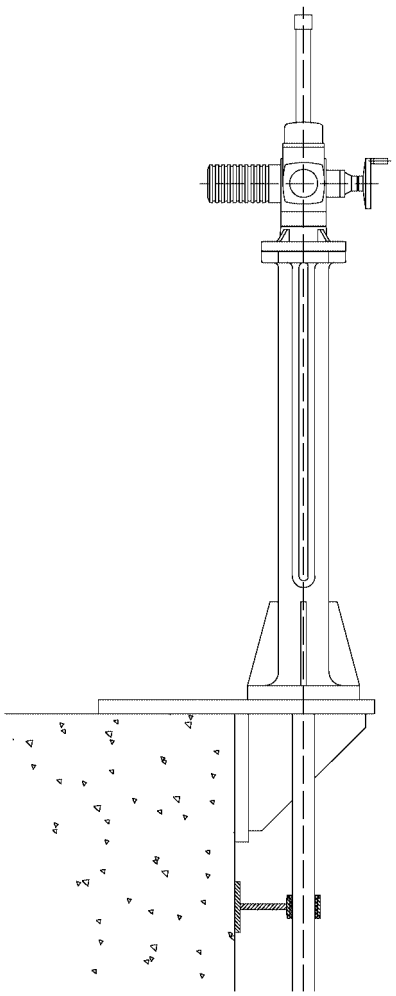
d1 - (wall bracket) distance from the wall to the face of the connecting flange.

**NOTE:**

1. Any type of actuator can be mounted on the floor stand such as Handwheel, Gear, Electric, etc....
2. A wall bracket (detail A) is recommended at every 1.5m. This prevents any deviation or buckling of the extension rod.
3. Standard construction of the floor stand is Cast Iron or carbon steel. Other materials are available on request.
4. A position indicator (optional) can be installed for easy visibility of the percentage of opening of the valve.



Detail A.



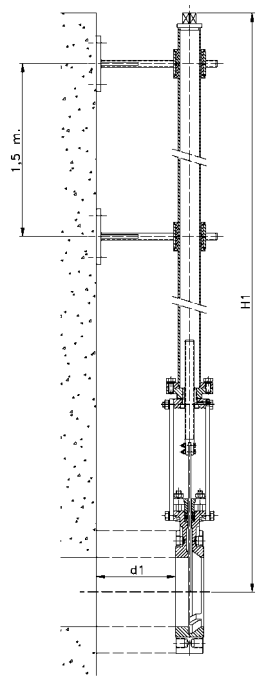
| STANDARD PARTS LIST | |
|---|---|
| Spindle | AISI 303 |
| Stem | AISI 304 |
| Wall bracket | Carbon Steel - Epoxy coated |
| Slider / bushing | Nylon |
| Floor stand | Cast Iron - Epoxy coated |

# MODEL EX

ORBINOX
VALVULAS-VALVES

## VALVE EXTENSIONS

### 2.- Tube




- Stem and yoke assembly remains in its original position.
- Handwheel is replaced by a tube, which rotates when operating the valve.
- Stem rises and lowers within the tube.
- Ideal for surface box operation, valve can be operated with a T-bar and a square nut.
- Required dimensions:

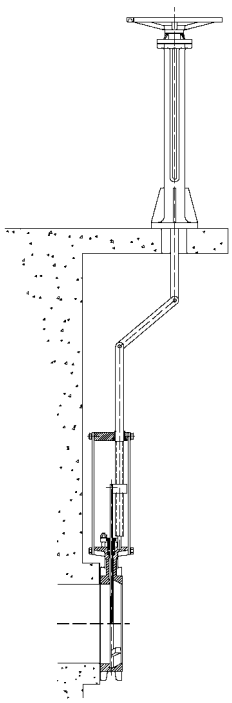
**H1:** distance from centre line of the pipe to the base of the floor.

**d1:** (wall bracket) distance from the wall to the face of the connecting flange.

NOTE:

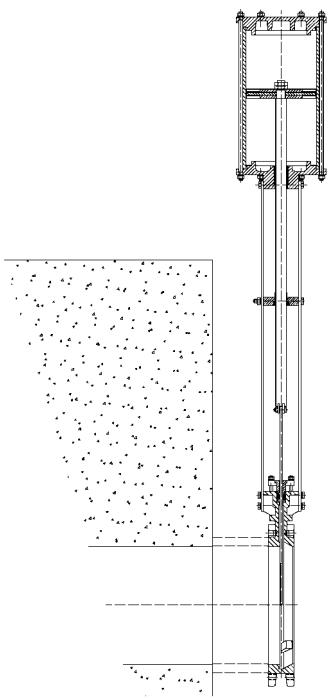
1. Handwheel or square nut operated only.
2. A wall bracket (detail A) is recommended at every 1.5m. This prevents any deviation or buckling of the extension rod.
3. Standard construction of the extension is carbon steel epoxy coated. Other materials are available on request.

### 3 - Universal joint



- Universal joints are installed between the rod extensions where a straight alignment is not available. Please contact our technical department for more information.

### 4 - Extended support plates



- Ideal where long extensions are not required.
- Guide bearing is installed at the mid point to prevent any deflection of the rod.

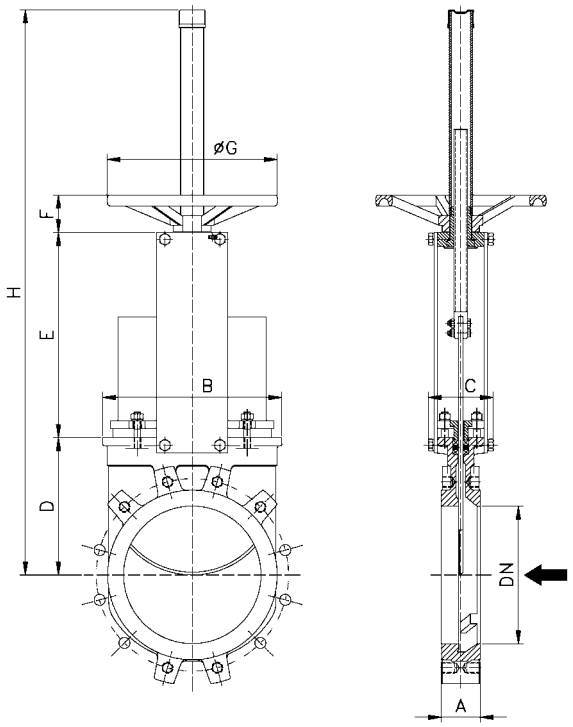
Please consult our technical department.

# MODEL EX

ORBINOX
VALVULAS-VALVES

## HANDWHEEL (rising stem)

- Standard handwheel actuator.
- Consists of:
  - Handwheel: Epoxy coated Cast Iron
  - Stem
  - Stem nut
  - Stem protector
  - Grease nipple
- Available in DN 50 to DN 1000
- Options:
  - Locking Device
  - Extensions




| DN | A | B | C | D | E | F | ØG | H | Weight (kg.) |
|---|---|---|---|---|---|---|---|---|---|
| 50 | 40 | 124 | 90 | 105 | 135 | 48 | 200 | 429 | 7 |
| 65 | 40 | 139 | 90 | 115 | 152 | 48 | 200 | 456 | 8 |
| 80 | 50 | 154 | 90 | 124 | 168 | 48 | 200 | 481 | 9 |
| 100 | 50 | 174 | 90 | 140 | 193 | 48 | 200 | 522 | 11 |
| 125 | 50 | 192 | 104 | 150 | 217 | 52 | 250 | 606 | 15 |
| 150 | 60 | 217 | 104 | 175 | 243 | 52 | 250 | 657 | 18 |
| 200 | 60 | 270 | 118 | 205 | 318 | 63 | 300 | 830 | 30 |
| 250 | 70 | 326 | 118 | 250 | 373 | 63 | 300 | 1030 | 44 |
| 300 | 70 | 380 | 118 | 300 | 423 | 63 | 300 | 1130 | 58 |
| 350 | 96 | 438 | 193 | 338 | 503 | 68 | 410 | 1341 | 96 |
| 400 | 100 | 493 | 193 | 392 | 553 | 68 | 410 | 1445 | 124 |
| 450 | 106 | 546 | 197 | 432 | 603 | 68 | 550 | 1610 | 168 |
| 500 | 110 | 620 | 197 | 485 | 663 | 68 | 550 | 1723 | 192 |
| 600 | 110 | 714 | 197 | 590 | 763 | 68 | 550 | 2038 | 245 |
| 700 | 110 | 834 | 400 | 686 | 890 | 74 | 800 | 2370 | 405 |
| 750 | 110 | 884 | 400 | 760 | 945 | 74 | 800 | 2579 | 455 |
| 800 | 110 | 1015 | 320 | 795 | 989 | 74 | 800 | 2737 | 512 |
| 900 | 110 | 1040 | 320 | 900 | 1118 | 74 | 800 | 3051 | 680 |
| 1000 | 110 | 1150 | 320 | 980 | 1220 | 74 | 800 | 3319 | 865 |



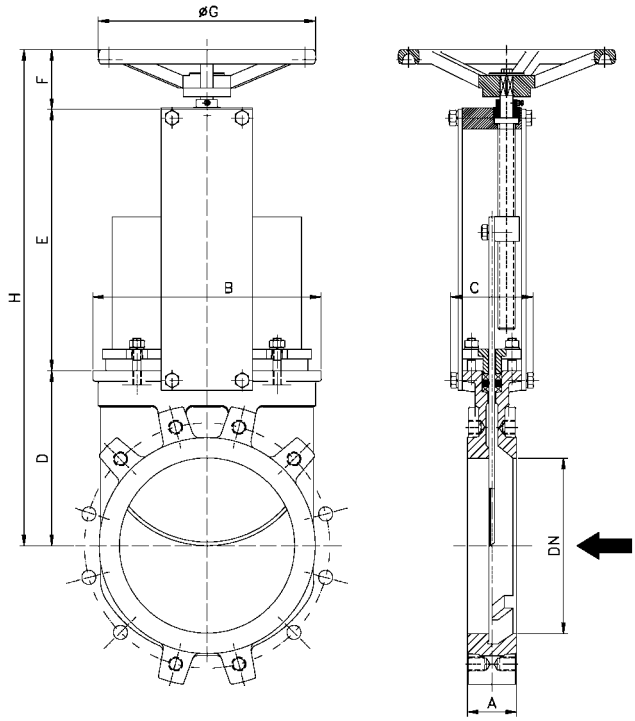
ORBINOX, S.A. Pol. Ind. s/n-20270 ANOETA (Spain) Apdo. 80 - 20400 TOLOSA (Spain) Tel: 943 - 69 80 30* Fax: 943 - 65 30 66 e-mail:orbinox@orbinox.com

# MODEL EX

ORBINOX
VALVULAS-VALVES

## HANDWHEEL (non-rising stem)

- Recommended for installation where space is limited.
- Consists of:
  - Handwheel
  - Epoxy coated Cast Iron
  - Stem
  - Yoke bushing
  - Stem nut fixed to the gate
  - Grease nipple
- Available in DN 50 to DN 1000
- Options:
  - Locking Device
  - Extension
  - Square Nut Drive




| DN | A | B | C | D | E | F | ØG | H |
|---|---|---|---|---|---|---|---|---|
| 50 | 40 | 124 | 107 | 105 | 135 | 62 | 200 | 302 |
| 65 | 40 | 139 | 107 | 115 | 152 | 62 | 200 | 329 |
| 80 | 50 | 154 | 107 | 124 | 168 | 62 | 200 | 354 |
| 100 | 50 | 174 | 107 | 140 | 193 | 62 | 200 | 395 |
| 125 | 50 | 192 | 107 | 150 | 217 | 66 | 250 | 433 |
| 150 | 60 | 217 | 107 | 175 | 243 | 66 | 250 | 484 |
| 200 | 60 | 270 | 118 | 205 | 318 | 80 | 300 | 603 |
| 250 | 70 | 326 | 118 | 250 | 373 | 80 | 300 | 703 |
| 300 | 70 | 380 | 118 | 300 | 423 | 80 | 300 | 803 |
| 350 | 96 | 438 | 200 | 338 | 503 | 81 | 410 | 922 |
| 400 | 100 | 493 | 200 | 392 | 553 | 81 | 410 | 1026 |
| 450 | 106 | 546 | 200 | 432 | 603 | 81 | 550 | 1116 |
| 500 | 110 | 620 | 200 | 485 | 663 | 81 | 550 | 1229 |
| 600 | 110 | 714 | 200 | 590 | 763 | 81 | 550 | 1434 |
| 700 | 110 | 834 | 296 | 686 | 890 | 150 | 800 | 1726 |
| 750 | 110 | 884 | 296 | 760 | 945 | 150 | 800 | 1855 |
| 800 | 110 | 1015 | 296 | 795 | 989 | 150 | 800 | 1934 |
| 900 | 110 | 1040 | 296 | 900 | 1118 | 150 | 800 | 2168 |
| 1000 | 110 | 1150 | 296 | 980 | 1220 | 150 | 800 | 2350 |



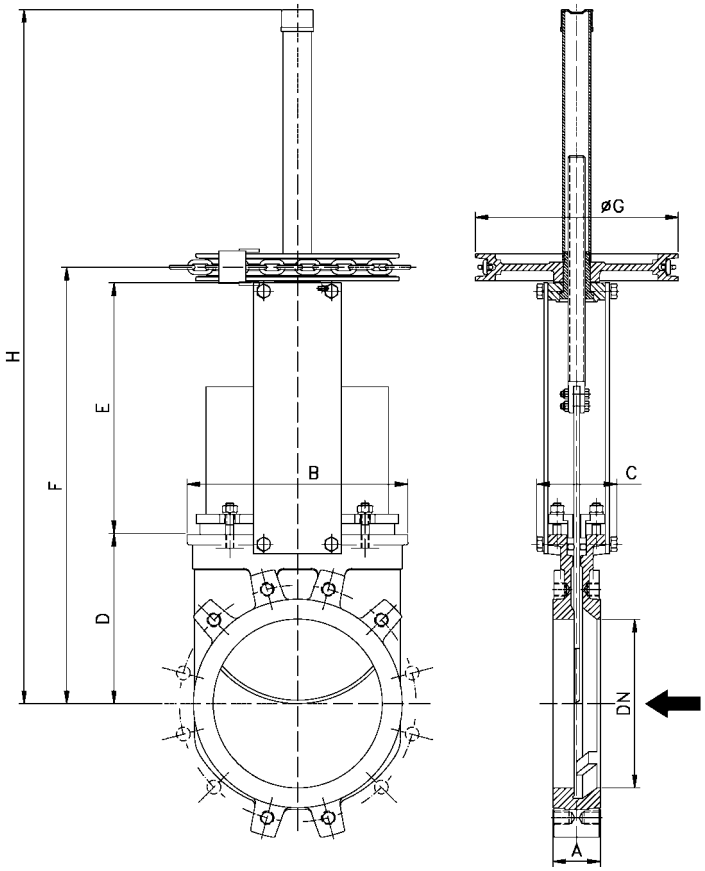
ORBINOX, S.A. Pol. Ind. s/n-20270 ANOETA (Spain) Apdo. 80 - 20400 TOLOSA (Spain) Tel: 943 - 69 80 30* Fax: 943 - 65 30 66 e-mail:orbinox@orbinox.com

# MODEL EX

ORBINOX
VALVULAS-VALVES

## CHAINWHEEL

- Recommended for elevated installations.
- Consists of:
  - Chainwheel: Epoxy coated Cast Iron
  - Stem
  - Stem nut
  - Stem protector
  - Grease nipple
- Available in DN 50 to DN 600
- Options:
  - Locking Device
  - Extension
  - Non-rising Stem




| DN | A | B | C | D | E | F | ØG | H |
|---|---|---|---|---|---|---|---|---|
| 50 | 40 | 124 | 90 | 105 | 135 | 258 | 225 | 429 |
| 65 | 40 | 139 | 90 | 115 | 152 | 285 | 225 | 456 |
| 80 | 50 | 154 | 90 | 124 | 168 | 310 | 225 | 481 |
| 100 | 50 | 174 | 90 | 140 | 193 | 351 | 225 | 522 |
| 125 | 50 | 192 | 104 | 150 | 217 | 385 | 225 | 606 |
| 150 | 60 | 217 | 104 | 175 | 243 | 436 | 225 | 657 |
| 200 | 60 | 270 | 118 | 205 | 318 | 546 | 300 | 830 |
| 250 | 70 | 326 | 118 | 250 | 373 | 646 | 300 | 1030 |
| 300 | 70 | 380 | 118 | 300 | 423 | 746 | 300 | 1130 |
| 350 | 96 | 438 | 193 | 338 | 503 | 874 | 454 | 1341 |
| 400 | 100 | 493 | 193 | 392 | 553 | 978 | 454 | 1445 |
| 450 | 106 | 546 | 197 | 432 | 603 | 1068 | 454 | 1610 |
| 500 | 110 | 620 | 197 | 485 | 663 | 1181 | 454 | 1723 |
| 600 | 110 | 714 | 197 | 590 | 763 | 1386 | 454 | 2038 |



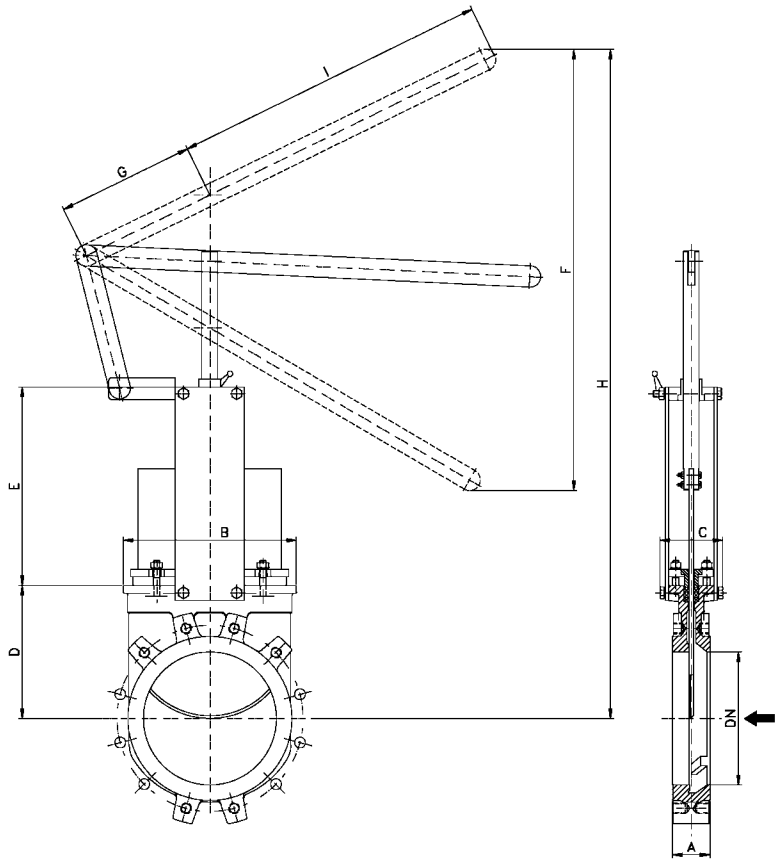
ORBINOX, S.A. Pol. Ind. s/n-20270 ANOETA (Spain) Apdo. 80 - 20400 TOLOSA (Spain) Tel: 943 - 69 80 30* Fax: 943 - 65 30 66 e-mail:orbinox@orbinox.com

# MODEL EX

ORBINOX
VALVULAS-VALVES

## LEVER

- Recommended for quick opening and closing.
- Consists of:
  - Lever
  - Stem
  - Yoke sleeve
  - Lever lock
- Available in DN 50 to DN 300




| DN | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| 50 | 40 | 124 | 90 | 105 | 135 | 208 | 150 | 390 | 315 |
| 65 | 40 | 139 | 90 | 115 | 152 | 214 | 150 | 423 | 315 |
| 80 | 50 | 154 | 90 | 124 | 168 | 259 | 150 | 500 | 315 |
| 100 | 50 | 174 | 90 | 140 | 193 | 378 | 150 | 623 | 415 |
| 125 | 50 | 192 | 104 | 150 | 217 | 455 | 150 | 734 | 415 |
| 150 | 60 | 217 | 104 | 175 | 243 | 520 | 150 | 846 | 415 |
| 200 | 60 | 270 | 118 | 205 | 318 | 666 | 235 | 1008 | 620 |
| 250 | 70 | 326 | 118 | 250 | 373 | 830 | 235 | 1258 | 620 |
| 300 | 70 | 380 | 118 | 300 | 423 | 943 | 235 | 1474 | 620 |



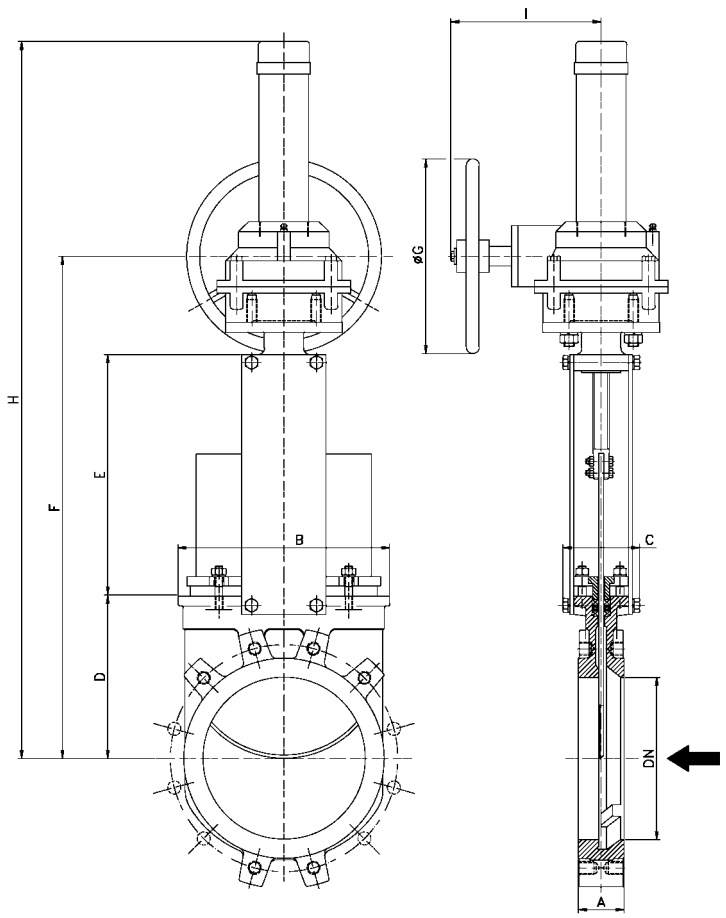
ORBINOX, S.A. Pol. Ind. s/n-20270 ANOETA (Spain) Apdo. 80 - 20400 TOLOSA (Spain) Tel: 943 - 69 80 30* Fax: 943 - 65 30 66 e-mail:orbinox@orbinox.com

# MODEL EX

ORBINOX
VALVULAS-VALVES

## GEAR

- Recommended for valves larger than DN 350 and working pressures greater than 3.5 bars.
- Consists of:
  - Stem
  - Yoke
  - Bevel Gear Actuator with Handwheel (Standard Ratio 4:1)
- Available in DN 200 to DN1200
- Options:
  - Locking device
  - Extension
  - Chainwheel
  - Non-rising stem




| DN | A | B | C | D | E | F | ØG | H | I |
|---|---|---|---|---|---|---|---|---|---|
| 200 | 60 | 270 | 118 | 205 | 318 | 675 | 300 | 1016 | 200 |
| 250 | 70 | 326 | 118 | 250 | 373 | 775 | 300 | 1116 | 200 |
| 300 | 70 | 380 | 118 | 300 | 423 | 875 | 300 | 1216 | 200 |
| 350 | 96 | 438 | 193 | 338 | 503 | 1005 | 450 | 1646 | 220 |
| 400 | 100 | 493 | 193 | 392 | 553 | 1108 | 450 | 1750 | 220 |
| 450 | 106 | 546 | 197 | 432 | 603 | 1200 | 450 | 1840 | 220 |
| 500 | 110 | 620 | 197 | 485 | 663 | 1312 | 450 | 1953 | 220 |
| 600 | 110 | 714 | 197 | 590 | 763 | 1516 | 450 | 2158 | 220 |
| 700 | 110 | 834 | 400 | 686 | 890 | 1678 | 450 | 2821 | 220 |
| 750 | 110 | 884 | 400 | 760 | 945 | 1807 | 450 | 2950 | 220 |
| 800 | 110 | 1015 | 320 | 795 | 989 | 1886 | 650 | 3029 | 250 |
| 900 | 110 | 1040 | 320 | 900 | 1118 | 2120 | 650 | 3263 | 250 |
| 1000 | 110 | 1150 | 320 | 980 | 1220 | 2302 | 650 | 3445 | 250 |
| 1200 | 150 | 1400 | 450 | 1230 | 1485 | 2820 | 850 | 4165 | 250 |



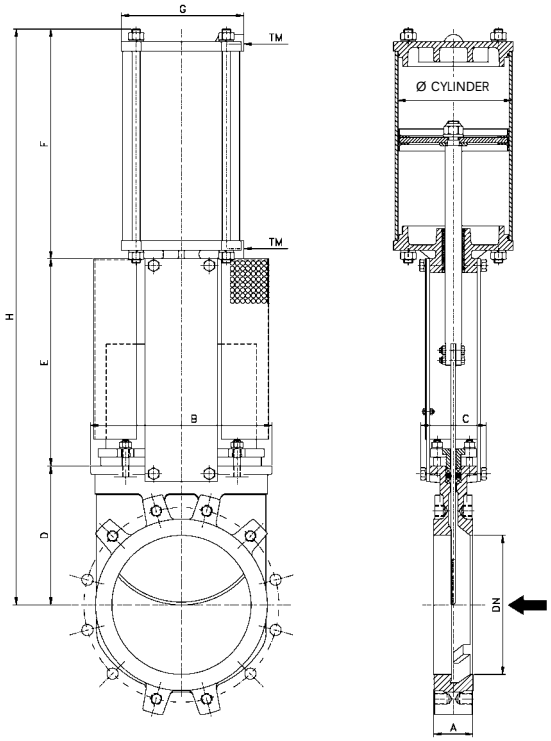
ORBINOX, S.A. Pol. Ind. s/n-20270 ANOETA (Spain) Apdo. 80 - 20400 TOLOSA (Spain) Tel: 943 - 69 80 30* Fax: 943 - 65 30 66 e-mail:orbinox@orbinox.com

# MODEL EX

ORBINOX
VALVULAS-VALVES

## PNEUMATIC CYLINDER

- The standard pneumatic actuator (double acting on-off cylinder) consists of:
  - Aluminium jacket and covers
  - Stainless (AISI 304) piston rod
  - Nitrile coated steel piston
- Available in DN 50 to DN 1000
- Supply Pressure: minimum 3.5 kg/cm$^2$ - maximum 7 kg/cm$^2$
- For valves installed in a horizontal position, we recommend U-type support plates and/or actuator support.
- Options:
  - Hard anodised jacket and covers
  - Over / Under sized cylinder
  - Stainless jacket and covers
  - Manual override
  - Fail safe system (Page EX-14)
  - Travel stops
- Instrumentation (on request):
  - Positioners
  - Solenoid valves
  - Flow regulators
  - Air preparation units



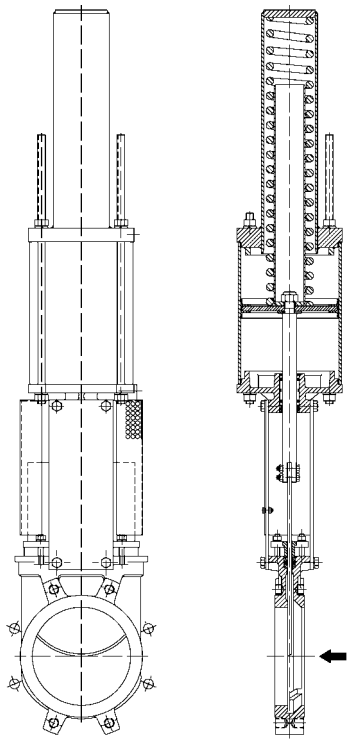

| DN | A | B | C | D | E | F | G | H | Weight (kg.) | Standard Cyl | Connect. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 50 | 40 | 124 | 90 | 105 | 135 | 170 | 95 | 410 | 9 | C80/62 | 1/4" G |
| 65 | 40 | 139 | 90 | 115 | 152 | 186 | 95 | 453 | 10 | C80/77 | 1/4" G |
| 80 | 50 | 154 | 90 | 124 | 168 | 204 | 95 | 496 | 11 | C80/95 | 1/4" G |
| 100 | 50 | 174 | 90 | 140 | 193 | 225 | 115 | 558 | 14 | C100/115 | 1/4" G |
| 125 | 50 | 192 | 104 | 150 | 217 | 268 | 140 | 635 | 20 | C125/143 | 1/4" G |
| 150 | 60 | 217 | 104 | 175 | 243 | 292 | 140 | 710 | 25 | C125/168 | 1/4" G |
| 200 | 60 | 270 | 118 | 205 | 318 | 355 | 175 | 878 | 44 | C160/220 | 1/4" G |
| 250 | 70 | 326 | 118 | 250 | 373 | 413 | 220 | 1036 | 67 | C200/270 | 3/8" G |
| 300 | 70 | 380 | 118 | 300 | 423 | 463 | 220 | 1186 | 82 | C200/320 | 3/8" G |
| 350 | 96 | 438 | 193 | 338 | 503 | 541 | 277 | 1382 | 135 | C250/375 | 3/8" G |
| 400 | 100 | 493 | 193 | 392 | 553 | 591 | 277 | 1536 | 165 | C250/425 | 3/8" G |
| 450 | 106 | 546 | 197 | 432 | 603 | 669 | 382 | 1704 | 220 | C300/475 | 1/2" G |
| 500 | 110 | 620 | 197 | 485 | 663 | 719 | 382 | 1867 | 280 | C300/525 | 1/2" G |
| 600 | 110 | 714 | 197 | 590 | 763 | 819 | 382 | 2172 | 330 | C300/625 | 1/2" G |
| 700 | 110 | 834 | 400 | 686 | 890 | 970 | 444 | 2546 | 520 | C350/730 | 3/4" G |
| 750 | 110 | 884 | 400 | 760 | 945 | 1020 | 444 | 2725 | 585 | C350/780 | 3/4" G |
| 800 | 110 | 1015 | 320 | 795 | 989 | 1070 | 444 | 2854 | 650 | C350/830 | 3/4" G |
| 900 | 110 | 1040 | 320 | 900 | 1118 | 1185 | 515 | 3203 | 850 | C400/930 | 3/4" G |
| 1000 | 110 | 1150 | 320 | 980 | 1220 | 1285 | 515 | 3485 | 1060 | C400/1030 | 3/4" G |

# MODEL EX

ORBINOX
VALVULAS-VALVES

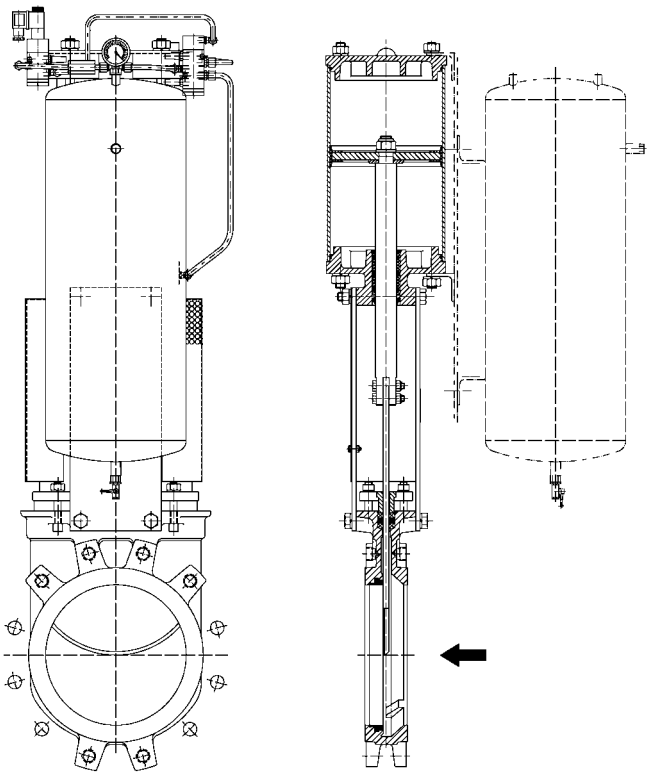
## FAIL SAFE SYSTEM

### SINGLE ACTING / SPRING RETURN

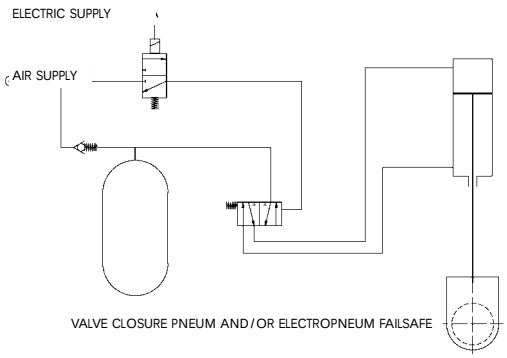


- This actuator (single acting cylinder) consists of:
  - Aluminium jacket and covers
  - SG Iron or carbon steel spring cap
  - Steel spring
  - Stainless (AISI 304) piston rod
  - Nitrile coated steel piston
- Available in DN 50 to DN 200
- Supply pressure: minimum 5 kg/cm² - maximum 7 kg/cm²
- Options:
  - Fail open
  - Fail close

### SINGLE ACTING / VOLUME TANK



- Consists of:
  - Air-pilot actuated valve
  - Solenoid-pilot actuated valve (only for option 2)
  - Volume tank with gauge, safety valve,...
- Available for all diameters
- Options:
  1- Pneumatic failsafe
  2- Pneumatic and electropneumatic failsafe
- Option 2:



# MODEL EX

ORBINOX
VALVULAS-VALVES

## ELECTRIC ACTUATOR

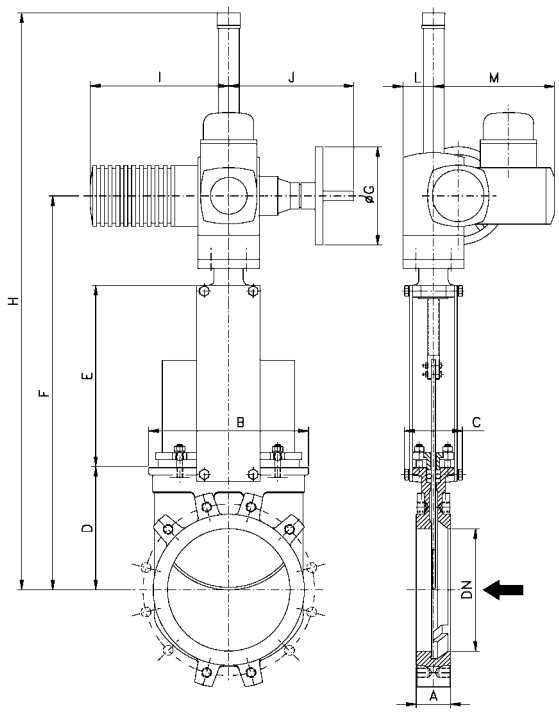
- Consists of:
  - Electric motor
  - Rising stem
  - Motor support yoke flange
    ( Acc. to ISO 5210 / DIN 3338 )

- The standard electric motor is equiped with:
  - Manual emergency operation
  - Limit switches (open / closed)
  - Torque switches

- Available in DN 50 to DN 1200

- Wide range of types and marks available to meet customer's needs.

- Option:
  - Non rising stem




| DN | A | B | C | D | E | F | ØG | H | I | J | L | M | stem Ø x pitch | Torque(Nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 50 | 40 | 124 | 90 | 105 | 135 | 393 | 140 | 763 | 265 | 234 | 62 | 237 | 20 x 4 | 20 |
| 65 | 40 | 139 | 90 | 115 | 152 | 420 | 140 | 790 | 265 | 234 | 62 | 237 | 20 x 4 | 25 |
| 80 | 50 | 154 | 90 | 124 | 168 | 445 | 140 | 815 | 265 | 234 | 62 | 237 | 20 x 4 | 30 |
| 100 | 50 | 174 | 90 | 140 | 193 | 486 | 140 | 856 | 265 | 234 | 62 | 237 | 20 x 4 | 40 |
| 125 | 50 | 192 | 104 | 150 | 217 | 520 | 160 | 890 | 265 | 250 | 62 | 237 | 20 x 4 | 50 |
| 150 | 60 | 217 | 104 | 175 | 243 | 571 | 160 | 941 | 265 | 250 | 62 | 237 | 20 x 4 | 60 |
| 200 | 60 | 270 | 118 | 205 | 318 | 705 | 200 | 1085 | 282 | 256 | 65 | 247 | 25 x 5 | 70 |
| 250 | 70 | 326 | 118 | 250 | 373 | 805 | 200 | 1185 | 282 | 256 | 65 | 247 | 25 x 5 | 80 |
| 300 | 70 | 380 | 118 | 300 | 423 | 905 | 200 | 1285 | 282 | 256 | 65 | 247 | 25 x 5 | 90 |
| 350 | 96 | 438 | 193 | 338 | 503 | 1035 | 200 | 1715 | 282 | 256 | 65 | 247 | 35 x 6 | 105 |
| 400 | 100 | 493 | 193 | 392 | 553 | 1139 | 200 | 1819 | 282 | 256 | 65 | 247 | 35 x 6 | 120 |
| 450 | 106 | 546 | 197 | 432 | 603 | 1274 | 315 | 1964 | 385 | 325 | 90 | 285 | 35 x 6 | 160 |
| 500 | 110 | 620 | 197 | 485 | 663 | 1387 | 315 | 2077 | 385 | 325 | 90 | 285 | 35 x 6 | 180 |
| 600 | 110 | 714 | 197 | 590 | 763 | 1592 | 315 | 2282 | 385 | 325 | 90 | 285 | 35 x 6 | 210 |
| 700 | 110 | 834 | 400 | 686 | 890 | 1751 | 315 | 2905 | 385 | 325 | 90 | 285 | 40 x 7 | 230 |
| 750 | 110 | 884 | 400 | 760 | 945 | 1880 | 400 | 2970 | 385 | 332 | 90 | 285 | 40 x 7 | 260 |
| 800 | 110 | 1015 | 320 | 795 | 989 | 1959 | 400 | 3049 | 385 | 332 | 90 | 285 | 50 x 8 | 290 |
| 900 | 110 | 1040 | 320 | 900 | 1118 | 2193 | 400 | 3283 | 385 | 332 | 90 | 285 | 50 x 8 | 325 |
| 1000 | 110 | 1150 | 320 | 980 | 1220 | 2375 | 400 | 3465 | 385 | 332 | 90 | 285 | 50 x 8 | 370 |
| 1200 | 150 | 1400 | 450 | 1230 | 1485 | 3025 | 500 | 4330 | 510 | 355 | 115 | 310 | 60 x 9 | 650 |





ORBINOX, S.A. Pol. Ind. s/n-20270 ANOETA (Spain) Apdo. 80 - 20400 TOLOSA (Spain) Tel: 943 - 69 80 30* Fax: 943 - 65 30 66 e-mail:orbinox@orbinox.com

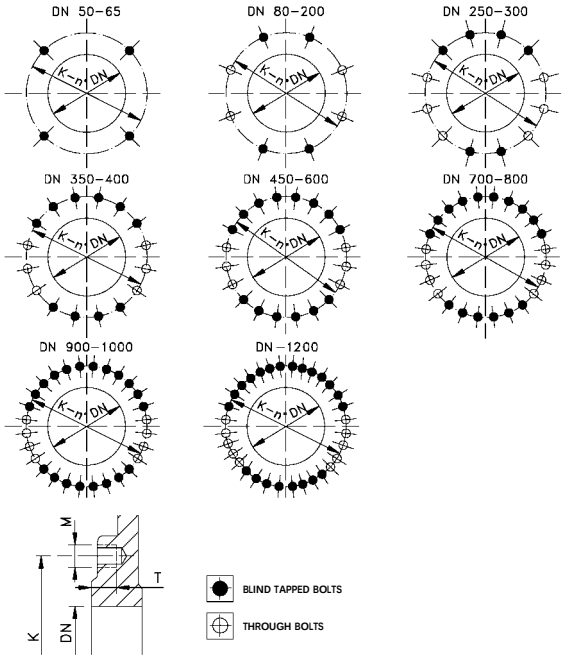
# MODEL EX

ORBINOX
VALVULAS-VALVES

## FLANGE AND BOLTING DETAILS

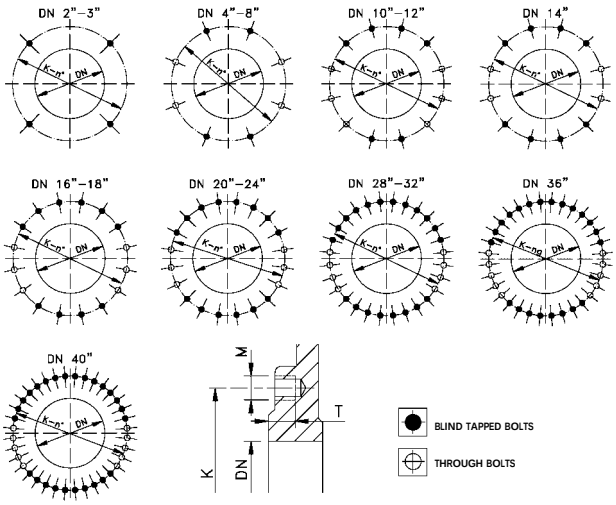
### DIN PN10

| DN | K | nº | M | T | ⌖ ⊕ |
|---|---|---|---|---|---|
| 50 | 125 | 4 | M-16 | 10 | 4 - -- |
| 65 | 145 | 4 | M-16 | 10 | 4 - -- |
| 80 | 160 | 8 | M-16 | 10 | 4 - 4 |
| 100 | 180 | 8 | M-16 | 10 | 4 - 4 |
| 125 | 210 | 8 | M-16 | 10 | 4 - 4 |
| 150 | 240 | 8 | M-20 | 14 | 4 - 4 |
| 200 | 295 | 8 | M-20 | 14 | 4 - 4 |
| 250 | 350 | 12 | M-20 | 18 | 6 - 6 |
| 300 | 400 | 12 | M-20 | 18 | 6 - 6 |
| 350 | 460 | 16 | M-20 | 22 | 10 - 6 |
| 400 | 515 | 16 | M-24 | 24 | 10 - 6 |
| 450 | 565 | 20 | M-24 | 24 | 14 - 6 |
| 500 | 620 | 20 | M-24 | 24 | 14 - 6 |
| 600 | 725 | 20 | M-27 | 24 | 14 - 6 |
| 700 | 840 | 24 | M-27 | 20 | 16 - 8 |
| 800 | 950 | 24 | M-30 | 20 | 16 - 8 |
| 900 | 1050 | 28 | M-30 | 20 | 20 - 8 |
| 1000 | 1160 | 28 | M-33 | 20 | 20 - 8 |
| 1200 | 1380 | 32 | M-36 | 30 | 22 - 10 |




### ANSI B16.5, class 150(*)

| DN | K | nº | M | T | ⌖ ⊕ |
|---|---|---|---|---|---|
| 2” | 4 3/4“ | 4 | 5/8” UNC | 3/8” | 4 - -- |
| 2 1/2” | 5 1/2” | 4 | 5/8” UNC | 3/8” | 4 - -- |
| 3” | 6” | 4 | 5/8” UNC | 3/8” | 4 - -- |
| 4” | 7 1/2” | 8 | 5/8” UNC | 3/8” | 4 - 4 |
| 5” | 8 1/2” | 8 | 3/4” UNC | 3/8” | 4 - 4 |
| 6” | 9 1/2” | 8 | 3/4” UNC | 1/2” | 4 - 4 |
| 8” | 11 3/4” | 8 | 3/4” UNC | 1/2” | 4 - 4 |
| 10” | 14 1/4” | 12 | 7/8” UNC | 3/4” | 6 - 6 |
| 12” | 17” | 12 | 7/8” UNC | 3/4” | 6 - 6 |
| 14” | 18 3/4” | 12 | 1” UNC | 7/8” | 8 - 4 |
| 16” | 21 1/4” | 16 | 1” UNC | 1” | 10 - 6 |
| 18” | 22 3/4” | 16 | 1 1/8” UNC | 1” | 10 - 6 |
| 20” | 25” | 20 | 1 1/8” UNC | 1” | 14 - 6 |
| 24” | 29 1/2” | 20 | 1 1/4” UNC | 1” | 14 - 6 |
| 28” | 34” | 28 | 1 1/4” UNC | 3/4” | 20 - 8 |
| 30” | 36” | 28 | 1 1/4” UNC | 3/4” | 20 - 8 |
| 32” | 38 1/2” | 28 | 1 1/2” UNC | 3/4” | 20 - 8 |
| 36” | 42 3/4” | 32 | 1 1/2” UNC | 3/4” | 22 -10 |
| 40” | 47 1/4” | 36 | 1 1/2” UNC | 3/4” | 26 -10 |




(*) From DN 24”, acc. to MSS SP 44 (class 150)





ORBINOX, S.A. Pol. Ind. s/n-20270 ANOETA (Spain) Apdo. 80 - 20400 TOLOSA (Spain) Tel: 943 - 69 80 30* Fax: 943 - 65 30 66 e-mail:orbinox@orbinox.com