

Gate Valves

Knife Gate Valve PN10 - CF8M stainless steel body and 316 stainless steel gate

Model 58481 EPDM seat

Model 58482 NBR seat

Model 58483 Metal seat



Specifications

Dimensions: DN50 to DN300 (2" to 12")

Connection: PN6/PN10 flanges
(depending on the size)

Operating pressure:

10 bar from DN50 to DN250

6 bar to DN300

Temperature: depending on the gasket

Material: 316 or CF8M stainless steel
(for the parts that can come into contact
with the transported fluid)

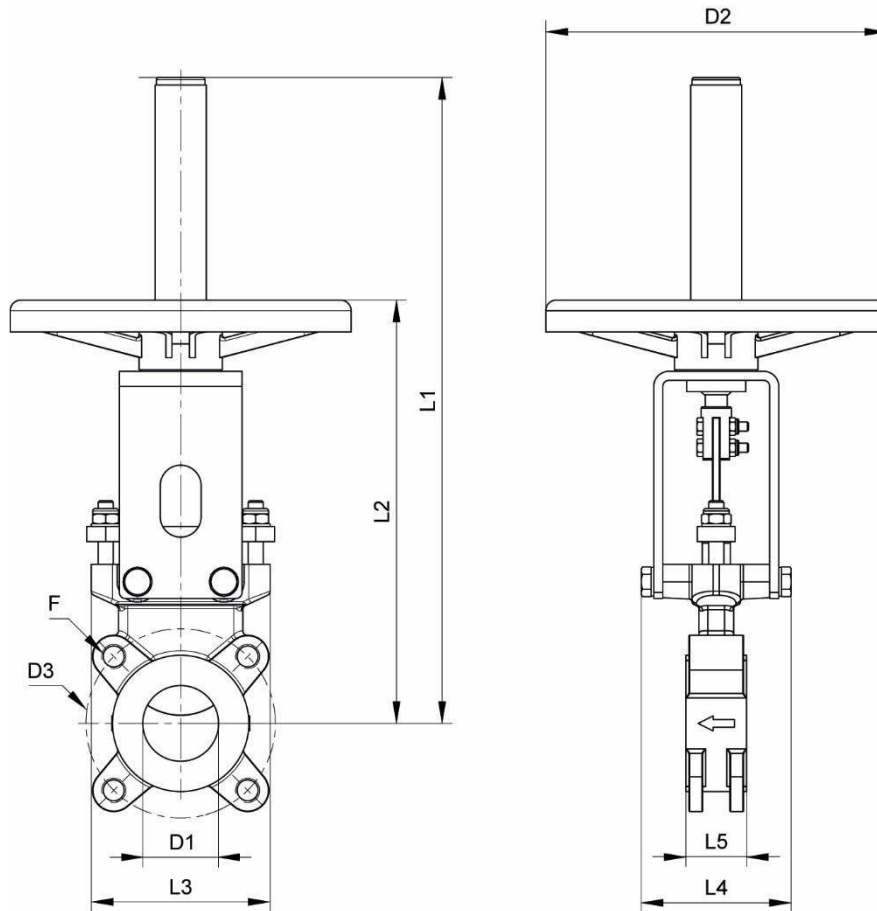
On request: lever control, electric
actuator, pneumatic actuator etc.



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DN (mm)	NB (Inches)	D1 (mm)	D2 (mm)	D3 (mm)	F			L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	Weight (kg)
					Qty	Ø	Depth (mm)						
50	2"	50	225	125	4	M16	11	420	281	119	100	40	7.00
65	2"1/2	65	225	145	4	M16	11	450	308	134	100	40	8.00
80	3"	80	225	160	8	M16	11	475	333	149	100	50	9.00
100	4"	100	225	180	8	M16	11	520	374	169	100	50	11.00
125	5"	125	225	210	8	M16	11	600	408	180	100	50	15.00
150	6"	150	225	240	8	M20	14	652	459	210	100	60	18.00
200	8"	200	310	295	8	M20	14	822	581	262	119	60	30.00
250	10"	250	310	350	12	M20	18	1022	681	318	122	70	44.00
300	12"	300	310	400	12	M20	18	1122	781	372	122	70	58.00

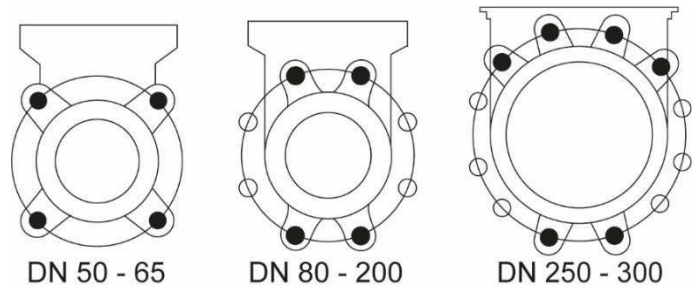
DN (mm)	NB (inches)	Part number	Part number	Part number
		EPDM	NBR	Metal
50	2"	458481-50	458482-50	458483-50
65	2"1/2	458481-65	458482-65	458483-65
80	3"	458481-80	458482-80	458483-80
100	4"	458481-100	458482-100	458483-100
125	5"	458481-125	458482-125	458483-125
150	6"	458481-150	458482-150	458483-150
200	8"	458481-200	458482-200	458483-200
250	10"	458481-250	458482-250	458483-250
300	12"	458481-300	458482-300	458483-300

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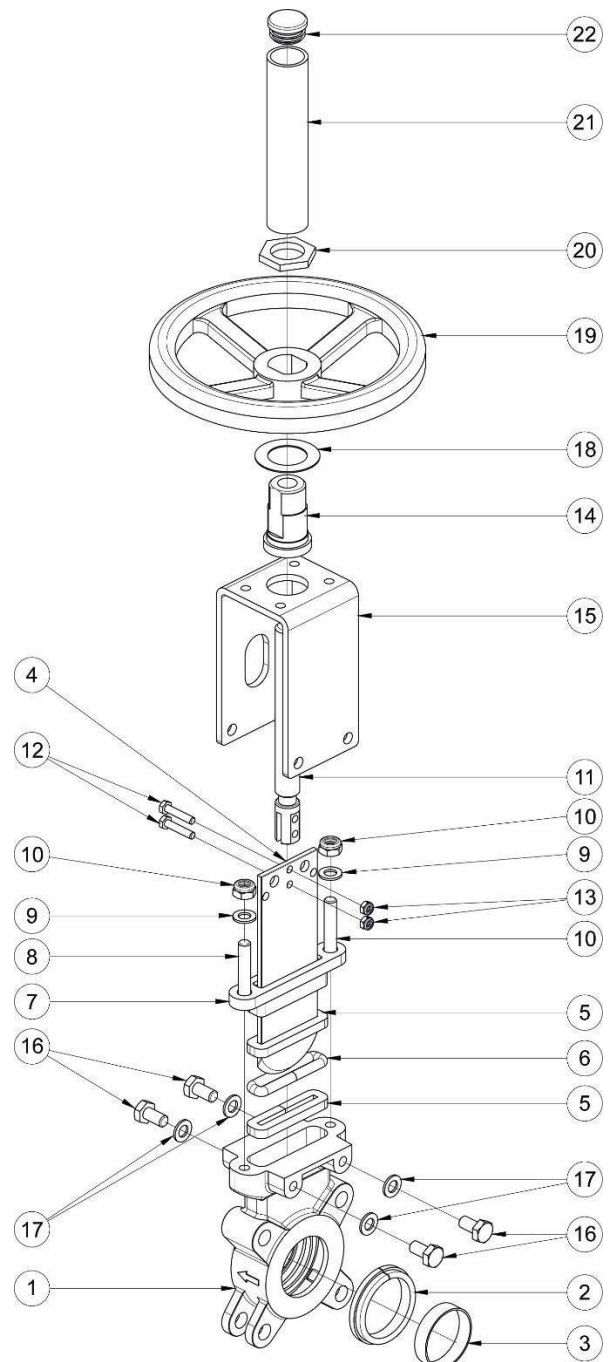
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DN (mm)	NB (inches)	No. of closed female thread holes	No. of through holes
50	2"	4	0
65	2"1/2	4	0
80	3"	4	4
100	4"	4	4
125	5"	4	4
150	6"	4	4
200	8"	4	4
250	10"	6	6
300	12"	6	6



N°	Part Name	Material
1	BODY	CF8M
2	GASKET (SEAT)	EPDM/NBR
3	BINDER	AISI 316
4	GATE	AISI 316
5	PACKING (SQUARE CORD)	TEFLON COATED FIBER
6	PACKING (O-RING SECTION)	EPDM/NBR
7	PACKING BOX	CF8M
8	THREADED PIN	A2 STAINLESS STEEL
9	WASHER	INOX A2
10	LOCK NUT	A2 STAINLESS STEEL
11	SHAFT	AISI 430
12	BOLT	A2 STAINLESS STEEL
13	LOCK NUT	A2 STAINLESS STEEL
14	SHAFT NUT	BRASS
15	BRIDGE	EPOXY COATED STEEL
16	SCREW (BODY FIXING)	A2 STAINLESS STEEL
17	WASHER (BODY FIXING)	A2 STAINLESS STEEL
18	FRICTION WASHER	BRASS
19	HANDWHEEL	GJS400 (GGG40)
20	NUT	GALVANISED STEEL
21	COVER	EPOXY COATED STEEL
22	UPPER CAP	PLASTIC



Use

Turn the valve's handwheel **19** clockwise to close it or anti-clockwise to open it.
When you open the valve, the valve's shaft will rise.

Temperature

Temperature (EPDM): -10°C to +120°C

Temperature (NBR): -10°C to +100°C

Temperature (metal): -10°C to +250°C

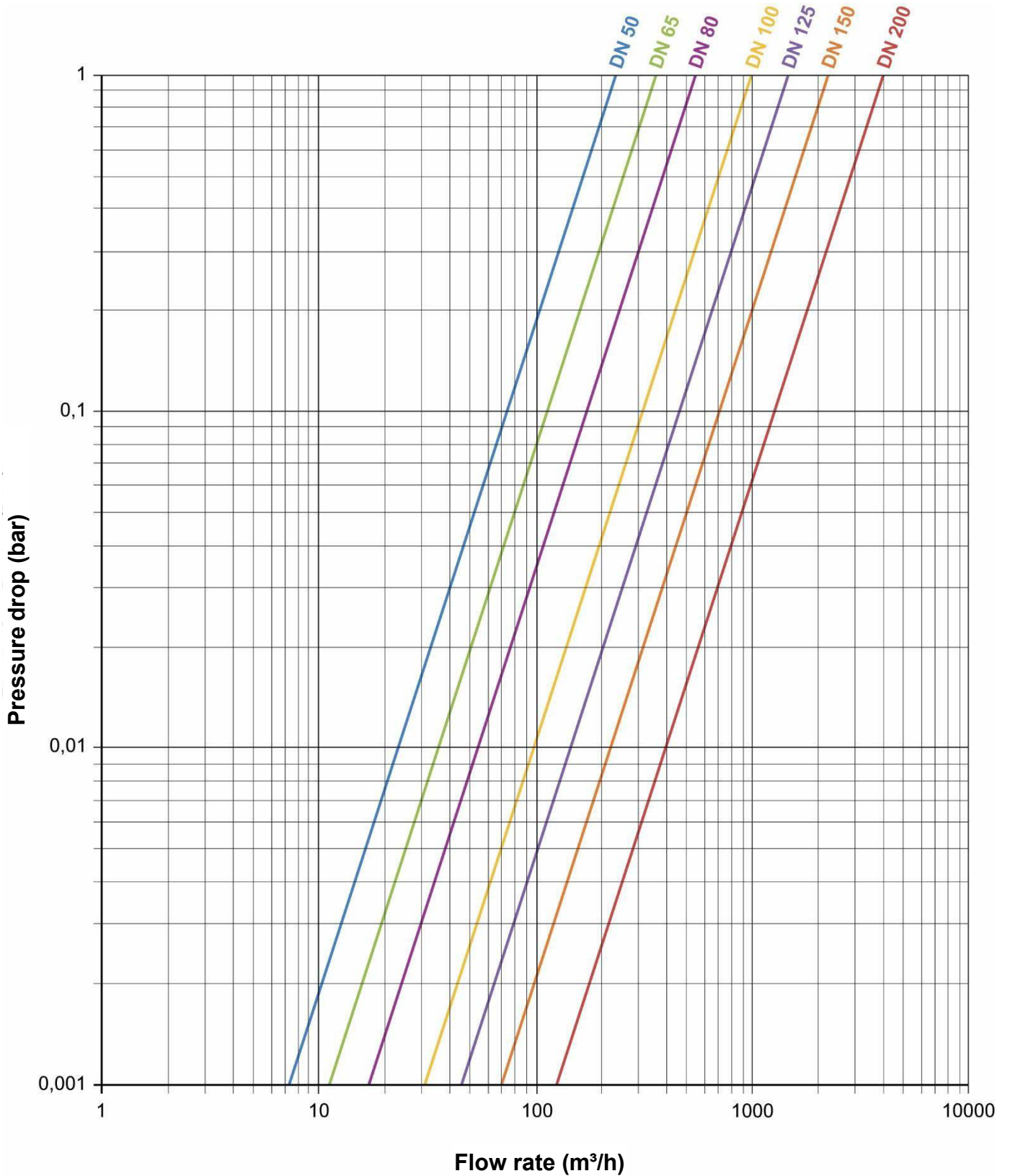
Fluids

You can use this valve with fluids containing suspended solids for applications in the following main sectors:

- Paper manufacturing
- Water treatment
- Food and beverages
- Mining
- Energy production
- Chemical manufacturing
- Solids handling

You should use the metal/metal option when you do not require complete sealing.

Pressure drop diagram



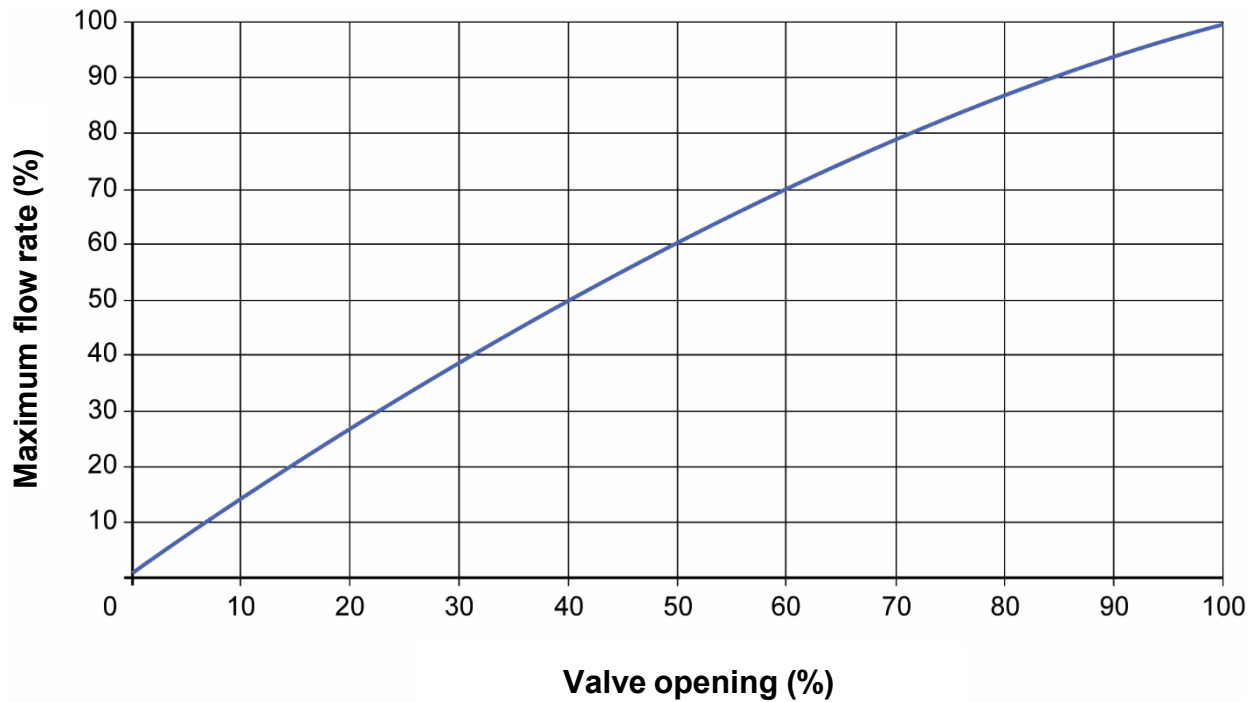
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Flow coefficient

DN	50	65	80	100	125	150	200
Inches	2"	2"1/2	3"	4"	5"	6"	8"
Surface area (cm ²)	20	33	50	79	123	177	314
Kv (m ³ /h)	233	350	535	966	1589	2217	3992

Flow rate



Assembly and maintenance instructions

Installation



Do not lift the valve by its handwheel or its protective covers. These are not designed to carry weight, so they could be damaged easily.
Do not lift the valve by its body. This could damage the surface of the seats and gaskets.

You should install the valve vertically on a horizontal pipe, if possible. However, if you cannot do this, please contact us to check whether it is possible to install this type of valve in your system. In certain cases, when you install this valve, you will need to build a suitable support structure.

This valve allows fluid to flow in one direction only, so you must install it so that the highest pressure will act on the seat (in the direction of the arrow). The inscription “SEAT SIDE” shows you the position for the seat. The direction of fluid flow does not necessarily correspond to the pressure direction.

Check that there is enough space to move the valve’s handwheel where you are planning to install the valve.

Check that the installation is clean and free from foreign bodies that could damage the valve.

Check that all piping is perfectly aligned and that the piping support structure is dimensioned so that the valve is not subject to any external stresses. The piping support structure must only support the pipes, not the valve.

How to install a valve with flanges:

Weld flanges (e.g. models **5743** or **5721**) onto the piping and respect the required spacing and alignment of the mounting holes. You must check that the valve is correctly lined up with the flanges during installation. For heavy parts, use lifting devices if necessary (do not lift the valve by its handwheel).

If you do not align the flanges correctly, this could deform the valve’s body and make it difficult to open and close the valve.

The following table shows the required screw tightening torques and the depth you should insert the screws into the closed holes on the valve’s body.

DN	50	65	80	100	125	150	200	250	300
EN 1092-1 PN10	M16	M16	M16	M16	M16	M20	M20	M20	M20
Depth (mm)	11	11	11	11	11	14	14	18	18
Torque (Nm)	70	70	70	70	70	140	140	140	140

Maintenance

You will only need to plan to change the packing **5** and **6** and the seat gaskets **2** of the sealed knife gate valves.

The lifespan of these sealing products will depend on the working conditions of the valve including operating pressure, temperature, level of abrasion, chemical attacks and the number of times it is opened/closed.

If the valve is never opened or closed during normal operation then you should regularly open and close the valve to check that it is still working correctly.

You should tighten the packing box **7** if there is a leak around the packing. You should tighten the packing box screws in a criss-cross pattern until the leak stops. Check that there is no contact between the gate and the packing box.

If the packing box is overtightened, you will need to use more force to operate the valve. This will make it harder to open or close the valve and it will also reduce the lifespan of the packing.

The following table shows the maximum packing box tightening torques.

DN	50	65	80	100	125	150	200	250	300
Tightening torque (Nm)	15	15	15	15	15	15	15	25	25

Assembly / Disassembly

The maintenance and removal/installation of the valve must be carried out by personnel who are qualified and trained for this type of intervention.



Warning: Before you work on the valve, check that the installation has been stopped and that the piping is empty and is not pressurised.

Warning: If the valve is used with fluids that have a temperature above 60°C then people could burn themselves if they touch it.

Warning: Beware of hazardous materials - follow the instructions provided by the suppliers.

How to replace the packing 5 and 6:

Close the valve.

Remove the shaft **11** and the gate **4**. (Photo 1)

Unscrew the screws from the bridge **15** and remove them.

Remove the nuts **10** from the packing box **7**. (Photo 2)

Remove the packing **5** and **6** that needs replacing and clean its housing.

Install the new packing **5** and **6** by using alternating gaskets (install the gasket symmetrically on one side of the gate and then the other) (Photo 3).

Tighten the nuts on the packing box **7** in a criss-cross pattern for the first time (Photo 2).

Put the bridge **15** (with the shaft nut **14**) into place and tighten it.

Fix the shaft **11** to the gate **4** (Photo 1).

Open and close the valve a few times once you have filled the piping and then retighten the packing box **7** to make sure that there are no leaks.

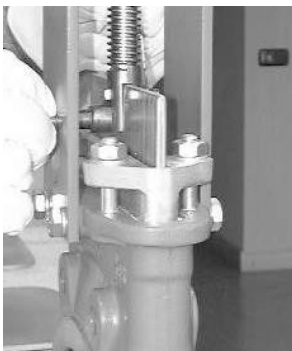


Photo 1



Photo 2



Photo 3

How to replace the seat gasket 2 (only for models 58481 and 58482):

Remove the valve from the piping.
Remove the shaft **11** and the gate **4**. (Photo 1)

Unscrew the screws from the bridge **15** and remove them. Remove the nuts **10** from the packing box **7**. (Photo 2)



Photo 1



Photo 2

Remove the packing **5** and **6** that needs replacing, the gate **4** and clean the housing.

Remove the binder **3** holding the seat gasket **2**.

Remove the seat gasket **2** that needs replacing and clean its housing.

Check that the length of the new gasket **2** corresponds to the table below and place it in the housing that is intended for its installation. The gasket's **2** seam must be positioned at the top. (Photos 4 and 5)

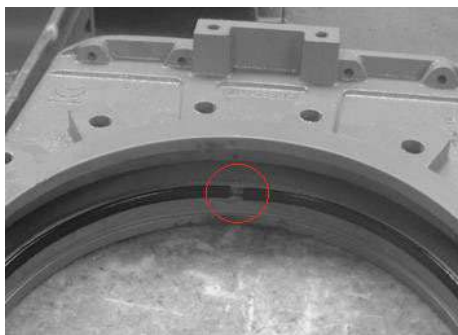


Photo 4

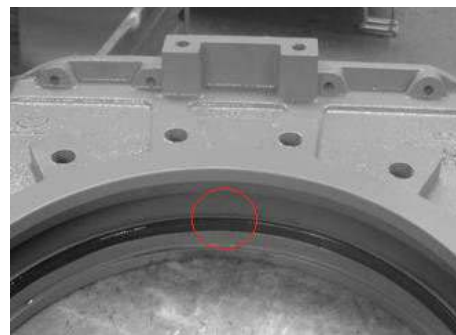


Photo 5

Gasket length:

DN	50	65	80	100	125	150	200	250	300
Length (mm)	240	290	340	410	485	565	720	880	1040

Place the binding **3** in its housing and finish installing it by gently tapping evenly all around its circumference.
(Photos 6 and 7)



Photo 6



Photo 7

Replace the gate **4** after you have cleaned it.

Install the packing box **7** by following the steps in the previous section “How to replace the packing”.

You should grease the shaft twice a year: remove the upper cap **22** and refill the cover **21** with a grease with the following characteristics:

- insoluble in water
- low ash content
- excellent adhesion

Standards and compliance

- Flange standards: DIN PN 10 (EN 1092-1)
- Leak testing according to EN 12266 / API 598
- This valve complies with European Pressure Equipment Directive (PED) 2014/68/EU (formerly 97/23/EC)
- ATEX II 2 G D, this valve complies with European Pressure Equipment Directive (PED) 2014/34/EU (formerly 94/9/EC)