



RHINOFLEX™

Through Conduit Knife Gate Valve

(Model RVS-TP-10)



1. Description

The RHINOFLEX through conduit knife gate valve is a bi-directional wafer knife gate valve. It is mainly designed for highly concentrated flow media. With a through going O-port plate, this valve provides a stable and safe shut-off performance without clogging. With double-seat design, it can handle flow in both directions.

2. Technical Data

Size: DN 50 to DN 600 (larger diameters on request)

Working pressure:

DN 50 to DN250	10 Bar	NPS 2-10	150 psi
DN 300 to DN450	7 Bar	NPS 12-18	90 psi
DN 500 to DN600	4 Bar	NPS 20-24	60 psi
DN 700 to DN1200	2 Bar	NPS 28-52	30 psi

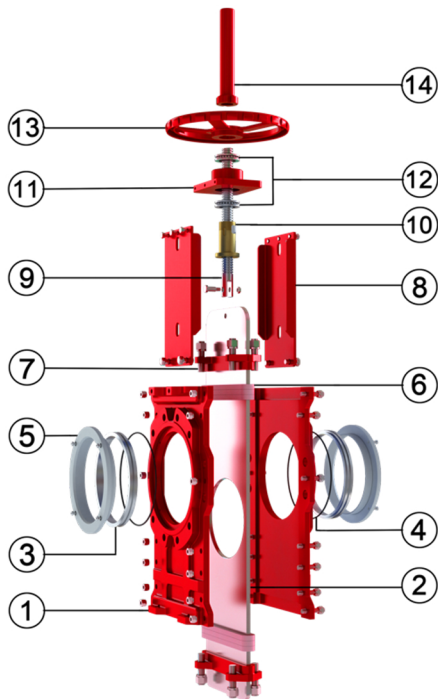
Standard flange connection:

EN1092	GB/T 9113
ASME B16.5	AS 2129/4087
JIS B2220	Others on request

Application:

Pulp and Paper/ Mining /Waste Water Treatment/ Food and Beverage/
Chemical Plants/ Power Plants/ Steel Industry/Etc.

3. Design Features



STANDARD PART LIST			
Parts	WCB	CF8	CE8M
1. Body	WCB	CF8	CF8M
2. Gate	304	304	316
3. Seat	Metal/Metal or EPDM		
4. O-ring	NBR		
5. Seat Retainer	WCB	CF8	CF8M
6. Packing	PTFE		
7. Gland	WCB	CF8	CF8M
8. Yoke	Q235	304	304
9. Stem	2Cr13	2Cr13	2Cr13
10. Stem Nut	Brass	Brass	Brass
11. Bearing Housing	WCB	WCB	WCB
12. Thrust Bearing	65#Mn		
13. Hand wheel	GGG30 (Epoxy Coated)		
14. Stem Protector	304	304	304
15. Fasteners	A2-70	A2-70	A4-70

Note: Hand wheel nut is available for valve without stem protector. Non-stainless parts are epoxy coated.

BODY:

- Split-body design with machined inner body, avoids adhesion of media in body cavity.
- Full port design minimizes pressure drop and maximizes flow capacity.
- Packing at both top and bottom eliminates leakage to surrounding.

GATE:

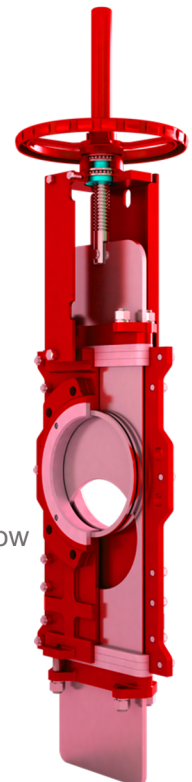
- Though gate with o-port cut through a disc of media down when closing and return this portion back when opening.
- Gate thickness can be increased to meet higher pressure.
- Gate surface is well polished at both sides for tight seal and less jamming.
- Gate is hard chrome coated for metal sealing valve.

SEAT:

- Side-entry seat is replaceable, reducing the cost of maintenance.
- L-shape seat retainer locks seat into valve body and covers seat side to prevent direct flow flushing.
- With seats on both sides, valve can handle flow in both directions equally.

Other:

- Stem cover is available to ensure long service life of stem.
- Two thrust bearings minimizes torque.
- Grease nipple is available for bearing lubrication.



4. Actuator Options

Manual

- Hand wheel
- Bevel Gear
- Chain wheel
- Lever

Automatic

- Electric
- Pneumatic (single & double-acting)
- Hydraulic

***Note: for other options, please contact us for availability.**

Accessories

- | | |
|--------------------------|-----------------|
| Actuator manual override | Locking device |
| Stem Extensions | Solenoid valves |
| Positioners | Limit Switches |
| Proximity Switches | ISO Mount |

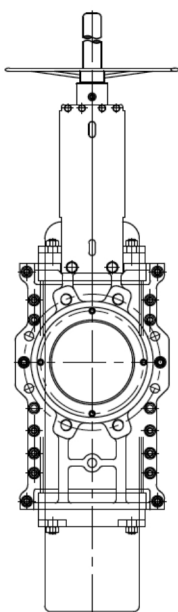
5. Other Options

V-PORT

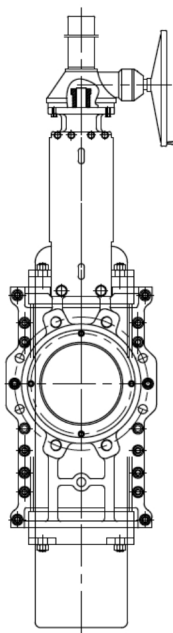
Semi lug design

Fabricated Valve

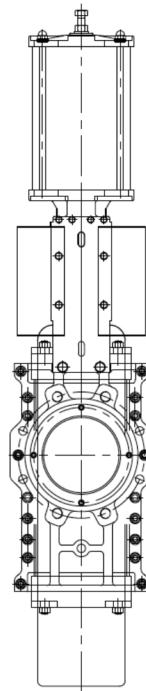
Other materials for valve



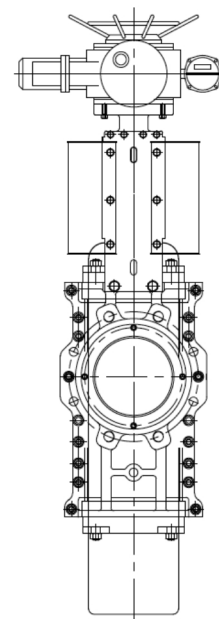
Hand Wheel Valve



Bevel Gear Valve



Pneumatic Valve

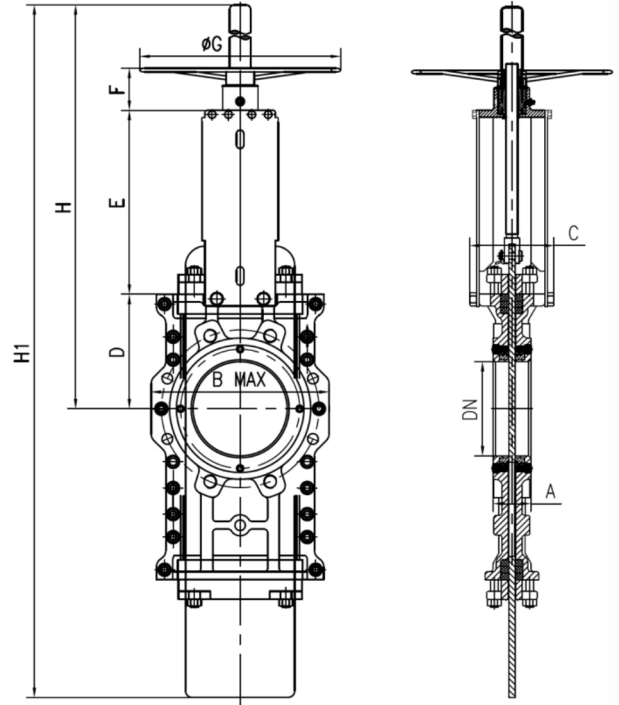


Electric Valve

MODEL : RVS-TP-10

Dimension I – Hand Wheel Operated Valve (Rising Stem)

- Standard Manual Actuator
- Including:
 - ⊕ Hand Wheel
 - ⊕ Stem
 - ⊕ Stem Nut
- Size Range:
 - ⊕ DN50-DN400
 - ⊕ Gearbox is suggested for size ≥ DN 350
- Options:
 - ⊕ Stem Cover
 - ⊕ Side Cover for gate safety
 - ⊕ Rod-type Yoke
 - ⊕ Locking Device
 - ⊕ Stem Extension

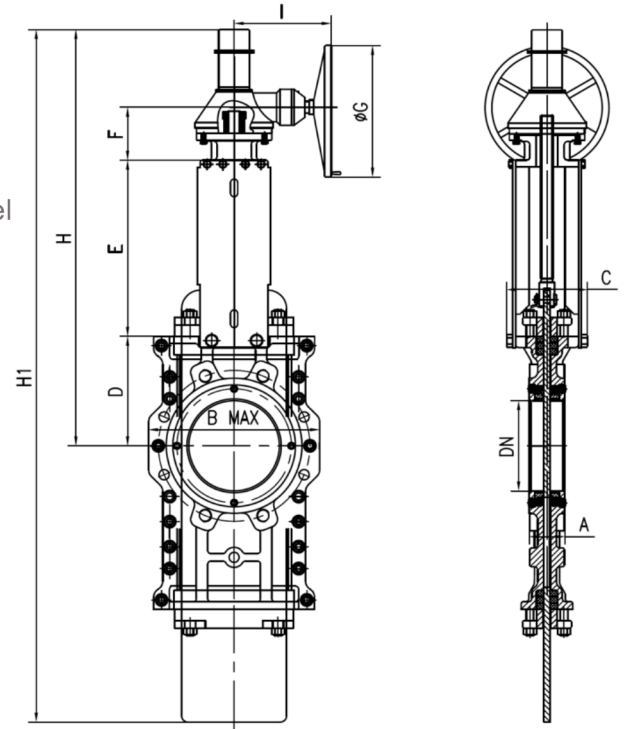


DN	A	B	C	D	E	F	G	H	H1	Weight (kg)
50	48	140	106	100	129	85	180	340	530	15
65	48	175	106	135	147	85	180	420	710	17
80	51	185	106	145	168	85	200	480	810	23
100	51	220	106	150	192	85	200	520	850	24
125	57	195	120	170	215	87	250	590	1000	35
150	57	225	130	175	245	87	280	650	1100	41
200	70	280	130	215	302	105	300	800	1380	68
250	70	356	140	270	355	105	350	960	1670	84
300	76	405	160	310	401	105	400	1100	1950	118
350	76	480	180	330	465	117	450	1250	2200	177
400	89	530	180	375	511	117	450	1460	2780	230

MODEL : RVS-TP-10

Dimension II – Bevel Gear Operated Valve

- Mainly applied to valve size \geq DN350
- Including:
 - ⊕ Gearbox (Standard Ratio: 4.5:1) with hand wheel
 - ⊕ Stem
 - ⊕ Stem Protector
- Options:
 - ⊕ Locking Device
 - ⊕ Extensions
 - ⊕ Chain wheel

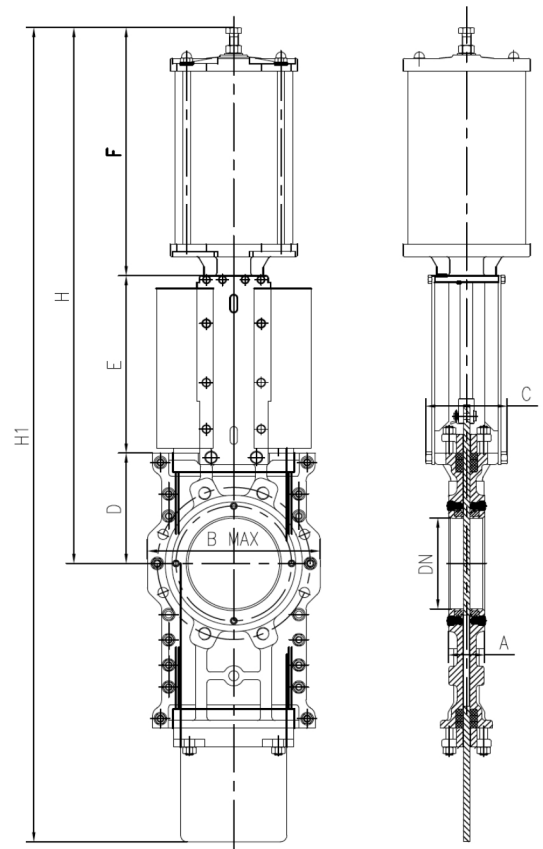


DN	A	B	C	D	E	F	G	H	H1	I	Weight (kg)
200	70	280	130	215	302	105	310	620	1400	150	93
250	70	356	140	270	355	105	310	740	1710	150	115
300	76	405	160	310	401	105	310	830	2000	170	150
350	76	480	180	330	465	117	310	930	2260	170	210
400	89	530	180	375	511	117	310	1090	2730	170	270
450	89	610	240	420	580	100	460	1180	2820	233	380
500	114	650	270	465	640	100	460	1450	3400	233	470
600	114	805	270	500	740	100	460	1850	4120	233	580

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Dimension III – Double Acting Pneumatic Valve

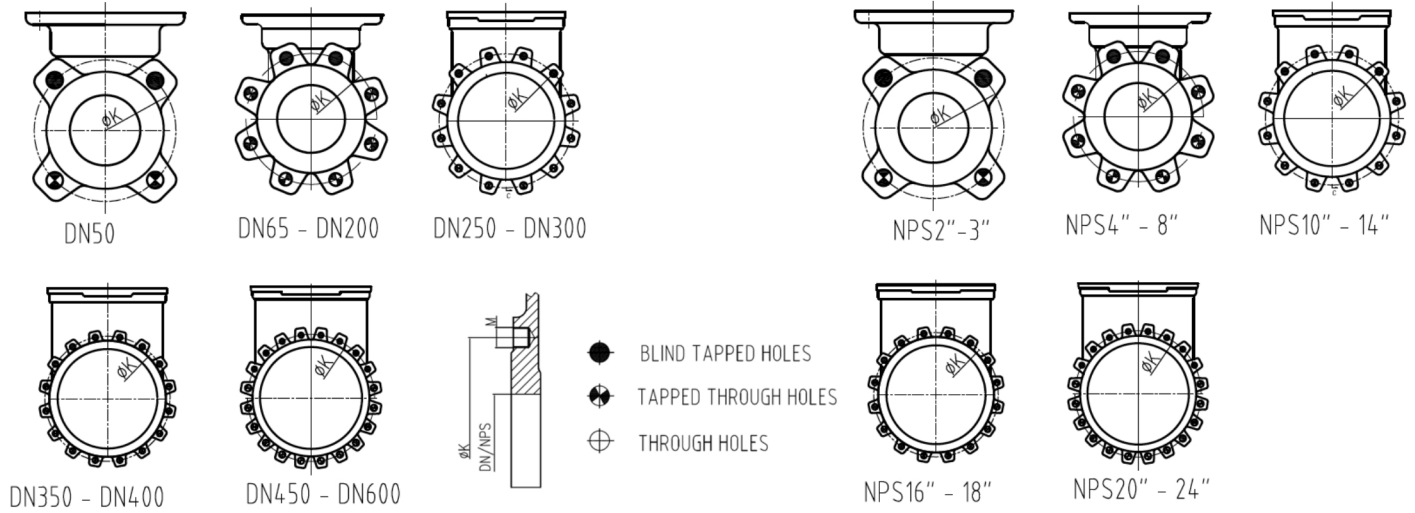
- Standard DA pneumatic actuator includes:
 - ⊕ ≤DN200 : Aluminum Cylinder
 - ⊕ ≥DN250 : WCB cylinder (Epoxy Coated)
 - ⊕ WCB caps (Epoxy Coated)
 - ⊕ #45Steel+Cr Piston Rod
- Size Range: DN50-DN600
- Air Supply Pressure Range
 - ⊕ 4 bar to 7 bar.
- Options:
 - ⊕ Gate cover for safe operation
 - ⊕ Manual override
 - ⊕ Locking Device
 - ⊕ Air tank for fail-safe operation
 - ⊕ Limit Switch
 - ⊕ Positioner
 - ⊕ Solenoid Valve
 - ⊕ Flow Regulator



DN	A	B	C	D	E	F	G	H	H1	Cylinder	Connect	Weight (kg)
50	48	140	106	100	129	230	100	475	665	C100/60	F1/4	18
65	48	175	106	135	147	245	100	540	895	C100/75	F1/4	22
80	51	185	106	145	168	270	120	570	915	C125/85	F1/4	28
100	51	220	106	150	192	300	120	605	925	C125/110	F1/4	32
125	57	195	120	170	215	330	150	620	940	C160/135	F3/8	43
150	57	225	130	175	245	350	150	775	1220	C160/160	F3/8	52
200	70	280	130	215	302	440	195	950	1510	C200/210	F3/8	91
250	70	356	140	270	355	505	240	1165	1875	C250/260	F3/8	115
300	76	405	160	310	401	550	280	1285	2110	C300/310	F3/8	158
350	76	480	180	330	465	620	380	1385	2330	C300/360	F3/8	260
400	89	530	180	375	511	670	395	1530	2600	C320/410	F3/8	350
450	89	610	240	420	580	710	395	1780	2965	C320/460	F3/8	410
500	114	650	270	465	640	800	425	1915	3265	C350/510	F3/8	520
600	114	805	270	500	740	910	425	2190	3860	C350/610	F3/8	710

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Dimension V – Flange and Bolting



EN 1092

DN	K	n°	M	T	
50	125	4	M-16	11	2 - 2 - 2
65	145	4	M-16	11	2 - 2 - 2
80	160	8	M-16	11	2 - 6 - 6
100	180	8	M-16	11	2 - 6 - 6
125	210	8	M-16	11	2 - 6 - 6
150	240	8	M-20	14	2 - 6 - 6
200	295	8	M-20	14	2 - 6 - 6
250	350	12	M-20	18	4 - 8 - 8
300	400	12	M-20	18	4 - 8 - 8
350	460	16	M-20	22	6 - 10 - 10
400	515	16	M-24	24	6 - 10 - 10
450	565	20	M-24	24	8 - 12 - 12
500	620	20	M-24	24	8 - 12 - 12
600	725	20	M-24	24	8 - 12 - 12

ANSI B16.5

DN	K	n°	M	T	
2"	4 3/4"	4	5/8" UNC	3/8"	2 - 2 - 2
2 1/2"	5 1/2"	4	5/8" UNC	3/8"	2 - 2 - 2
3"	6"	8	5/8" UNC	3/8"	2 - 2 - 2
4"	7 1/2"	8	5/8" UNC	3/8"	2 - 6 - 6
5"	8 1/2"	8	3/4" UNC	3/8"	2 - 6 - 6
6"	9 1/2"	8	3/4" UNC	1/2"	2 - 6 - 6
8"	11 1/2"	8	3/4" UNC	1/2"	2 - 6 - 6
10"	14 1/2"	12	7/8" UNC	3/4"	4 - 8 - 8
12"	17"	12	7/8" UNC	3/4"	4 - 8 - 8
14"	18 1/2"	16	1" UNC	7/8"	4 - 8 - 8
16"	21 1/2"	16	1" UNC	1"	6 - 10 - 10
18"	22 1/2"	20	1 1/8" UNC	1"	6 - 10 - 10
20"	25"	20	1 1/8" UNC	1"	8 - 12 - 12
24"	29 1/2"	20	1 1/4" UNC	1"	8 - 12 - 12

Appendix – Actuator Selection Data

DN	Thrust (N)	Torque (N*M)	# of Turns	Stem Size
50	2800	68	15	Tr20*4 LH
65	3300	89	18	Tr20*4 LH
80	3800	98	23	Tr20*4 LH
100	4430	105	28	Tr20*4 LH
125	5321	165	28	Tr22*5 LH
150	7730	195	33	Tr22*5 LH
200	13000	303	37	Tr28*6 LH
250	18800	505	45	Tr28*6 LH
300	27100	547	52	Tr28*6 LH
350	29000	765	60	Tr32*6 LH
400	31000	965	69	Tr32*6 LH
450	36500	1366	66	Tr35*6 LH
500	38900	1618	73	Tr40*7 LH
600	43700	2058	88	Tr40*7 LH

Note: Thrust and Torque data are reference for normal application, for specific conditions, please contact us for further support.

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