MODEL CX

BURNER SHUT-OFF KNIFE GATE VALVE

The CX model knife gate is an uni-directional full flange valve designed for multiple purpose industrial service applications especially for burner shut off, coal feeder discharge, mill outlet, coal pulverized feed isolation, etc. The valve complies with NFPA 85.

Sizes: DN 200mm/8" to DN 900mm/36" (larger diameters on request)

Working pressure:

DN 200mm/ 8" to DN 250mm/10"	10 bar
DN 300mm/12" to DN 400mm/16"	6 bar
DN 450mm/18"	5 bar
DN 500mm/20" to DN 900mm/36"	4 bar

Standard flange connection:

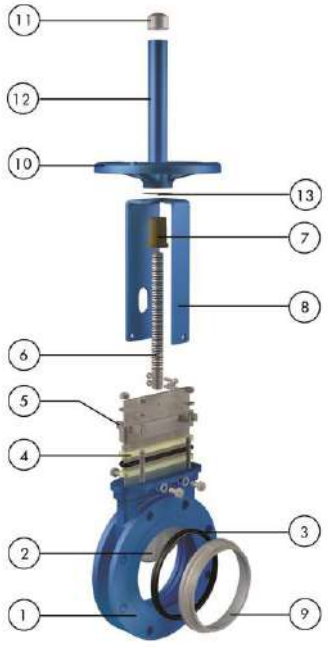
DIN PN 10 and ANSI B16.5 (class 150)
Other flange connections available on request

Other flange connections available on request

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

Directives: For EU Directives and other Certificates, please see the document: Directives and Certificates Compliance - Knife Gate Valves - Catalogues and Datasheets

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



STANDARD PARTS LIST

Part:		
1- Body	A216WCB / CF8M	
2- Gate	AISI 304	
3- Seat	Metal/Metal or EPDM	
4- Packing	PTFE Impreg. Synth. Fibre (With a EPDM O-Ring)	
5- Gland Follower	Alum. (DN 50 to DN 300) or Ductile Iron (DN 350 a DN 1200)	CF8M
6- Stem	Stainless Steel	
7- Stem nut	Brass	
8- Yoke	Epoxy-coated Carbon Steel	
9- "A" ring	AISI 304	AISI 316
10- Handwheel	Ø≤ 310: Ductile Iron / Ø≥ 410: GJL 250 (GG25)	
11.- Cap	Plastic	
12- Stem Protector	Epoxy-coated Carbon Steel	
13- Friction Washer	Brass	

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DESIGN FEATURES

BODY:

Full flange 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. Body bore is optionally coated with tugstene carbides. Face-to-face according to MSS-SP-81 standard.

GATE:

Stainless steel gate as standard.
Gate edge stellited for resistance against abrasive flow media.
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. On request: thickness and/or material of the gate can be changed for higher pressure requirement.

SEAT: (resilient)

Unique design that mechanically locks the seat in the internal of the valve body with a stainless steel retainer ring. Rings are optionally coated with tugstene carbides.
Standard EPDM also available in different materials such as Viton, PTFE, etc.

PACKING:

Long-life packing with several layers 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.
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 are interchangeable, and supplied with an standard mounting for installation purposes on site.

YOKE or ACTUATOR SUPPORT:

Made of EPOXY coated steel (stainless steel available on request).
Compact design makes it extremely robust even under the most severe conditions.

EPOXY COATING:

The epoxy coating cast iron and carbon steel valve bodies and components is electrostatically applied making the valves to be corrosion resistant with a high quality finished surface.
The standard colour is RAL-5015 blue.

GATE SAFETY PROTECTION:

Automated valves are provided with gate guards in accordance with EU Safety Standards.
The design feature prevents any objects from being caught accidentally while the gate is moving.

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OTHER OPTIONS

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

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

Flush ports (Fig.2):
Allow for cleaning of solids trapped within the body cavities that can obstruct the flow or prevent the valve from closing.
Purging can be made with air, steam, liquids, etc. depending on the process

Other materials of construction:
Ductile iron, carbon steel, stainless steel (AISI 317,...), special alloys (254SMO, Hastelloys), etc.

Fabricated valves:
Special fabricated valves for special process conditions (big sizes and/or high pressures.

EXT (full lug design):
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.

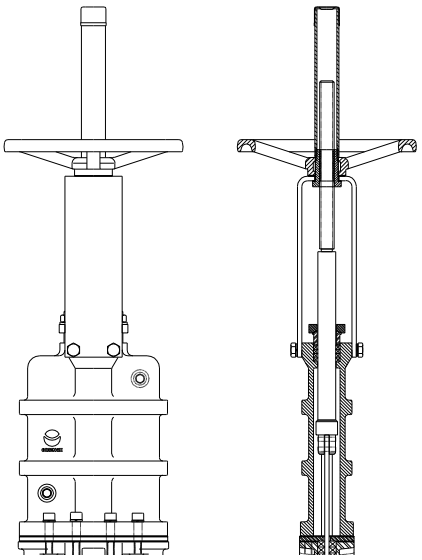

Fig.1

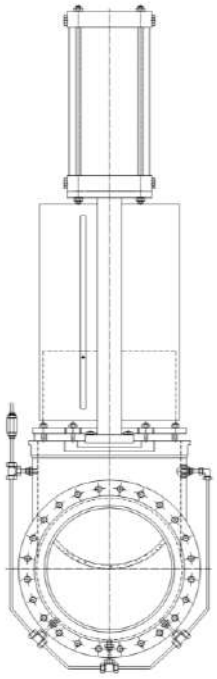

Fig.2

SURFACE TREATMENTS

Valve components can be protected or coated for a longer life expectancy, depending on the valve application and the service conditions.
We can offer alternative treatments and coatings for the different valve components to improve the properties against abrasion (Stellite, Polyurethane…), corrosion (Halar, Rilsan, Galvanised…) and adherence (Polishing, PTFE…).

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ACTUATOR TYPES

MANUAL:
Handwheel (rising & non-rising stem)
Chainwheel
Lever
Bevel Gear
Other (square nut…)

AUTOMATIC:
Electric
Pneumatic
Hydraulic

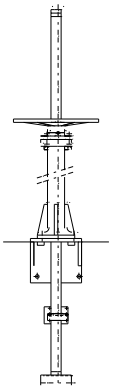
All actuators are interchangeable

ACCESSORIES:

Mechanical Stops
Actuator manual override
Positioners
Proximity Switches

Locking device
Solenoid valves
Limit Switches
Floor stands

Wide range of valve extensions available



Standard Handwheel (Rising Stem)

Handwheel (Non Rising Stem)

Pneumatic Cylinder

Electric

Lever

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TEMPERATURE CHART

SEAT / SEALS

Material	Max.Temp.(°C)	Applications
Metal/Metal	>250	High temp. Low tightness
EPDM (E)	120	Acids and non mineral oils
NBR (N)	120	Resistance to petroleum products
FKM-FPM (V)	200	Chemical service / High temp.
VMQ (S)	250	Food service / High temperature
PTFE (T)	250	Corrosion resistance

More details and other materials under request.

PACKING

Material	Max.Temp.(°C)	pH
PTFE impregn. synth. fibre (ST)	250	2-13
Braided PTFE (TH)	260	0-14
Graphited (GR)	600	0-14
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
For applications with:
- High temperature
- High density media application
- When full tightness is not required

TYPE "B" SEAT (resilient)
- Temperature limitations according to the selected seat material. Review the above chart or contact our Technical Department for more information.
- Replaceable and reinforced seat ring available in different materials and coatings, like tugstene carbides, etc.

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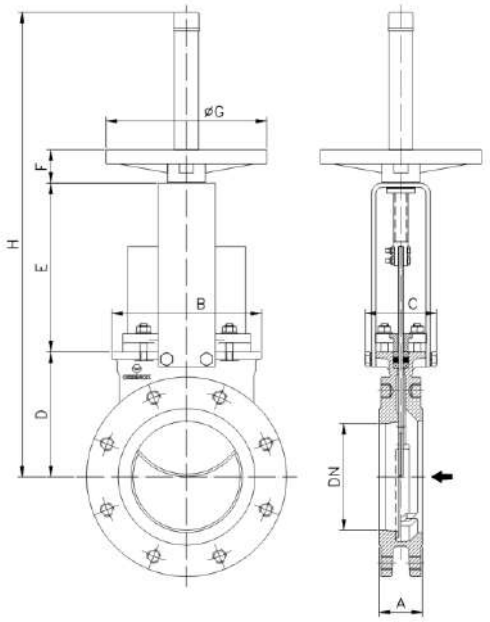
HANDWHEEL (rising stem)

- Standard handwheel actuator.
- Consists of:
  - Handwheel: Epoxy coated Cast Iron
  - Stem
  - Stem nut
  - Stem protector
- Available from DN 200mm/8″ to DN 900mm/36″
- Options:
  - Locking Device
  - Extensions



DN (mm/″)	A	B	C	D	E	F	ØG	H	Weight(kg)
200/8″	70	247	122	203	309	67	310	820	32
250/10″	70	298	122	233	345	67	310	986	47
300/12″	76	349	122	273	390	69	410	1071	65
350/14″	76	391	193	312	433	66	410	1245	95
400/16″	89	439	193	347	478	66	410	1325	122
450/18″	89	483	197	415	552	67	550	1510	160
500/20″	114	542	197	450	611	67	550	1617	202
600/24″	114	637	197	501	697	67	550	1883	290

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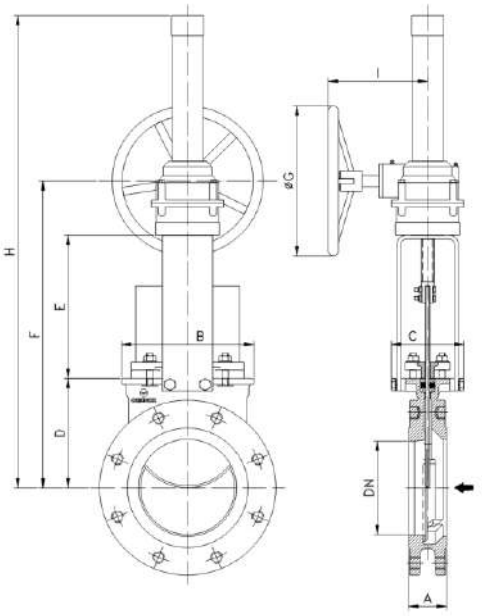
GEAR

- Recommended for valves larger than DN 350/14" and working pressures greater than 3.5 bar
- Consists of:
  - Stem
  - Yoke
  - Bevel Gear Actuator with Handwheel (Standard Ratio 4:1)
- Available from DN 200mm/8" to DN 900mm/36"
- Options:
  - Locking device
  - Extension
  - Chainwheel
  - Non-rising stem



DN(mm/")	A	B	C	D	E	F	ØG	H	I
200/8"	70	247	122	203	309	582	300	992	200
250/10"	70	298	122	233	345	648	300	1060	200
300/12"	76	349	122	273	390	733	300	1143	200
350/14"	76	391	197	312	430	790	450	1489	270
400/16"	89	439	197	347	475	870	450	1570	270
450/18"	89	483	201	415	518	984	450	1615	270
500/20"	114	542	201	450	558	1092	450	1810	280
600/24"	114	637	201	501	663	1248	650	1879	290
750/30"	117	842	320	624	871	1597	650	2650	413
900/36"	117	970	320	779	1046	2135	650	3135	442

*custom face to face available

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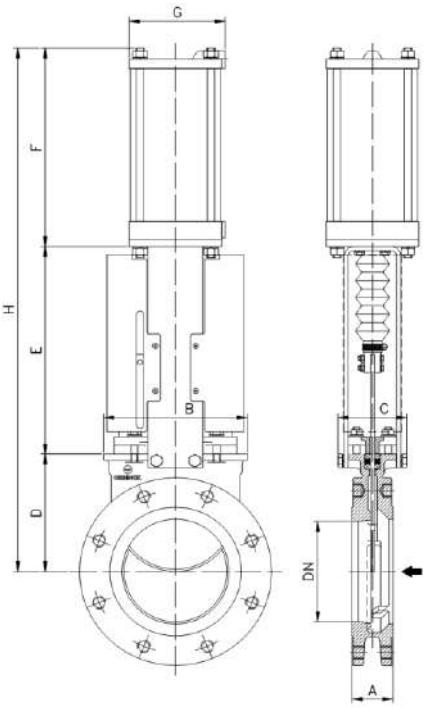
PNEUMATIC CYLINDER

- The standard pneumatic actuator (double acting on-off cylinder) consists of:
  - Ø≤ 300mm/12": Aluminum barrels
  - Ø≥ 350mm/14": Composite barrels
  - Aluminum end caps
  - Stainless steel (AISI 304) piston rod
  - Nitrile coated steel piston
- Available from DN 200mm/8" to DN 900mm/36"
- Supply Pressure: minimum 3.5 bar - maximum 10 bar
- Actuator designed with 6 bar air supply
- For valves installed in a horizontal position, we recommend U-type support plates and/or actuator support.
- Options: - Hard anodized jacket and covers
  - Over / Undersized cylinder
  - Stainless steel 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(mm/")	A	B	C	D	E	F	G	H	Weight(kg)	Standard Cyl	Connect.
200/8"	70	247	122	203	309	358	175	870	46	C160/220	1/4" G
250/10"	70	298	122	233	345	428	220	1006	70	C200/270	3/8" G
300/12"	76	349	122	273	390	478	220	1141	89	C200/320	3/8" G
350/14"	76	391	193	312	459	549	277	1320	135	C250/375	3/8" G
400/16"	89	439	193	347	478	599	277	1424	162	C250/425	3/8" G
450/18"	89	483	197	415	552	680	382	1647	212	C300/475	1/2" G
500/20"	114	542	197	450	611	730	382	1791	290	C300/525	1/2" G
600/24"	114	637	197	501	697	830	382	2028	375	C300/625	1/2" G
750/30"	117	842	320	624	940	985	444	2549	645	C350/730	3/4" G
900/36"	117	970	320	775	1100	1202	515	3077	780	C400/930	3/4" G

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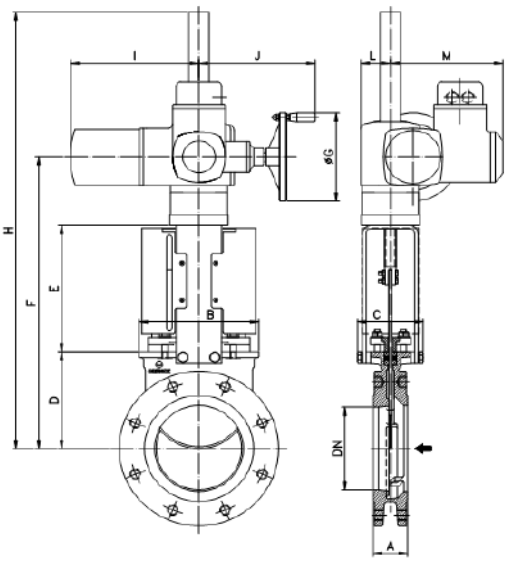
ELECTRIC ACTUATOR

- Consists of:
  - Electric actuator
  - 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 from DN 200mm/8" to DN 900mm/36"
- Wide range of types and marks available to meet customer's needs
- Option:
  - Non rising stem



DN(mm/")	A	B	C	D	E	F	ØG	H	I	J	L	M	stem Ø x picht	Torque(Nm)
200/8"	70	247	122	203	309	667	160	1255	265	249	62	238	25 x 5	30
250/10"	70	298	122	233	345	733	160	1321	265	249	62	238	25 x 5	45
300/12"	76	349	122	273	390	793	200	1381	283	254	65	248	25 x 5	70
350/14"	76	391	193	312	433	875	200	1463	283	254	65	248	35 x 6	110
400/16"	89	439	193	347	478	955	315	1543	389	336	91	286	35 x 6	160
450/18"	89	483	270	415	552	1142	315	1870	389	336	91	286	35 x 6	190
500/20"	114	542	270	450	611	1222	400	1950	389	339	91	286	35 x 6	270
600/24"	114	637	270	501	697	1444	400	2172	389	339	91	286	40 x 7	450
750/30"	117	842	320	624	883	1779	500	2832	430	365	117	303	50 x 8	550
900/36"	117	970	320	779	1046	2035	500	3080	430	365	117	303	60 x 9	850

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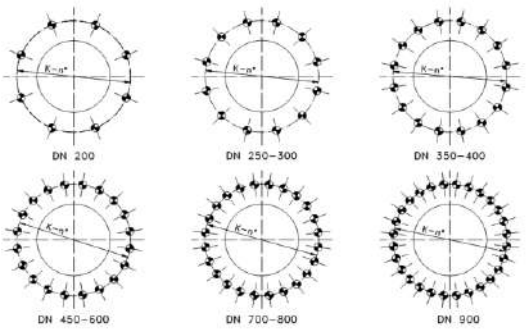
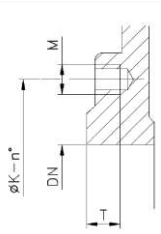
FLANGE AND BOLTING DETAILS

EN 1092-2 PN10

DN	K	nº	M	T	⌖ ⌖
200	295	8	M-20	12	2 - 6
250	350	12	M-20	12	4 - 8
300	400	12	M-20	12	4 - 8
350	460	16	M-20	15	6 - 10
400	515	16	M-24	15	4 - 12
450	565	20	M-24	15	6 - 14
500	620	20	M-24	22	6 - 14
600	725	20	M-27	22	6 - 14
900	1050	28	M-30	32	10 - 18



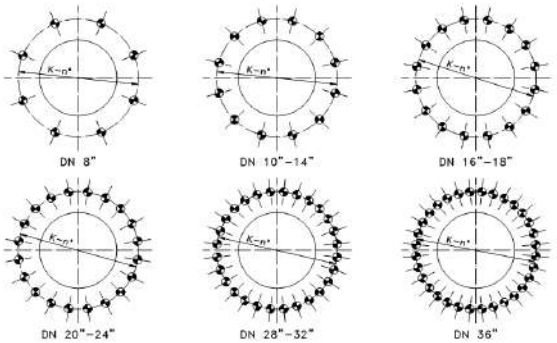


● BLIND TAPPED HOLES

⊕ TAPPED THROUGH

ANSI B16.5, class 150(*)

DN	K	nº	M	T	⌖ ⌖
8″	11 ¾″	8	3/4″ UNC	15/32″	2 - 6
10″	14 ¼″	12	7/8″ UNC	15/32″	4 - 8
12″	17″	12	7/8″ UNC	15/32″	4 - 8
14″	18 ¾″	12	1″ UNC	19/32″	4 - 8
16″	21 ¼″	16	1″ UNC	19/32″	4 - 12
18″	22 ¾″	16	1 1/8″ UNC	19/32″	6 - 10
20″	25″	20	1 1/8″ UNC	7/8″	6 - 14
24″	29 ½″	20	1 1/4″ UNC	7/8″	6 - 14
30″	36″	28	1 1/4″ UNC	1 1/8″	10 - 18
36″	42 ¾″	32	1 1/2″ UNC	1 1/4″	10 - 22



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