



## eDART Knife Gate Valves



**C-TECH**

- 80 - 800NB and larger on request
- PN10, PN16, PN25, PN40
- Robust one piece body
- Rigid pedestal for smooth gate operation
- Wide range of materials of construction available
- Complete range of actuator options
- Precision ground, thick gate to resist pressure distortions
- ASME Class II (0.5% Cv) and ASME Class IV (0.1% Cv) leakage
- Valve seal/seat protected by deflection cone

## Pedestal

Robust laser cut for extra support of actuator and gate. Instrumentation mounting points are standard.

Options:

- Lockable open or closed
- Safety guards to remove pinch point hazard

## Clevis

The clevis provides rigid coupling between the actuator shaft and the gate.

Two bolt attachment prevents gate misalignment due to pivoting and ensures smooth cycling operation.

## Gland

Designed for safe and easy access to tighten during maintenance.

## Optional Seat Seal

For improved shut off.

## Actuator

Designed and engineered to be correctly sized for the application.

Options:

- Pneumatic
- Hydraulic
- Handwheel
- Gearbox
- Electric

## Gate

Extra thick gate extends life and manages fluid hammer. Precision ground to create a better seal and doesn't need to be scrubbed during operation.

## Packing

Various packings to suit abrasive, corrosive as well as high temperature applications.

## Lifting Points

Lifting lugs cast into body provide secure and safe rigging points for ease of installation and maintenance.

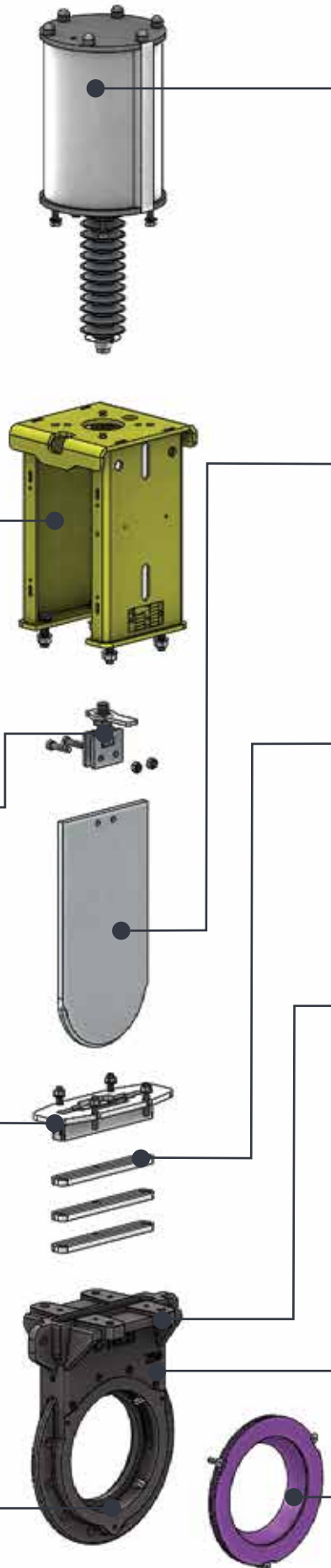
## Body

Robust one-piece body resists pipe expansion and pipe misalignments. Fewer pipe support needed.

## Deflection Cone

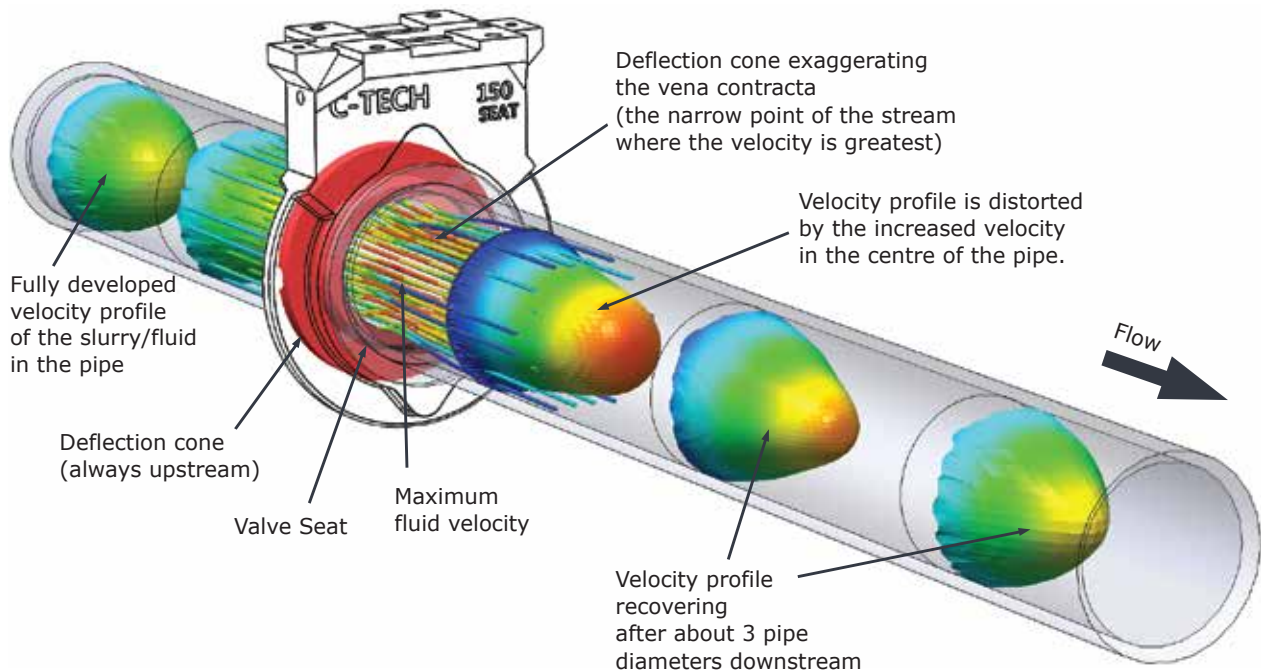
Sacrificial hard chrome wear cone protects seat from premature wear by diverting the media from the sealing surface.

Easy to replace once worn.



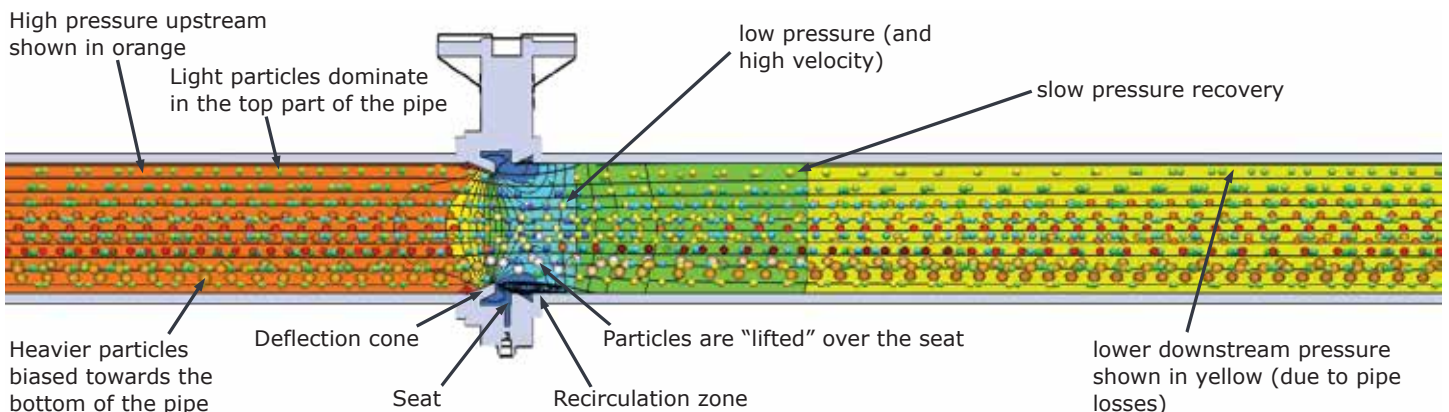
## Deflection Cone and CFD Design

The deflection cone lifts the flow over the metal seat to protect it from the destructive action of the slurry. It is made from a hard 75 Rockwell high chrome material to be resistant to erosion and easily replaceable. The deflection cone is the primary replacement spare component for the valve.



- The deflector cone is always installed upstream.
- The valve is always orientated so that the line pressure pushes the gate into the seat when closed.

### CFD pressure profile of eDART knife gate valve







## C-Tech Technical Specifications

eDART is an ISO 9001 (2015) accredited company.

All valves are shell tested and leak tested to procedures based on the Manufacturers Standardization Society of the Valve and Fittings Industry (MSS) standards.

### Pressure Rating & Flange Drilling

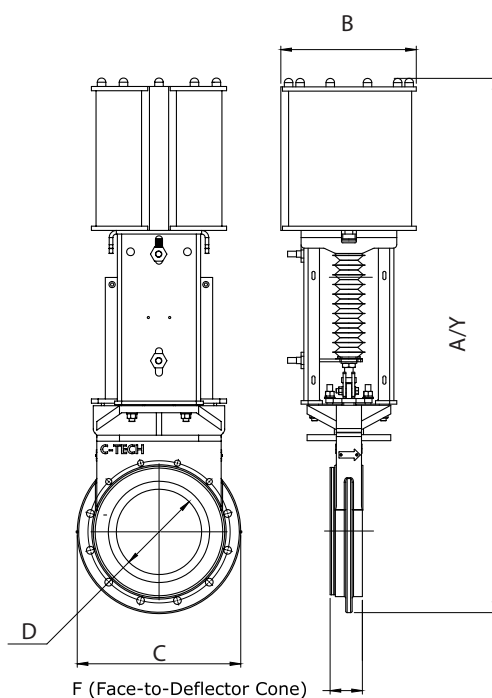
Pressure ratings
PN 10
PN 16
PN 25
PN 40

Flange drilling
SANS1123 T/1000; T1600; T2500; T4000
BS4504 T10; T16
BS10 Table D; Table E
ASME 150#
AS 2129 Table D; Table E



### Materials of Construction

Part	Material Options
Body	SG42 CF8M (Stainless Steel) SAF2205 Other materials on request
Pedestal	Mild Steel, [Phenoline   epoxy] painted Stainless Steel 316
Packing	Impregnated Cotton PTFE High temperature packing (HT Inconel reinforced graphite)
Gate	Stainless Steel 304 Stainless Steel 316 SAF2205 Other materials on request
Deflection Cone	Cast High-Chrome (27% Cr BS4844) with soft poly gaskets Cast High-Chrome (27% Cr BS4844) without poly Hard Polyurethane with soft poly gaskets SAF2205 or CF8M (316 Stainless Steel)
Seat Seal	<ul style="list-style-type: none"> <li>BunaN</li> <li>EPDM</li> <li>Viton</li> </ul>



### Overall Dimensions for 10 + 16 bar rated valves

Size	PN10				PN16				
	D	F	C	A	D	F	C	Y	ØX
100	80	69	225	736	222	69	225	766	50
150	120	75	285	929	265	75	285	959	50
200	165	88	340	1136	318	88	340	1166	50
250	193	88	410	1343	382	88	420	1373	60
300	240	94	460	1507	475	101	475	1537	70
350	292	94	525	1683	475	101	525	1713	80
400	339	110	585	1956	475	116	600	1986	95
450	387	110	635	2120	625	137	640	2150	105
500	426	137	715	2386	625	144	715	2416	115
600	516	143	835			169	860	2718	140
700	605	160	915				915	3182	165
750	650	173	957					3411	
800	700	185	1035					3554	

\* with deflection cone

\* = Dimensions subject to change without notice.

x = Information not available at time of publication.

Please ask for comprehensive interface Control documentation and ICD drawing models