



Our Mission at VAAS is to be a
leader in Knife Gate Valve
technology by offering solutions
for customers' varied and
difficult applications. We
achieve this by working closely
with customers. Long term
associations and close
interaction allows us to offer
customers the right products at
cost effective prices.

Mines in Australia, Paper mills in India, Steel factories in Africa, Municipal plants in the US — these are some of the industries worldwide that have discovered VAAS Knife Gate Valves.

Uniquely adapted for tough environments VAAS valves last longer and need fewer replacements resulting in less downtime.

VAAS is an ISO 9001 company established in 1984, in technical and financial collaboration with a leading US manufacturer.

VAAS valves have a market worldwide and are exported to countries spanning all continents from















Australia to South America.

VAAS has an extensive list of satisfied users in a variety of industries which include Thermal Power, Pulp & Paper, Mining, Cement, Carbon Black, Chemical & Petrochemical and Water and Waste Water.

#### Top-of-the line Facilities

VAAS is a dedicated valve company-our name expands to 'Valves, Actuators, Automation & Solutions'. Our 3000 sq m facility in the port city of Chennai, India is equipped with modern machinery

and a team of skilled engineers and technicians. Most of the manufacturing is done in-house including critical operations such as gate grinding, machining of body and seat assembly, and testing to ensure consistent quality. The entire operation is linked to a quality assurance system offering high traceability.

A top flight after sales team helps maintain valves during their operational life.

VAAS Group also includes a company manufacturing high quality Ball Valves.

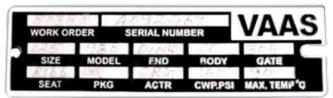


## Consistent Quality & Continuous Innovation - The Cornerstones of VAAS Business Processes

We acknowledge that we have competitiors in business and respect them for their capabilities. Within the choices available to our customers for similar products, VAAS, an ISO 9001 company, strives to be the one manufacturer they can rely on for consistent quality. We back this up with continuous efforts to innovate products that are more suitable, more cost effective and more reliable.

Stringent quality control is the key to the high performance of our products. Every VAAS product that leaves our factory is tested by us as per our stringent norms (often stricter than applicable standards and industry norms).

We maintain a complete record of the material that goes into production, its manufacturing sequence, etc. Every valve carries a stainless steel tag plate with the relevant product information and its functional



capabilities. This tag also carries a unique serial number that can be used for full traceability and for ordering exact spares.









## Specialised Manufacturing & Testing

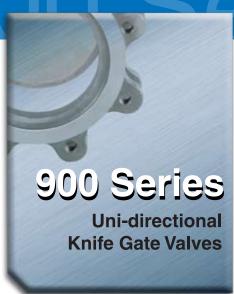
We began producing Knife Gate Valves about a quarter of a century ago - just one type, limited to maximum 600mm (24 inch) size. Over the years, we actively listened to our customers and produced new designs, improved the ones we had and expanded our size range to 1500mm (60 inch).

Along the way, we also devised our own specialized systems for design and testing, more elaborate than those normally found with other valve manufacturers. A large percentage of our valves go into very difficult service environments such as highly abrasive erosive slurries.

VAAS has set up a unique in-house facility where valve prototypes can be life cycle tested in 'near-actual' conditions. This facility (see picture below) at our factory in Chennai, India is also available to customers/users, if they wish to test valves.



900 Series 900





## FIG 930 VERSA

General purpose valve for use with sludge, mild slurries, pulp stock and dry powder hopper isolation meeting European face-to-face and rating norms



## FIG 931

General purpose valve for use with sludge, mild slurries, pulp stock and dry powders, meeting MSS SP-81 face-to-face norms

## FIG 950

Wafer, semi-lug body design for severe service applications such as abrasive and erosive media



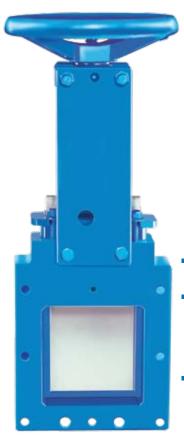
## FIG 940

Lug body design for severe service applications such as abrasive and erosive media



900

## Seriesann Sari



## FIG 955

Flanged hopper isolation valve



Square/rectangular flanged body design for dry powder hopper isolation and other material handling applications



## FIG 970

Coal mill isolation Knife Gate Valve complying to NFPA-85 (2001) design requirements featuring full flow bore and various hardfacing options for erosive boiler coal firing applications

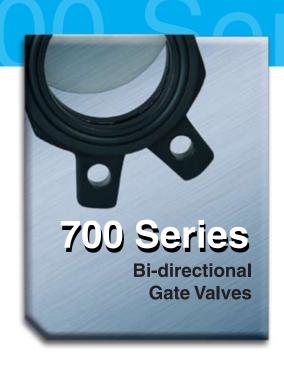


## FIG 980

Wafer, semi lug body (lug body- FIG 985) uni-directional bonnetted design for buried services and for applications involving toxic or dangerous media requiring high packing tightness



\* CE/PED certification process for other designs in progress



## FIG 740

General purpose, lug body, full port, bi-directional gate valve for sludge, mild slurries, pulp stock and similar media, meeting MSS SP-81 face-to-face norms



## FIG 752

Wafer, mid-flange, two-piece bolted body bi-directional slurry valve for severe services such as abrasive and erosive media with quick-change seats and reinforced U-seal seat



## FIG 730

General purpose, wafer semi-lug body, full port, bi-directional gate valve for sludge, mild slurries, pulp stock and similar media meeting European face-to-face and rating norms



## FIG 755

755 Wafer, mid-flange, two-piece bolted body bi-directional slurry valve for severe services such as abrasive and erosive media with quick-change steel reinforced U-seal seat and polyurethane bore liner



Through-going O-port bi-directional valve with steel reinforced elastomer seats for severe services such as cementing slurries and dry powder conveying systems



## FIG 760 Slurry-Max

Two-piece bolted body, flanged, bi-directional valve for severe services such as abrasive and erosive media with spring-reinforced elastomer sleeves



## FIG 780

Two-piece bolted body, through-going O-port bi-directional valve for severe services such as reject paper stock and similar media



\*CE/PED certification process for other designs in progress

900 Series / UU

## ACTUATOR OPTIONS

## MANUAL

Hand Wheel Rising Stem



Gear Hand Wheel

Hand

Wheel

Non-Rising

Stem



Chain Wheel



Lever



Extension

Hand

## PNEUMATIC

Double Acting



Double Acting with Fail Safe System



Double Acting Positioner



Spring Return

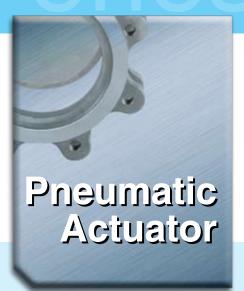


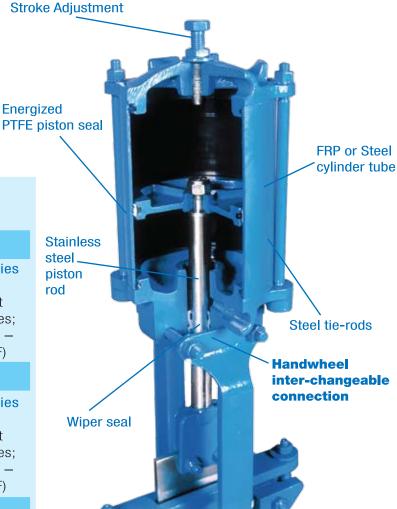
OTHER TYPES

**Electric** 

Hydraulic







## Model: CCGCx

Double-acting cylinder actuator for Series 900 valves

Features: inter-changeability with most hand wheel operated valves in the series; FRP cylinder tube; Max pressure/temp -8 bar (100 psi) / 100 deg C (212 deg F)

## Model: RCGCx

Double-acting cylinder actuator for Series 700 valves

Features: inter-changeability with most hand wheel operated valves in the series; FRP cylinder tube; Max pressure/temp -8 bar (100 psi) / 100 deg C (212 deg F)

## Model: CCMCx

Double-acting cylinder actuator for Series 900 valves

Features: inter-changeability with most hand wheel operated valves in the series; Steel cylinder tube; Max pressure/temp -8 bar (100 psi) / 100 deg C (212 deg F); viton seals available as option for high ambient temperature locations

## Model: RCMCx

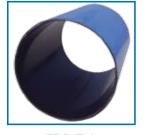
Double-acting cylinder actuator for Series 700 valves

Features: inter-changeability with most hand wheel operated valves in the series; Steel cylinder tube; Max pressure/temp -8 bar (100 psi) / 100 deg C (212 deg F); viton seals available as option for high ambient temperature locations

## Model: CAACx

Double-acting cylinder actuator for FIG 930 & FIG 730 VERSA valves.

Features: inter-changeability with most hand wheel operated valves in the series; Aluminium cylinder tube; Max pressure/temp - 8 bar (100 psi) / 100 deg C (212 deg F)



Steel Tube

**FRP Tube** With With FRP / Steel **Aluminium Tube** Tube





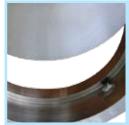
### **PTFE** seat ring

Available models: FIG 940, 950



## PTFE seat ring with retainer ring

Available model: FIG 931



### Integral, metal-to-metal

Available models: FIG 930, 931, 940, 950, 960, 980, 985



## Replaceable metal reinforced elastomer seat

Available model: FIG 770
Available elastomer materials:
Nitrile, Choroprene, EPDM,
Viton



## Replaceable metal seat with or without elastomer body seal

Available models: FIG 940, 950, 980, 985 Available elastomer materials: Nitrile, Choroprene, EPDM, Viton, PTFE



## Replaceable flexible elastomer U-seal

Available models: FIG 730, 740
Available elastomer materials:
Nitrile, Choroprene, Viton



## Replaceable elastomer seat

Available models: FIG 930, 931 940, 950, 960, 980, 985
Available elastomer materials:
Nitrile, Choroprene, EPDM,
Viton, PTFE



## Replaceable steel reinforced elastomer U-seal

Available models: FIG 752, 755 Available elastomer materials: Nitrile, Viton



## Replaceable elastomer seat with metal backup ring

Available models: FIG 940, 950 Available elastomer materials: Nitrile, Choroprene, EPDM, Viton, PTFE



## Replaceable spring reinforced elastomer sleeve seat

Available model: FIG 760

Available elastomer materials:
Natural Gum Rubber,
Choroprene, EPDM, Viton



## Replaceable metal seat ring

Available model: FIG 780

Maximum recommended temperatures (deg C / deg F) for the various elastomer seats/seals used in our valves:- Nitrile (80/176), Chloroprene (90/194), Natural Rubber (30/176), Polyurethane (80/176), EPDM (120/248), Viton (200/392), PTFE (232/450)

## rackaging optic



Seat / Packing options

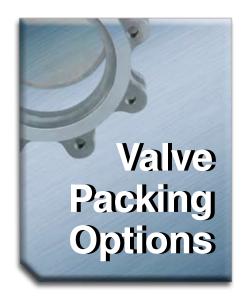
Copper braid wiper packing layer (500/932 deg C/F)

Elastomer (Nitrile, Viton) QUAD packing (80/176, 100/392 deg C/F) High temperature braided Graphite (1000/1832 deg C/F)

Yarn packing; for general, non-corrosive services (80/176 deg C/F)

## **STANDARD**

PTFE Syntex braided (232/450 deg C/F)



Maximum recommended service temperature indicated within brackets.

Compatatibility with media to be checked; please consult VAAS for suggestions

# Special Constructions & Accessories



Gate guard



Locking device



Stem guard



**Purge Port** 

V-orifice seat

Integral / Replaceable

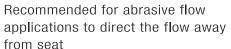




Roller support



**Deflection cone** Polyurethane (DC2)



Approx hardness: Shore 90A Max temperature: 90 deg C. Usage: With select 900 Series valves

Models: FIG 940, 950



**Bore-Liner** Models: FIG 752, 755



## **Deflection cone** Cast Ni-hard (DC1)

Recommended for abrasive flow applications to direct the flow away from seat

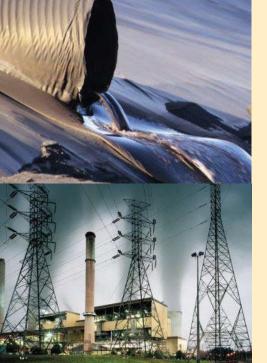
Approx hardness:500 BHN Usage: With select 900 Series

Models: FIG 940, 950

valves







Knife Gate Valve is a versatile design that offers superior performance and reliability over conventional valve designs in a variety of difficult applications. They are generally not used in clean media where conventional valves are sufficient.

## ases

## solids/p



Knife Gate Valves are used in gas, liquid and solid handling, mostly for flow isolation but for throttling/control duties as well, in a limited way.

Most Knife Gate Valve applications involve relatively low pressures (typically 10 bar (150psi) or less). However, special designs are used upto 20 bar or even higher in some models. Knife Gate Valves, due to their simple construction, can handle temperature fluctuations that could seriously damage or hamper working of conventional valve designs.

It would be difficult to list the numerous applications that Knife Gate Valves are used for.

Following are some of the broad categories of media & applications that these valves generally handle:



## Waers liauids

## Liquids

Water and waste water

Raw water intake; Sewage; Steel mill waste water

Abrasive slurries

Slurries in mineral processing of Coal, Iron ore, Copper, Nickel, Gold, Platinum etc; Ash slurries in coal fired power plants; Gypsum; Rock phosphate slurry

Chemical slurries

Slurries in phosphoric acid/fertilizer plants

· High viscous media

Paper pulp, Molasses in sugar plants, Bitumen and other tarry media; Viscose rayon

### Solids/Powders

Silo isolation handling variety of powders
 ESP hoppers in coal fired power plants; Raw material and product storage in processing industries; Weighing systems; Foundries

Pneumatic conveying systems
 Cement, Polyester pellets, Fly ash, Detergent powders

High temperature solids
 Boiler bed ash, Carbon black powder

## Gases

High temperature gases
 Carbon black, Blast furnace gases

Media containing solid/powder material and gases
 Pulverized coal firing lines in Power plants, Carbon black, Blast furnace gases,
 Engine exhaust applications



		Typical Usage	sage		May	May be used	þ		seneral	Generally not used	sed		Gu	Va elect	);
						Valve	Valve model								
Applications					Bi-directiona	tional				Uni-di	Uni-directional			æ	
	710	740	752	755	760	770	780	930	940	950	955	096		080	
Blast furnace dust															
Bottom ash slurry															
Buried valve services															
Carbon Black															
Chemical slurries															
Coal firing lines-Boilers															
Coal slurry															
Copper tailings															
Detergent powders															
Dryer loading/discharge															
Flyash slurry															
General mining slurries															
Clean gases															
Hot & dirty gases - Carbon Black, boilers															
Iron ore slurry															
Magnetite slurry															
Massecuite/Molasses-Sugar mills															
Phosphoric acid slurry															
Pneumatic conveying															
Polymer chips															
Pulp stock- 4% to 10% consistency															
Pulp stock- upto 3% consistency															
Raw water intake															
Silo isolation-free flowing powders															
Silo isolation-stagnant column															
Slag slurry															
Toxic / hot gas handling															
Viscose rayon															
Waste water / sewage / mild sludges															
Water															
Weigh hoppers															

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	n L	٠ ج	Seat Metal/Soft	Metal/Soft	Metal/Soft	Metal/Soft	Metal	Metal	Metal/Soft	Metal	Metal/Soft	Soft	Soft	Soft	Soft	Soft	Soft	2011	Soft	on reques	Selection																						
	Size, mm	Size, inch	Н			$\dashv$	$\dashv$	$\dashv$	$\dashv$	-				+	+	+									Н	$\dashv$	3,	-		+	+	+		+						$\dashv$		railabh	lection
	Sizo		Cast Iron / Ductile Iron	Steel / Stainless Steel	Cast Iron / Ductile Iron	Ductile Iron	Ductile Iron	Ductile Iron	Steel / Stainless Steel	Steel / Stainless Steel	Steel / Stalliess Steel	Steel / Stainless Steel	Note: Higher pressure designs available on request. Please consult VAAS.	Se																													
			Model 930	931	940	950	952	955	096	970	930	931	940	950	952	900	980	981	985	730	752	752	752	755	755	755	760	270	780	/10	711	7.40	752	752	752	755	755	755	770	780	780	Note: /	

Model, Size,

VAAS uses a 40-segment order code system to identify their products with clarity and detail. The order code is built up of segments in the sequence shown below. Example: 0300, FIG 950, WM, G1, S1-ST, S1-ST, C, S, CCGC3, MOH, PS, TS

VAAS Order code System

	Limit Switch / Prox Switch	Junction Box	Companion Flanges	Flange Fasteners	Flange Gaskets	Special Construction1	Special Construction2	Special Construction3	Painting	Testing	
Segment	31	32	33	34	35	36	37	38	39	40	
Level Description	Position Indicator	Solenoid Valve	Positioners	IP Convertor	Fail Safe System	Manual Spool Valve	Pneumatic Tubing	Speed Control Valve	Air Lock Relay	Air Filter Regulator	
Segment	21	22	23	24	25	26	27	28	29	30	
revel Description	Seat Leakage	Pressure Rating	Body Purges	Chest Purges	Deflection Cone	Actuator	Manual Override	Locking Device	Gate Guard / Bellows	Stem Guard / Cushioning	
Segment	11	12	13	14	15	16	17	18	19	20	
Level Description	Size	Model	Endstyle	Drilling	Body	Body Option	Gate	Gate Option	Seat Option	Packing Material	
Segment	_	2	က	4	5	9	7	80	6	10	

er code	Description	Order code
970	Drilled to suit sketch furnished / approved by customer	F15
980	Undrilled	F17
985	Drilled to suit ANSI 150 & 300 drilling on chest area	F21
	Drilled to suit IS:8329 TABLE 3 flanges	F28
	Drilled to suit ANSI 150,300& 600 drilling on chest area	F29
	Drilled to suit AS 2129 TABLE "F" flanges	F31
	Drilled to suit BS-4504 PN-6 flanges	F33
	Drilled to suit ANSI 150,300,600 & 900 drilling on chest area	F34
	Drilled to suit ANSI 300 lb flanges	F35
	Drilled to suit ANSI 600 lb flanges	F36
	Drilled to suit IS:1538 TABLE 6 flanges	F37
5	Drilled to suit IS 6392 TABLE 10 flanges	F38
	Drilled to suit SABS 1123 flanges	F39
	Drilled to suit IS6392 TABLE 11 flanges	F40
	5. Body Material	
	Cast iron	ਠ
	Alloy Cast iron with hardness of 250 BHN (Min)	AC
	Cast iron - IS 210 Gr FG 300	AC1
	Aluminium	⋖
	Ductile iron	IO
	Ni Resist Cast Iron	D2
	Carbon Steel (Cast (WCB) / Fabricated)	SS
	Cast 304 stainless steel; ASTM A351 CF8	S1
	ast 316 stainless steel; ASTM A351 CF8M	S2
	Cast 316 stainless steel; ASTM A351 CF3M	S2L
	Cast 317L stainless steel; ASTM A351 CG3M	S3L
	Cast 310 stainless steel; ASTM A351 CK20	S4
	Hastelloy-C22 or equivalent	SS
	Alloy 20	S6
	J4MCL	88
	6. Body Options	

Z

Description	Order code	Description	Order code	Description
1. Valve Size		FIG 970 Coal mill isolation valve	FIG 970	Drilled to s
2 inch (50 mm) to 60 inch (1500 mm) (All except model	<u>02</u> 00 to	FIG 980 Bonnetted two-lug knife gate valve	FIG 980	Undrilled
HG 960)	0009	FIG 985 Bonnetted full lug knife gate valve	FIG 985	Drilled to s
Length (Stroking dimension, inch- first two digits) & Width	eg.,0306=	3. Endstyle		Drilled to s
(inch, second two digits) (For FIG 960 valves only)	3in (80mm)	Wafer with threaded holes in lugs & chest area	>	Drilled to s
	x 6 in	(Not applicable for FIG752/FIG755/FIG930 valves)		Drilled to s
	(150mm),	Wafer with through holes in lugs & threaded holes	TW	Drilled to s
	nominal	in chest area (Not applicable for FIG780 valves)		Drilled to s
2. Model		Wafer with metric threaded holes in lugs & chest area	MM	Drilled to s
FIG 930 VERSA semi-lug uni-directional knife gate valve.		(Not applicable for FIG752/FIG755/FIG930 valves)		Drilled to s
EN-558 face-to-face	FIG 930	Wafer with through holes in lugs & metric threaded holes in		Drilled to s
EIG 930A semi-Ing uni-directional knife gate valve -	) ) ) ;	chest area (Not applicable for HG780 valves)	WTM	Drilled to s
MCC CD01 food to food	EIG 001	Wafer Square valve	W3	Drilled to s
INISO OF OF INCE-TO-TAKE	1000	Wafer Rectangular valve	W4	Drilled to s
FIG 940 full lug uni-directional knife gate valve	HG 940	UNC DRILLED HOLES AND TAPPED.	W5	5. Body Ma
FIG 950 semi-lug uni-directional knife gate valve	FIG 950	4. Drilling		Cast iron
FIG 952 Flanged uni-directional knife gate valve	FIG 952	Drilled to suit ANSI 150 (ANSI B16.5 class 150 (for size up		Allov Cast
FIG 955 Hopper Isolation uni-directional knife gate valve	FIG 955	to 600mm/24")/MSS-SP-44 (above 600mm/24") flandes.	Ш	Cast iron -
FIG 960 Square / Rectangular uni-directional knife gate valve	FIG 960	Drilled to suit DIN PN 10 flanges	G1	Aluminium
FIG 710 Slim Bi-directional valve (Drilling: ANSI 150,300,600lb)	FIG 710	Drilled to suit DIN PN 16 flanges	G2	Ductile iror
FIG 711 Slim Bi-directional valve		Drilled to suit BS 10 Table D flanges	H	Ni Resist C
(Drilling: ANSI 150,300,600 & 900lb)	FIG 711	Drilled to suit BS 10 Table E flanges	里	Carbon Ste
FIG 730 Bi-directional gate valve, semi-lug, single-piece body	FIG 730	Drilled to suit JIS 5 K flanges	OSC	Cast 304 s
FIG 730 Bi-directional gate valve, full lug, single-piece body	FIG 740	Drilled to suit JIS 10 K flanges	JS1	ast 316 sta
FIG 752 Bi-directional slurry valve	FIG 752	Drilled to suit 280MM PCD,8 HOLES,M12 TAPPED flanges	F1	Cast 316 s
FIG 752 Bi-directional slurry valve with polyurethane bore liner	FIG 755	Drilled to suit 410MM PCD,12 HOLES,M16 TAPPED flanges	F2	Cast 317L
FIG 760 Slurry-Max Bi-directional slurry valve	FIG 760	Drilled to suit BS 4504 PN10 flanges	F3	Cast 310 s
FIG 770 Ported gate valve	FIG 770	Drilled to suit IS6392 TABLE 17 flanges	F9	Hastelloy-(
FIG 780 0-port valve	FIG 780	Drilled to suit AS 2129 TABLE D flanges	F10	Alloy 20
FIG 780 0-port valve with dual gates	FIG 780D	Drilled to suit AS 2129 TABLE E flanges	F11	CD4IMCU, I
HG 780 O-port valve with steel reinforced elatomer seats	FIG 780S	Drilled to suit BS 4504 PN16 STANDARD flanges	F12	Nitrided

m	yale	liqu	lids

		5	1.0-20-011	Leakage @ 100
V-orfice; welded-on	>	Stainless steel 304 replaceable seat with EPDM 0-ring	RS-S1-E	flow direction (a
Seat bore stellited	STB	Stainless steel 316 replaceable seat with EPDM 0-ring	RS-S2-E	Max leakage of
Seat face & bore stellited	STF	Stainless steel 304 replaceable seat with VITON 0-ring	RS-S1-V	seats only
V-orifice; welded-on with bore face stellited	V-ST	Stainless steel 316 replaceable seat with VITON O-ring	RS-S2-V	As per MSS SP-
Welded-on 304 Stainless steel seat (applicable for CS body)	S1	Replaceable, Stainless steel 304 V-orifice	RS-S1-VP	No seat test dor
7. Gate Material		Replaceable, Stainless steel 316 V-orifice	RS-S2-VP	with M5 Packing
Stainless steel, 304	S1	Replaceable Alloy Cast Iron Seat	RS-AC	Leakage @ 300
Stainless steel, 316	S2	Replaceable Cast Iron (IS 210 Gr.FG 300) Seat	RS-AC1	when tested wit
Stainless steel, 316L	S2L	Nitrile with steel wire reinforcement	R080	(applicable for F
Stainless steel, 317	S3	Chloroprene with steel wire reinforcement	R016	12. Pressure R
Stainless steel, 317L	S3L	EPDM with steel wire reinforcement	R066	900 Series with
Stainless steel, 310	S4	Chloroprene rubber sleeve	RS-SL-RS16	Rating - CWP- 2
Hastelloy C (B4)	SS	Natural rubber sleeve	RS-SL-RS53	Rating - CWP- 3
Alloy 20 (B10)	Se	EPDM rubber sleeve	RS-SL-RS66	Rating - CWP- {
Stainless steel, 410	S7	10. Packing Options		Rating - CWP-
Stainless steel, 904L	S8	Oil impregnated yarn; max. temperature-120 deg C	В	Rating - CWP-
Carbon Steel	SS	232 deg C	O	Rating - CWP-
Ni-Resist Cast Iron	D2	Copper wiper	<b>*</b>	Rating - CWP- 2
8. Gate Options		PTFE impregnated syntex fiber; max temperature -		13. Body Purge:
Nitrided	Z	232 dea C with copper wiper laver	CW	Purge connection
Edge Stellited	ST	PTEF impregnated syntex fiber: max temperature -		plug; 2 nos (5&
Hard Chrome Plated	НС9		0,4/0	Purge connection
9. Seat Options		ī p.	7	9,6) son 6;3,6
Replaceable; Chloroprene	RS16	nax temperature -		Purge connection
Replaceable; NBR	RS26	232 deg C with nitrile quad layer	CWQ1	plug; 2 nos (5&
Replaceable; EPDM	RS66	PTFE impregnated syntex fiber; max temperature -		Purge connection
Replaceable; Nitrile	RS69	232 deg C with copper wiper layer & nitrile quad layer	CQ	plug; 3 nos (3,6
Replaceable; OFF WHITE VITON	RS58	PTFE impregnated syntex fiber; max temperature -		Purge connection
Replaceable; Viton	RS48	232 deg C with copper wiper layer & nitrile quad layer	CQ1	plug; 2 nos (5&
Replaceable, PTFE with 316 st. steel back-up ring		Pure PTFE; Max.temp. 232 Deg C; Max. pressure 150 psi	_	Purge connection
(for sizes above 200mm)	RS75	Inmarco style 126S pcking; Max.temp. 1000 Deg C	M15	plug; 3 nos (3,6
Replaceable, PTFE; solid PTFE ring (for sizes upto 150mm)	RS76	Inmarco style 126S pcking; Max.temp. 1000 Deg C with		Purge connection
	RS80		M15W	plug; 2 nos (5&
Viton with steel reinforcement Series 752 / 755 valves only	RS85	PTFE synth. Fiber with one Nitrile quad seal with		Purge connection
Replaceable Stainless steel 304 with stellited face Replaceable Stainless steel 316 with stellited face	RS-S1-S1 RS-S2-ST	Polyurethane scrapper IG752/FIG755 Moldels only	cas	plug; 3 nos (3,6 Purge connectic
Replaceable Stainless steel 304 with stellited face with		11. Seat Leakage		plua: 2 nos (58
EPDM O-ring	RS-S1T-E	As per MSS SP-81 for metal seated valves	Σ	1
	5	As ner ANSI Class I	>	

Leakage @ 100 cc/min when tested with 40 psi water at normal	
flow direction (applicable for std valves with lapping)	Ш
Max leakage of 4cc/min/inch size of valve- for valves with PTFE	
seats only	×
As per MSS SP-81 for soft seated valves	Z
No seat test done (for all square, rectangular & valves	
with M5 Packing)	z
Leakage @ 300cc/min or 2.25 LPM whichever is high,	
when tested with 40 psi water at normal flow direction	
(applicable for Fig 930 metal seated valves)	9
12. Pressure Rating	
900 Series with standard rating	No code
Rating - CWP- 2 bar	CWP-2
Rating - CWP- 3 bar	CWP-3
Rating - CWP- 5 bar	CWP-5
Rating - CWP- 7 bar	CWP-7
Rating - CWP- 10 bar	CWP-10
Rating - CWP- 16 bar	CWP-16
Rating - CWP- 20 bar	CWP-20
13. Body Purges	
Purge connections on valve body; NPT(M) connections with	
plug; 2 nos (5&7 0' Clock position); Size - 1/4"	P11
Purge connections on valve body; NPT(M) connections with	
plug; 3 nos (3,6 & 9 O' Clock position); Size - 1/4"	P21
Purge connections on valve body; NPT(M) connections with	
plug; 2 nos (5&7 0' Clock position); Size - 3/8"	P12
Purge connections on valve body; NPT(M) connections with	
plug; 3 nos (3,6 & 9 0' Clock position); Size - 3/8"	P22
Purge connections on valve body; NPT(M) connections with	
plug; 2 nos (5&7 O' Clock position); Size - 1/4"	P13
Purge connections on valve body; NPT(M) connections with	
plug; 3 nos (3,6 & 9 0' Clock position); Size - 1/2"	P23
Purge connections on valve body; NPT(M) connections with	
plug; 2 nos (5&7 0' Clock position); Size - 1/2"	P15
Purge connections on valve body; NPT(M) connections with	
plug; 3 nos (3,6 & 9 0' Clock position); Size - 1"	P25
Purge connections on valve body; NPT(M) connections with	
plug; 2 nos (5&7 0' Clock position); Size - 1"	P35



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# VAAS

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Description	Order code	Description	Order code	<b>Description</b> Ord	Order code
14. Chest Purges		Pneumatic double-acting cylinder actuator, FRP cylinder tube,		22. Solenoid Valve	
Purge connections on valve body; NPT(M) connections with		PTFE+nitrile+polyurethane seals; x inch diameter cylinder -		23. Positioners	
plug; 2 nos on either side of chest; Size - 1/4"	C21	for Series 700 valves tube	RCGCx	24. Ip Convertor	
Purge connections on valve body; NPT(M) connections with		Pneumatic double-acting cylinder actuator, Steel cylinder tube,		25. Fail Safe System	
plug; 2 nos on either side of chest; Size - 3/8"	C22	PTFE+nitrile+polyurethane seals, x inch diameter cylinder -		Capacity tank fail safe system-FAIL CLOSED	FSC
Purge connections on valve body; NPT(M) connections with		for Series 700 valves tube	RCMCx	Capacity tank fail safe system-FAIL OPEN	FSO
plug; 2 nos on either side of chest; Size - 1/2"	C23	Pneumatic double-acting cylinder actuator, Steel cylinder tube,		26. Manual Spool Valve	
Purge connections on valve body; NPT(M) connections with		PTFE+viton seals, x inch diameter cylinder- for Series		27. Pneumatic Tubing	
plug; 2 nos on either side of chest; Size - 1"	C25	700 valves	RCMCxV	28. Speed Control Valve	
Purge connections on valve body; NPT(M) connections with		Enclosed bevel gear hand wheel, Model Gx, ISO -		29. Air Lock Relay	
plug; 2 nos on face of chest; Size - 1"	CF25	F10 mounting	CEGx-F10	30. Air Filter Regulator	
15. Deflection Cone		Enclosed bevel gear hand wheel, Model Gx, ISO -		31. Limit Switch / Prox Switch	
Deflection cone, cast n-hard	DC1	F14 mounting	CEGx-F14	32. Junction Box	
Deflection cone, polyurethane	DC2	Electric actuator, On/off duty, Model Rotork India		33. Companion Flanges	
Deflection cone, cast n-hard with Aramid gasket	DC11	K30F10A-WD1000 K30F10A	WD1000	34. Flange Fasteners	
Deflection cone, 304 stainless steel	DCS1	17. Manual Override		35. Flange Gaskets	
Deflection cone, 316 stainless steel	DCS2	Manual override; direct mounted rising stem hand wheel	МОН	36. Special Construction1	
16. Actuator		Manual override; bevel gear rising stem hand wheel	MOG	37. Special Construction2	
Direct mounted hand wheel, non-rising; rising stem	СНС	Manual override; enclosed bevel gear rising stem hand wheel;		38. Special Construction3	
Direct mounted hand wheel, non-rising; non-rising stem	CRG	model G01	MO-EG01-F10	39. Painting	
Lever	CLG	Manual override; enclosed bevel gear rising stem hand wheel;		VAAS standard paint - Phirozi blue epoxy on non-stainless steel	
Chain wheel	CWG	model G02	M0-EG02-F14	exteriors (RAL 5012)	PS
Open bevel gear hand wheel; rising stem	caa	Manual override; direct mounted rising stem chain wheel	CWG	As per customers order/ drg /approved specification details	PC
Open bevel gear hand wheel; rising stem	CGG2	18. Locking Device		Heat resistant aluminium paint, coating thickness	P1
Pneumatic double-acting cylinder actuator, Aluminium		Locking device; chain type	LK1	RILSAN coated body- inside and outside	PE4
cylinder tube, PTFE+nitrile+polyurethane seals; x inch		Locking device; special yoke with pin	LK2	40. Testing	
diameter cylinder - for Series 900 valves	CAACx	Locking device; lock for handwheel locking	LK3	VAAS standard pre-dispatch inspection	TS
Pneumatic double-acting cylinder actuator, FRP cylinder tube,		19. Gate Guard/bellows		VAAS standard pre-dispatch inspection with customer witness	TC
PTFE+nitrile+polyurethane seals, x inch diameter cylinder -		Gate guard	GG1		
for Series 900 valves	CCGCx	Gate guard with holes	662		
Pneumatic double-acting cylinder actuator, Steel cylinder tube,		Gate cover; steel	gc		
PTFE+nitrile+polyurethane seals, x inch diameter cylinder -		Bellows for piston rod protection; canvas bellows	CBEL		
for Series 900 valves	CCMCx	Bellows for piston rod protection; leather bellows	LBEL		
Pneumatic double-acting cylinder actuator, Steel cylinder tube,		20. Stem Guard / Cushioning			
PTFE+viton seals; x inch diameter cylinder -		21. Position Indicator			
for Series 900 valves	CCMCxV				