

INDUSTRY'S CHOICE FOR SERVICE & QUALITY

35 Teal Avenue, Stoney Creek, Ontario, Canada L8E 3B1 Phone 905 662-7711 Fax 905 662-8825

North Port Valves



Sizes from 24"-48" **NPV Large Diameter Uni-Directional** and Bi-Directional Valve



NPV Bi-Directional Valve Non Rise Stem



NPV O-Port Thru Gate Valve Man Safe Double Block and Bleed







NPV Pneumatic Cylinders



NPV Round x Round Flange Scavenger Valve



NPV Round x Square Flange Scavenger Valve



Duco Round x Round Flange Scavenger Valve

NPV Unidirectional Valve

Features and Benefits :

- 1. NPV Unidirectional casting provides for full guiding of gate throughout the cycle which prevents any gate distortion even in the event of a back pressure
- Guiding of gate in body casting also extends cycle life of packing material
- 3. Leakage rate with metal to metal seats on water is Class 4 in preferred direction
- 4. Leakage rate with elastomer seats on water is bubble tight shutoff in preferred direction
- 5. NPV Unidirectional valves can be supplied with Stainless Steel mechanical lockout bar or cylinder lockout bar
- 6. NPV valves are manufactured to be easily adapted for cylinder operation without need for additional mounting accessories. Allows for convenient field mounting, when necessary
- 7. Valve is manufactured of Stainless Steel components to prevent damaging corrosion, both internal and external
- 8. Unidirectional valves available from 2"-48" diameter, both metal and elastomer seated.

NOTE: All Unidirectional valves must have pressure behind the gate upon closing for proper sealing





Manual lockout

REPLACEABLE SEAT CARTRIDGES:



POLYURETHANE



V-NOTCH

DUFRENE AND COMPANY, LLC EXCLUSIVE AGENT/NORTH PORT VALVES

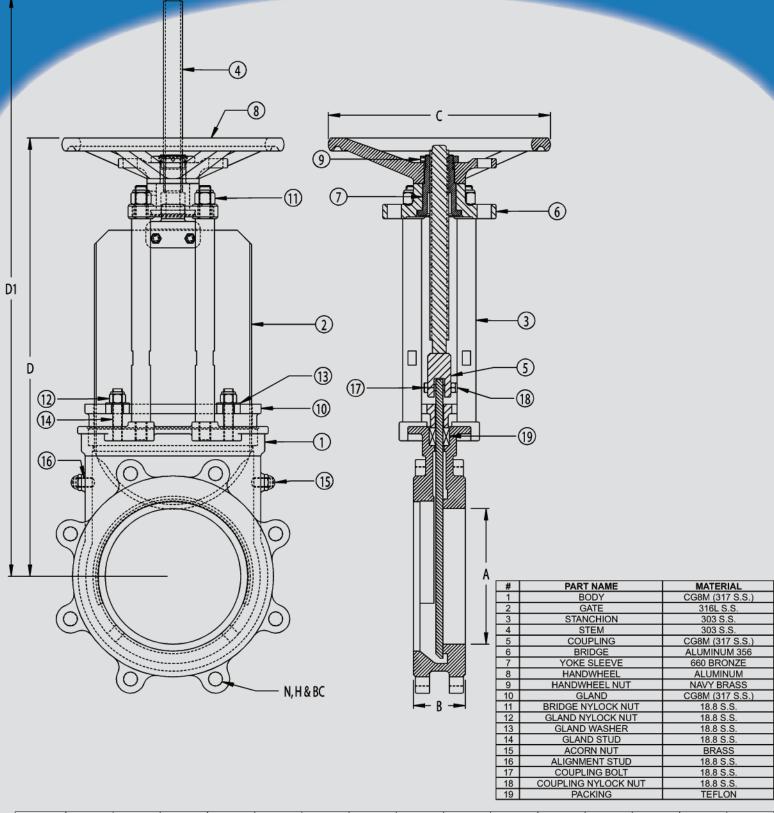
BRIAN M. DUFRENE

VICE PRESIDENT/BUSINESS DEVELOPMENT

CELL: 225-938-5025 brian@dufrenevalve.com OFC: 225-753-5006 FAX: 225-753-8828 sales@dufrenevalve.com

- 1. Low density stock
- 2. Moderate slurries
- 3. Water applications with elastomer seal

NPV Undirectional Valve



	2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	30"	36"
Α	2"	3"	3 3/4"	4 7/8"	5 3/4"	7 5/8"	9 1/2"	11 1/8"	13 3/16"	15 35/64"	17 7/16"	19 11/32"	23"	28 5/16"	33 1/2"
В	1 7/8"	2"	2"	2 1/4"	2 1/4"	2 3/4"	2 3/4"	3"	3"	3 1/2"	3 1/2"	4 1/2"	4 1/2"	4 1/2"	5"
N(HOLES)	4	4	8	8	8	8	12	12	12	16	16	20	20	28	32
H(TAP)	5/8" - 11	5/8" - 11	5/8" - 11	3/4" - 10	3/4" - 10	3/4" - 10	7/8" - 9	7/8" - 9	1" - 8	1" - 8	1 1/8" - 7	1 1/8" - 7	1 1/4" - 7	1 1/4" - 7	1 1/2" - 7
BC	4 3/4"	6"	7 1/2"	8 1/2"	9 1/2"	11 3/4"	14 1/4"	17"	18 3/4"	21 1/4"	22 3/4"	25"	29 1/2"	36"	42 3/4"
С	7 1/2"	7 1/2"	7 1/2"	9"	9"	11 3/4"	11 3/4"	15 3/4"	15 3/4"	15 3/4"	20"	20"	23 5/8"	26 3/4"	31 1/2"
D	11 5/8"	13 1/2"	15"	17"	18 1/4"	23"	28"	31 7/8"	36 7/8"	44 1/2"	48 1/4"	53 7/8"	61"	72 1/2"	90"
D1	14 3/4"	17 1/8"	19"	22 3/8"	23 1/2"	30 5/8"	37 1/2"	43 7/8"	50 5/8"	60 1/2"	66"	73 5/8"	84 3/4"	106"	129"
WGT.	21	27	32	38	48	86	120	164	228	390	438	630	960	1390	1820

NPV Bidirectional Valve

Features and Benefits :

- Designed to perform in applications where the industry has been using more expensive perimeter seated high performance knife gate valves
- 2. Use of replaceable metal seat cartridge with viton elastomer L-seal eliminates integral seated o-rings coming loose and getting into the flow stream possibly causing major damage to equipment and paper products.
- Precision machined cast lugs in the body guarantee bidirectional shut off and assures bubble tight shut off when using elastomer seat
- Internal square body design and square gate prevents build up of solids and dewatering of pulp stock
- Non-rise stem eliminates safety hazard and improves vibration resistance of valve topworks
- Full flange body design resists adverse effects of pipe stresses
- Topworks, bolting, packing gland, body and gate are all Stainless Steel construction preventing internal and external corrosion
- 8. Stainless Steel Nylock nuts guarantee positive tightness even under high vibration
- All standard valves are manufactured of 317SS bodies with 316L SS chromed gates. In addition we offer carbon steel, ductile iron, Alloy 20, 254 SMO, Hastelloy, Titanium, etc.
- 10. Sizes: 3"- 42"

Covers 98% of knife gate valve applications





Heavy duty cast handwheel with lockout bar simplifies lockout procedure

Beveled gate edge assists in removing any solid material that may plug in lower section of valve body



Bidirectional bubble tight shut off with elastomer seat allows for installation in either direction

REPLACEABLE SEAT CARTRIDGE



L-seal viton elastomer

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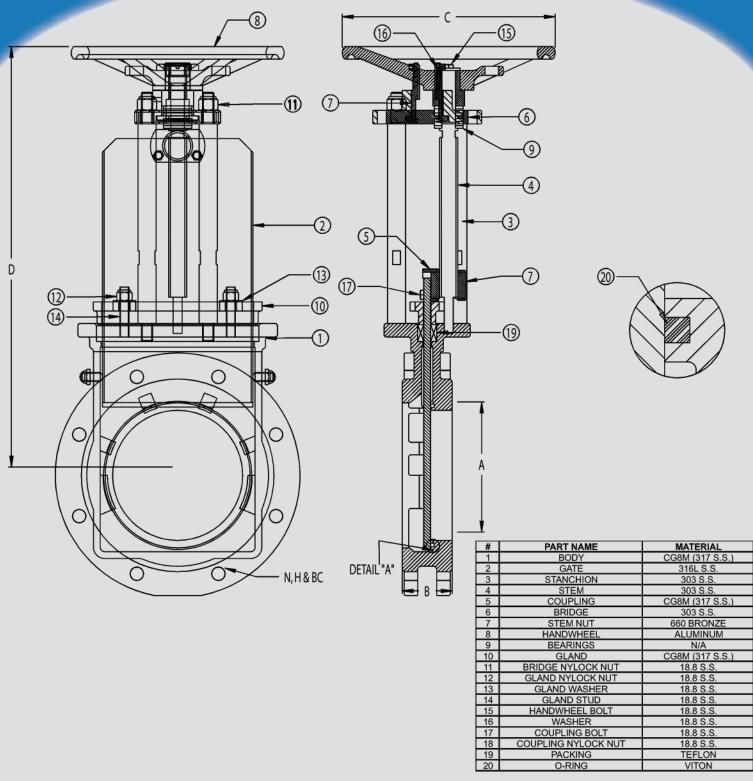
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- Pulp and Paper pulp stock (High and low density), black liquor, white liquor, white water, lime mud slurries, refiner isolation, water and waste treatment
- 2. Power fly ash, wet ash, lime slurry scrubbers, pulverizers
- 3. Others plastics manufacturers, cement manufacturers, water treatment and waste treatment facilities
- 4. Some scavenger applications

NPV Bidirectional Valve

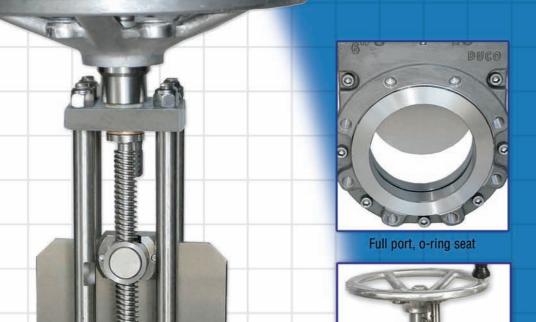


	2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	30"	36"
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В	1 7/8"	2"	2"	2 1/4"	2 1/4"	2 3/4"	2 3/4"	3"	3"	3 1/2"	3 1/2"	4 1/2"	4 1/2"	4 1/2"	5"
N(HOLES)	4	4	8	8	8	8	12	12	12	16	16	20	20	28	32
H(TAP)	5/8" - 11	5/8" - 11	5/8" - 11	3/4" - 10	3/4" - 10	3/4" - 10	7/8" - 9	7/8" - 9	1" - 8	1" - 8	1 1/8" - 7	1 1/8" - 7	1 1/4" - 7	1 1/4" - 7	1 1/2" - 7
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С	7 1/2"	7 1/2"	7 1/2"	9"	9"	11 3/4"	11 3/4"	15 3/4"	15 3/4"	15 3/4"	20"	20"	23 5/8"	26 3/4"	31 1/2"
D	11 5/8"	13 1/2"	15"	17"	18 1/4"	23"	28"	31 7/8"	36 7/8"	44 1/2"	48 1/4"	53 7/8"	61"	72 1/2"	90"

DUCO Bidirectional Perimeter Seated Full Port Cavity Free Design

Features and Benefits:

- Perimeter o-ring seat guarantees bidirectional bubble tight shutoff
- O-ring is mechanically retained between body halves preventing any movement during cycles assuring bubble tight shutoff
- Full port cavity free body design can easily handle slurries, powders, plastics and other solids handling applications
- Body halves serve as scraper blades for gate preventing excessive solid materials from entering packing area
- 5. Two-piece body design simplifies repair/replacement of gate, packing and seat ring
- Non-rise stem design eliminates potential safety hazard caused by rising stem valves and performs better in high vibration areas
- 7. All external valve components stanchions, bolting, bridge, stem, clevis, packing follower are of stainless steel construction which minimizes external corrosion
- 8. Deep stuffing box along with our special live loaded packing (o-ring insert) ensures long term external gate seal
- DUCO design allows for flexibility of using o-ring seat or replaceable cartridge seats depending on nature of application



Manual lockout

REPLACEABLE SEAT CARTRIDGES:





L-SEAL







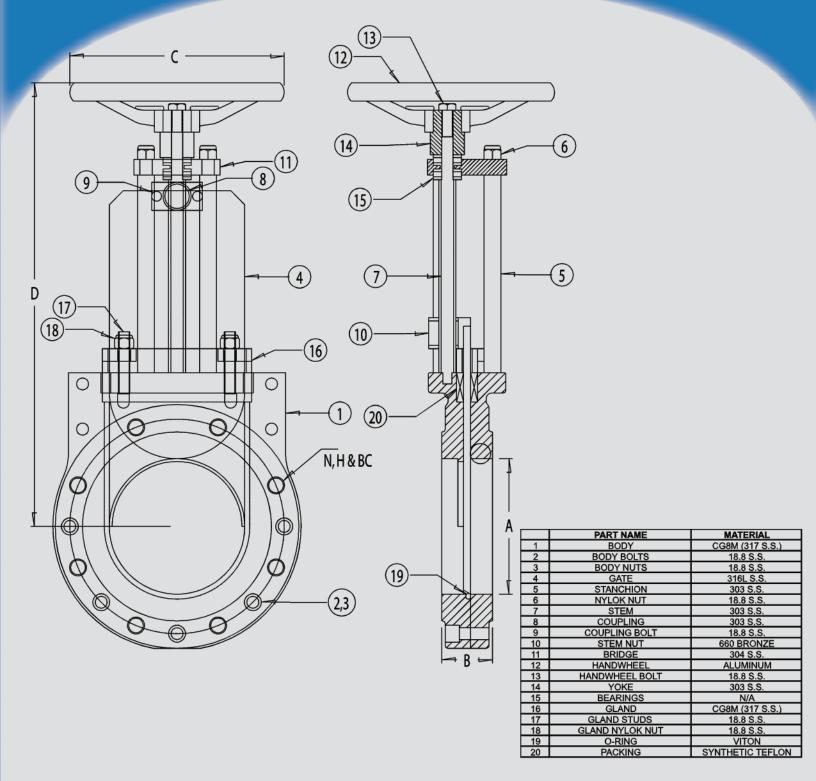
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- 1. All stock applications
- 2. Refiners for paper machines
- Green, black, and white liquor
- 4. Lime slurry, fly ash, powders, solids, etc.

DUCO Bidirectional Perimeter Seated Full Port Cavity Free Design



	3"	4"	6"	8"	10"	12"	14"	16"
Α	3"	4"	6"	8"	10"	12"	14"	16"
В	2"	2"	2 1/4"	2 3/4"	2 3/4"	3"	3"	3 1/2"
N(HOLES)	4	8	8	8	12	12	12	16
H(TAP)	5/8" - 11	5/8" - 11	3/4" - 10	3/4" - 10	7/8" - 9	7/8" - 9	1" - 8	1" - 8
ВС	6"	7 1/2"	9 1/2"	11 3/4"	14 1/4"	17"	18 3/4"	21 1/4"
С	7 1/2"	7 1/2"	9"	11 3/4"	11 3/4"	15 3/4"	15 3/4"	15 3/4"
D	15 1/2"	17"	20 1/4"	25"	30"	33 7/8"	36 7/8"	44 1/2"

NPV O-Port Thru Gate Valve Man Safe/Double Block and Bleed

Features and Benefits:

- 1. Thru gate, man safe/double block and bleed design used to replace "line blinds" reducing down time and maintenance hours and assuring work safe environment
- 2. Precision machining of body halves and close tolerances to gate eliminates solids build up between components ensuring proper cycling
- 3. Elastomer seated design eliminates pressure on packing in fully open and fully closed positions extending packing life
- 4. Equipped with hardened gate and cartridge seats, O-Port can be used in large scavenger applications for recycle pulper applications
- 5. Positive shutoff bidirectional valve in heavy stock applications eliminates dewatering
- 6. All components stanchions, bolting, bridge, stem, packing follower - of stainless steel construction which eliminates external corrosion
- 7. Stainless Steel lockout bar on every valve for quick and efficient lockout
- 8. Due to torque requirements of O-Port design, use of gear operator or NPV pneumatic cylinder is recommended above 12"



Fully closed valve showing double block and bleed ports

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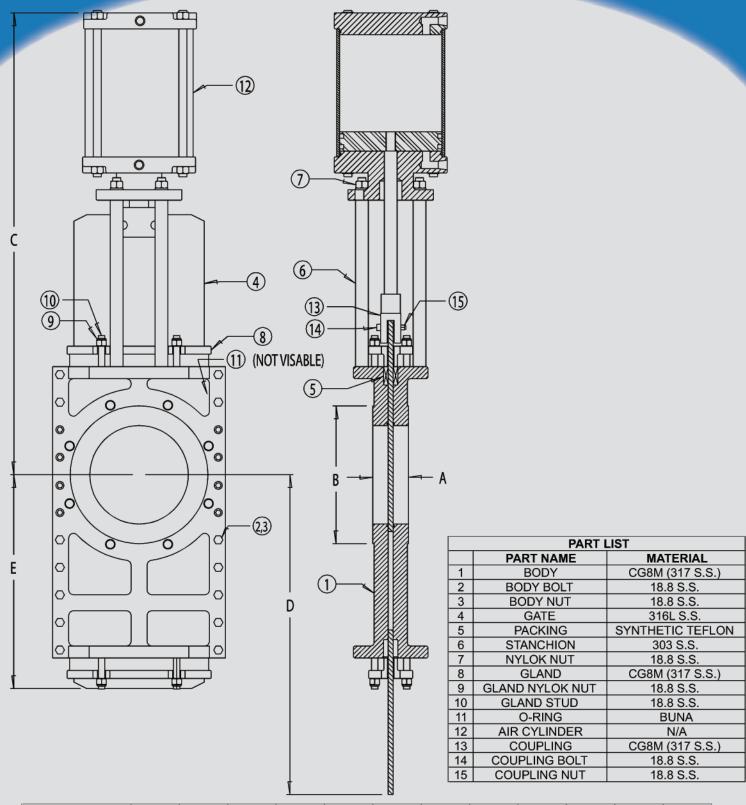
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- 1. Man safe, double block and bleed valve replaces need for line blind
- 2. High density stock isolation
- 3. Recycle paper pulper discharge

NPV O-Port Thru Gate Valve

Man Safe/Double Block and Bleed

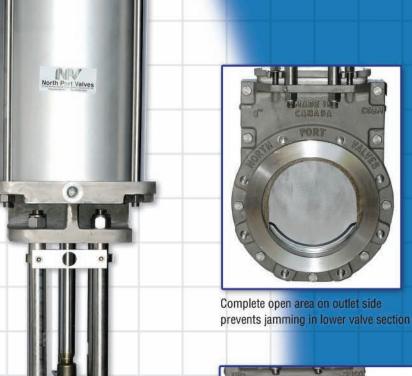


	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"	30"
Α	2	2	2.25	2.75	2.75	3	3	3.5	3.5	4.5	4.5	4.5
В	7.5	9	11	13.5	16	19	21	23.5	25	27.5	32	33.5
BOLT CIRCLE	6	7.5	9.5	11.8	14.3	17	18.8	21.3	22.8	25	29.5	36
С	24	26	30	37	44	48.5	53.5	59.5	65.5	71	82	98.5
D	12	14	18	23	31	35	40	45	51	55	65	78
E	9	10	12	15	21	23	26	29	33	35	41	50

DUCO Scavenger Valve Round x Round Flange

Features and Benefits .

- 1. Currently used in over 50 recycle paper facilities in North America, proving to last 2-3 times the life of our competition
- 2. IVEX 600 hardened and chromed gate material for extended life in highly abrasive demanding applications
- 3. Stainless Steel hardened seat cartridge provides shearing, sealing, and protection of body from abrasive solids
- 4. Hardened lower guide ring reduces wear on lower body half and extends overall cycle life
- 5. Combination of gate profile and smoothness of body halves between 8 o'clock and 4 o'clock eliminates jamming and plugging of solids
- 6. Precision machined body halves act as scrapers to prevent foreign materials entering into the packing area
- 7. Two piece body design and factory replaceable/repairable wetted components make the DUCO valve repairable at a percentage of new valve cost
- 8. Topworks, including stanchions, limit switch brackets, lockout bar and clevis nut manufactured of Stainless Steel for corrosion resistance
- 9. NPV manufactured air cylinders meet the demanding requirements of recycle applications such as HD and MD cleaners
- 10. Available in 3"-24" allowing for use in a wide variety of recycle applications, such as hydrapurgers, detrashers and pulper discharge valves Inquire for larger sizes





Factory replaceable wetted components - seat cartridge, gate, and lower guide ring

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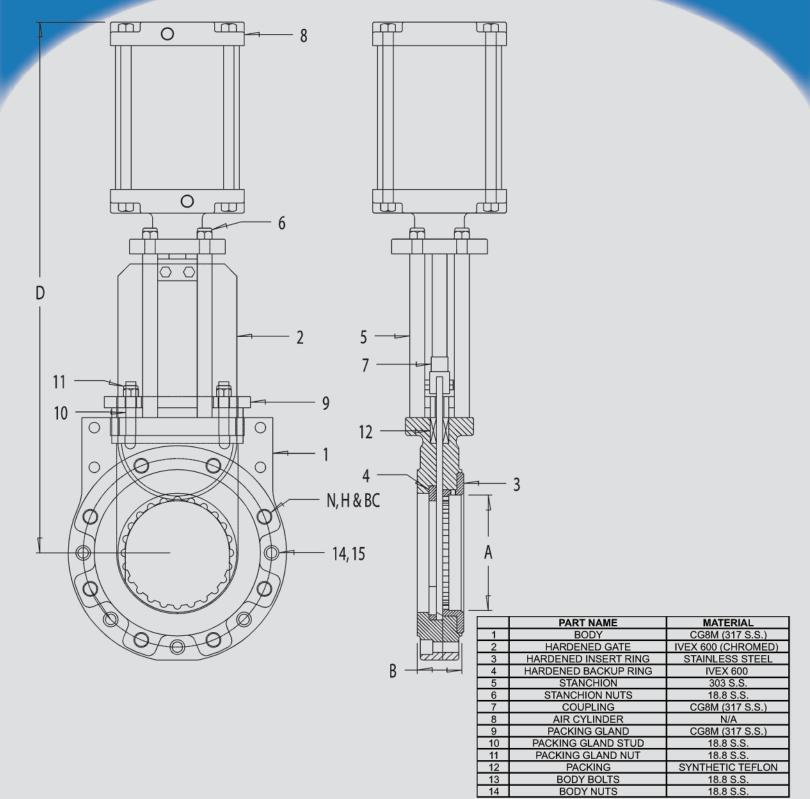
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- 1. Recycle Paper Mills HD cleaners, MD cleaners, detrashers, hydrapurgers, pulper rejects, etc.
- 2. Virgin Pulp Mills removal of rejects and knotters in heavy clone applications
- 3. In any reject system requiring high abrasion resistance and shearing and sealing capabilitiess

DUCO Scavenger Valve

Round x Round Flange



	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"
Α	3"	3 3/4"	5 3/4"	7 5/8"	9 1/2"	11 1/8"	13 3/16"	15 35/64"	17 7/16"	19 11/32"	23"
В	2"	2"	2 1/4"	2 3/4"	2 3/4"	3"	3"	3 1/2"	3 1/2"	4 1/2"	4 1/2"
N(HOLES)	4	8	8	8	12	12	12	16	16	20	20
H(TAP)	5/8" - 11	5/8" - 11	3/4" - 10	3/4" - 10	7/8" - 9	7/8" - 9	1" - 8	1" - 8	1 1/8" - 7	1 1/8" - 7	1 1/4" - 7
ВС	6"	7 1/2"	9 1/2"	11 3/4"	14 1/4"	17"	18 3/4"	21 1/4"	22 3/4"	25"	29 1/2"
D	22"	23 3/4"	29 3/4"	38 1/4"	46"	53 1/2"	62"	73 1/2"	80 1/2"	89 1/4"	105"

NPV Scavenger Valve Round x Square Flange Design

Features and Benefits:

- 1. Precision machining of 2-piece body and wetted parts prevents plugging or jamming of solid materials
- Cavity free design allows for removal of solids ensuring proper cycling of valve and contact of limit switches
- 3. Special heat treated and hardened materials for gate and seat cartridge reduce abrasive wear thereby extending cycle life
- NPV manufactured air cylinder designed for high cycles required in recycle scavenger applications
- Stainless Steel lockout bar and limit switch brackets are standard accessories with every cylinder operated valve
- 6. Two-piece valve design allows for complete factory repair to like new condition at a percentage of new valve price
- Round by Square design proven to work in newspaper, magazine, and general office type paper recycle facilities without plugging
- 8. Round by Square design is now available in 6", 8" and 10" diameters to fit existing round by square reject chambers





Square flanged full opening of outlet side



Beveled edged square gate, fully closed position, shows cavity free opening at bottom, preventing plugging

Inlet view showing round flange and replaceable cartridge seat ring

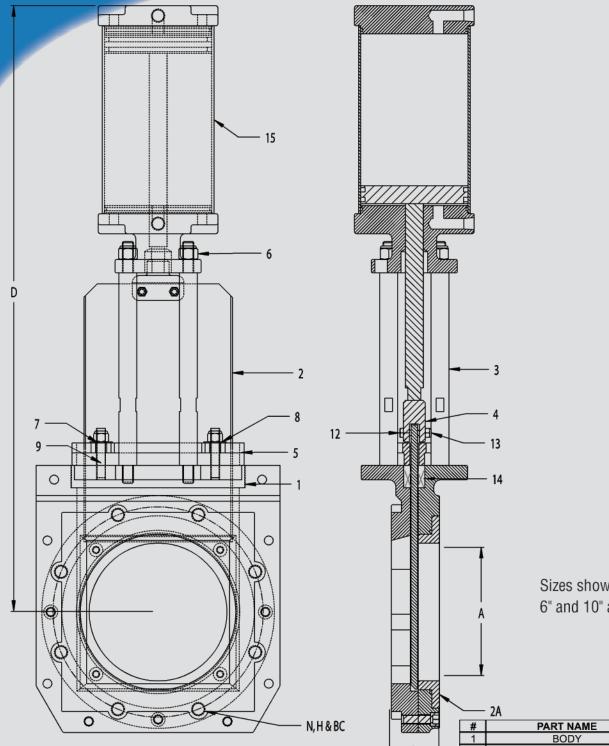
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- Recycle paper mill applications in HD and MD cleaners requiring round by square flanges
- 2. Knotter and reject applications in pulp mills
- Preferred in recycling of magazine, office and newsprint applications due to abundance of small staples.

NPV Scavenger Valve Round x Square Flange Design



Sizes shown for 8" valve only; 6" and 10" available on request

Α	7 5/8"
В	2 3/4"
N(HOLES)	8
H(TAP)	3/4" - 10
ВС	11 3/4"
D	34"

#	PART NAME	MATERIAL
1	BODY	CG8M (317 S.S.)
2	HARDENED GATE	STAINLESS STEEL
2A	HARDENED INSERT RING	STAINLESS STEEL
3	STANCHION	303 S.S.
4	COUPLING	CG8M (317 S.S.)
5	GLAND	CG8M (317 S.S.)
6	NYLOCK NUT	18.8 S.S.
7	GLAND NYLOCK NUT	18.8 S.S.
8	GLAND WASHER	18.8 S.S.
9	GLAND STUD	18.8 S.S.
12	COUPLING BOLT	18.8 S.S.
13	COUPLING NYLOCK NUT	18.8 S.S.
14	PACKING	TEFLON
15	AIR CYLINDER ASSEMBLY	N/A

NPV Pneumatic Cylinder

Features and Benefits:

- All cylinders manufactured by NPV to mount directly to our valves eliminating need for an adapter plate
- NPV cylinders manufactured of aluminum or composite housing means lighter weight and corrosion resistance
- 3. All cylinder operated valves supplied with Stainless Steel lockout bar and limit switch brackets
- Piston seal is an elastomer quad seal providing longer life and positive seal when compared to standard o-ring seal
- Cylinder stem seal is a U-cup design protected by scraper for longer life and positive sealing
- Length of lower cylinder bridge serves as guide for stem reducing any side torque extending seal life
- 7. When used on high cycle scavenger valves, extra precaution is taken to prevent stem and clevis coming apart by threading and pinning the connection
- 8. For all high cycle scavenger valves, clevis to gate connection is mechanically secured with set screws to prevent premature failure
- Cylinders are easily field repairable by replacing complete soft goods kit
- Due to light weight construction of all NPV cylinders and the strength of 4-post topworks, most installations do not require additional support



NPV cylinders: 5"-20" bore



Stainless Steel bar for cylinder lockout in open and closed position

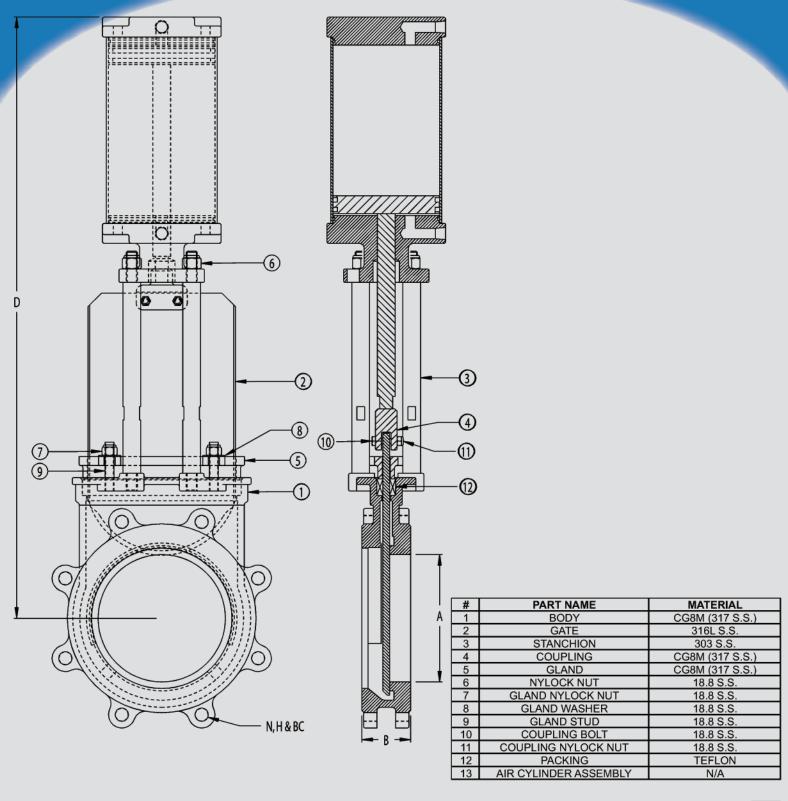
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NPV Pneumatic Cylinder



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Α	3"	3 3/4"	5 3/4"	7 5/8"	9 1/2"	11 1/8"	13 3/16"	15 35/64"	17 7/16"	19 11/32"	23"	28 5/16"
В	2"	2"	2 1/4"	2 3/4"	2 3/4"	3"	3"	3 1/2"	3 1/2"	4 1/2"	4 1/2"	4 1/2"
N(HOLES)	4	8	8	8	12	12	12	16	16	20	20	28
H(TAP)	5/8" - 11	5/8" - 11	3/4" - 10	3/4" - 10	7/8" - 9	7/8" - 9	1" - 8	1" - 8	1 1/8" - 7	1 1/8" - 7	1 1/4" - 7	1 1/4" - 7
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D	20 3/8"	22 1/4"	28 1/4"	34"	40"	47 1/2"	54 1/4"	63 3/4"	68 1/2"	75 3/4"	87"	105 1/4"

NORTH PORT VALVES, INC.

APPLICATION DATA SHEET

VALVE SIZE A	ACTUATION TYPE	_PLANT AIR SUPPLY							
ORIENTATION OF VALVE: VERTICAL, HORIZONTAL, OR OTHER									
SERVICE CONDITIONS	S: FLOW MEDIA	_TEMPERATURE							
	NORMAL LINE PRESSURE	MAX. LINE PRESSURE							
	PERCENTAGE OF SOLIDS	STOCK CONSISTENCY							
ABRASION: ZERO, LO	ABRASION: ZERO, LOW, MEDIUM, HIGH								
FREQUENCY OF CYCL	LES: PER MINUTE, HOUR, DAY, MONTH	H, ETC							
PURPOSE OF VALVE:	ON/OFFTHROTTLING/	CONTROL							
SHUT-OFF REQUIRED: UNIDIRECTIONAL, BIDIRECTIONAL, BUBBLE TIGHT, ZERO LEAKAGE									
SPECIAL REQUIREMENTS: LIMIT SWITCHES, SOLENOIDS, QUICK EXHAUST VALVES, PACKING MATERIAL, ETC.									



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