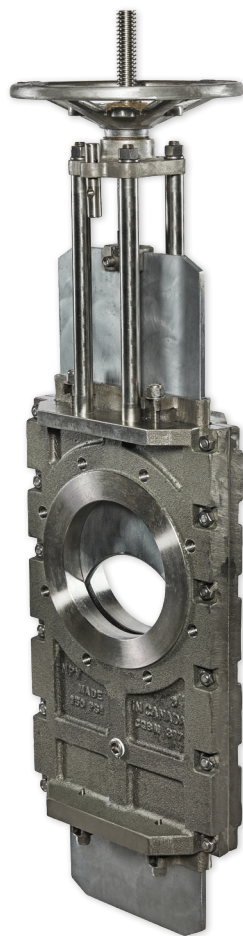
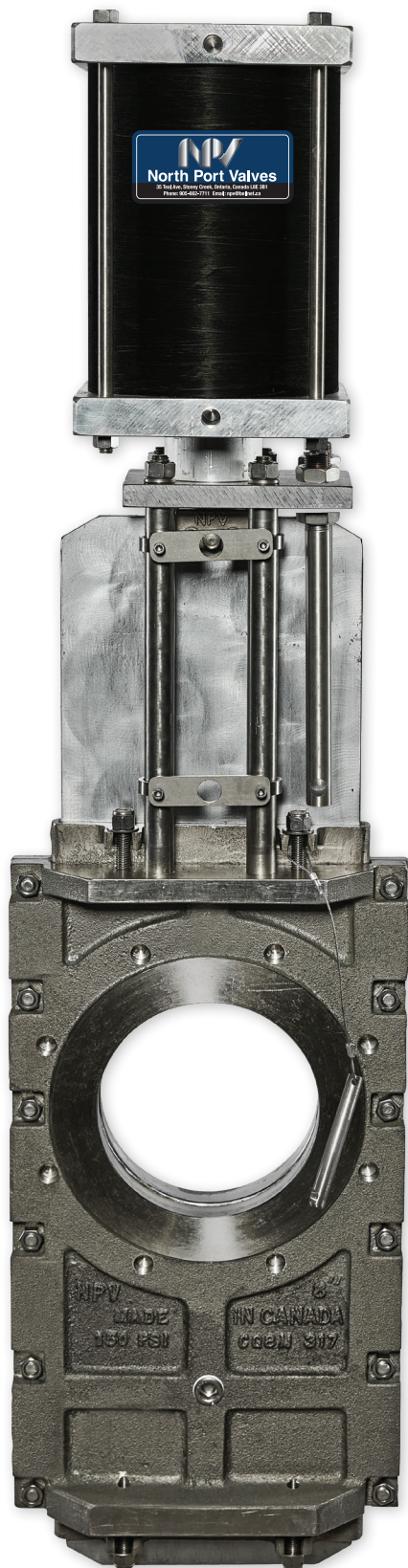


NPV O-PORT THRU GATE VALVE HEAVY SLURRY AND SCALING APPLICATIONS

SERIES
400



Valve with hand wheel

FEATURES AND BENEFITS

1. NPV O-Port design is generally used in heavy slurry and scaling applications
2. Electropolished gate with beveled edge port prevent buildup and allow for breaking through green and white liquor scaling
3. Precision machining of body halves and close tolerances to gate eliminates solids build up between components ensuring proper cycling
4. Internal elastomer seats on either side of the gate are completely out of media flow and are fully protected by the valve body halves
5. Elastomer seated design eliminates pressure on packing in fully open and fully closed positions extending packing life
6. Equipped with a hardened gate and serrated cartridges, the O-Port valve can be also be utilized in scavenger applications
7. Positive shutoff bidirectional valve in heavy stock applications eliminates dewatering
8. All components - stanchions, bolting, bridge, stem, packing follower - of stainless steel construction which eliminates external corrosion
9. Premium carbon packing included in all valves for black, white and green liquors
10. Stainless steel mechanical or manual lockout on every valve for quick and efficient lockout
11. Due to torque requirements of O-Port design, use of gear operator or NPV pneumatic cylinder is recommended above 12"
12. Bottom safety guards are available for valve installations in confined spaces
13. NPV O-Port available in sizes 3" - 30"

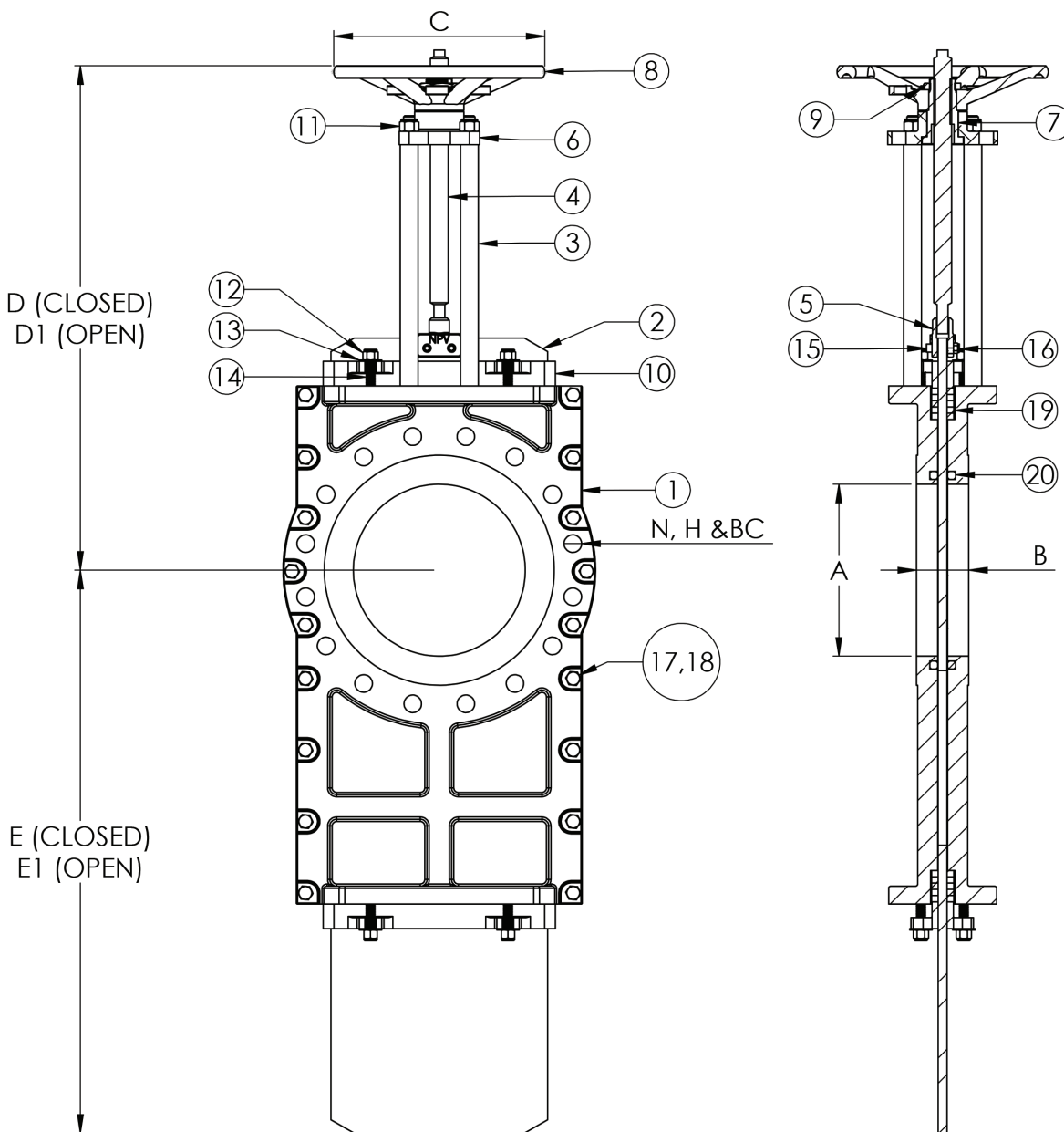


TYPICAL APPLICATIONS INCLUDE

1. High density pulp stock isolation
2. Black liquor and pulp stock
3. Concentrated black, liquor, solids up to 85%
4. For severe scaling applications: green liquor and white liquor

NPV O-PORT THRU GATE VALVE - HAND WHEEL OPERATED HEAVY SLURRY AND SCALING APPLICATIONS

SERIES 400

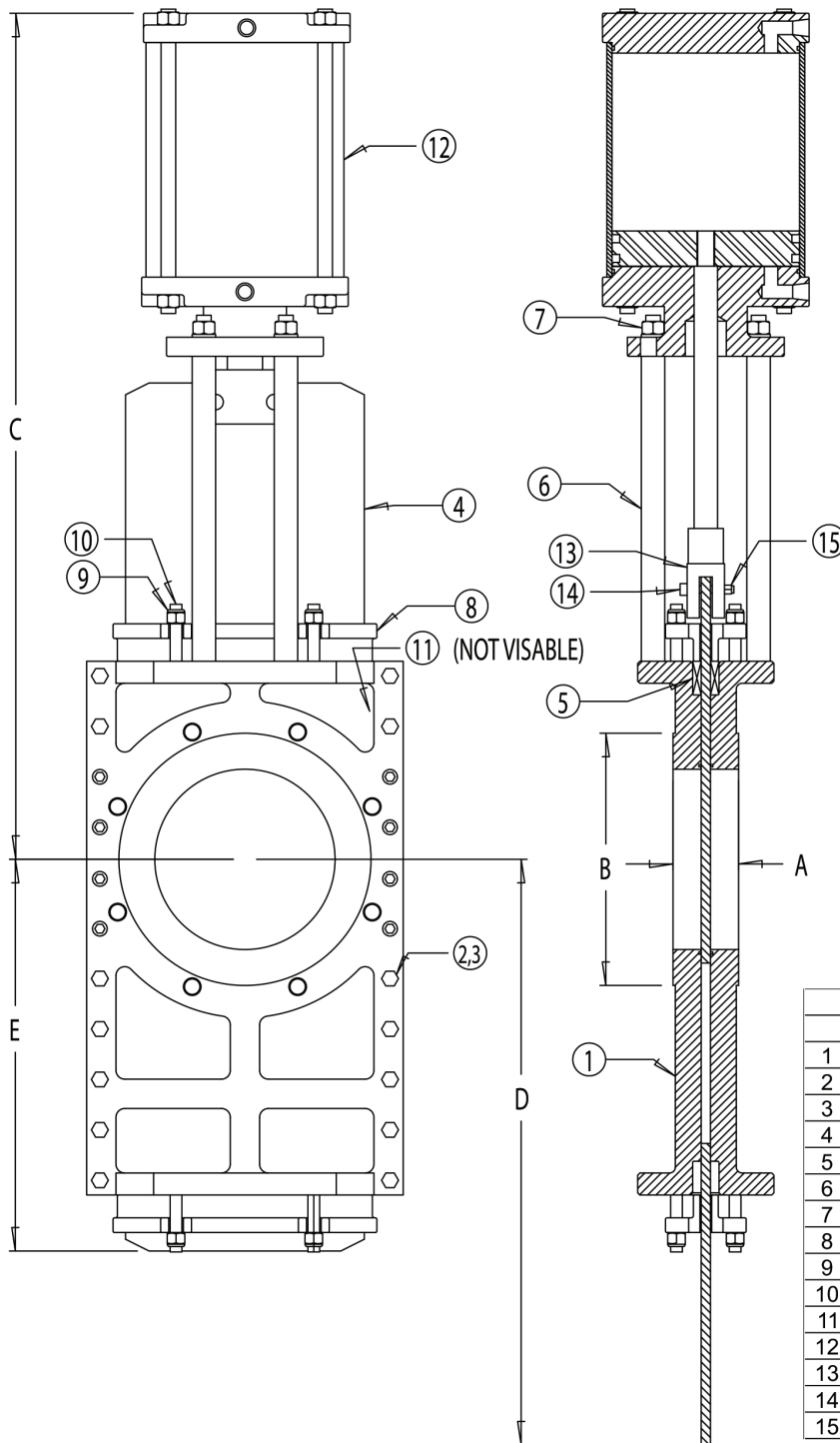


| | 3" | 4" | 6" | 8" | 10" | 12" | 14" | 16" | 18" | 20" | 24" | 30" |
|-----------------|-----------|-----------|-----------|-----------|----------|----------|----------|-----------|------------|------------|------------|------------|
| A | 3" | 3 3/4" | 5 3/4" | 7 5/8" | 9 1/2" | 11 1/8" | 13 3/16" | 15 35/64" | 17 7/16" | 19 11/32" | 23" | 28 5/16" |
| B | 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 |
| BC | 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" | 36" |
| C | 7 1/2" | 7 1/2" | 9" | 11 3/4" | 11 3/4" | 15 3/4" | 15 3/4" | 15 3/4" | 20" | 20" | 23 5/8" | 26 3/4" |
| D | 18" | 19" | 22" | 26" | 31" | 33" | 26" | 40" | 44" | 47" | 54" | 70 1/2" |
| D1 | 21" | 23" | 28" | 34" | 41" | 45" | 50" | 56" | 62" | 67" | 78" | 94 1/2" |
| E | 12" | 14" | 18" | 23" | 31" | 35" | 40" | 45" | 51" | 55" | 65" | 78" |
| E1 | 9" | 10" | 12" | 15" | 21" | 23" | 26" | 29" | 33" | 35" | 41" | 50" |

| # | PART NAME | MATERIAL |
|----|---------------------|-----------------|
| 1 | BODY | CG8M (317 S.S.) |
| 2 | GATE | 316L S.S. |
| 3 | STANCHION | 303 S.S. |
| 4 | STEM | 303 S.S. |
| 5 | COUPLING | CG8M (317 S.S.) |
| 6 | BRIDGE | ALUMINUM 356 |
| 7 | YOKE SLEEVE | 660 BRONZE |
| 8 | HANDWHEEL | ALUMINUM |
| 9 | HANDWHEEL NUT | NAVY BRASS |
| 10 | GLAND | CG8M (317 S.S.) |
| 11 | NYLOCK NUT | 18.8 S.S. |
| 12 | GLAND NYLOCK NUT | 18.8 S.S. |
| 13 | GLAND WASHER | 18.8 S.S. |
| 14 | GLAND STUD | 18.8 S.S. |
| 15 | COUPLING BOLT | 18.8 S.S. |
| 16 | COUPLING NYLOCK NUT | 18.8 S.S. |
| 17 | BODY BOLTS | 18.8 S.S. |
| 18 | BODY NUTS | 18.8 S.S. |
| 19 | PACKING | TEFLON |
| 20 | O-RING | VITON |

NPV O-PORT THRU GATE VALVE - CYLINDER OPERATED HEAVY SLURRY AND SCALING APPLICATIONS

SERIES 400



| PART LIST | | |
|-----------|-----------------|--------------------|
| | PART NAME | MATERIAL |
| 1 | BODY | CG8M (317 S.S.) |
| 2 | BODY BOLT | 18.8 S.S. |
| 3 | BODY NUT | 18.8 S.S. |
| 4 | GATE | 316L S.S. |
| 5 | PACKING | SYNTHETIC (2-12PH) |
| 6 | STANCHION | 303 S.S. |
| 7 | NYLOK NUT | 18.8 S.S. |
| 8 | GLAND | CG8M (317 S.S.) |
| 9 | GLAND NYLOK NUT | 18.8 S.S. |
| 10 | GLAND STUD | 18.8 S.S. |
| 11 | O-RING | BUNA |
| 12 | AIR CYLINDER | N/A |
| 13 | COUPLING | CG8M (317 S.S.) |
| 14 | COUPLING BOLT | 18.8 S.S. |
| 15 | COUPLING NUT | 18.8 S.S. |

| | 3" | 4" | 6" | 8" | 10" | 12" | 14" | 16" | 18" | 20" | 24" | 30" |
|--------------------|-----|-----|------|------|------|------|------|------|------|------|------|------|
| A | 2 | 2 | 2.25 | 2.75 | 2.75 | 3 | 3 | 3.5 | 3.5 | 4.5 | 4.5 | 4.5 |
| B | 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 |
| C | 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 |