# CHESTERTON®

# 440 EXTERNAL SEAL

**FOR CORROSIVE AND OTHER SERVICES**

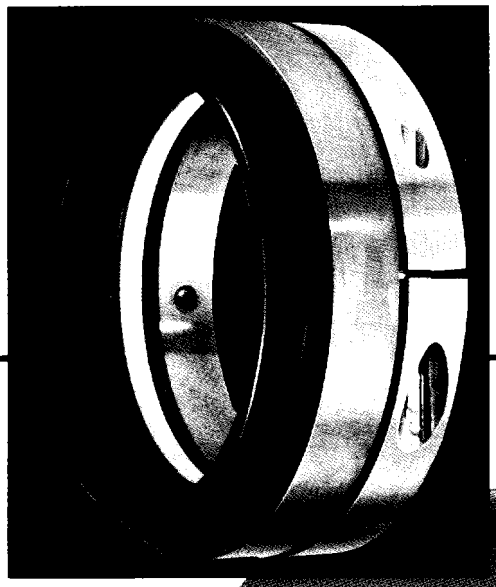
**LOW COST REPLACEMENT FOR SEALS MADE FROM EXOTIC OR EXPENSIVE MATERIALS**

**NO METAL PARTS TOUCH PUMPED FLUID**

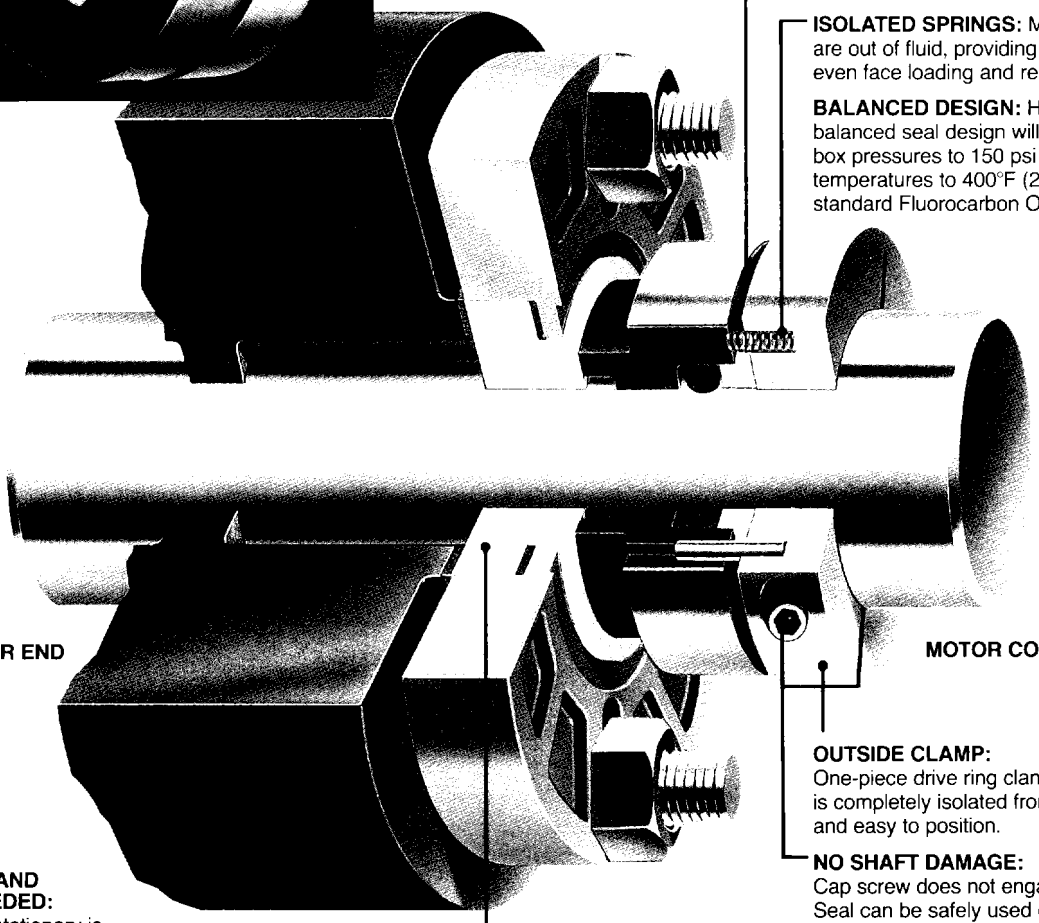
**PREVENTS DAMAGE TO GLASS-LINED PUMPS/SHAFTS**

**HYDRAULICALLY BALANCED**

**NO SLEEVE OR STEP NEEDED**



**Utilized as external component of CHESTERTON® 1210 Environmental Unit**



**VISUAL EXAMINATION:** Easily visible 1/16" (1,5 mm) spring gap assures proper installation dimensions for all size seals. Permits visual examination of face wear.

**ISOLATED SPRINGS:** Multiple springs are out of fluid, providing longer life, even face loading and reduced clogging.

**BALANCED DESIGN:** Hydraulically balanced seal design will take stuffing box pressures to 150 psi (10 BAR) — temperatures to 400°F (205°C) with standard Fluorocarbon O-rings.

**IMPELLER END**

**MOTOR COUPLING END**

**NEW GLAND NOT NEEDED:**
Ceramic stationary is lapped on both sides so it can be reversed for installation either way. L-shape eliminates need for special glands. Allows you to use your present gland in most cases. Either add shroud or use existing shroud over seal.

**OUTSIDE CLAMP:**
One-piece drive ring clamp is completely isolated from fluid and easy to position.

**NO SHAFT DAMAGE:**
Cap screw does not engage shaft. Seal can be safely used on ceramic, glass-lined or plastic pumps/shafts.

**ISOLATED METAL:** No metal comes in contact with the fluid.

# CHESTERTON 440 EXTERNAL SEAL TECHNICAL DATA

## Materials

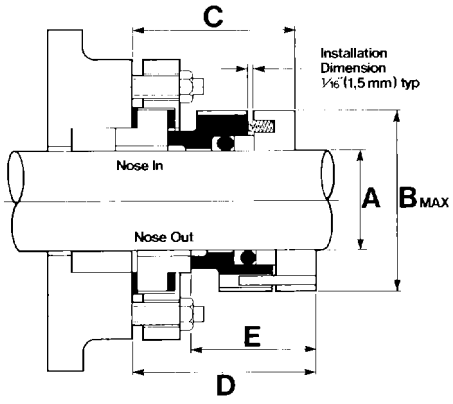
DRIVE RING: Type 316 Stainless Steel.
CAPSCREW: Type 316 Stainless Steel.
SPRINGS: Hastelloy C†.
O-RINGS:
Fluorocarbon (Viton* or Fluorel**) supplied as standard.
Ethylene Propylene (EP) supplied as spares.
Kalrez* or Chemraz*** available upon request.
ROTATING FACE:
Carbon. Alumina Ceramic and Teflon* available in limited sizes.

## Temperature

−20°F (−30°C) to 400°F (205°C) with Fluorocarbon.
−65°F (−55°C) to 300°F (150°C) with Ethylene Propylene.
−0°F (−18°C) to 500°F (260°C) with Kalrez.
−20°F (−30°C) to 450°F (230°C) with Chemraz.

## Pressure

28" (711 mm) Hg vacuum to 150 psi (10 BAR) maximum, depending upon shaft size and speed.




**ENGLISH — inch**

| A | Dash | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 15/16 | 7.5 | 1.937 | 1 15/16 | 2 3/16 | 1 1/2 | 317 |
| 1 | 8 | 2.000 | 1 15/16 | 2 3/16 | 1 1/2 | 318 |
| 1 1/8 | 9 | 2.125 | 1 15/16 | 2 3/16 | 1 1/2 | 320 |
| 1 1/4 | 10 | 2.250 | 1 15/16 | 2 3/16 | 1 1/2 | 322 |
| 1 3/8 | 11 | 2.375 | 1 15/16 | 2 3/16 | 1 1/2 | 324 |
| 1 7/16 | 11.5 | 2.500 | 1 15/16 | 2 3/16 | 1 1/2 | 325 |
| 1 1/2 | 12 | 2.500 | 1 15/16 | 2 3/16 | 1 1/2 | 325 |
| 1 5/8 | 13 | 2.625 | 1 15/16 | 2 3/16 | 1 1/2 | 326 |
| 1 3/4 | 14 | 2.750 | 1 15/16 | 2 3/16 | 1 1/2 | 327 |
| 1 7/8 | 15 | 2.875 | 1 15/16 | 2 3/16 | 1 1/2 | 328 |
| 2 | 16 | 3.000 | 1 15/16 | 2 3/16 | 1 1/2 | 329 |
| 2 1/8 | 17 | 3.125 | 1 15/16 | 2 3/16 | 1 1/2 | 330 |
| 2 1/4 | 18 | 3.250 | 1 15/16 | 2 3/16 | 1 1/2 | 331 |
| 2 3/8 | 19 | 3.375 | 1 15/16 | 2 3/16 | 1 1/2 | 332 |
| 2 1/2 | 20 | 3.500 | 1 15/16 | 2 3/16 | 1 1/2 | 333 |
| 2 5/8 | 21 | 3.625 | 1 15/16 | 2 3/16 | 1 1/2 | 334 |
| 2 3/4 | 22 | 3.850 | 2 7/16 | 2 11/16 | 1 5/8 | 335 |
| 2 7/8 | 23 | 3.980 | 2 7/16 | 2 11/16 | 1 5/8 | 336 |
| 3 | 24 | 4.110 | 2 7/16 | 2 11/16 | 1 5/8 | 337 |
| 3 1/8 | 25 | 4.230 | 2 7/16 | 2 11/16 | 1 5/8 | 338 |
| 3 1/4 | 26 | 4.360 | 2 7/16 | 2 11/16 | 1 5/8 | 339 |
| 3 3/8 | 27 | 4.480 | 2 7/16 | 2 11/16 | 1 5/8 | 340 |
| 3 1/2 | 28 | 4.610 | 2 7/16 | 2 11/16 | 1 5/8 | 341 |
| 3 5/8 | 29 | 4.730 | 2 7/16 | 2 11/16 | 1 5/8 | 342 |
| 3 3/4 | 30 | 4.860 | 2 7/16 | 2 11/16 | 1 5/8 | 343 |
| 3 7/8 | 31 | 4.980 | 2 7/16 | 2 11/16 | 1 5/8 | 344 |
| 4 | 32 | 5.110 | 2 7/16 | 2 11/16 | 1 5/8 | 345 |
| 4 1/8 | 33 | 5.230 | 2 7/16 | 2 11/16 | 1 5/8 | 346 |
| 4 1/4 | 34 | 5.360 | 2 7/16 | 2 11/16 | 1 5/8 | 347 |
| 4 3/8 | 35 | 5.480 | 2 7/16 | 2 11/16 | 1 5/8 | 348 |
| 4 1/2 | 36 | 5.610 | 2 7/16 | 2 11/16 | 1 5/8 | 349 |

**METRIC — millimeter**

| A | B | C | D | E | F |
|---|---|---|---|---|---|
| 24 | 49,2 | 49 | 55,5 | 38 | 317 |
| 25 | 50,8 | 49 | 55,5 | 38 | 318 |
| 28 | 54,0 | 49 | 55,5 | 38 | 320 |
| 30 | 57,2 | 49 | 55,5 | 38 | 321 |
| 32 | 57,2 | 49 | 55,5 | 38 | 322 |
| 35 | 60,3 | 49 | 55,5 | 38 | 324 |
| 38 | 63,5 | 49 | 55,5 | 38 | 325 |
| 40 | 66,7 | 49 | 55,5 | 38 | 326 |
| 42 | 69,9 | 49 | 55,5 | 38 | 326 |
| 45 | 69,9 | 49 | 55,5 | 38 | 327 |
| 48 | 73,0 | 49 | 55,5 | 38 | 328 |
| 50 | 76,2 | 49 | 55,5 | 38 | 329 |
| 55 | 79,4 | 49 | 55,5 | 38 | 331 |
| 60 | 85,7 | 49 | 55,5 | 38 | 332 |
| 65 | 92,1 | 49 | 55,5 | 38 | 334 |
| 70 | 98,0 | 62 | 68,5 | 41,5 | 335 |
| 75 | 104,4 | 62 | 68,5 | 41,5 | 337 |
| 80 | 108,2 | 62 | 68,5 | 41,5 | 338 |
| 85 | 113,8 | 62 | 68,5 | 41,5 | 340 |
| 90 | 118,1 | 62 | 68,5 | 41,5 | 342 |
| 95 | 123,4 | 62 | 68,5 | 41,5 | 343 |
| 100 | 128,3 | 62 | 68,5 | 41,5 | 345 |
| 110 | 139,2 | 62 | 68,5 | 41,5 | 348 |

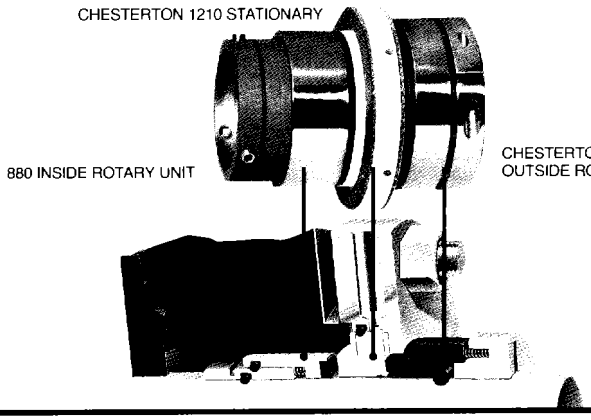
A — Shaft Size
B — Rotary Diameter
C — Distance to First Obstruction L-shape Nose In
D — Distance to First Obstruction L-shape Nose Out
E — Installed Length of Rotary
F — O-Ring

**NOTE**
When installing 440, L-shaped (nose in) and 478 gland, it is necessary to install stationary and gland, position 440 on shaft, *remove clips*, move 440 up to stationary, *set spring installation gap* 1/16" (1,5 mm) and tighten clamp to shaft.

*DuPont's Registered Trademark
**3M Co. Registered Trademark
***Greene, Tweed & Co. Registered Trademark
†Haynes International, Inc. Registered Trademark

## CHESTERTON 1210 ENVIRONMENTAL UNIT

The CHESTERTON 1210 stationary provides two sealing faces which can fit between CHESTERTON 880 and 440 Rotary Units. Varying barrier pressures, introduced through the 1210 unit, can shield environment from products, provide lubrication, and prevent resins or waxes from hardening during shutdowns. For paper stock pumps, the 440 Seal can operate as a stand-by, pre-installed seal in the event of primary seal wearout.





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