## WHEEL BEARING SEALS

Seals to keep grease in, and dirt out, aid bearing life and good housekeeping.



Straight Roller Bearing Seals. A flexible oil-resistant synthetic rubber lip is bonded to the inner circumference of a retaining washer. One such seal-washer is then press-fit into each end of the wheel hub in place of the standard retaining washer. Furnished at no extra cost if specified on Series SEC, EHD, CH, A, ES, FM, HS, WH and EC casters; slight extra cost on other caster series or on wheels only. Not available with 11/8" bearings. To order, add suffix -BS to catalog number.

**Tapered Roller Bearing Seals** are also available with most casters and wheels that offer ¾", 1" or 11¼" tapered bearings. Most often furnished is a snap-on steel case with a rubber lip that is securely clamped between the cone back face and shaft shoulder. The lip functions to prevent dirt and debris from entering the bearing cavity.(suffix **-DS**). For certain 11¼" and larger tapered bearings, Hamilton provides a rubber seal and spacer (suffix **-CRS**).

## THREAD GUARDS



Thread or string guards are fixed discs that fit over the wheel hub to prevent lint, etc. from clogging the axle or bearing. They are always installed in pairs, one on each side of the hub tightened between the spanner bushing and caster legs to prevent rotation. Hamilton offers two series of casters that come standard with thread guards—see pages 56 and 57.

Thread Guards are also available with most types of wheels listed in any series that shows them as an optional extra. To order, add suffix **-TG** to caster catalog number. (Lube type axles and drilled spanner bushings are always required when thread guards are specified with roller bearing wheels).

## **KEYWAYS**

Keyways for square keys can be machined on special order in most Hamilton wheels having semi-steel or forged steel hubs, the only limitation being the wall thickness (Dimension C) remaining between the bottom of the keyway and the outside of the hub diameter (Dimension A). We do not recommend machining keyways in aluminumcenter or Plastex Wheels; also, the hubs of Pneumatic, Semi-Pneumatic, and plastichub wheels do not have sufficient thickness for keyways.



When requesting keyways, be sure to specify bore size required (Dimension **B**) and keyway size (Dimension **W** designating width, and **D** designating depth). Should you not wish to specify keyway dimensions, the factory will be glad to recommend the size commonly used for the bore specified. Note that the keyway width will normally be twice the depth, since we are usually machining for square keys. The factory will not accept responsibility for machining keyways where the remaining hub wall (Dimension **C**) will be less than 1/4".

In the case of all-metal wheels, the face should be machined to ensure good concentricity. Resilient tread wheels with keyways will not, of course, provide the degree of concentricity achievable with the fullymachined metal wheel.

Because the use of keyed drive wheels generates more stresses than encountered in free-wheeling caster applications, our normal warranty does not apply. Vulcanized rubber and polyurethane treads are especially prone to shorter life expectancy, so we recommend reducing capacity ratings of these by 50%.

Set screws are also available with keyways. If one set screw is desired it will be placed over the keyway, and if two are desired one will be over the keyway and the other at 90°, unless otherwise specified. We do not supply keys or keyed shafts.

Wheels with keyways are designated by the suffix  $-\mathbf{K}$  after the catalog number.

### SEALED SWIVEL ASSEMBLIES



The main and secondary swivel bearing raceways of some Hamilton casters can be ordered with seals by adding the suffix **-SS** to the caster catalog number. Cold-forged Series MS (pg. 38), GS (pg. 39), 52 (pp. 40-41), WW (pg. 42), TG (pg. 56) and TX (pg. 57) can be sealed with special synthetic rubber rings fitted around the circumference of the raceways (illustrated).

Hot forged Series HS (pg. 33) is sealed by fitting a special quad ring around the horn base and using an integrally sealed secondary bearing; however, this arrangement is not available with the swivel lock option.



## SWIVEL LOCKS

Provides fingertip conversion of swivel caster to rigid caster for straight line steering control. Springloaded plunger housed beneath caster mounting plate positively engages slots milled in the swivel horn base. When retracted, plunger sits in a vertical notch in the housing to hold it clear of the swivel horn.



Available with 4-positions at 90° intervals (to order, add suffix **-4SL** to caster catalog number); or 2-positions at a 180° interval for steering in fore-and-aft direction only (to order, add suffix **-2SL** to caster catalog number). Can be furnished with Hamilton swivel casters as follows:

#### 2-Position

Series MD, MDD, PSD, EHD, CH, A, ES, FM (8" only), HS, WH, STA, 7000, 7200, 8000 (#8008/8010), and Dual Wheel MDD, EHD, or HS.

#### 4-Position

Series MD, MDD, PSD, EHD, CH, A, ES, FM (8" only), HS, WH, WHS, MS (6" only), 52, 7000, 7200, 8000 (various models), 4000 (#4208 only), and Dual-Wheel MDD, EHD2, or HS2.



**4-Position Field Installable** Exclusively designed for Series SEC and EC (pgs. 25, 36-37)

CASTER & WHEEL OPTIONS

# **HAMILTON**®

**Toe Brake.** This economical brake activates by pushing down the "toe-size" pedal which pinches the wheel between the caster legs. Available with Series HL and 300 swivel casters models (add suffix **-TB**).



**Combination Brake.** A complete caster series **(Series BC)** is dedicated to this brake type and can be found on page 51. The combination brake is activated by stepping down on the pedal locking both the swivel mechanism and the wheel simultaneously. (For a lighter duty combination brake alternative, refer to the 300 Series and **-LCB** option on pg. 44.)

Stainless Steel Contact Brake. Available exclusively on the STL Series -SSCB on page 55. The frame is solid stainless steel with a nylon pedal impervious to most chemicals and rated up to 421 degrees F. The brake is activated by stepping down on the pedal, locking the wheel in place.



Optional *Rap-A-Round* pedal extension provides convenient all-around accessibility. Available on InsTOEmatic Brake (suffix -IRB) and Side Foot Brake (suffix -FRB).

#### ★ = available **PRONTO**<sup>®</sup>!

$\mathbf{x} = a\mathbf{v}$	allable	
Series Abbrv.	Page Ref.	BRAKE OFFERINGS (SUFFIX)
MD	22	-HCB, -HB
MDD	23	-DHCB
PSD	24	-ZВ, -В
SEC	25	★-ZB
EHD	26-27	★-ZB (not ★ w/tapered bearings), -FCB, ★-IB, -IRB, (★-IB, -IRB NA with Precision BB), -B
СН	28	★-ZB (not ★ w/tapered bearings), -FCB, ★-IB, -IRB, (★-IB, -IRB NA with Precision BB), -B
EHD2	29	-2IB, -2IRB, -2FCB, -2B
HS2	29	-2IB, -2IRB, -2FCB, -2B
А	30	★-ZB, -FCB (except 5" & 6" swivels), ★-IB, -IRB, -B
ES	31	★-ZB (not ★ w/tapered bearings), -FCB, ★-IB, -IRB, (★-IB, -IRB NA with Precision BB), -B
FM	32	★-ZB (not ★ w/tapered bearings), -FCB, ★-IB, -IRB, (★-IB, -IRB NA with Precision BB), -B
HS	33	★-ZB (on 5" models and larger and not ★ w/tapered bearings), ★-IB (NA w/Precision BB), -IRB (NA w/Precision BB & 4" and
WH	34	larger only), -B
WHS	35	★-SZB (on 5" models and larger), -SB
EC	36-37	★-ZB, (on 5" models & larger and not ★ w/tapered bearings), -B
62	37	-FCB
MS	38	<b>★-CB</b> , <b>★-ZB</b> , FB, -FRB, -B
GS	39	★-CB, -FB, -FRB, (★-CB, -FB, -FRB on 4" models & larger only), -B, ★-ZB, (on 5" models and larger).
52	40-41	★-CB, -FB, -FRB, (★-CB, -FB, -FRB on 4" models & larger only), -B, ★-ZB, (on 5" models and larger).
WW	42	-FB (except 8"), -FRB (except 31/4" & 8" models), -B
HL	43	★-B (3" swivels only), ★-TB (swivels, except 3" models)
200	44	-В
300	45	-TB (plate-type swivels only), -LCB (plate-type swivels, except 3* models), -B (rigids only)
7000	48	-FCB (8" thru 18" models), ★-IB/-IRB (8" thru 12" models), -B (8" thru 12" models), -HB (16" & 18" B25 models)
7200	49	-DCB
5000	50	★-IB (8" & 10" only)
8000	52	★-IB/-IRB (#8008/8010/8410/8412), ★-ZB (#8006/8208/8526/8528), -CB (#8526/8528),-FB/-FRB (#8006/8208/8526/8528), -B
4000	53	-CB (#4208)
STA	54	-SCB (swivels only)
STL	55	-SCCB (swivels, except 3½" models)
TG	56	-CB
ТХ	57	-CB
V	58	See respective caster series.
		•

NOTE: Brakes are not designed to stop moving equipment nor are they intended for use on ramps or inclines.

† These brakes are most effective on resilient tread wheels, e.g. polyurethane or rubber.

## **Brake Options**

Maxi-Duty Contact Brake.<sup>†</sup> Available on the Maxi-Duty and Dual Wheel Maxi-Duty Casters, this brake is activated by tightening the brakeshoe against the wheel(s). The "thumbscrew" design provides adjustable brake pressure. Add suffix **-HCB** on Series MD, **-DHCB** on Series MDD.



E OPTIO

Dual Tread Contact Brake.† This brake (suffix - DCB) is designed for Series 7200 pneumatic casters. A pull on the lever at the back of the caster forces a non-skid pad against both wheels. Constructed of heavy duty steel components, this brake features an adjusting rod to compensate for tread wear and inflation pressure.





Heavy Duty Contact Brake. This heavy duty face contact brake is new to Hamilton's brake offerings and represents Hamilton's most effective frictionbased brake. The new –**ZB** brake is made from  $\frac{3}{6}$ " x 2" plate steel with an easy to engage foot pedal with an adjustable thick rubber stop. Unless specified otherwise, the brake is mounted behind the wheel but the factory can mount in front of the wheel for no additional charge.

InsTOEmatic Wheel Brake (U.S. Pat. No. 3467981). This static foot-operated brake is available on series A, CH, EHD, ES, FM, HS, WH, and various 7000 and 8000 series models (Not available with wheels having tapered or precision ball bearings). Stepping down on either end of the pedal forces three steel plungers against a washer which contacts the wheel hub. To order, add suffix -IB.

Tread Contact Brake. † Stepping down on the lever forces a non-skid pad against the wheel tread. This brake is offered on Series MS, GS, and 52 casters, Thread Guard casters (TG and TX) and various 4000 and 8000 series casters (suffix -CB). Available with all-stainless steel components for stainless steel casters (on Series STA, suffix -SCB).



Side Foot Brake. This husky all-steel wheel brake (suffix -FB) is available on Whirlaway (WW), Medium Service (MS), General Service (GS), Series 52, and various 8000 series models. The oversize foot pedal utilizes cam action to lock the wheel, but the unique design permits a full length spanner bushing to maintain caster strength. For *Rap-A-Round* pedal extension, allowing all-around accessibility, add suffix -FRB).

Thumbscrew Wheel Brake. An effective yet simple brake. Turning the screw forces the thrust washer against the wheel hub, resulting in positive locking of the wheel. Available on most swivel or rigid Hamilton casters. To order, add suffix -B (-HB for Maxi-Duty casters) to catalog number of desired caster.



