

EATON Airflex

Airflex® WCB2 & WCBD Brakes

Designed for continuous slip service, these units can absorb and dissipate the thermal loads found in severe applications.



Authorized Distributor



26255 Groesbeck Hwy.
Warren, MI 48089 U.S.A.
586.775.3000 • 586.775.3040 (Fax)
sales@midwestbrake.com
www.midwestbrake.com

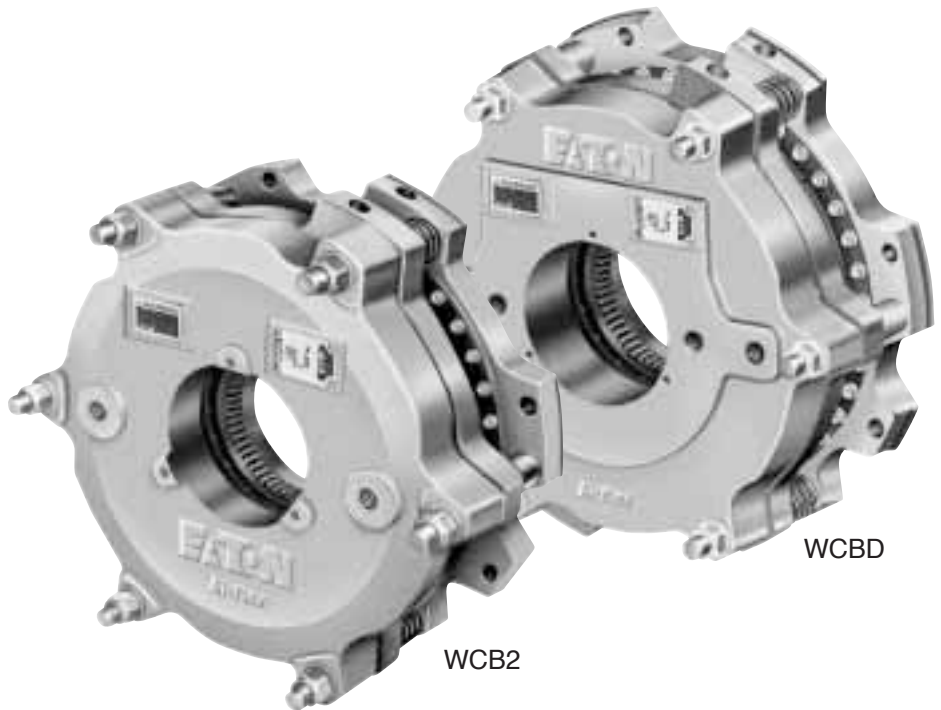
Eaton® Airflex® Clutches & Brakes

WCB2 & WCBD Description

WCB elements are disc type, externally cooled units. They are designed to absorb and dissipate the thermal loads associated with the most severe clutch and brake applications. The WCB friction couple was developed specifically for continuous slip service and has a dynamic coefficient of friction. Special high coefficient linings are also available which provide 50% higher torque than standard friction linings and provide 1:1 dynamic to static torque ratio.

Element construction and operation is illustrated in the figure. Pressurizing the cylinder causes the piston to clamp the friction disc between the water jackets. Heat generated at the friction interfaces is quickly transferred to the circulating coolant.

Element sizes are indicated by the number of friction discs and the disc diameter in inches. For instance, size 224WCB has two friction discs 24 inches in diameter.



Features:

Patented piston design

Single or dual piston provides wider range of applied tension with greater control.

Drop in powerhead package

Standard single piston elements can be retrofitted with a dual piston powerhead to provide increased control.

Unique friction couple

A specially formulated friction material, interfacing with a copper alloy surface, eliminates the stick-slip characteristic associated with ordinary frictional devices.

Rapid heat dissipation

The copper interface conducts heat rapidly to the circulating coolant.

Open or closed loop coolant systems

The element works equally well with open or closed loop circulating systems. On mobile equipment, the engine's cooling system can be tapped to provide coolant to the element.

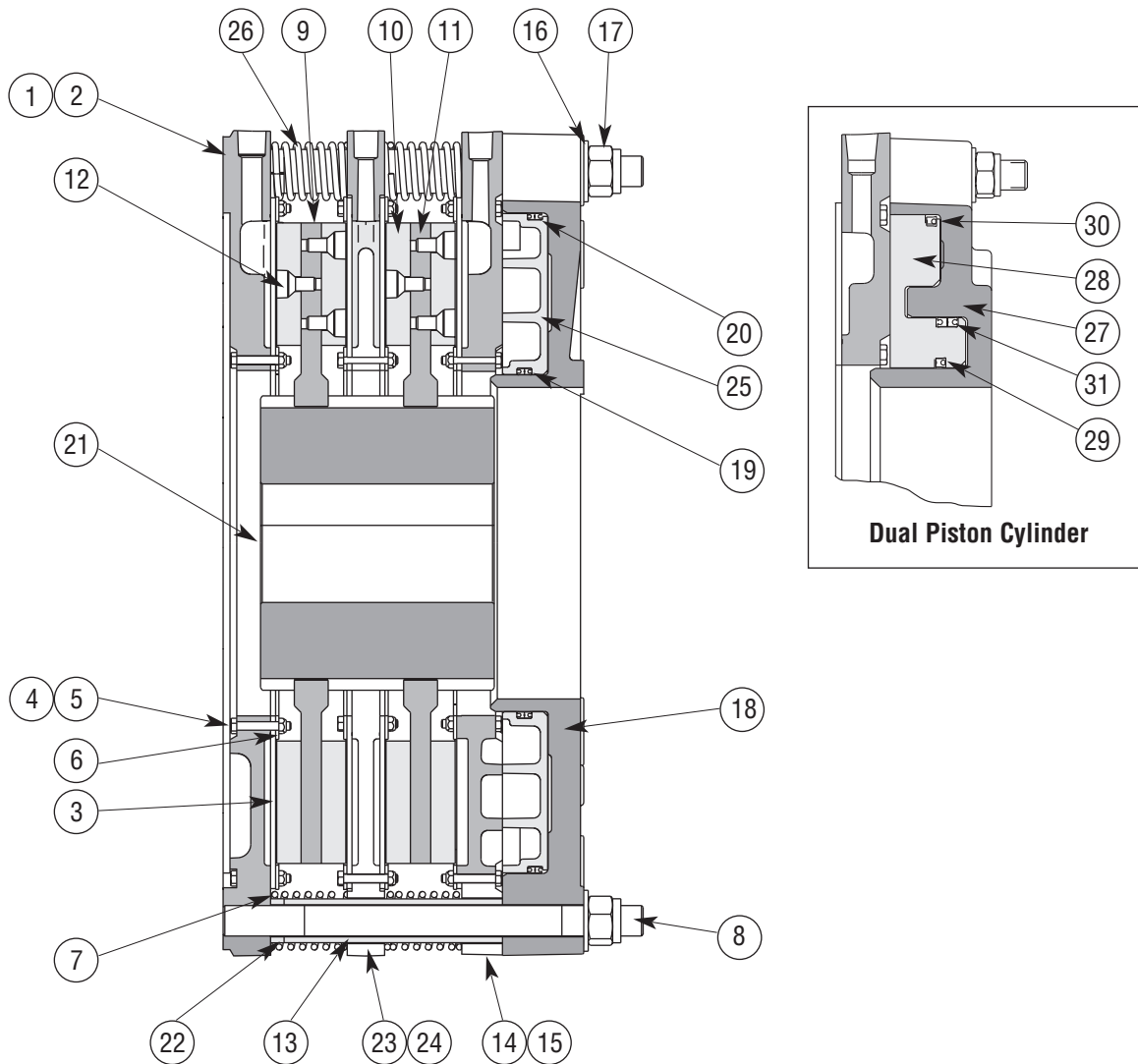
Optional corrosion protection

For marine environment applications, protective coatings are available to minimize corrosion.

Where used:

- Dynamometers
- Logging equipment
- Marine mooring systems
- Slip clutches
- Tension brakes
- Unwind stands

WCB2 & WCBD Component Parts



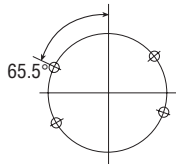
| Item | Description | Item | Description |
|------|------------------------------|------|-------------------------------|
| 1 | Mounting Flange Sub-Assembly | 17 | Lock Nut |
| 2 | Mounting Flange | 18 | Cylinder |
| 3 | Wear Plate | 19 | Inner Seal |
| 4 | Hex Head Screw | 20 | Outer Seal |
| 5 | Locknut | 21 | Gear |
| 6 | Inner Support Ring | 22 | Wear Spacer |
| 7 | Outer Support Ring | 23 | Reaction Plate Sub-Assembly |
| 8 | Stud | 24 | Reaction Plate |
| 9 | Friction Disc Sub-Assembly | 25 | Piston |
| 10 | Friction Disc | 26 | Release Spring |
| 11 | Friction Disc Core | 27 | Dual Piston Cylinder |
| 12 | Flat Head Screw | 28 | Dual Piston |
| 13 | Clamp Tube | 29 | Dual Piston Inner Seal |
| 14 | Pressure Plate Sub-Assembly | 30 | Dual Piston Outer Seal |
| 15 | Pressure Plate | 31 | Dual Piston Intermediate Seal |
| 16 | Flat Washer | | |

Note:

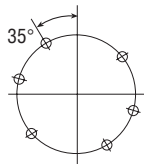
① Dual disc unit shown. Other multi-disc units are similar. Items 23 and 24 are not required for single disc units.

WCB2 & WCB Elements— Dimensional Data*

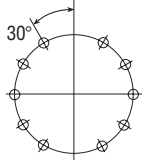
Mounting Bolt Circles¹



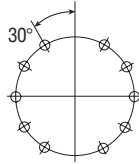
Coolant Inlet Port
8WCB
(4) 0.531 (13,5)Ø Dia.
Mounting holes based on
6 equally spaced as
shown on 11.125
(282,5) bolt circle



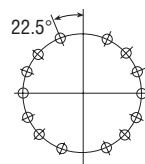
Coolant Inlet Port
14WCB
(6) 0.656 (16,7)Ø Dia.
Mounting holes based on
8 equally spaced as
shown on 17.500
(444,5) bolt circle



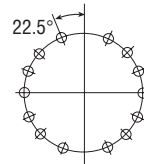
Coolant Inlet Port
18WCB
(10) 0.656 (16,75)Ø Dia.
Mounting holes based on
12 equally spaced
as shown on 22.000
(558,8) bolt circle



Coolant Inlet Port
24WCB
(10) 0.656 (16,75)Ø Dia.
Mounting holes based on
12 equally spaced
as shown on 28.750
(730,3) bolt circle



Coolant Inlet Port
36WCB
(14) 1.062 (27,0)Ø Dia.
Mounting holes based on
16 equally spaced as
shown on 42.000
(1066,8) bolt circle

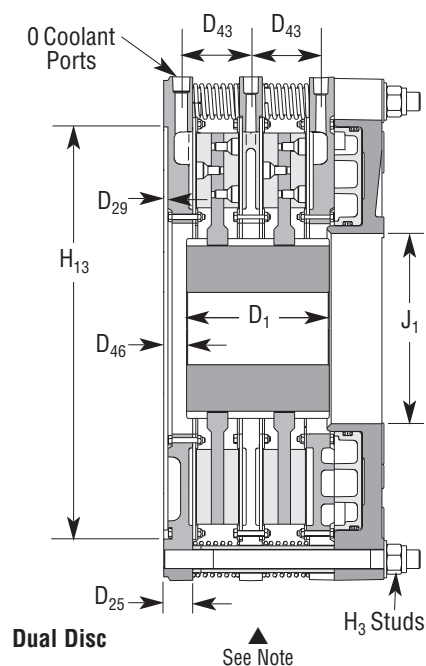
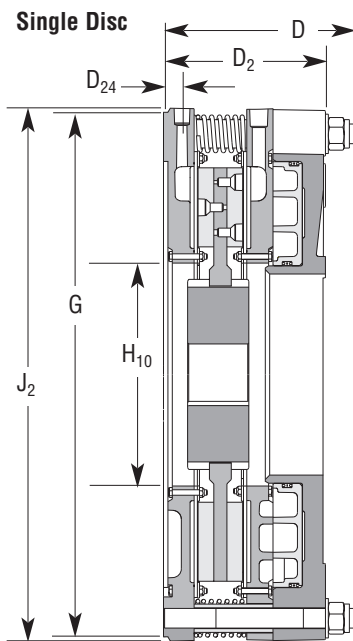


Coolant Inlet Port
48WCB
(14) 1.438 (36,5)Ø Dia.
Mounting holes based on
16 equally spaced as
shown on 54.000
(1371,6) bolt circle

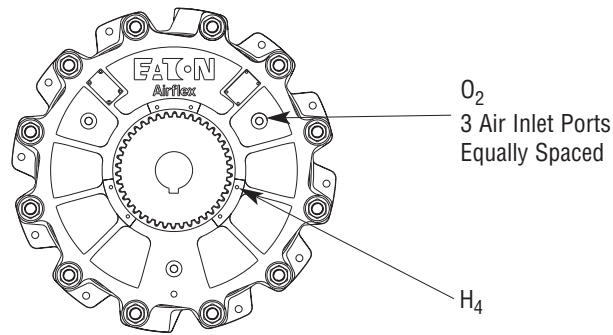
* Data shown is subject to change. Please consult factory for current dimensional data.

| English | | Dimensions in inches | | | | | | | | | | | |
|--------------|-----------------|---------------------------|-----------------|-----------------|-----------------|--------|----------------------|---------|--------|-----------------|-----------------|----------------|----------------|
| 8WCB | 0.81 | 1.25 | 0.250 | 7 | 2.62 | 12.125 | 8 | 1/2-13 | 10.875 | 4.12 | 8.375 | 3.12 | 12.24 |
| 14WCB | 0.91 | 1.41 | 0.250 | 8 | 2.90 | 18.750 | 8 | 3/4-10 | 17.000 | 7.12 | 14.375 | 6.00 | 18.94 |
| 18WCB | 0.93 | 1.47 | 0.250 | 1.25 | 3.14 | 23.25 | 12 | 3/4-10 | 21.750 | 11.00 | 18.250 | 8.50 | 23.86 |
| 24WCB | 1.06 | 1.75 | 0.250 | 1.38 | 4.13 | 29.998 | 12 | 1 1/8-7 | 27.875 | 12.75 | 24.375 | 11.50 | 30.62 |
| 36WCB | 1.52 | 2.58 | 0.280 | 2.38 | 4.97 | 44.498 | 16 | 1 3/8-6 | 41.500 | 16.50 | 18.375 | 16.50 | 44.86 |
| 48WCB | 1.48 | 2.70 | - | 1 | 5.80 | 56.50 | 16 | 1 3/8-6 | 58.688 | 25.19 | - | 23.00 | 57.09 |
| Size | D ₂₄ | D ₂₅ | D ₂₉ | D ₄₆ | D ₄₃ | G | No. Size Bolt Circle | | | H ₁₀ | H ₁₃ | J ₁ | J ₂ |
| | | | | | | | H ₃ | 4 | | | | | |
| | | | | | | | | | | | | | |
| 8WCB | 21 | 32 | 6.4 | 7 | 67 | 308,0 | 8 | 1/2-13 | 276,2 | 106 | 212,7 | 79 | 311 |
| 14WCB | 23 | 36 | 6.4 | 8 | 74 | 476,3 | 8 | 3/4-10 | 431,8 | 181 | 365,1 | 152 | 481 |
| 18WCB | 24 | 37 | 6.4 | 32 | 80 | 590,6 | 12 | 3/4-10 | 552,4 | 279 | 463,5 | 216 | 606 |
| 24WCB | 27 | 44 | 6.4 | 35 | 105 | 761,9 | 12 | 1 1/8-7 | 708,0 | 324 | 619,1 | 292 | 778 |
| 36WCB | 39 | 65 | 7,1 | 60 | 126 | 1130,2 | 16 | 1 3/8-6 | 1054,1 | 419 | 932,1 | 419 | 1139 |
| 48WCB | 38 | 69 | - | 1 | 147 | 1435,0 | 16 | 1 3/8-6 | 1490,7 | 640 | - | 584 | 1450 |
| SI | | Dimensions in millimeters | | | | | | | | | | | |

| English | | Dimensions in inches | | | | | | | | | | |
|--------------|-----|---------------------------|-------------|--------|--------------------------------|--------|------------------------------|--------|-------------|--|--|--|
| 8WCB | 3 | 1/4-20 | 3.500 | 3/8-18 | 6.63 | TBD | TBD | TBD | TBD | | | |
| 14WCB | 3 | 3/8-16 | 6.500 | 1/2-14 | 11.50 | 1/2-14 | 13.250 | 3/8-18 | 8.250 | | | |
| 18WCB | 3 | 3/8-16 | 9.125 | 1/2-14 | 15.25 | 1/2-14 | 15.750 | 3/8-18 | 11.630 | | | |
| 24WCB | 6 | 3/8-16 | 12.250 | 1/2-14 | 18.50 | 1/2-14 | 20.500 | 3/8-18 | 14.500 | | | |
| 36WCB | 6 | 1/2-13 | 14.500 | 3/4-14 | 28.00 | 3/4-14 | 28.000 | 3/8-18 | 22.250 | | | |
| 48WCB | 3 | 3/4-10 | 24.500 | 1-11.5 | 41.500 | 1-11.5 | 41.500 | 0.5-14 | 31.500 | | | |
| Size | No. | Size Bolt Circle | | | Size Bolt Circle | | Dual Piston O ₂ 6 | | | | | |
| | | H ₄ | | | Single Piston O ₂ 6 | | Large | | Small | | | |
| | No. | Size | Bolt Circle | Size | Bolt Circle | Size | Bolt Circle | Size | Bolt Circle | | | |
| 8WCB | 3 | 1/4-20 | 88,9 | 3/8-18 | 168 | TBD | TBD | TBD | TBD | | | |
| 14WCB | 3 | 3/8-16 | 165,1 | 1/2-14 | 292 | 1/2-14 | 337 | 3/8-18 | 210 | | | |
| 18WCB | 3 | 3/8-16 | 231,8 | 1/2-14 | 387 | 1/2-14 | 400 | 3/8-18 | 295 | | | |
| 24WCB | 6 | 3/8-16 | 311,2 | 1/2-14 | 470 | 1/2-14 | 521 | 3/8-18 | 368 | | | |
| 36WCB | 6 | 1/2-13 | 444,5 | 3/4-14 | 711 | 3/4-14 | 711 | 3/8-18 | 565 | | | |
| 48WCB | 3 | 3/4-10 | 622,3 | 1-11,5 | 1054,1 | 1-11,5 | 1054,1 | 0,5-14 | 800 | | | |
| SI | | Dimensions in millimeters | | | | | | | | | | |



WCB2 & WCB4 Elements— Dimensional Data



| English | Dimensions in inches | | | | | | |
|---------|----------------------|-------|-------|-------|-------|----|--------------|
| 108WCB | 1.50 | 2.56 | 7.00 | 1.75 | 5.69 | 4 | 3/8-18 |
| 208WCB | 1.75 | 2.63 | 9.75 | 4.00 | 8.31 | 6 | 3/8-18 |
| 308WCB | 2.00 | 2.50 | 12.88 | 7.75 | 10.95 | 8 | 3/8-18 |
| 114WCB | 2.25 | 4.50 | 8.00 | 2.88 | 6.59 | 4 | 1/2-14 |
| 214WCB | 2.75 | 4.38 | 11.50 | 4.38 | 9.50 | 6 | 1/2-14 |
| 314WCB | 2.25 | 4.50 | 16.25 | 8.25 | 12.39 | 8 | 1/2-14 |
| 118WCB | 2.88 | 5.56 | 9.00 | 2.50 | 7.32 | 4 | 1/2-14 |
| 218WCB | 3.63 | 5.63 | 13.00 | 5.63 | 10.66 | 8 | 1/2-14 |
| 318WCB | 4.25 | 5.81 | 17.25 | 9.63 | 14.00 | 12 | 1/2-14 |
| 418WCB | 4.63 | 5.81 | 21.50 | 12.50 | 17.34 | 16 | 1/2-14 |
| 124WCB | 3.75 | 7.25 | 11.00 | 3.50 | 9.26 | 4 | 3/4-14 |
| 224WCB | 4.63 | 7.38 | 15.50 | 8.63 | 13.31 | 8 | 3/4-14 |
| 324WCB | 5.38 | 7.50 | 24.00 | 13.19 | 17.38 | 12 | 3/4-14 |
| 424WCB | 6.00 | 7.50 | 28.50 | 16.94 | 21.43 | 16 | 3/4-14 |
| 136WCB | 5.63 | 11.25 | 17.00 | 5.00 | 12.07 | 4 | 1 1/4-11 1/2 |
| 236WCB | 6.75 | 11.13 | 20.75 | 9.00 | 17.04 | 8 | 1 1/4-11 1/2 |
| 336WCB | 7.75 | 11.13 | 27.48 | 13.00 | 22.00 | 12 | 1 1/4-11 1/2 |
| 436WCB | 8.50 | 11.13 | 35.00 | 18.00 | 26.99 | 16 | 1 1/4-11 1/2 |
| 148WCB | 7.13 | 16.13 | 16.57 | 5.00 | 14.42 | 4 | 1 1/4-11 1/2 |
| 248WCB | 8.88 | 16.38 | 23.45 | 11.25 | 20.07 | 8 | 1 1/4-11 1/2 |
| 348WCB | 10.25 | 16.38 | 30.70 | 16.75 | 25.71 | 12 | 1 1/4-11 1/2 |
| 448WCB | 11.25 | 16.38 | 37.70 | 22.50 | 31.36 | 16 | 1 1/4-11 1/2 |

| Size | Min. | Max. | D | D ₁ | D ₂ | No. | Size | |
|--------|--------------|------|-----|----------------|----------------|-------------------|--------------|------|
| | Bore Range ⑨ | | | | | O Coolant Ports ⑥ | No. | Size |
| | Min. | Max. | | | | | | |
| 108WCB | 38 | 65 | 178 | 44 | 145 | 4 | 3/8-18 | |
| 208WCB | 44 | 67 | 248 | 102 | 211 | 6 | 3/8-18 | |
| 308WCB | 51 | 64 | 327 | 196 | 278 | 8 | 3/8-18 | |
| 114WCB | 57 | 114 | 203 | 73 | 167 | 4 | 1/2-14 | |
| 214WCB | 70 | 111 | 292 | 111 | 241 | 6 | 1/2-14 | |
| 314WCB | 57 | 114 | 413 | 210 | 315 | 8 | 1/2-14 | |
| 118WCB | 73 | 141 | 229 | 64 | 186 | 4 | 1/2-14 | |
| 218WCB | 92 | 143 | 330 | 143 | 271 | 8 | 1/2-14 | |
| 318WCB | 108 | 148 | 438 | 245 | 356 | 12 | 1/2-14 | |
| 418WCB | 117 | 148 | 546 | 318 | 440 | 16 | 1/2-14 | |
| 124WCB | 95 | 184 | 279 | 89 | 235 | 4 | 3/4-14 | |
| 224WCB | 117 | 187 | 394 | 219 | 338 | 8 | 3/4-14 | |
| 324WCB | 137 | 191 | 610 | 335 | 441 | 12 | 3/4-14 | |
| 424WCB | 152 | 191 | 724 | 430 | 544 | 16 | 3/4-14 | |
| 136WCB | 143 | 286 | 432 | 17 | 307 | 4 | 1 1/4-11 1/2 | |
| 236WCB | 171 | 283 | 527 | 229 | 433 | 8 | 1 1/4-11 1/2 | |
| 336WCB | 197 | 283 | 698 | 330 | 559 | 12 | 1 1/4-11 1/2 | |
| 436WCB | 216 | 283 | 889 | 457 | 686 | 16 | 1 1/4-11 1/2 | |
| 148WCB | 181 | 410 | 421 | 127 | 366 | 4 | 1 1/4-11 1/2 | |
| 248WCB | 225 | 416 | 596 | 286 | 510 | 8 | 1 1/4-11 1/2 | |
| 348WCB | 260 | 416 | 780 | 425 | 653 | 12 | 1 1/4-11 1/2 | |

Notes:

- ❶ Only two ports, 180° apart, furnished on sizes 8 and 14WCB
 - ❷ To insure proper cooling, inlet port must be located at the six o'clock position.
 - ❸ Tolerance Sizes 8WCB thru 24WCB +0.000/-0.003 (+0,00/-0,08)
36WCB +0.000/-0.005 (+0,00/-0,13)
48WCB +0.000/-0.005 (+0,00/-0,13)
 - ❹ American National Standard for Unified Screw Threads
 - ❺ Tolerance +0.003/-0.000 in. (0,08/-0,00 mm)
 - ❻ American National Pipe Thread
 - ❼ 1.00 in (25 mm) for 108WCB
1.38 in (35 mm) for 208WCB
0.19 in (4,8 mm) for 308WCB
 - ❽ 1.06 in (27 mm) for 114WCB & 314WCB
1.69 in (43 mm) for 214WCB
 - ❾ Minimum bore sizes are based on flat keys, allowable gear hub stresses and torque ratings at 80 psi (5,5 bar).
 - ❿ Maximum diameter of "as cast" surfaces
 - ⓫ 1.96 in (50 mm) for 148WCB
1.75 in (44 mm) for 248WCB
1.75 in (44 mm) for 348WCB
1.75 in (44 mm) for 448WCB
- ▲ Some high torque applications of three or four disc elements require additional torsional support on the cylinder end of the unit. Contact your local Airflex representative for more details.

WCB2 & WCB3 Elements— Technical Data

| English | | | lb-in @ 80 psi | | | HP | GPM | | in ³ | | | | | | | |
|---------|--------|--------|----------------|---------|---------|--------|------|-----|-----------------|---------|-----|------|-----|-----|-----|-----|
| 108WCB | 146455 | 146415 | 415313 | 5700 | 2900 | 2700 | 30 | 3 | 6.7E-02 | 0 | 3 | 20 | 2 | 11 | 2 | 10 |
| 208WCB | 146456 | 146416 | 415314 | 11400 | 5900 | 5400 | 60 | 6 | 1.7E-0212 | 0 | 7 | 24 | 4 | 12 | 3 | 11 |
| 308WCB | 146457 | 146417 | 416457 | 17100 | 8900 | 8100 | 90 | 9 | 7.4E-02 | 0 | 10 | 27 | 5 | 14 | 5 | 13 |
| 114WCB | 146458 | 146418 | 415454 | 21500 | 16000 | 5400 | 60 | 6 | 2.4E-02 | 0 | 13 | 64 | 10 | 48 | 3 | 16 |
| 214WCB | 146459 | 146419 | 415302 | 43000 | 32100 | 10800 | 120 | 12 | 6.0E-03 | 0 | 27 | 77 | 20 | 58 | 7 | 19 |
| 314WCB | 146460 | 146420 | 416303 | 64500 | 48200 | 16300 | 180 | 18 | 2.6E-03 | 0 | 40 | 90 | 30 | 68 | 10 | 23 |
| 118WCB | 146461 | 146421 | 302813 | 48800 | 36400 | 12300 | 120 | 12 | 1.9E-02 | 1.9E-01 | 17 | 124 | 13 | 93 | 4 | 31 |
| 218WCB | 146462 | 146422 | 302907 | 97600 | 72900 | 24600 | 240 | 24 | 4.7E-03 | 9.5E-02 | 34 | 141 | 26 | 105 | 9 | 36 |
| 318WCB | 146463 | 146423 | 413208 | 146400 | 109400 | 37000 | 360 | 36 | 2.1E-03 | 6.3E-02 | 51 | 158 | 38 | 118 | 13 | 40 |
| 418WCB | 146464 | 146424 | 141111 | 195200 | 145800 | 49300 | 480 | 48 | 1.2E-03 | 4.8E-02 | 68 | 175 | 51 | 131 | 17 | 44 |
| 124WCB | 146465 | 146425 | 411672 | 100000 | 72000 | 27000 | 270 | 27 | 4.3E-03 | 1.2E-01 | 31 | 204 | 23 | 148 | 9 | 56 |
| 224WCB | 146466 | 146426 | 410970 | 20000 | 145000 | 54000 | 540 | 54 | 1.1E-03 | 6.1E-02 | 62 | 235 | 45 | 170 | 17 | 64 |
| 324WCB | 146467 | 146427 | 412433 | 300000 | 217000 | 82000 | 810 | 81 | 4.8E-04 | 4.1E-02 | 93 | 266 | 68 | 193 | 26 | 73 |
| 424WCB | 146468 | 146428 | 413195 | 400000 | 290000 | 109000 | 1080 | 108 | 2.7E-04 | 3.0E-02 | 124 | 297 | 90 | 215 | 34 | 82 |
| 136WCB | 146469 | 146429 | 416538 | 295000 | 223000 | 71000 | 650 | 65 | 1.2E-03 | 8.9E-02 | 98 | 441 | 74 | 334 | 24 | 107 |
| 236WCB | 146470 | 146430 | 416536 | 590000 | 446000 | 143000 | 1300 | 130 | 2.8E-04 | 5.8E-02 | 196 | 539 | 148 | 408 | 47 | 131 |
| 336WCB | 146471 | 146413 | 416535 | 885000 | 670000 | 214000 | 1950 | 195 | 1.2E-04 | 3.9E-02 | 294 | 637 | 223 | 482 | 71 | 154 |
| 436WCB | 146472 | 146431 | 416537 | 1180000 | 893000 | 286000 | 2600 | 260 | 6.9E-05 | 2.9E-02 | 392 | 734 | 297 | 556 | 95 | 178 |
| 148WCB | 146473 | 146432 | 416794 | 686000 | 508000 | 178000 | 1300 | 130 | 1.1E-03 | 4.6E-02 | 221 | 574 | 163 | 425 | 57 | 149 |
| 248WCB | 146474 | 146433 | 416795 | 1372000 | 1016000 | 356000 | 2600 | 260 | 2.3E-04 | 3.6E-02 | 441 | 795 | 327 | 589 | 115 | 206 |
| 348WCB | 146475 | 146434 | 416688 | 2058000 | 1524000 | 534000 | 3900 | 390 | 1.0E-04 | 2.4E-02 | 662 | 1016 | 490 | 752 | 172 | 264 |
| 448WCB | 146476 | 146435 | 416797 | 2744000 | 2032000 | 712000 | 5200 | 520 | 5.6E-05 | 1.8E-02 | 883 | 1236 | 654 | 915 | 229 | 321 |

| Size | Part Number ① | | Gear Part Number | Torque Rating Mr ② | | | ③ Thermal Rating | ④ Water Flow | ⑤ Pressure Drop Coefficient | | New Single Piston or both Pistons Together | Worn Single Piston or both Pistons Together | New Worn Engaging Volume ⑥ | | | | New Worn | | |
|--------|--------------------|------------------|------------------|--|-------------------|-------------------|------------------|--------------|-----------------------------|---------|--|---|----------------------------|-------|------|------|----------|-----|------|
| | WCB2 Single Piston | WCB3 Dual Piston | | Single Piston or both Pistons Together | Dual Piston | | | | C1 | C2 | | | New | Worn | New | Worn | | New | Worn |
| | | | | | Large Piston Only | Small Piston Only | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| 108WCB | 146455 | 146415 | 415313 | 644 | 328 | 305 | 22,4 | 11,4 | 3,2E-04 | 0 | 0,05 | 0,33 | 0,03 | 0,18 | 0,03 | 0,16 | | | |
| 208WCB | 146456 | 146416 | 415314 | 1288 | 667 | 610 | 44,7 | 22,7 | 8,2E-05 | 0 | 0,11 | 0,39 | 0,07 | 0,20 | 0,05 | 0,18 | | | |
| 308WCB | 146457 | 146417 | 416457 | 1932 | 1006 | 915 | 67,2 | 34,2 | 7,4E-03 | 0 | 0,16 | 0,44 | 0,08 | 0,23 | 0,08 | 0,21 | | | |
| 114WCB | 146458 | 146418 | 415454 | 2429 | 1808 | 610 | 44,7 | 22,7 | 1,2E-04 | 0 | 0,21 | 1,05 | 0,16 | 0,79 | 0,05 | 0,26 | | | |
| 214WCB | 146459 | 146419 | 415302 | 4858 | 3627 | 1220 | 89,5 | 45,4 | 2,9E-05 | 0 | 0,44 | 1,26 | 0,33 | 0,95 | 0,11 | 0,31 | | | |
| 314WCB | 146460 | 146420 | 416303 | 7288 | 5446 | 1842 | 134,4 | 68,4 | 2,6E-03 | 0 | 0,66 | 1,48 | 0,49 | 1,11 | 0,16 | 0,38 | | | |
| 118WCB | 146461 | 146421 | 302813 | 5514 | 4113 | 1390 | 89,5 | 45,4 | 9,1E-05 | 3,5E-03 | 0,28 | 2,03 | 0,21 | 1,52 | 0,07 | 0,51 | | | |
| 218WCB | 146462 | 146422 | 302907 | 11027 | 8237 | 2779 | 179,0 | 90,9 | 2,3E-05 | 1,7E-03 | 0,56 | 2,31 | 0,43 | 1,72 | 0,15 | 0,59 | | | |
| 318WCB | 146463 | 146423 | 413208 | 16541 | 12361 | 4180 | 268 | 136 | 1,0E-05 | 1,2E-03 | 0,84 | 2,59 | 0,62 | 1,93 | 0,21 | 0,66 | | | |
| 418WCB | 146464 | 146424 | 141111 | 22055 | 16473 | 5570 | 358 | 182 | 5,7E-06 | 8,7E-04 | 1,11 | 2,87 | 0,84 | 2,15 | 0,28 | 0,72 | | | |
| 124WCB | 146465 | 146425 | 411672 | 11298 | 8135 | 3051 | 201,3 | 102,2 | 2,1E-05 | 2,2E-03 | 0,51 | 3,34 | 0,38 | 2,43 | 0,15 | 0,92 | | | |
| 224WCB | 146466 | 146426 | 410970 | 22597 | 16383 | 6101 | 402,7 | 204,4 | 5,2E-06 | 1,1E-03 | 1,02 | 3,85 | 0,74 | 2,79 | 0,28 | 1,05 | | | |
| 324WCB | 146467 | 146427 | 412433 | 33895 | 24518 | 9265 | 604 | 307 | 2,3E-06 | 7,4E-04 | 1,52 | 4,36 | 1,11 | 3,16 | 0,43 | 1,20 | | | |
| 424WCB | 146468 | 146428 | 413195 | 45194 | 32766 | 12315 | 805 | 409 | 1,3E-06 | 5,6E-04 | 2,03 | 4,87 | 1,48 | 3,52 | 0,56 | 1,34 | | | |
| 136WCB | 146469 | 146429 | 416538 | 33331 | 25196 | 8022 | 484,7 | 246,1 | 5,7E-06 | 1,6E-03 | 1,61 | 7,23 | 1,21 | 5,47 | 0,39 | 1,75 | | | |
| 236WCB | 146470 | 146430 | 416536 | 66661 | 50391 | 16157 | 969,4 | 492,1 | 1,3E-06 | 1,1E-03 | 3,21 | 8,83 | 2,43 | 6,69 | 0,77 | 2,15 | | | |
| 336WCB | 146471 | 146413 | 416535 | 99992 | 75700 | 24179 | 1454 | 738 | 5,9E-07 | 7,1E-04 | 4,82 | 10,44 | 3,657 | 7,90 | 1,16 | 2,52 | | | |
| 436WCB | 146472 | 146431 | 416537 | 133322 | 100895 | 32314 | 1939 | 984 | 3,3E-07 | 5,3E-04 | 6,42 | 12,03 | 4,87 | 9,11 | 1,56 | 2,92 | | | |
| 148WCB | 146473 | 146432 | 416794 | 77508 | 57396 | 20111 | 696 | 4921 | 5,2E-06 | 8,4E-04 | 3,62 | 9,41 | 2,67 | 6,97 | 0,93 | 2,44 | | | |
| 248WCB | 146474 | 146433 | 416795 | 155015 | 114793 | 40223 | 1939 | 9840 | 1,1E-06 | 6,5E-04 | 7,23 | 13,03 | 5,36 | 9,65 | 1,88 | 3,38 | | | |
| 348WCB | 146475 | 146434 | 416688 | 232523 | 172189 | 60334 | 2908 | 14763 | 4,8E-07 | 4,4E-04 | 10,85 | 16,65 | 8,03 | 12,33 | 2,82 | 4,33 | | | |
| 448WCB | 146476 | 146435 | 416797 | 310030 | 229585 | 80445 | 3878 | 19684 | 2,7E-05 | 3,3E-03 | 14,47 | 20,26 | 10,72 | 15,00 | 3,75 | 5,26 | | | |

| SI | Nm @ 5,5 bar | | | kW | dm ³ /min | | dm ³ | | | |
|----|--------------|--|--|----|----------------------|--|-----------------|--|--|--|
|----|--------------|--|--|----|----------------------|--|-----------------|--|--|--|

Notes:

- ① Basic part number only. Order gear separately.
- ② Exact torque rating is dependent upon applied pressure. Maximum allowable pressure is 150 psi (10,3 bar).

③ Based upon a 70°F (21°C) fresh water inlet temperature and a 50°F (28°C) temperature rise between inlet and outlet. See cooling requirements.

④ To insure proper cooling, inlet port must be located at the six o'clock position. Maximum allowable inlet pressure is 45 psi (3,1 bar), 40 psi (2,7 bar) for 36WCB only.

WCB2 & WCB Elements— Technical Data

| English | rpm | | lb | | in | | lb-ft ² | | in ³ | |
|---------|------|------|------|------|-------|-------|--------------------|------|-----------------|------|
| 108WCB | 2150 | 3400 | 61 | 19 | 3.17 | 2.05 | 9 | 0.8 | 12 | 10 |
| 208WCB | 2150 | 3400 | 82 | 39 | 4.44 | 3.38 | 12 | 1.5 | 24 | 20 |
| 308WCB | 2150 | 3400 | 120 | 59 | 5.55 | 4.55 | 15 | 2.33 | 36 | 30 |
| 114WCB | 1260 | 2100 | 217 | 48 | 3.69 | 2.42 | 64 | 6.4 | 40 | 29 |
| 214WCB | 1260 | 2100 | 284 | 86 | 5.26 | 3.83 | 83 | 12.6 | 75 | 58 |
| 314WCB | 1260 | 2100 | 366 | 141 | 6.95 | 5.23 | 102 | 19.5 | 120 | 87 |
| 118WCB | 955 | 1600 | 284 | 91 | 4.0 | 2.6 | 170 | 20 | 65 | 54 |
| 218WCB | 955 | 1600 | 383 | 189 | 5.5 | 4.2 | 220 | 40 | 125 | 108 |
| 318WCB | 955 | 1600 | 380 | 272 | 7.4 | 6.2 | 270 | 60 | 185 | 162 |
| 418WCB | 955 | 1600 | 665 | 383 | 10 | 7.6 | 320 | 80 | 245 | 216 |
| 124WCB | 715 | 1200 | 445 | 208 | 5.2 | 3.3 | 622 | 78 | 160 | 126 |
| 224WCB | 715 | 1200 | 770 | 439 | 7.6 | 5.7 | 822 | 158 | 320 | 252 |
| 324WCB | 715 | 1200 | 424 | 676 | 10 | 8 | 1022 | 238 | 480 | 378 |
| 424WCB | 715 | 1200 | 413 | 887 | 12.4 | 10.1 | 1222 | 318 | 640 | 504 |
| 136WCB | 475 | 700 | 2650 | 470 | 6.9 | 4.3 | 4922 | 324 | 600 | 337 |
| 236WCB | 475 | 700 | 3250 | 855 | 9.5 | 6.8 | 6323 | 667 | 1135 | 673 |
| 336WCB | 475 | 700 | 4350 | 1240 | 12.11 | 9.2 | 7724 | 1010 | 1670 | 1009 |
| 436WCB | 475 | 700 | 5300 | 1655 | 14.67 | 11.8 | 9125 | 1353 | 2205 | 1345 |
| 148WCB | 715 | 1200 | 3694 | 796 | 7.86 | 4.46 | 12024 | 1463 | 700 | 273 |
| 248WCB | 715 | 1200 | 5035 | 1592 | 10.69 | 7.31 | 16205 | 2958 | 1400 | 546 |
| 348WCB | 715 | 1200 | 6378 | 2383 | 13.53 | 10.11 | 20398 | 4434 | 2100 | 818 |
| 448WCB | 715 | 1200 | 7719 | 3186 | 16.37 | 12.95 | 24583 | 5916 | 2800 | 1091 |

| Size | Maximum Slip Speed ⑤ | Maximum Freewheeling Speed ⑥ | Weight | | Center of Gravity ⑦ | | Wk ² | | Water Volume | Lining Wear Volume |
|--------|----------------------|------------------------------|---------|-------------|---------------------|-------------|-----------------|-------------|--------------|--------------------|
| | | | Housing | Disc & Gear | Housing | Disc & Gear | Housing | Disc & Gear | | |
| | | | Mass | | Center of Gravity | | J | | | |
| 108WCB | 2150 | 3400 | 28 | 9 | 81 | 52 | 0,38 | 0,3 | 0,2 | 0,2 |
| 208WCB | 2150 | 3400 | 37 | 17 | 113 | 86 | 0,51 | 0,6 | 0,4 | 0,3 |
| 308WCB | 2150 | 3400 | 54 | 27 | 141 | 116 | 0,64 | 0,04 | 0,6 | 0,4 |
| 114WCB | 1260 | 2100 | 98 | 22 | 94 | 61 | 2,70 | 0,27 | 0,7 | 0,5 |
| 214WCB | 1260 | 2100 | 129 | 39 | 134 | 97 | 3,50 | 0,53 | 1,2 | 1,0 |
| 314WCB | 1260 | 2100 | 166 | 64 | 177 | 133 | 4,30 | 0,82 | 2,0 | 1,5 |
| 118WCB | 955 | 1600 | 129 | 41 | 102 | 66 | 7,16 | 0,84 | 1,1 | 0,9 |
| 218WCB | 955 | 1600 | 174 | 86 | 140 | 107 | 9,27 | 1,69 | 2,1 | 1,8 |
| 318WCB | 955 | 1600 | 172 | 123 | 188 | 157 | 11,38 | 2,53 | 3,0 | 2,7 |
| 418WCB | 955 | 1600 | 302 | 174 | 254 | 193 | 13,48 | 3,37 | 4,0 | 3,5 |
| 124WCB | 715 | 1200 | 202 | 94 | 132 | 84 | 26,21 | 3,29 | 2,6 | 2,1 |
| 224WCB | 715 | 1200 | 349 | 199 | 193 | 145 | 34,64 | 6,66 | 5,3 | 4,1 |
| 324WCB | 715 | 1200 | 192 | 307 | 254 | 203 | 43,07 | 10,03 | 7,9 | 6,2 |
| 424WCB | 715 | 1200 | 187 | 402 | 315 | 257 | 51,50 | 13,40 | 10,5 | 8,3 |
| 136WCB | 475 | 700 | 1202 | 213 | 109 | 2,2 | 207,41 | 13,65 | 9,9 | 5,5 |
| 236WCB | 475 | 700 | 1474 | 388 | 241 | 173 | 266,45 | 28,11 | 18,6 | 11,1 |
| 336WCB | 475 | 700 | 1973 | 562 | 308 | 234 | 325,49 | 42,56 | 27,4 | 16,6 |
| 436WCB | 475 | 700 | 2404 | 751 | 373 | 300 | 384,53 | 57,02 | 36,2 | 22,1 |
| 148WCB | 715 | 1200 | 1676 | 361 | 200 | 113 | 506,70 | 61,65 | 11,5 | 4,5 |
| 248WCB | 715 | 1200 | 2284 | 722 | 272 | 186 | 682,89 | 124,65 | 22,9 | 8,9 |
| 348WCB | 715 | 1200 | 2893 | 1081 | 344 | 257 | 859,59 | 186,85 | 34,4 | 13,4 |
| 448WCB | 715 | 1200 | 3501 | 1445 | 416 | 329 | 1035,95 | 249,31 | 45,9 | 17,9 |

| SI | rpm | | kg | | mm | | kg-m ² | | dm ³ | |
|----|-----|--|----|--|----|--|-------------------|--|-----------------|--|
|----|-----|--|----|--|----|--|-------------------|--|-----------------|--|

Notes:

⑤ Based upon a continuous slip velocity of 4500 fpm (22,9 mps).

⑥ Maximum freewheeling velocity is 7500 fpm (38,1 mps).

⑦ Located from mounting flange surface.

⑧ Absolute volume of cylinder at contact with new and worn friction discs.

⑨ Pressure drop coefficient based on maximum pressure drop across brake.

For More Information

Eaton's worldwide network of Sales Engineers and Distributors are ready to assist you with additional technical data or application information. Call the 800 number below for the name of your nearest Airflex sales office.
Call: **1-800-824-1586** or **FAX: 216-281-3890**



Eaton offers many other answers to your clutch and brake problems.

Write or call Eaton for a free copy of the Airflex 410 page engineering catalog which covers the complete line of Airflex clutches and brakes. It contains descriptions, dimensions, application information and technical data over nineteen types of clutches and brakes offered by Eaton. Ask for Catalog 800.

Headquarters:
Eaton Corporation
Airflex Division
9919 Clinton Road
Cleveland, Ohio 44144-1077
Phone: (216) 281-2211
FAX: (216) 281-3890



See our catalog at:
www.Airflex.com

Airflex® Clutches & Brakes

Catalog A-144a
2.5M501AP
Printed in U.S.A.