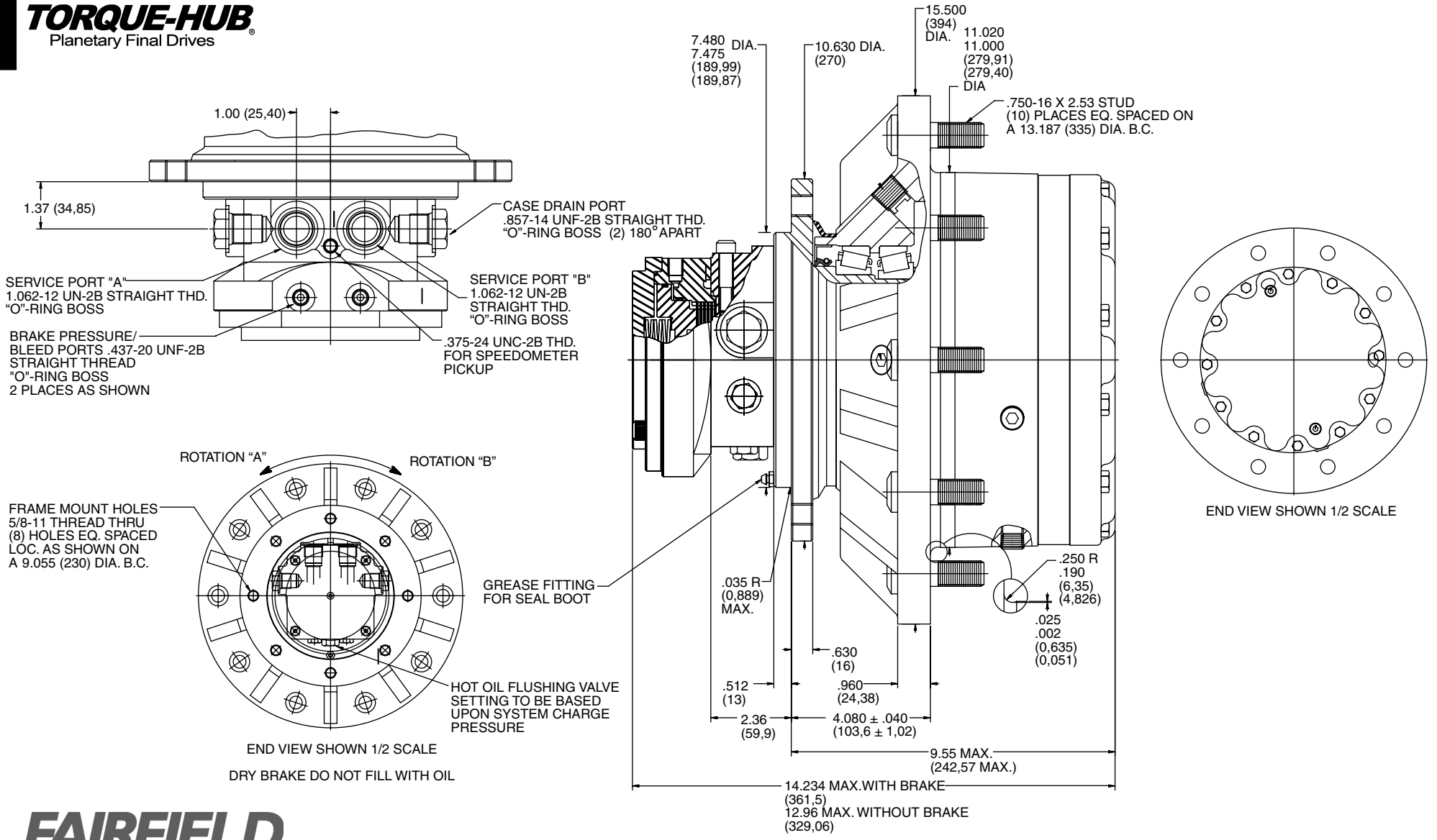


3 Series  
**W3M1**  
 Application Sheet

**TORQUE-HUB®**  
 Planetary Final Drives



**FAIRFIELD**  
 GEARED FOR EXCELLENCE

NOTE: MM SHOWN IN ( )  
 MOTOR CAVITY DIMENSIONS VARY WITH MODEL  
 OTHER MODELS ALSO AVAILABLE

## W3M1

### Performance Data

| Continuous  | Intermittent | Peak        |
|-------------|--------------|-------------|
| 37,500lb-in | 75,000lb-in  | 90,000lb-in |
| 3,125lb-ft  | 6,250lb-ft   | 8,333ft-lb  |
| 4,234Nm     | 8,468Nm      | 11.290Nm    |
| 432kg-m     | 864kg-m      | 1,152kg-m   |

For ultimate torque and horsepower capacities, contact a Torque-Hub® representative.

### Speed Limitations

**Input Speed:** 4000 RPM Maximum Intermittent

### Weight

**Approximately** 215 lbs (98kg) without Brake  
Add 10 lbs (5kg) for Brake

Note: Specific models will change weights.

### W3M1 Model Formula

### Oil

Fill to half full with 90 weight gear lube with EP additive on most applications.

**Approximate Volume** 44 oz. (1,301 cm³)

Note: Oil level and type will vary with specific model and application.

### Conditions of Bearing Curve

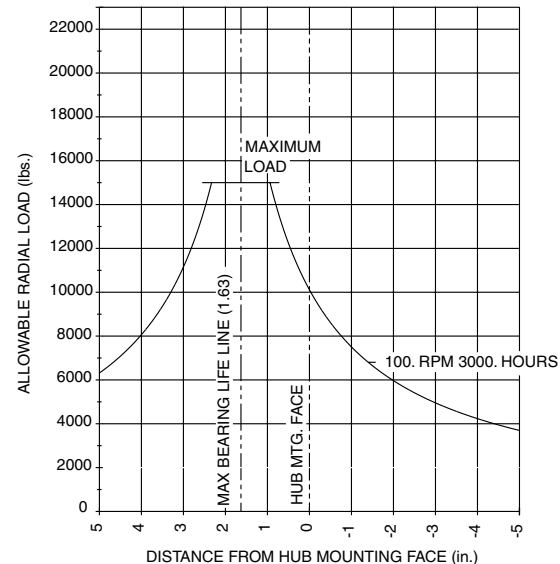
**Life** = 3,000 hours B-10

**Speed** = 100 RPM output

To adjust for loads and speeds other than shown on curve:

$$\text{Adjusted Life (hrs)} = 3,000 \left( \frac{100 \text{ RPM}}{\text{Speed (Adjusted)}} \right) \times \left( \frac{\text{Load (Curve)}}{\text{Load (Adjusted)}} \right)^{10/3}$$

### Bearing Curve



### Special Features

**ZC** – Standard Cover with 2 Extra Pipe Plugs 180 Apart

**W** – Torque-Hub® Wheel Drive w/Intergral Motor

**3** – Series

|           | Housing          |   |
|-----------|------------------|---|
|           | Mtg. Dia.        | Flange Holes                                |
| <b>M1</b> | 11.020<br>11.000 | .850/.848(10)Holes<br>on a 13.187 Dia. B.C. |
| <b>M2</b> | 11.020<br>11.000 | .713/.709(10)Holes<br>on a 12.598 Dia. B.C. |

### Stud

- 0**– Not Included
- 1**– 3/4-16 by 2.52 Inch (use with .850/.848 Flange Hole)
- 8**– 3/4-16 by 3.25 Inch (use with .850/.848 Flange Hole)

### Brake (Dry)

- 0**– Not Included
- A**– Spring Applied, Pressure Release  
Static Torque 1770in-lb Initial Release 135psi  
Full Release 190psi Max. Release 3000psi

### Motor Flushing Valve Relief Settings

- 1**– Blocked Flushing Valve
- A**– 206 psi (14 Bar)
- B**– 110 psi (7.5 Bar)
- C**– 230 psi (16 Bar)
- D**– 302 psi (21 Bar)
- E**– 174 psi (12 Bar)
- F**– 182 psi (12.5 Bar)
- G**– 166 psi (11.5 Bar)
- H**– 270 psi (18.5 Bar)
- I**– 350 psi (24.0 Bar)
- J**– 334 psi (32.0 Bar)
- K**– 214 psi (15.0 Bar)

### Ratio Cu. In.

|                    |               |
|--------------------|---------------|
| <b>24</b> –24.43:1 | <b>52.18</b>  |
| <b>30</b> –30.04:1 | <b>64.17</b>  |
| <b>35</b> –34.49:1 | <b>73.67</b>  |
| <b>37</b> –37.48:1 | <b>80.21</b>  |
| <b>43</b> –42.50:1 | <b>90.25</b>  |
| <b>50</b> –50.54:1 | <b>108.16</b> |
| <b>54</b> –53.58:1 | <b>114.66</b> |
| <b>73</b> –72.68:1 | <b>155.23</b> |

| Temperature at Hottest Point          | Fluid Contamination Levels   |
|---------------------------------------|------------------------------|
| Transmission (Normally at case drain) | ISO Code                     |
| Max. F–°220                           | Recommended Limit            |
| C–°104                                | Continuous Operation – 18/13 |
| Con. F–°180                           | Limit for Machine Assembly   |
| C–°82                                 | (at roll off) – 21/15        |
| Fluid Viscosity Limits                |                              |
| SUS (CST)                             |                              |
| Optimum – 70 (13)                     |                              |
| Min. Con. – 55 (9.0)                  |                              |
| Min. Int. – 47 (6.4)                  |                              |
| Max. Con. – 500 (110)                 |                              |
| Max. Cold Start. – 7500 (1600)        |                              |

# FAIRFIELD

GEARED FOR EXCELLENCE

Fairfield Manufacturing Company, Inc.

First in Custom Gears and Drive Systems

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FAX (765) 772-4010  
www.fairfieldmfg.com

### Special Features

- 0**– Not Included
- Z**– Seal Boot

**W 3 M1 F 0 A A A 54**

### Motor/Spindle

|          | Flange Mtg. Dia. | Flange B.C.                   | Motor                      | Notes               |
|----------|------------------|-------------------------------|----------------------------|---------------------|
| <b>A</b> | 7.480<br>7.475   | (8) M16x2 on 9.055 B.C.       | 2.14 cid 1.062-12 UNF Port | Metric Frame Mount  |
| <b>B</b> | 7.480<br>7.475   | (8) .625-11 UNC on 9.055 B.C. | 2.14 cid 1.062-12 UNF Port | English Frame Mount |