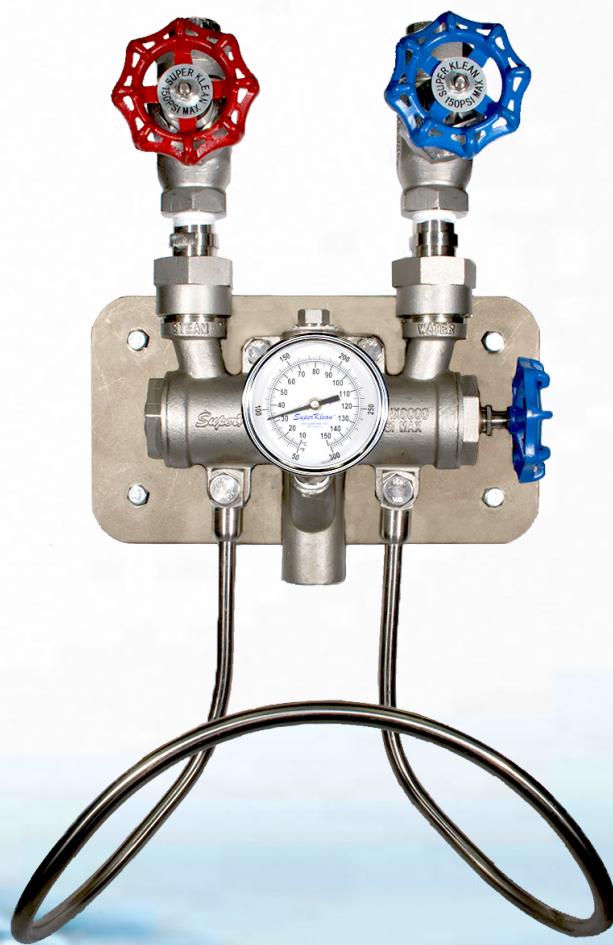


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Environmentally Exceptional Washdown Products

## DURAMIX 8000 MIXING UNIT



 **VaporTec**  
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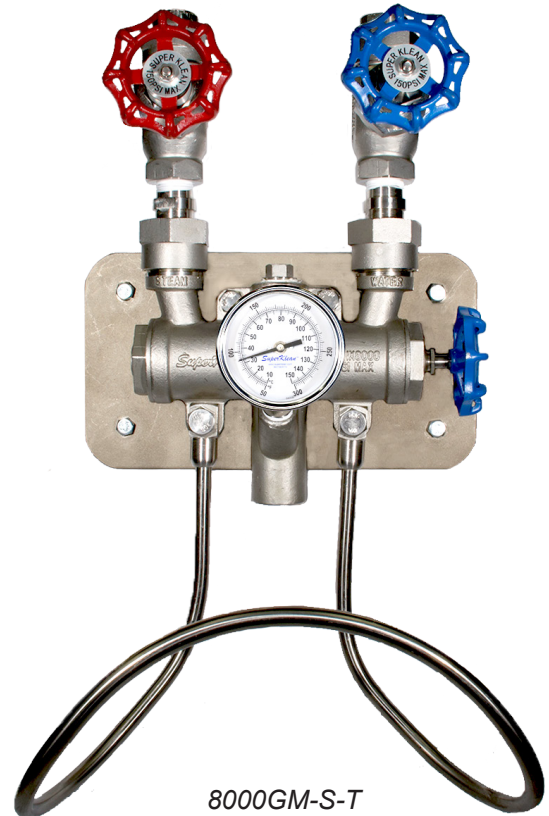
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## Duramix 8000GM Series Steam & Cold Water Mixing Station (8000GM-B, 8000GM-B-T, 8000GM-S, 8000GM-S-T)

The Duramix 8000GM series is designed with safety and efficiency in mind.

- Its unique design prevents live steam from passing in the scenario that water pressure drops, or the water supply is cut.
- Jam nut design on the steam globe valve allows for adjustment of maximum flow rate of live steam in situations where the steam to water ratio is greater than 2:1.
- The unit works within the full range of water and steam pressure specified without the need to change internal parts.
- The strategic dual output design, one at the bottom for a hose and one at the top for hard pipe installation provides users with the ability to supply two individual terminals with their own hot water supply.
- Easy to adjust the temperature of the hot water. The temperature control wheel adjusts the cold water flow rate into the mixing chamber and can be used alone to set the desired temperature after desired steam flow rate is set with the jam nut.



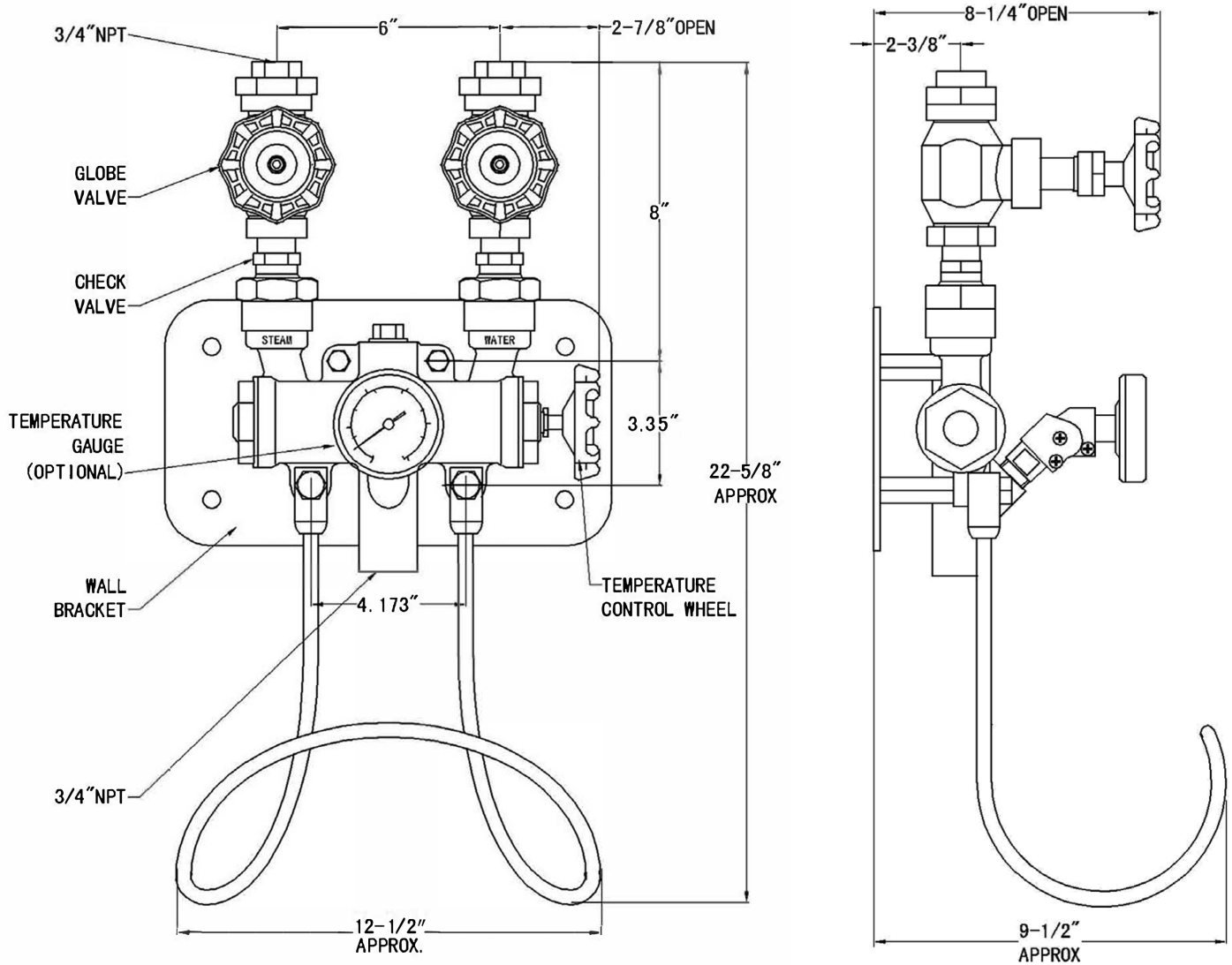
8000GM-S-T

|  | 8000GM-B, 8000GM-B-T     | 8000GM-S, 8000GM-S-T |
|--|--------------------------|----------------------|
| Inlet/Outlet Diameter:                   | 3/4" NPT                 | 3/4" NPT             |
| Globe Valves:                            | Bronze                   | 304 Stainless Steel  |
| Mixer Body:                              | Bronze                   | 304 Stainless Steel  |
| Check Valves: 304 Stainless Steel        | Bronze / Stainless Steel | 304 Stainless Steel  |
| Hose Rack: 304 Stainless Steel           | 304 Stainless Steel      | 304 Stainless Steel  |
| Temperature Gauge (Optional):            | Stainless Steel          | Stainless Steel      |
| Weight:                                  | 24.3 lbs. (11 kg)        | 26.5 lbs. (12 kg)    |
| <b>Recommended Operative Conditions</b>  |                          |                      |
| Working Steam Pressure (Saturated Only): | 30-150 PSI               | 30-150 PSI           |
| Working Water Pressure:                  | 30-150 PSI               | 30-150 PSI           |
| Maximum Temperature:                     | 200 °F (93 °C)           | 200 °F (93 °C)       |
| Maximum Pressure:                        | 150 PSI                  | 150 PSI              |

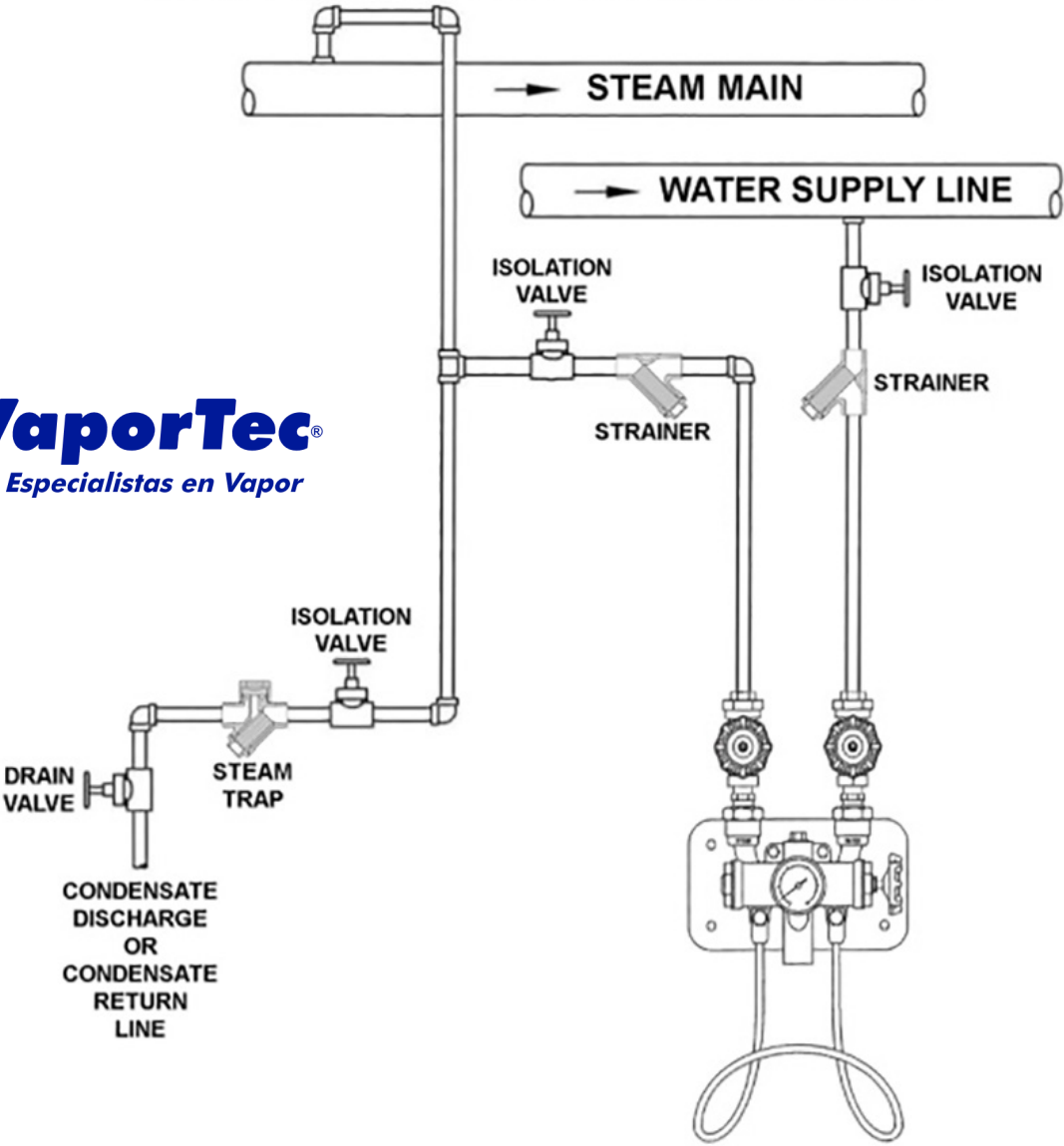
(If steam to water ratio is more than 2:1, please refer to page 3)

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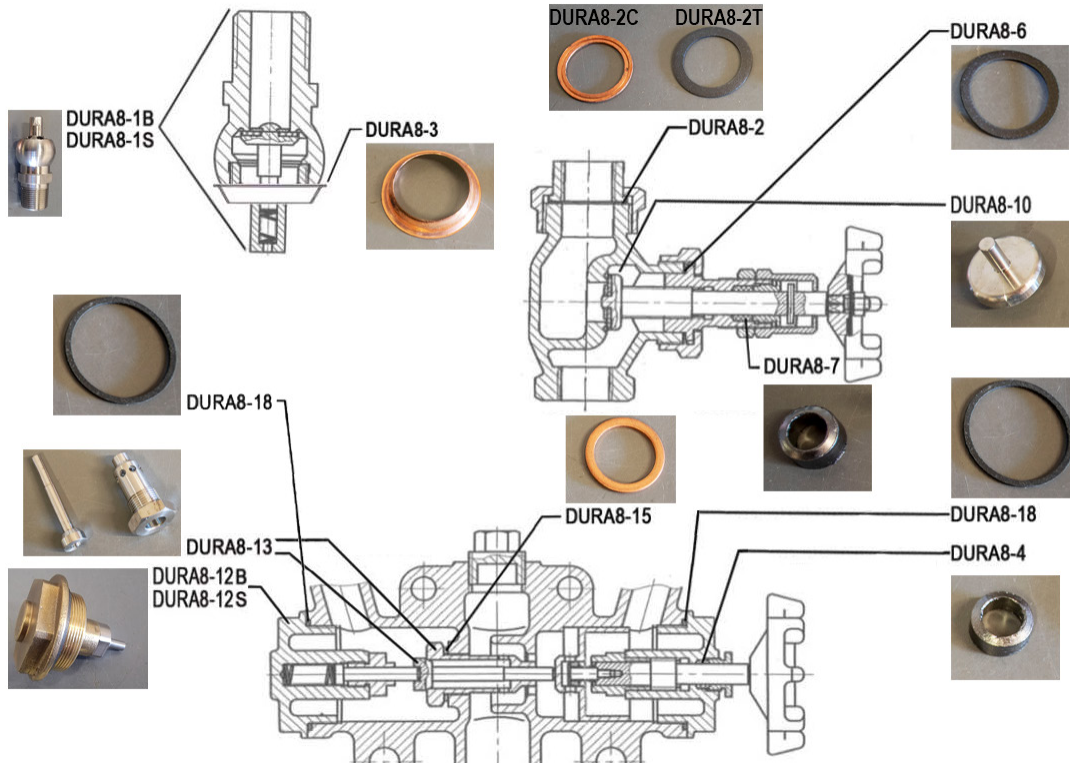
# Recommended Installation Layout





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| Part #            | Description   |
|-------------------|---|
| DURA8-1B          | Check valve assembly. Includes check valve poppet, spring, and copper connection gasket. Bronze.          |
| DURA8-1S          | Check valve assembly. Includes check valve poppet, spring, and copper connection gasket. Stainless Steel. |
| DURA8-2-T         | Globe valve connection gasket. Teflon. Cold water.  |
| DURA8-2-C         | Globe valve connection gasket. Copper. Steam.   |
| DURA8-3           | Check valve connection gasket. Copper.  |
| DURA8-4           | Temperature control stem guide. Teflon filling.   |
| DURA8-6           | Globe valve stem guide nut gasket. Teflon.  |
| DURA8-7           | Globe valve stem guide Teflon filling.  |
| DURA8-10S         | Globe valve poppet. Stainless steel.  |
| DURA8-12B         | Steam chamber cover plate assembly. Bronze  |
| DURA8-12S         | Steam chamber cover plate assembly. Stainless Steel.  |
| DURA8-13          | Steam poppet and poppet seat. Stainless steel   |
| DURA8-15          | Steam poppet seat copper gasket.  |
| DURA8-18          | Temperature control chamber plate gasket. Teflon.   |
| HAND WHEEL-(BLUE) | Globe valve hand wheel (Blue)   |
| HAND WHEEL-(RED)  | Globe valve hand wheel (Red)  |
| GV-STEAM          | Globe valve for steam and cold water mixing unit. Bronze. Steam side.                                     |
| GV-STEAM-SS       | Globe valve for steam and cold water mixing unit. Stainless steel. Steam side.                            |
| GV-WATER          | Globe valve for steam and cold water mixing unit. Bronze. Water side.                                     |
| GV-WATER-SS       | Globe valve for steam and cold water mixing unit. Stainless steel. Water side.                            |

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(Charts below are for reference purposes only)  
(Saturated Steam Only)

For example, provided you have the following:

1. Inlet water: 60 PSI @ 50°F (10°C)
2. Inlet steam: 75 PSI
3. Desired output: 12 GPM @ 105°F (41°C)

Temperature rise in F° should be converted to temperature rise in C° using the following formula:

$$\text{Temp. Rise } C^{\circ} = (\text{Temp. High } F^{\circ} - \text{Temp. Low } F^{\circ}) / 1.8$$

Temperature Rise = 105-50 = 55°F. By examining the table with 55°F temperature rise, we discover that a water output of 12.1 GPM can be achieved with 60 PSI water and 75 PSI steam. This means that one Duramix 8000 unit will be able to produce 12.1 GPM@105°F at the outlet, thus satisfying the requirements. Please note that in some cases it will be necessary to install multiple Duramix 8000 units if the desired outflow is higher than what is indicated on this chart.

0°F (0°C) Temperature Rise Flow Rate: (30 PSI water pressure) 13.1 GPM, (45PSI water pressure) 13.3 GPM, (60 PSI water pressure) 13.6 GPM, (75 PSI water pressure) 13.8 GPM

55°F (31°C) Temperature Rise  
(Inlet Water Temperature + 55°F (31°C) Temperature Rise = Outlet Temperature Output)

| STEAM \ WATER  | 45 PSI (3 Bar)             | 75 PSI (5 Bar)             | 100 PSI (7 Bar)            | 125 PSI (9 Bar)            | 150 PSI (10 Bar)           |
|----------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| 30 PSI (2 Bar) | 10.0 gal/min<br>37.9 l/min | 11.8 gal/min<br>44.7 l/min | 13.0 gal/min<br>49.2 l/min | 14.1 gal/min<br>53.4 l/min | 15.2 gal/min<br>57.5 l/min |
| 45 PSI (3 Bar) | 10.0 gal/min<br>37.9 l/min | 12.0 gal/min<br>45.4 l/min | 13.2 gal/min<br>50.0 l/min | 14.2 gal/min<br>53.8 l/min | 15.3 gal/min<br>57.9 l/min |
| 60 PSI (4 Bar) | 10.2 gal/min<br>38.6 l/min | 12.1 gal/min<br>45.8 l/min | 14.0 gal/min<br>53.0 l/min | 14.3 gal/min<br>54.1 l/min | 15.6 gal/min<br>59.1 l/min |
| 75 PSI (5 Bar) | 10.3 gal/min<br>39.0 l/min | 12.3 gal/min<br>46.6 l/min | 14.2 gal/min<br>54.9 l/min | 14.5 gal/min<br>54.9 l/min | 15.7 gal/min<br>59.4 l/min |

100°F (56°C) Temperature Rise  
(Inlet Water Temperature + 100°F (56°C) Temperature Rise = Outlet Temperature Output)

| STEAM \ WATER  | 45 PSI (3 Bar)            | 75 PSI (5 Bar)            | 100 PSI (7 Bar)            | 125 PSI (9 Bar)            | 150 PSI (10 Bar)           |
|----------------|---------------------------|---------------------------|----------------------------|----------------------------|----------------------------|
| 30 PSI (2 Bar) | 6.5 gal/min<br>24.6 l/min | 8.0 gal/min<br>30.3 l/min | 8.5 gal/min<br>32.2 l/min  | 9.4 gal/min<br>35.6 l/min  | 10.2 gal/min<br>38.6 l/min |
| 45 PSI (3 Bar) | 6.5 gal/min<br>24.6 l/min | 8.2 gal/min<br>31.0 l/min | 9.0 gal/min<br>34.1 l/min  | 9.6 gal/min<br>36.3 l/min  | 10.5 gal/min<br>39.7 l/min |
| 60 PSI (4 Bar) | 6.8 gal/min<br>25.7 l/min | 8.2 gal/min<br>31.0 l/min | 9.9 gal/min<br>37.5 l/min  | 10.0 gal/min<br>37.9 l/min | 10.7 gal/min<br>40.5 l/min |
| 75 PSI (5 Bar) | 6.9 gal/min<br>26.1 l/min | 8.3 gal/min<br>31.4 l/min | 10.1 gal/min<br>38.2 l/min | 10.3 gal/min<br>39.0 l/min | 10.9 gal/min<br>41.3 l/min |

135°F (75°C) Temperature Rise  
(Inlet Water Temperature + 135°F (75°C) Temperature Rise = Outlet Temperature Output)

| STEAM \ WATER  | 45 PSI (3 Bar)            | 75 PSI (5 Bar)            | 100 PSI (7 Bar)           | 125 PSI (9 Bar)           | 150 PSI (10 Bar)           |
|----------------|---------------------------|---------------------------|---------------------------|---------------------------|----------------------------|
| 30 PSI (2 Bar) | 4.6 gal/min<br>17.4 l/min | 6.7 gal/min<br>25.4 l/min | 7.2 gal/min<br>27.3 l/min | 8.3 gal/min<br>31.4 l/min | 9.5 gal/min<br>36.0 l/min  |
| 45 PSI (3 Bar) | 4.8 gal/min<br>18.2 l/min | 7.0 gal/min<br>26.5 l/min | 7.6 gal/min<br>28.8 l/min | 8.5 gal/min<br>32.2 l/min | 9.7 gal/min<br>36.7 l/min  |
| 60 PSI (4 Bar) | 4.8 gal/min<br>18.2 l/min | 7.2 gal/min<br>27.3 l/min | 7.8 gal/min<br>29.5 l/min | 8.6 gal/min<br>32.6 l/min | 9.8 gal/min<br>37.1 l/min  |
| 75 PSI (5 Bar) | 4.9 gal/min<br>18.5 l/min | 7.3 gal/min<br>27.6 l/min | 8.0 gal/min<br>30.3 l/min | 8.9 gal/min<br>33.7 l/min | 10.1 gal/min<br>39.4 l/min |