





## HEAVY DUTY SINGLE STAGE CYLINDER PRESSURE REGULATORS WITH OUTLET FLOW-METER



## TORNADO SERIES LFM

HEAVY DUTY SINGLE STAGE REGULATORS WITH FLOW-METER

The **TORNADO** single stage, spring-loaded regulator with flow meter is a time and industry proven design that has evolved from more than 100 years of Messer German engineering experience and technology to ensure the accurate control of industrial gases with minimum outlet pressure fluctuations and stable flow rates.

**TORNADO** regulators series LFM is a visibly strong, no nonsense, durable construction that sets the standard for pressure regulators used throughout heavy duty welding, brazing, soldering, and gas shielding applications. The **TORNADO** uses the most up-to-date production and testing facilities to ensure a reliable, versatile, affordable, high performance regulator.



## TORNADO Type LFM

- Designed in accordance to internationally recognized standards EN ISO, BSP, CGA, NFE and AS.
- Manufactured under the quality management of EN ISO 9001.
- 100% Quality Assurance Testing.
- Heavy duty, durable construction.
- Forged brass body and housing cap.
- Heavy duty flow meter with shatter proof Polymer lens.
- Pressure relief valve & Burst Disc on flow meter to ensure maximum safety.
- Unique Central Sintered filter protects valve seat from foreign particles and contaminants.
- Internal design reduces gas velocity to prevent fluctuation of valve seat.

- Soft valve seat to ensure leak tightness and increase life span.
- Inlet pressure gauge and outlet flowmeter with dual scale.
- · Fire-retardant valve seat material.
- Outlet pressure relief valve on regulator body ensures operator safety.
- Internal limit lock to maintain stable and constant pressure to flow meter to ensure accurate and stable gas flow.
- Large internal engineering to achieve comparatively high gas flow characteristics and pressure stability
- Reduced maintenance and downtime due to maintenance-free technology.
- German engineered for optimum performance and long life.

| TORNADO<br>Type | Standard | Gas<br>Type                          | Inlet<br>Pressure     | Flow<br>Rate   | Article No. | TORNADO<br>Type | Standard | Gas<br>Type    | Inlet<br>Pressure     | Flow<br>Rate   | Article No. |
|-----------------|----------|--------------------------------------|-----------------------|----------------|-------------|-----------------|----------|----------------|-----------------------|----------------|-------------|
| LFM/E-Ar        | DIN      | Ar<br>Argon                          | 200 bar<br>2900 psi   | 16l/min/34scfh | 770.52095   | LFM/E-N         | DIN      | N2<br>Nitrogen | 200 bar<br>2900 psi   | 16l/min/34scfh | 770.52111   |
|                 |          |                                      |                       | 301/min/64scfh | 770.52096   |                 |          |                |                       | 30l/min/64scfh | 770.52112   |
| LFM/B-Ar        | BSP      |                                      |                       | 16l/min/34scfh | 770.52097   | LFM/B-N         | BSP      |                |                       | 16l/min/34scfh | 770.52113   |
|                 |          |                                      |                       | 301/min/64scfh | 770.52098   |                 |          |                |                       | 30l/min/64scfh | 770.52114   |
| LFM/F-Ar        | NFE      |                                      |                       | 16l/min/34scfh | 770.52099   | LFM/F-N         | NFE      |                |                       | 16l/min/34scfh | 770.52115   |
|                 |          |                                      |                       | 301/min/64scfh | 770.52100   |                 |          |                |                       | 30l/min/64scfh | 770.52116   |
| LFM/AS-Ar       | AS       |                                      | 20000 KPa<br>2900 psi | 16l/min/34scfh | 770.52101   | LFM/AS-N        | AS       |                | 20000 KPa<br>2900 psi | 16l/min/34scfh | 770.52117   |
|                 |          |                                      |                       | 301/min/64scfh | 770.52102   |                 |          |                |                       | 30l/min/64scfh | 770.52118   |
| LFM/E-C         | DIN      | CO <sub>2</sub><br>Carbon<br>Dioxide | 100 bar<br>1450 psi   | 16l/min/34scfh | 770.52103   | LFM/E-H         | DIN      | H2<br>Hydrogen | 200 bar<br>2900 psi   | 16l/min/34scfh | 770.52119   |
|                 |          |                                      |                       | 30l/min/64scfh | 770.52104   |                 |          |                |                       | 30l/min/64scfh | 770.52120   |
| LFM/B-C         | BSP      |                                      |                       | 16l/min/34scfh | 770.52105   | LFM/B-H         | BSP      |                |                       | 16l/min/34scfh | 770.52121   |
|                 |          |                                      |                       | 301/min/64scfh | 770.52106   |                 |          |                |                       | 30l/min/64scfh | 770.52122   |
| LFM/F-C         | NFE      |                                      |                       | 16l/min/34scfh | 770.52107   | LFM/F-H         | NFE      |                |                       | 16l/min/34scfh | 770.52123   |
|                 |          |                                      |                       | 301/min/64scfh | 770.52108   |                 |          |                |                       | 30l/min/64scfh | 770.52124   |
| LFM/AS-C        | AS       |                                      | 10000 KPa<br>1450 psi | 16l/min/34scfh | 770.52109   | LFM/AS-H        | AS       |                | 20000 KPa<br>2900 psi | 16l/min/34scfh | 770.52125   |
|                 |          |                                      |                       | 301/min/64scfh | 770.52110   |                 |          |                |                       | 30l/min/64scfh | 770.52126   |



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