

# Profile cylinder NFPA, TaskMaster®, Series TM5

R480698927

AVENTICS  
Series  
TaskMaster  
Profile  
Cylinders

## AVENTICS Series TaskMaster Profile Cylinders

The AVENTICS Series TM5 TaskMaster is an NFPA compatible cylinder available in profile and tie-rod constructions with five bore sizes. Built to perform in the most demanding applications, the pneumatic cylinder has been enhanced with ideal cushioning. This helps to achieve improved cycle time, reduced wear and vibration, providing the best-in-class solution in industrial applications. Its rugged, non-corroding aluminum body construction and high-strength steel piston rod are paired with a complete range of standard precision-machined mountings.



### Technical data

|                                        |                                                                                  |
|----------------------------------------|----------------------------------------------------------------------------------|
| Industry                               | Industrial                                                                       |
| Standards                              | NFPA                                                                             |
| Type                                   | Bore size: Ø 1-1/2" - 4"<br>Built-in mounting: NFPA MS4<br>Piston rod thread KK1 |
| Piston Ø                               | 63.5 mm                                                                          |
| Stroke                                 | 76.2 mm                                                                          |
| Ports                                  | 3/8" NPTF                                                                        |
| Functional principle                   | Double-acting                                                                    |
| Cushioning                             | Pneumatically                                                                    |
| Magnetic piston                        | with magnetic piston                                                             |
| Piston rod thread - type               | External thread                                                                  |
| Piston rod thread                      | 7/16-20 UNF                                                                      |
| Pressure for determining piston forces | [[90] psi]                                                                       |
| Retracting piston force                | 1650.36 N                                                                        |
| Extracting piston force                | 1966.19 N                                                                        |
| Min. ambient temperature               | -23.33 °C                                                                        |
| Max. ambient temperature               | 73.88 °C                                                                         |
| Min. working pressure                  | 1.38 bar                                                                         |
| Max. working pressure                  | 10 bar                                                                           |

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|                         |                |
|-------------------------|----------------|
| Max. speed              | 2 m/s          |
| Medium                  | Compressed air |
| Min. medium temperature | -23.33 °C      |
| Max. medium temperature | 73.88 °C       |

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## Material

|                       |                     |
|-----------------------|---------------------|
| Piston rod            | Carbon steel        |
| Scraper material      | Polyurethane        |
| Material, front cover | Die-cast aluminum   |
| Cylinder tube         | Aluminum            |
| End cover             | Die-cast aluminum   |
| Piston seal           | Nitrile rubber      |
| Cylinder tube seal    | Polyester elastomer |
| Rod bearing           | Sintered bronze     |
| Cushion ring          | Polyurethane        |
| Nut for piston rod    | Carbon steel        |
| Part No.              | R480698927          |

## Technical information

The pressure dew point must be at least 15 °C less than ambient and medium temperature and may not exceed 3 °C.

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Dimensions in inches



S = stroke

## Dimensions affected by rod diameter

| Ø [inch] | MM    | W    | EE  | RM   | DT   | ZJ   | A    | D     | Y    |
|----------|-------|------|-----|------|------|------|------|-------|------|
| 1 1/2    | 0.625 | 0.63 | 3/8 | 1.12 | 0.31 | 4.63 | 0.75 | 0.5   | 1.35 |
| 2        | 0.625 | 0.63 | 3/8 | 1.12 | 0.34 | 4.63 | 0.75 | 0.5   | 1.26 |
| 2 1/2    | 0.625 | 0.63 | 3/8 | 1.12 | 0.44 | 4.75 | 0.75 | 0.5   | 1.36 |
| 3 1/4    | 1     | 0.75 | 1/2 | 1.5  | 0.50 | 5.63 | 1.12 | 0.875 | 1.66 |
| 4        | 1     | 0.75 | 1/2 | 1.5  | 0.64 | 5.63 | 1.12 | 0.875 | 1.59 |

| Ø [inch] | XT   |
|----------|------|
| 1 1/2    | 1.44 |
| 2        | 1.44 |
| 2 1/2    | 1.44 |
| 3 1/4    | 1.69 |
| 4        | 1.69 |

## Dimensions not affected by rod diameter

| Ø [inch] | E    | G    | J    | P    | V    | AA   | LB   | NT      | RC   |
|----------|------|------|------|------|------|------|------|---------|------|
| 1 1/2    | 2.00 | 1.4  | 1.08 | 2.85 | 0.25 | 2.02 | 4.00 | 1/4-20  | 0.47 |
| 2        | 2.50 | 1.22 | 1.05 | 2.90 | 0.25 | 2.60 | 4.00 | 5/16-18 | 0.50 |
| 2 1/2    | 3.00 | 1.33 | 1.04 | 2.94 | 0.25 | 3.10 | 4.12 | 3/8-16  | 0.50 |
| 3.25     | 3.75 | 1.64 | 1.22 | 3.46 | 0.25 | 3.90 | 4.88 | 1/2-13  | 0.53 |

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| Ø [inch] | E   | G    | J    | P    | V    | AA  | LB   | NT     | RC               |
|----------|-----|------|------|------|------|-----|------|--------|------------------|
| 4        | 4.5 | 1.55 | 1.22 | 3.50 | 0.25 | 4.7 | 4.88 | 1/2-13 | Cylinder<br>0.62 |

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| Ø [inch] | RT      | SN   | TN   |
|----------|---------|------|------|
| 1 1/2    | 1/4-28  | 2.75 | 0.63 |
| 2        | 5/16-24 | 2.75 | 0.88 |
| 2 1/2    | 5/16-24 | 2.88 | 1.25 |
| 3.25     | 3/8-24  | 3.38 | 1.5  |
| 4        | 3/8-24  | 3.38 | 2.06 |

