

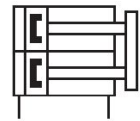
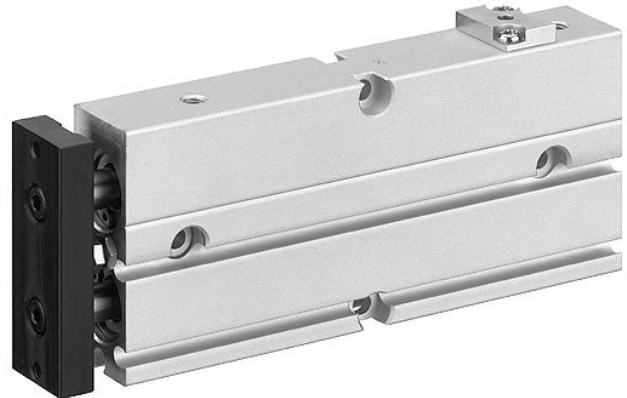
# Double piston cylinder, Series TWC-HL

R402000846

AVENTICS  
Series TWC  
Double  
piston  
cylinders

## AVENTICS Series TWC Double piston cylinders

The AVENTICS Series TWC is a compact and powerful cylinder with its double piston offering also an high non-rotating accuracy.



## Technical data

|  |                      |
|--|----------------------|
| Industry                               | Industrial           |
| Piston Ø                               | 16 mm                |
| Stroke                                 | 10 mm                |
| Port                                   | M5                   |
| Functional principle                   | Double-acting        |
| Magnetic piston                        | with magnetic piston |
| End position lock                      | retracted cylinder   |
| Medium                                 | Compressed air       |
| Max. particle size                     | 5 µm                 |
| Pressure for determining piston forces | 6,3 bar              |
| Cushioning                             | elastic              |
| Min. ambient temperature               | 0 °C                 |
| Max. ambient temperature               | 60 °C                |
| Min. oil content of compressed air     | 0 mg/m <sup>3</sup>  |
| Max. oil content of compressed air     | 1 mg/m <sup>3</sup>  |
| Min. working pressure                  | 1.5 bar              |
| Max. working pressure                  | 7 bar                |
| Retracting piston force                | 189 N                |
| Extracting piston force                | 253 N                |
| Max. speed                             | 0.5 m/s              |
| Max. holding force when locked         | 95 N                 |
| Max. play with locked end position     | 1 mm                 |
| Max. cushioning energy                 | 0.11 J               |
| Weight 10 mm stroke                    | 0.24 kg              |
| Weight +10 mm stroke                   | 0.035 kg             |

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Max. play (radial) 0.6 °

2024-04-05

## Material

|                        |                                |
|------------------------|--------------------------------|
| Material, front cover  | Steel, chrome-plated           |
| Surface front cover    | nickel-plated                  |
| Material of rear cover | Polyoxymethylene               |
| Housing material       | Aluminum                       |
| Surface housing        | anodized                       |
| Material piston rod    | Steel, chrome-plated           |
| Surface piston rod     | hardened                       |
| Material front plate   | Steel, chrome-plated           |
| Surface front plate    | galvanized                     |
| Seal material          | Acrylonitrile butadiene rubber |
| Material guide bushing | Aluminum                       |
| Surface guide bushing  | anodized                       |
| Part No.               | R402000846                     |

## Technical information

Additional function: end position lock with pressure drop

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

The oil content of compressed air must remain constant during the life cycle.

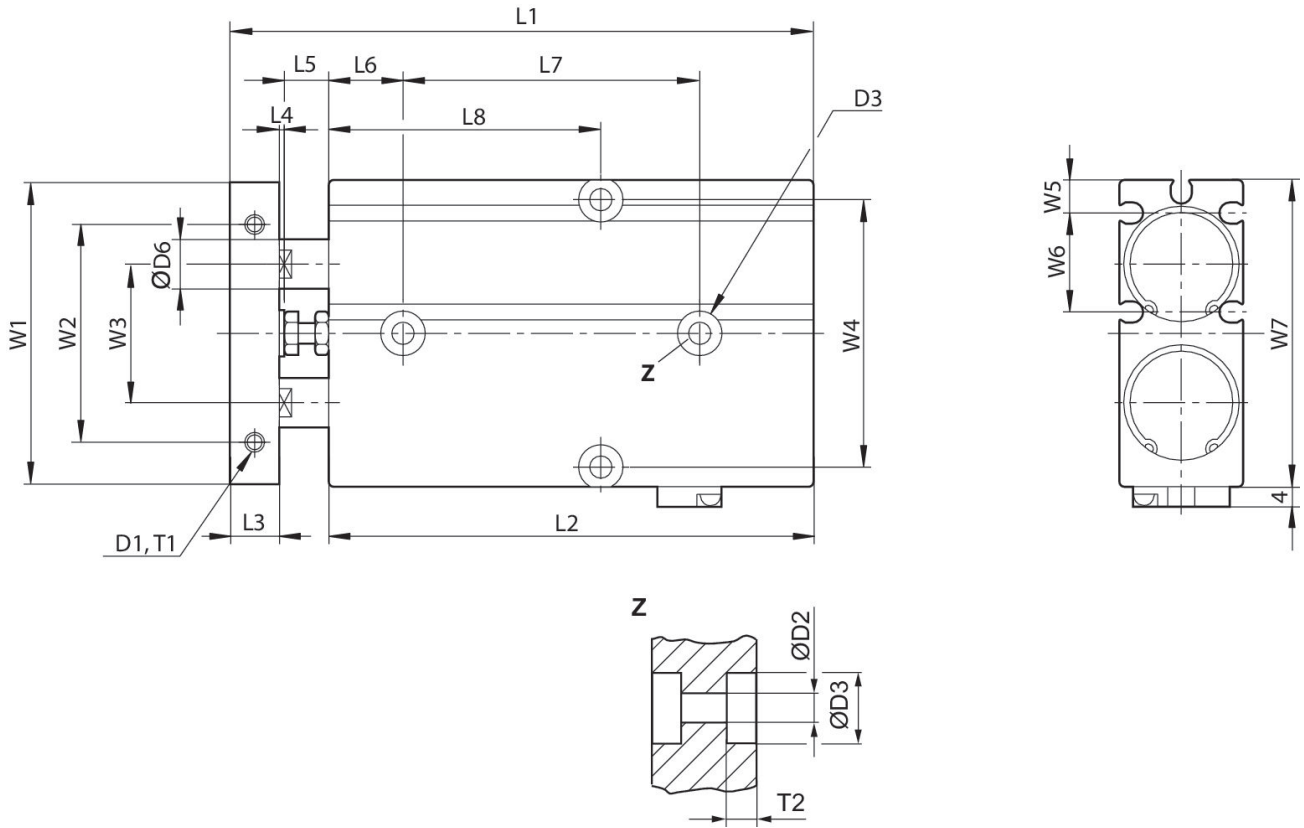
Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in <https://www.emerson.com/en-us/support>).

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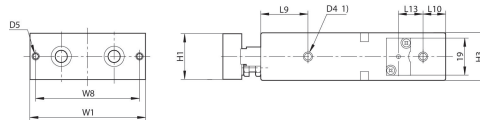
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TWC 16-HL - 25-HL



TWC 16-HL - 25-HL



T1 = depth of thread

1) Compressed air connection

| Piston Ø | D1   | T1 | Ø D2 | Ø D3 | T2  | D4 | D5   | Ø D6 | H1 |
|----------|------|----|------|------|-----|----|------|------|----|
| 16       | 2xM4 | 5  | 4,5  | 8    | 5,5 | M5 | 2xM4 | 8    | 20 |
| 20       | 2xM4 | 5  | 4,5  | 8    | 5,5 | M5 | 2xM4 | 10   | 24 |
| 25       | 2xM5 | 6  | 4,5  | 9    | 6   | M5 | 2xM4 | 12   | 29 |

| Piston Ø | H3 | L1 ±0,8 1) | L2 ±0,2<br>S=10 2) | L2 ±0,2<br>S=20 2) | L2 ±0,2<br>S=30 2) | L2 ±0,2<br>S=40 2) | L2 ±0,2<br>S=50 2) | L2 ±0,2<br>S=60 2) | L2 ±0,2<br>S=70 2) |
|----------|----|------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| 16       | 21 | 88         | 83                 | 93                 | 103                | 113                | 123                | 133                | 143                |
| 20       | 25 | 98         | 88                 | 98                 | 108                | 118                | 128                | 138                | 148                |
| 25       | 30 | 101        | 92                 | 102                | 112                | 122                | 132                | 142                | 152                |

| Piston Ø | L2 ±0,2<br>S=80 2) | L3 | L4 | L5 | L6 | L7 ±0,2 1) | L8 ±0,2<br>S=10 2) | L8 ±0,2<br>S=20 2) | L8 ±0,2<br>S=30 2) |
|----------|--------------------|----|----|----|----|------------|--------------------|--------------------|--------------------|
| 16       | 153                | 8  | 1  | 6  | 15 | 40         | 40                 | 45                 | 50                 |
| 20       | 158                | 10 | 1  | 9  | 15 | 40         | 40                 | 45                 | 50                 |

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| Piston Ø | L2 ±0,2<br>S=80 2) | L3 | L4 | L5 | L6 | L7 ±0,2 1) | L8 ±0,2<br>S=10 2) | L8 ±0,2<br>S=20 2) | L8 ±0,2<br>S=30 2) |
|----------|--------------------|----|----|----|----|------------|--------------------|--------------------|--------------------|
| 25       | 162                | 10 | 1  | 8  | 15 | 50         | 45                 | 50                 | 55                 |

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| Piston Ø | L8 ±0,2<br>S=40 2) | L8 ±0,2<br>S=50 2) | L8 ±0,2<br>S=60 2) | L8 ±0,2<br>S=70 2) | L8 ±0,2<br>S=80 2) | L9 | L10 | L13 | W1 |
|----------|--------------------|--------------------|--------------------|--------------------|--------------------|----|-----|-----|----|
| 16       | 55                 | 60                 | 65                 | 70                 | 75                 | 22 | 10  | 13  | 53 |
| 20       | 55                 | 60                 | 65                 | 70                 | 75                 | 25 | 12  | 13  | 61 |
| 25       | 60                 | 65                 | 70                 | 75                 | 80                 | 30 | 12  | 10  | 72 |

| Piston Ø | W2 ±0,2 | W3 | W4 ±0,2 | W5  | W6   | W7 | W8 ±0,2 |
|----------|---------|----|---------|-----|------|----|---------|
| 16       | 34      | 24 | 47      | 5.7 | 18.5 | 54 | 47      |
| 20       | 44      | 28 | 55      | 6.8 | 20   | 62 | 55      |
| 25       | 56      | 34 | 66      | 8.3 | 22.5 | 73 | 66      |

S = stroke

1) + Stroke

2) Dimensions for corresponding stroke