

# Series 1386-1387-1388/ 1396/1397/1398, ECOPLUS

# General

Profiled tube has two "T" slots on the three sides hosting sensors 1580.\_, MRS.\_, MHS.\_. without adaptors.

#### **Construction characteristics**

| End caps                 | Series 1386 - 1388:                                      | Series 1396 - 1398:   |  |  |  |
|--------------------------|--|-----------------------|--|--|--|
|                          | high resistant   | Die-casting aluminium |  |  |  |
|                          | thermoplastic material                                   |                       |  |  |  |
| Rod                      | C43 chromed steel or stainless steel                     |                       |  |  |  |
| Barrel                   | anodised aluminium alloy                                 |                       |  |  |  |
| Rod-guide bushing        | self-lubricating sintered bronze                         |                       |  |  |  |
| Piston                   | acetal resin, aluminium on request                       |                       |  |  |  |
| Seal                     | standard: NBR Oil resistant rubber, PUR Piston rod seals |                       |  |  |  |
|                          | (PUR seals available upon request)                       |                       |  |  |  |
| Cushion adjusting screws | brass  |                       |  |  |  |

#### **Operational characteristics**

| Fluid                                  | Filtered air.<br>No lubrication needed, if applied it shall be continuous. |  |  |
|--|--|--|--|
| Max. pressure                          | 10 bar   |  |  |
| Operating temperature                  | -5°C - +70°C with standard seals<br>-30°C - +80°C with PUR seals           |  |  |
| Bore                                   | Ø 32 - 40 - 50 - 63 - 80 - 100   |  |  |
| Cushioning lenght                      | mm 27 - 31 - 31 - 37 - 40 - 44   |  |  |
| Cushioning lenght "K" and "PK" version | mm 20 - 20 - 22 - 22 - 32 - 32   |  |  |

Please follow the suggestions below to ensure a long life for these cylinders:

•use clean and lubricated air

• correct alignment during assembly with regard to the applied load so as to avoid radial components or bending the rod;

• avoid high speeds together with long strokes and heavy loads: this would produce kinetic energy which the cylinder cannot absorb, especially if used as a limit stop (in this case use mechanical stop device and aluminium piston);

• evaluate the environmental characteristics of cylinder used (high temperature, hard atmosphere, dust, humidity etc.)

### Please note: air must be dried for applications with lower temperature.

Use hydraulic oils H class (ISO VG32) for correct continued lubrication. Our Technical Department will be glad to help.

| Stroke tolerance (ISO 15552) |                     |           |  |  |  |
|------------------------------|---------------------|-----------|--|--|--|
| Bore                         | Stroke              | Tolerance |  |  |  |
| 32 - 40 - 50                 | up to 500           | +2<br>0   |  |  |  |
|                              | over 500 up to 1000 | +3.2      |  |  |  |
| C2 00 100                    | up to 500           | +2.5<br>0 |  |  |  |
| 63 - 80 - 100                | over 500 up to 1000 | +4 0      |  |  |  |

#### Standard strokes (for all diameters)

| from | n 0 to 150, | every 25 mm |
|------|-------------|-------------|
| 6    |             |             |

from 150 to 500, every 50 mm from 500 to 1000, every 100

On request are available strokes up to 2800 mm

PNEUMATIC ACTUATION



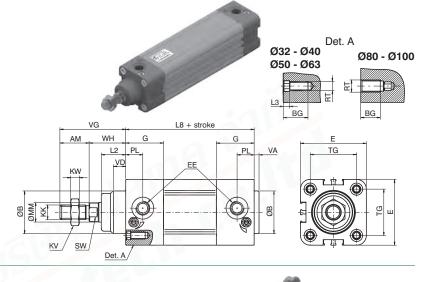
# Basic version "01"

#### Ordering code

TECHNOPOLYMER COVERS 1386.Ø.stroke.01 Magnetic chromed rod 1387.Ø.stroke.01 Magnetic stainless steel rod 1388.Ø.stroke.01 Non magnetic chromed rod

### ALUMINIUM COVERS

1396.Ø.stroke.01 Magnetic chromed rod 1397.Ø.stroke.01 Magnetic stainless steel rod 1398.Ø.stroke.01 Non magnetic chromed rod



# Through rod cylinder version "02"

Ordering code

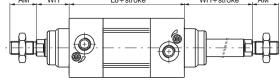
# TECHNOPOLYMER COVERS

1386.Ø.stroke.02 Magnetic chromed rod 1387.Ø.stroke.02 Magnetic stainless steel rod 1388.Ø.stroke.02 Non magnetic chromed rod

# ALUMINIUM COVERS

1396.Ø.stroke.02 Magnetic chromed rod 1397.Ø.stroke.02 Magnetic stainless steel rod 1398.Ø.stroke.02 Non magnetic chromed rod





# Tandem push with common rods "G"

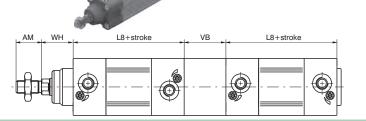
### Ordering code

# TECHNOPOLYMER COVERS

1386.Ø.stroke.G Magnetic chromed rod 1387.Ø.stroke.G Magnetic stainless steel rod 1388.Ø.stroke.G Non magnetic chromed rod

# ALUMINIUM COVERS

1396.Ø.stroke.G Magnetic chromed rod 1397.Ø.stroke.G Magnetic stainless steel rod 1398.Ø.stroke.G Non magnetic chromed rod



# Tandem push with independent rods "F"

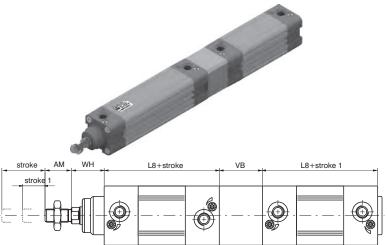
Ordering code

# **TECHNOPOLYMER COVERS**

1386.Ø.stroke.stroke1.F Magnetic chromed rod 1387.Ø.stroke.stroke1.F Magnetic stainless steel rod 1388.Ø.stroke.stroke1.F Non magnetic chromed rod

# ALUMINIUM COVERS

1396.Ø.stroke.stroke1.F Magnetic chromed rod 1397.Ø.stroke.stroke1.F Magnetic stainless steel rod 1398.Ø.stroke.stroke1.F Non magnetic chromed rod





## Opposed tandem with common rod "D"

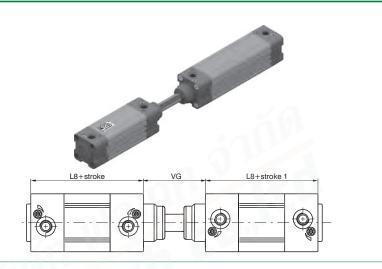
#### Ordering code

# **TECHNOPOLYMER COVERS**

1386.Ø.stroke.stroke1.D Magnetic chromed rod 1387.Ø.stroke.stroke1.D Magnetic stainless steel rod 1388.Ø.stroke.stroke1.D Non magnetic chromed rod

### ALUMINIUM COVERS

1396.Ø.stroke.stroke1.D Magnetic chromed rod 1397.Ø.stroke.stroke1.D Magnetic stainless steel rod 1398.Ø.stroke.stroke1.D Non magnetic chromed rod



### Tandem with opposed rods "E"

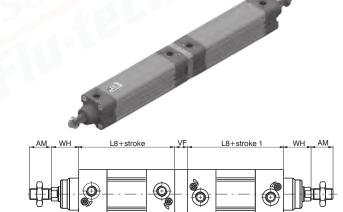
#### Ordering code

### **TECHNOPOLYMER COVERS**

1386.Ø.stroke.stroke1.E Magnetic chromed rod 1387.Ø.stroke.stroke1.E Magnetic stainless steel rod 1388.Ø.stroke.stroke1.E Non magnetic chromed rod

### ALUMINIUM COVERS

1396.Ø.stroke.stroke1.E Magnetic chromed rod 1397.Ø.stroke.stroke1.E Magnetic stainless steel rod 1398.Ø.stroke.stroke1.E Non magnetic chromed rod



# Variants

Ordering code

13\_\_.Ø.stroke.\_\_.P = Version with PUR seals

**13**\_.Ø.stroke.\_.K = Version with aluminium piston

13\_\_.Ø.stroke.\_\_.PK = Version with PUR seals and aluminium piston

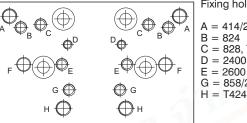
### Table of dimensions

| chisto   |               |             |          |          |         |         |         |         |
|----------|---------------|-------------|----------|----------|---------|---------|---------|---------|
| Bore     |               |             | 32       | 40       | 50      | 63      | 80      | 100     |
| AM       |               |             | 22       | 24       | 32      | 32      | 40      | 40      |
| B (d 11) |               |             | 30       | 35       | 40      | 45      | 45      | 55      |
| BG       |               |             | 16       | 16       | 18      | 18      | 16      | 16      |
| E        |               |             | 46       | 54       | 65      | 77,5    | 95,5    | 115,5   |
| EE       |               |             | G 1/8"   | G 1/4"   | G 1/4"  | G 3/8"  | G 3/8"  | G 1/2"  |
| G        |               |             | 29       | 31       | 33      | 36      | 40      | 44      |
| KK       |               |             | M10X1,25 | M12X1,25 | M16x1,5 | M16x1,5 | M20x1,5 | M20x1,5 |
| KV       |               |             | 17       | 19       | 24      | 24      | 30      | 30      |
| KW       |               |             | 6        | 7        | 8       | 8       | 9       | 9       |
| L2       |               |             | 16       | 20       | 25      | 25      | 32      | 35      |
| L3       |               |             | 4        | 4        | 5       | 5       | /       | /       |
| L8       |               |             | 94       | 105      | 106     | 121     | 128     | 138     |
| MM       |               |             | 12       | 16       | 20      | 20      | 25      | 25      |
| PL       |               |             | 13       | 14       | 14      | 16      | 16      | 18      |
| RT       |               |             | M6       | M6       | M8      | M8      | M10     | M10     |
| SW       |               |             | 10       | 13       | 17      | 17      | 22      | 22      |
| TG       |               |             | 32,5     | 38       | 46,5    | 56,5    | 72      | 89      |
| VA       |               |             | 4        | 4        | 4       | 4       | 4       | 4       |
| VB       |               |             | 33       | 41       | 51      | 51      | 65      | 71      |
| VD       |               |             | 8        | 10       | 12      | 12      | 15      | 16      |
| VF       |               |             | 12       | 12       | 16      | 16      | 20      | 20      |
| VG       |               |             | 48       | 54       | 69      | 69      | 86      | 91      |
| WH       |               |             | 26       | 30       | 37      | 37      | 46      | 51      |
| Weight   | Aluminium     | stroke 0    | 550      | 690      | 1200    | 1590    | 2500    | 3670    |
| g        | covers        | every 10 mm | 29       | 40       | 57      | 66      | 96      | 112     |
| Weight   | Technopolymer | stroke 0    | 470      | 590      | 1020    | 1320    | 2090    | 3010    |
| g        | covers        | every 10 mm | 29       | 40       | 57      | 66      | 96      | 112     |



# Solenoid valves supports

This accessory permits to mount a valve or an electrovalve on a side of the cylinder. The plate can be fitted on the cylinder profiled barrel, and, on it, can be mounted either a threaded distributor or a base on whic can be mounted an ISO distributor. Once installed the connections must be done with fittings and pipes. All of the threaded holes on the support plate are dedicated to different valves series as per attached drawing.



Fixing holes for valves series:

A = 414/2B = 824 C = 828, T488, 488, 484 D = 2400

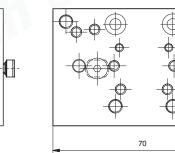
G = 858/2

Ordering code

1386.15

Flu:Tech





Attention: do not use ISO distributor for base mounting





|                                 | Dimensions |    |    |        |  |
|---------------------------------|------------|----|----|--------|--|
|                                 | А          | В  | С  | D      |  |
| bases for ISO 1 solenoid valves | 40         | 75 | 15 | G 1/8" |  |
| bases for ISO 2 solenoid valves | 50         | 95 | 20 | G 1/4" |  |

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