

PNEUMATIC ACTUATORS

Pneumatic actuators

Aluminium double acting "DA" pneumatic actuator

features

features & benefits

output torque

codes, dimensions and materials



Features

TECHNICAL FEATURES

Torque from 8 Nm to 3840 Nm.

Mounting flange according to DIN/ISO 5211 DIN 3337

F03 - F04 - F05 - F07 - F10 - F12 - F14 - F16.

NAMUR connection for accessories.

Rotation angle 90°

Torque: directly proportional to the air supply (see table).

The code numbers after the DA letters, always correspond to the breakaway torque in Nm by 5,6 bar air supply.

WORKING CONDITION

Temperature: from 0°C to +80°C; from -20°C to +80°C with dry air only. (+150°C in special execution)

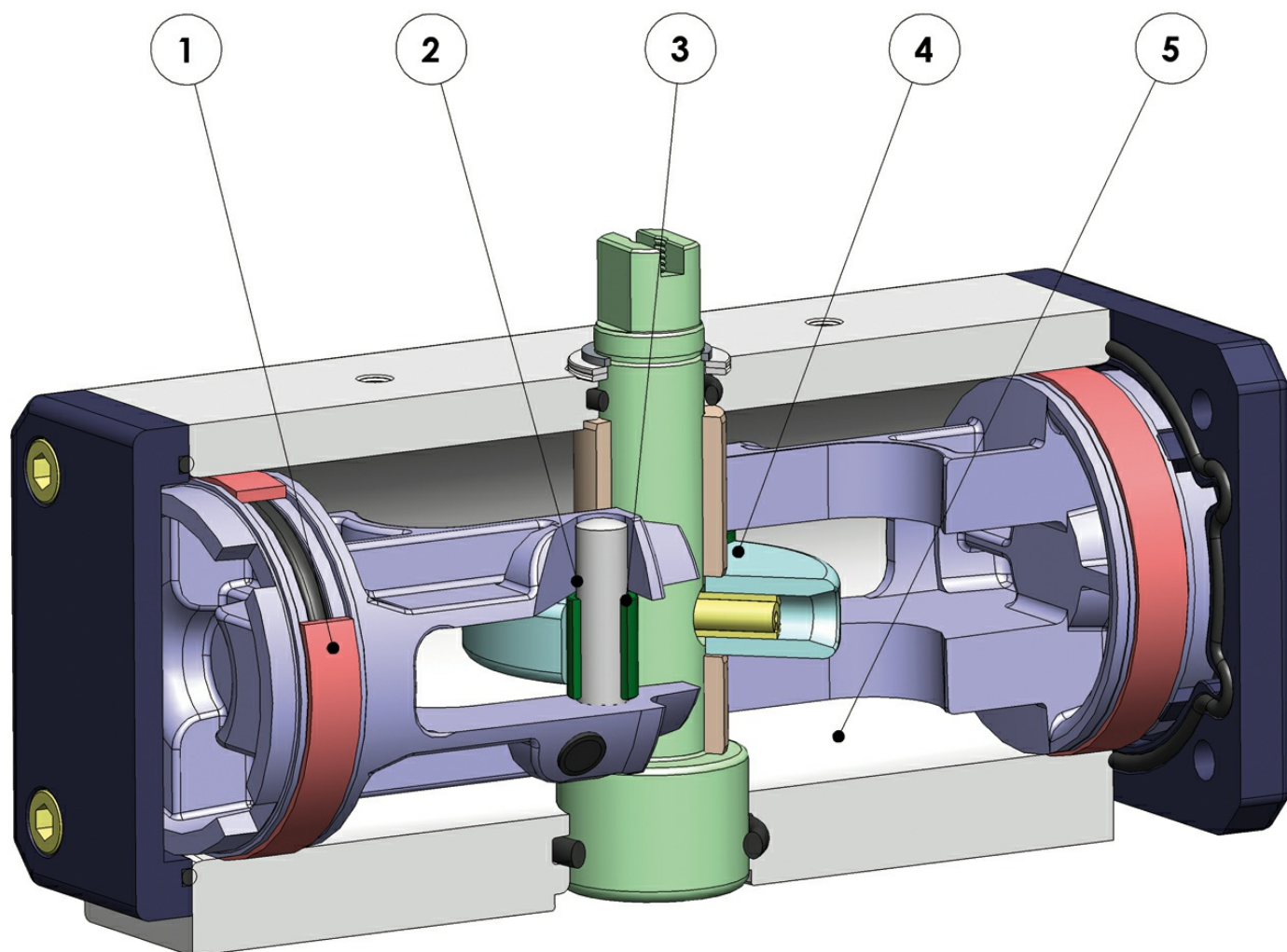
Air supply: 5,6 bar; maximum 8,4 bar.

Operating media: compressed filtered air, not necessarily lubricated.

In case of lubricated air, either non detergent oil or NBR compatible oil, must be used.

Features & benefits

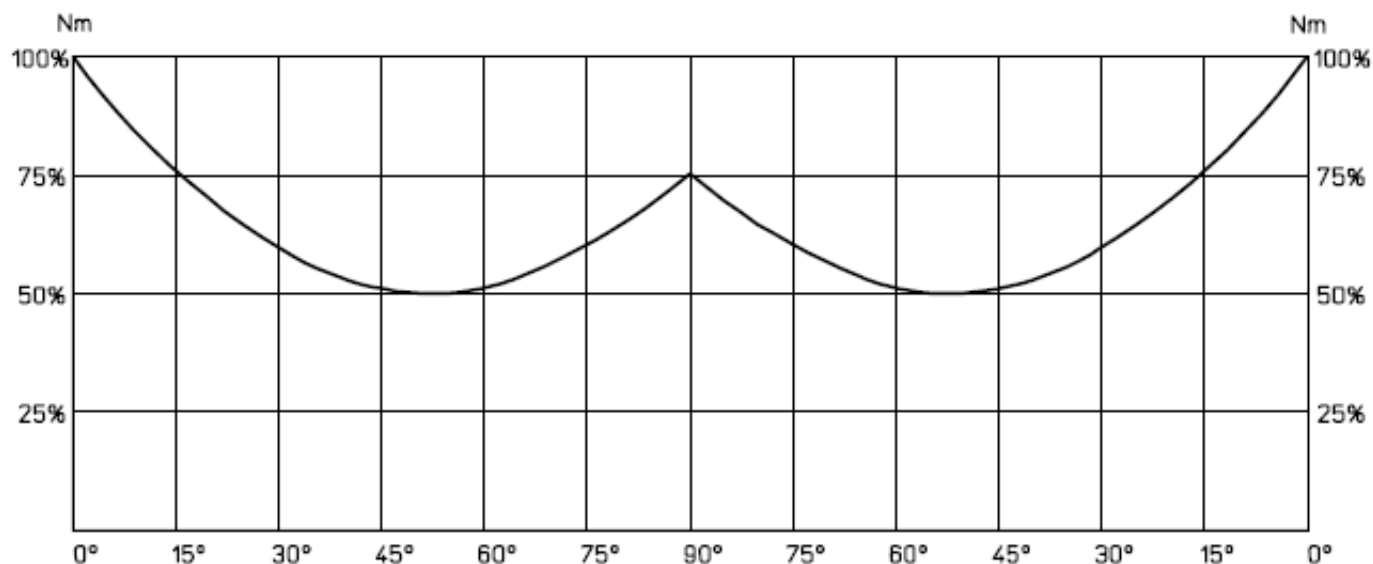
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| FEATURES AND BENEFITS | | |
|-----------------------|--|---|
| 1 | Energized and self-lubricated strips | <p>Less friction between piston and cylinder</p> <p>It prevents the bonding of the seal to the cylinder even after long periods of inactivity</p> |
| 2 | Slots, bushes and pins made by steel with hardness higher than 50 HRC | Higher resistance to the forces inside the actuator |
| 3 | Rolling friction between piston and slot | Less friction |
| 4 | Scotch yoke with rolling friction (transforming rotary motion into linear motion using piston and shaft without teeth/gears) | <p>Reduced friction between piston and shaft with consequently less wear on the relevant parts</p> <p>Empowered Break Away Torque (BTO & BTC)</p> <p>Smaller volume/size than rack and pinion actuators (with the same torque) therefore less space required for installation</p> <p>Less weight than the rack and pinion (-30% kg / Nm), with consequent savings on the construction sizing of the plant/equipment</p> |

| | | |
|---|---|--|
| | | Lower air consumption compared to the rack and pinion (-40% air cm ³ /Nm for Double Acting and -20% air cm ³ /Nm for Spring Return) therefore less load on the compressor or the possibility of using a smaller compressor's size. |
| 5 | Rolled cylinder | Less wear of the energized ties thanks to the low roughness of the surface (0.15 micron Ra) |
| | 100% in- house manufacturing process technology | Maximum control and accuracy in all the stages of the manufacturing process |
| | ATEX Certificate | Installation is allowed in a potential explosive environment |
| | SIL 3 Certified | Guarantee of the high level of functional safety. |

Output torque

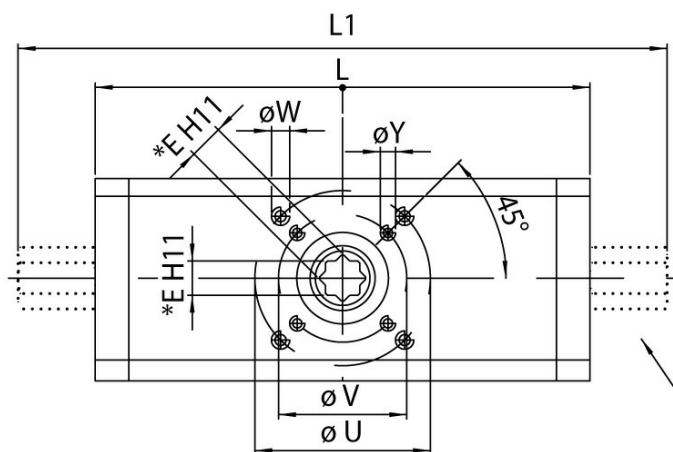


OUTPUT TORQUE TABLE (Nm) α° = rotation angle

| SIZE | α° | 3 bar | 4 bar | 5 bar | 5,6 bar | 6 bar | 7 bar | 8 bar |
|--------|----------------|-------|-------|-------|---------|-------|-------|-------|
| DA 8 | 0° | 4,3 | 5,7 | 7,1 | 8,0 | 8,6 | 10,0 | 11,4 |
| | 45° | 2,1 | 2,8 | 3,6 | 4,0 | 4,3 | 5,0 | 5,7 |
| | 90° | 4,3 | 5,7 | 7,1 | 8,0 | 8,6 | 10,0 | 11,4 |
| DA 15 | 0° | 8,0 | 10,7 | 13,4 | 15,0 | 16,1 | 18,8 | 21,4 |
| | 50° | 4,0 | 5,4 | 6,7 | 7,5 | 8,0 | 9,4 | 10,7 |
| | 90° | 6,0 | 8,1 | 10,1 | 11,3 | 12,1 | 14,1 | 16,1 |
| DA 30 | 0° | 16,1 | 21,4 | 26,8 | 30,0 | 32,1 | 37,5 | 42,9 |
| | 50° | 8,0 | 10,7 | 13,4 | 15,0 | 16,1 | 18,8 | 21,4 |
| | 90° | 12,0 | 16,1 | 20,1 | 22,5 | 24,1 | 28,1 | 32,1 |
| DA 45 | 0° | 24,0 | 32,1 | 40,2 | 45,0 | 48,3 | 56,4 | 64,2 |
| | 50° | 12,0 | 16,2 | 20,1 | 22,5 | 24,0 | 28,2 | 32,1 |
| | 90° | 18,0 | 24,3 | 30,3 | 34,0 | 36,3 | 42,3 | 48,3 |
| DA 60 | 0° | 32,1 | 42,9 | 53,6 | 60,0 | 64,3 | 75,0 | 85,7 |
| | 50° | 16,1 | 21,4 | 26,8 | 30,0 | 32,1 | 37,5 | 42,9 |
| | 90° | 24,1 | 32,1 | 40,2 | 45,0 | 48,2 | 56,3 | 64,3 |
| DA 90 | 0° | 48,0 | 64,2 | 80,4 | 90,0 | 96,6 | 112,8 | 128,4 |
| | 50° | 24,0 | 32,4 | 40,2 | 45,0 | 48,0 | 56,4 | 64,2 |
| | 90° | 36,0 | 48,6 | 60,6 | 68,0 | 72,6 | 84,6 | 96,6 |
| DA 120 | 0° | 64,3 | 85,7 | 107,1 | 120,0 | 128,6 | 150,0 | 171,4 |
| | 50° | 32,1 | 42,9 | 53,6 | 60,0 | 64,3 | 75,0 | 85,7 |
| | 90° | 48,2 | 64,3 | 80,4 | 90,0 | 96,4 | 112,5 | 128,6 |
| DA 180 | 0° | 96,0 | 128,4 | 160,8 | 180,0 | 193,2 | 225,6 | 264,8 |
| | 50° | 48,0 | 64,8 | 80,4 | 90,0 | 96,0 | 112,8 | 128,4 |

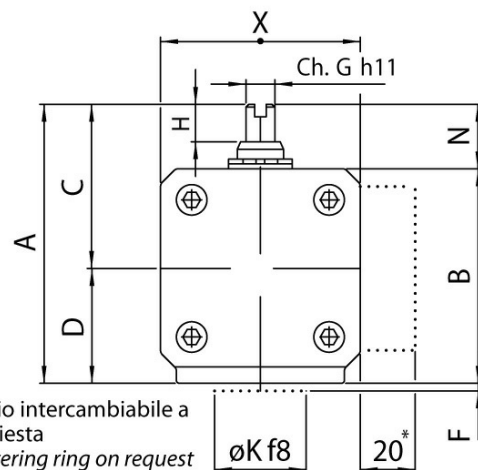
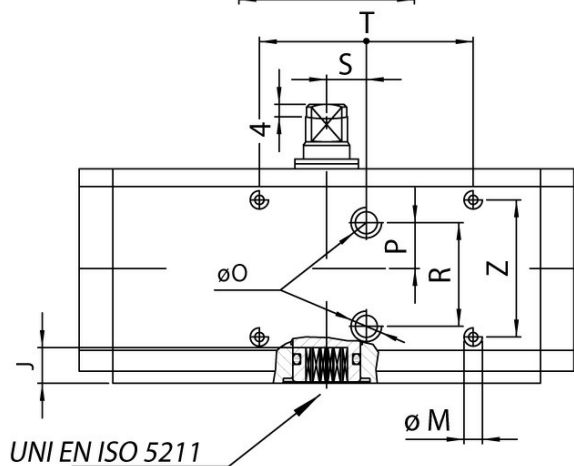
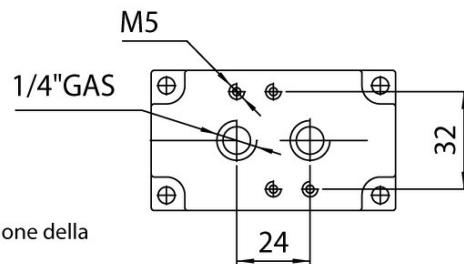
| | | | | | | | | |
|----------|-----|--------|--------|--------|--------|--------|--------|--------|
| | 90° | 72,0 | 97,2 | 121,2 | 135,0 | 145,2 | 169,2 | 193,2 |
| DA 240 | 0° | 128,6 | 171,4 | 214,3 | 240,0 | 257,1 | 300,0 | 342,9 |
| | 50° | 64,3 | 85,7 | 107,1 | 120,0 | 128,6 | 150,0 | 171,4 |
| | 90° | 96,4 | 128,6 | 160,7 | 180,0 | 192,9 | 225,0 | 257,1 |
| DA 360 | 0° | 192,0 | 256,8 | 321,6 | 360,0 | 386,4 | 451,2 | 513,6 |
| | 50° | 96,0 | 129,6 | 160,8 | 180,0 | 192,0 | 225,6 | 264,8 |
| | 90° | 144,0 | 194,4 | 242,4 | 270,0 | 290,4 | 338,4 | 386,4 |
| DA 480 | 0° | 257,1 | 342,9 | 428,6 | 480,0 | 514,3 | 600,0 | 685,7 |
| | 50° | 128,6 | 171,4 | 214,3 | 240,0 | 257,1 | 300,0 | 342,9 |
| | 90° | 192,9 | 257,1 | 321,4 | 360,0 | 385,7 | 450,0 | 514,3 |
| DA 720 | 0° | 384,0 | 513,6 | 643,2 | 720,0 | 772,8 | 902,4 | 1027,2 |
| | 50° | 192,0 | 259,2 | 321,6 | 360,0 | 384,0 | 451,2 | 529,6 |
| | 90° | 288,0 | 388,8 | 484,8 | 540,0 | 580,8 | 676,8 | 772,8 |
| DA 960 | 0° | 514,3 | 685,7 | 857,1 | 960,0 | 1028,6 | 1200,0 | 1371,4 |
| | 50° | 257,1 | 342,9 | 428,6 | 480,0 | 514,3 | 600,0 | 685,7 |
| | 90° | 385,7 | 514,3 | 642,9 | 720,0 | 771,4 | 900,0 | 1028,6 |
| DAN 1440 | 0° | 768,0 | 1027,2 | 1286,4 | 1440,0 | 1545,6 | 1804,8 | 2057,4 |
| | 50° | 384,0 | 518,4 | 643,2 | 720,0 | 768,0 | 902,4 | 1059,2 |
| | 90° | 576,0 | 777,6 | 969,9 | 1080,0 | 1161,6 | 1353,6 | 1545,6 |
| DAN 1920 | 0° | 1028,6 | 1371,4 | 1714,3 | 1920,0 | 2057,1 | 2400,0 | 2742,9 |
| | 50° | 514,3 | 685,8 | 857,1 | 960,0 | 1028,6 | 1200,0 | 1371,4 |
| | 90° | 771,4 | 1028,6 | 1285,7 | 1440,0 | 1542,9 | 1800,0 | 2057,1 |
| DA 2880 | 0° | 1543 | 2057 | 2571,4 | 2880 | 3085,7 | 3600 | 4114,3 |
| | 50° | 771,4 | 1028,6 | 1285,7 | 1440 | 1543 | 1800 | 2057,1 |
| | 90° | 1157 | 1543 | 1928,6 | 2160 | 2314,3 | 2700 | 3085,7 |
| DA 3840 | 0° | 2050 | 2840 | 3425 | 3840,0 | 4110 | 4880,0 | 5485 |
| | 50° | 1025 | 1370 | 1710 | 1920,0 | 2055 | 2400,0 | 2740 |
| | 90° | 1540 | 2055 | 2570 | 2880,0 | 3085 | 3600,0 | 4014 |
| DA 5760 | 0° | 3085,7 | 4114,3 | 5143 | 5760 | 6171,4 | 7200 | 8228,6 |
| | 50° | 1542,9 | 2057 | 2571,4 | 2880 | 3085,7 | 3600 | 4114,3 |
| | 90° | 2314,3 | 3085,7 | 3857,1 | 4320 | 4628,6 | 5400 | 6171,4 |
| DA 8000 | 0° | 4285,7 | 5714,3 | 7142,9 | 8000 | 8571,4 | 10000 | |
| | 50° | 2142,9 | 2857,1 | 3571,4 | 4000 | 4285,7 | 5000 | |
| | 90° | 3214,3 | 4285,7 | 5357,1 | 6000 | 6428,6 | 7500 | |

Codes, dimensions and materials - DA8



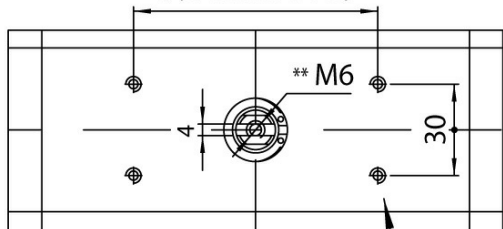
Dispositivo di regolazione della
caorsa (max 10°)
Manual stroke adjustment (max 10°)

INTERFACCIA NAMUR
NAMUR INTERFACE



Anello di centraggio intercambiabile a
richiesta
Interchangeable centering ring on request

Q (N°4 FILETTI M5)
Q (N°4 THREAD M5)



** DA 8 filetto M4
** DA 8 thread M4

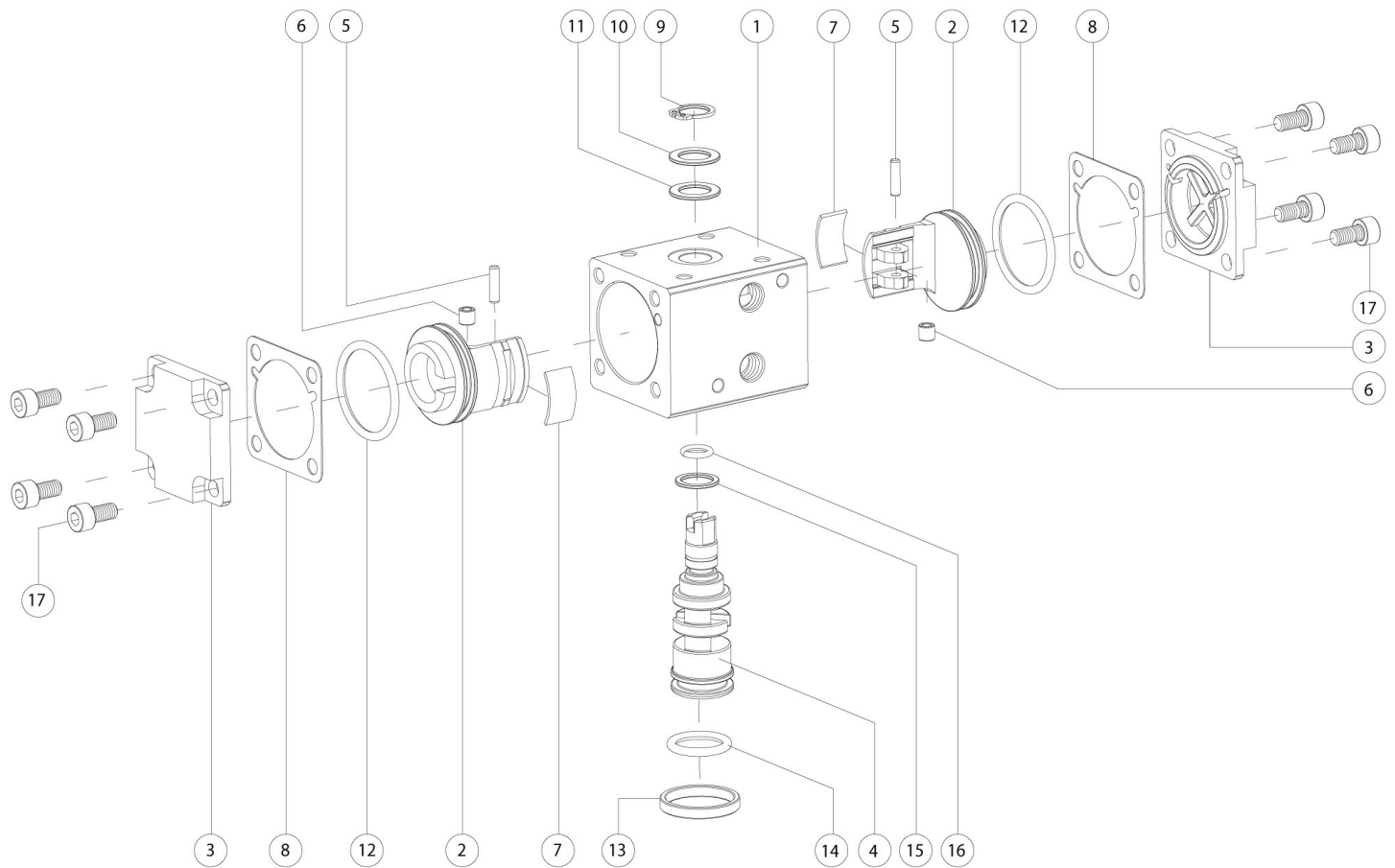
Interfaccia per accessori
secondo VDI/VDE 3845, EN 15714-3
Accessories interface
VDI/VDE 3845, EN 15714-3

*Per le misure DA8-DA360 è disponibile a
richiesta una bassetta con interfaccia NAMUR
*Sizes from DA8 to DA360 can be provided
with NAMUR plate on request

DIMENSION TABLE

| | |
|---------------|----------------|
| code | DA008401S |
| code adj. 10° | --- |
| Spare seals | KGDI0010 |
| size | DA 8F03 |
| L mm. | 70 |
| L1 mm. | --- |
| A mm. | 57,7 |
| B mm. | 42,7 |
| X mm. | 43,2 |
| C mm. | 35 |

| | |
|----------------------------|-------|
| D mm. | 22,7 |
| E mm. | 9 |
| J mm. | 9,5 |
| G mm. | 8 |
| H mm. | 8 |
| N mm. | 15 |
| øM x depth. mm. | M 5x5 |
| øO thread GAS | 1/8" |
| P mm. | 11,5 |
| Q mm. | 30 |
| R mm. | 23 |
| S mm. | 5 |
| T mm. | 25 |
| øU mm. | --- |
| øV mm. | 36 |
| øK mm. | 25 |
| F mm. | 2 |
| øY x depth. mm. | M 5x8 |
| øW x depth. mm. | --- |
| Z mm. | 30 |
| air dm ³ /cycle | 0,034 |
| weight Kg. | 0,29 |

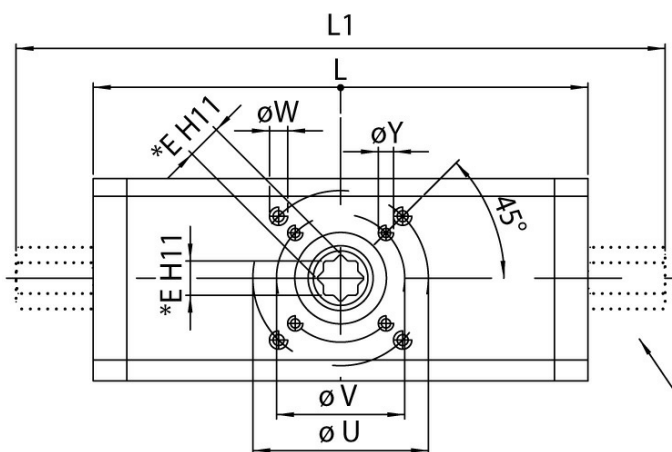


MATERIALS SPECIFICATION

| Pos | Denomination | Q.TA' Q.ty | Material |
|-----|-------------------|------------|------------------|
| 1 | Cylinder | 1 | Aluminium alloy |
| 2 | Piston | 2 | Aluminium alloy |
| 3 | Cap DA | 2 | Aluminium alloy |
| 4 | Shaft | 1 | Steel alloy |
| 5 | Sleeve | 2 | Steel alloy |
| 6 | Bush | 2 | Steel alloy |
| 7* | Support band | 2 | Acetalic resins |
| 8* | O-ring | 2 | NBR |
| 9 | Seeger | 1 | Stainless steel |
| 10 | Washer | 1 | Stainless steel |
| 11* | Ext. support ring | 1 | Acetalic resins |
| 12* | O-ring | 2 | NBR |
| 13 | Center ring F03 | 1 | Alluminium alloy |
| 14* | O-ring | 1 | FKM |
| 15* | Int.support ring | 1 | Acetalic resins |
| 16* | O-ring | 1 | FKM |
| 17 | Screw | 8 | Stainless steel |

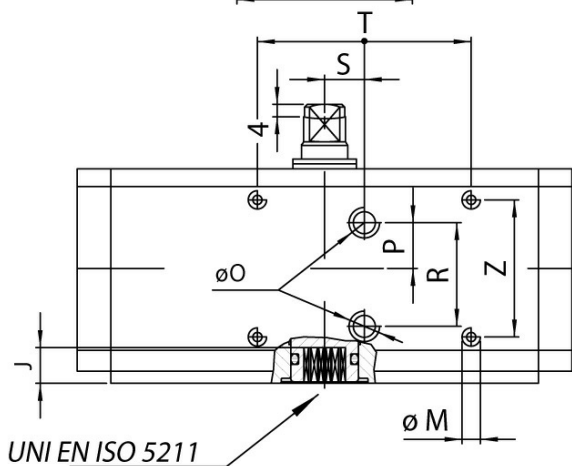
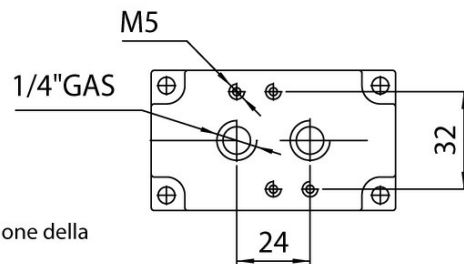
*Components of spare part kit

Codes, dimensions and materials - DA15

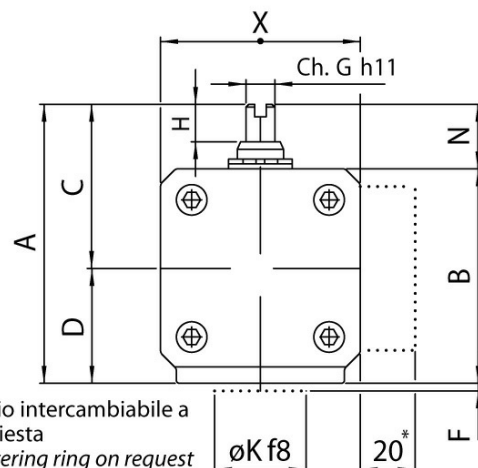


Dispositivo di regolazione della corsa (max 10°)
Manual stroke adjustment (max 10°)

INTERFACCIA NAMUR
NAMUR INTERFACE

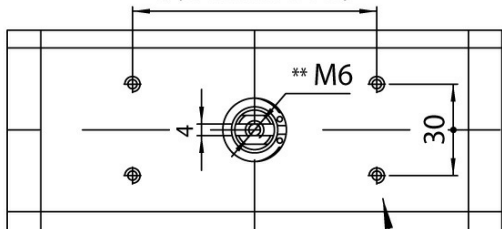


UNI EN ISO 5211



Anello di centraggio intercambiabile a richiesta
Interchangeable centering ring on request

Q (N°4 FILETTI M5)
Q (N°4 THREAD M5)



** DA 8 filetto M4
** DA 8 thread M4

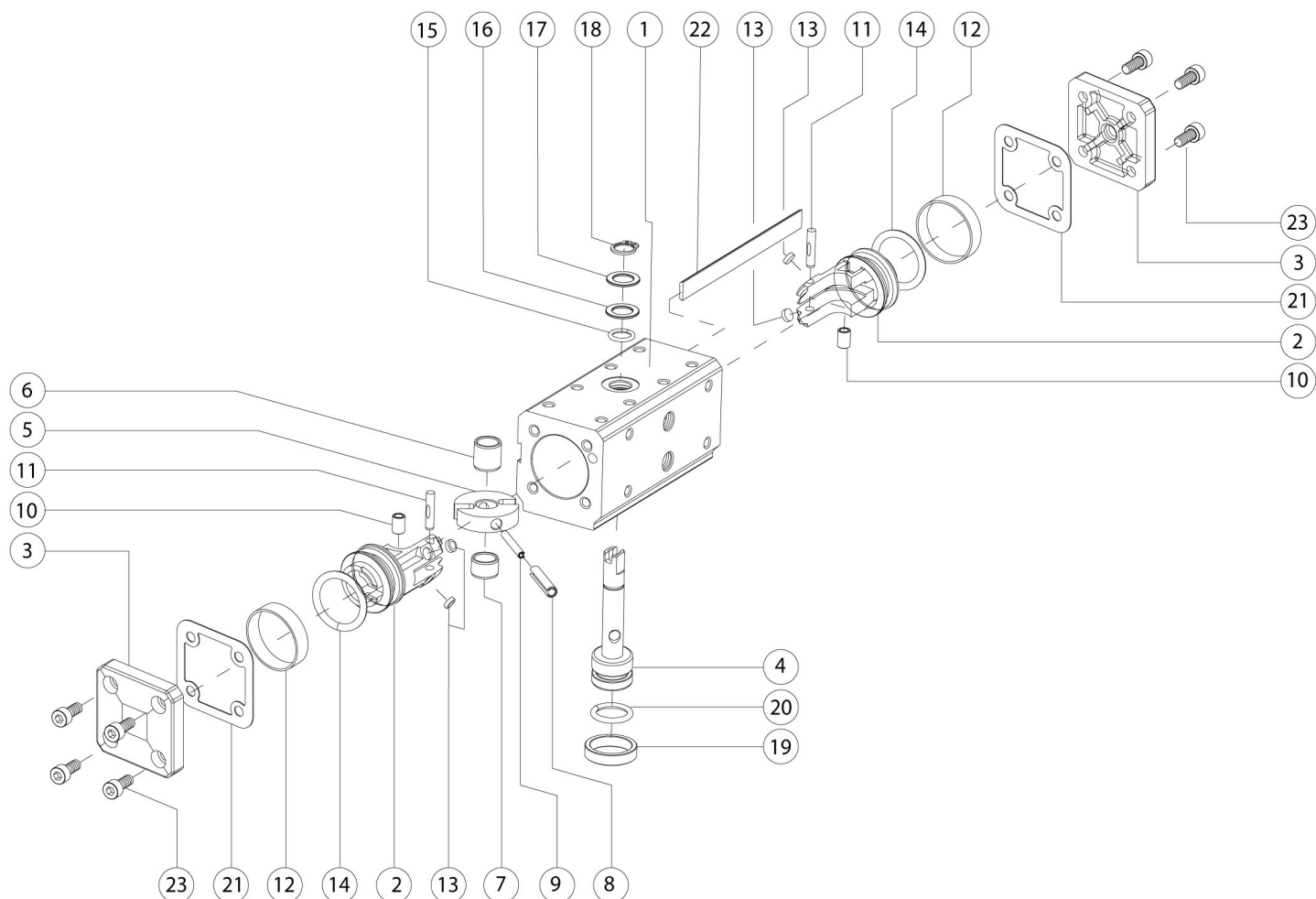
Interfaccia per accessori secondo VDI/VDE 3845, EN 15714-3
Accessories interface VDI/VDE 3845, EN 15714-3

*Per le misure DA8-DA360 è disponibile a richiesta una bassetta con interfaccia NAMUR
*Sizes from DA8 to DA360 can be provided with NAMUR plate on request

DIMENSION TABLE

| | |
|---------------|----------------------|
| code | DA015401S |
| code adj. 10° | DA015411S |
| Spare seals | KGDI0012 |
| size | DA 15 F03 |
| L mm. | 115 |
| L1 mm. | 160 |
| A mm. | 72,4 |
| B mm. | 52 |
| X mm. | 48 |

| | |
|----------------------------|--------|
| C mm. | 44,2 |
| D mm. | 28,2 |
| E mm. | 9 |
| J mm. | 10,2 |
| G mm. | 8 |
| H mm. | 10 |
| N mm. | 20 |
| øM x depth. mm. | M 5x10 |
| øO thread GAS | 1/8" |
| P mm. | 9 |
| Q mm. | 80 |
| R mm. | 20,5 |
| S mm. | 6 |
| T mm. | 70 |
| øU mm. | --- |
| øV mm. | 36 |
| øK mm. | 25 |
| F mm. | 2 |
| øY x depth. mm. | M 5x9 |
| øW x depth. mm. | --- |
| Z mm. | 30 |
| air dm ³ /cycle | 0,079 |
| weight Kg. | 0,73 |



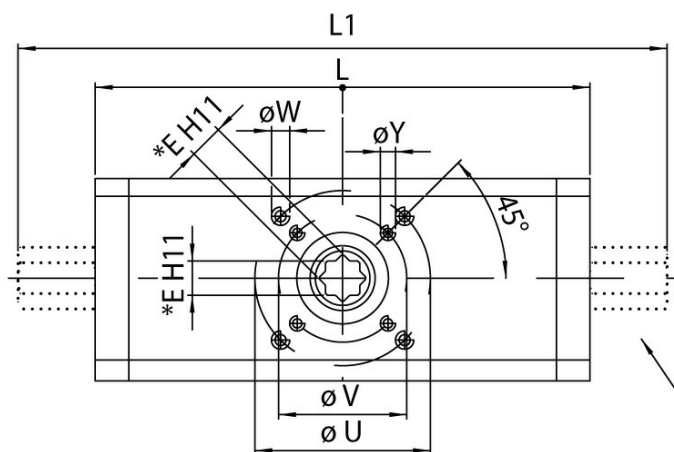
MATERIALS SPECIFICATION

| Pos | Denomination | Q.ty | Material |
|-----|-------------------|------|----------------------------|
| 1 | Cylinder | 1 | Aluminium alloy |
| 2 | Piston | 2 | Aluminium alloy |
| 3 | Cap DA | 2 | Aluminium alloy |
| 4 | Shaft | 1 | Stainless steel |
| 5 | Scotch yoke | 1 | Steel alloy |
| 6 | Bush | 1 | Acetalic resins |
| 7 | Bush | 1 | Acetalic resins |
| 8 | Ext. elastic pin | 1 | Steel alloy |
| 9 | Int. elastic pin | 1 | Steel alloy |
| 10 | Bush | 2 | Steel alloy |
| 11 | Sleeve | 2 | Steel alloy |
| 12* | Dynamic seal | 2 | Polyurethan |
| 13* | suppoert disk | 4 | Carbo-graphite filled PTFE |
| 14* | O-ring | 2 | NBR |
| 15* | O-ring | 1 | Viton |
| 16* | Ext. support ring | 1 | Acetalic resins |
| 17 | Washer | 1 | Stainless steel |
| 18 | Seeger | 1 | Stainless steel |
| 19 | Center ring F03 | 1 | Aluminium alloy |

| | | | |
|-----|--------|---|-----------------|
| 20* | O-ring | 1 | Viton |
| 21* | Gasket | 2 | AFM-38 |
| 22 | Plate | 1 | Aluminium |
| 23 | Screw | 8 | Stainless steel |

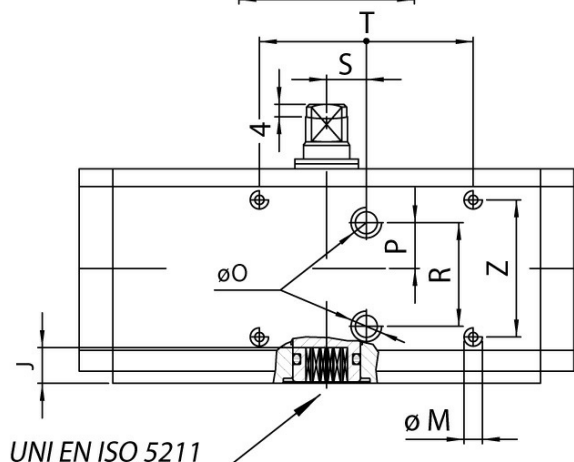
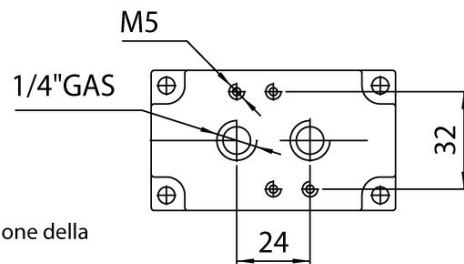
*Components of spare part kit

Codes, dimensions and materials - DA30 - DA360

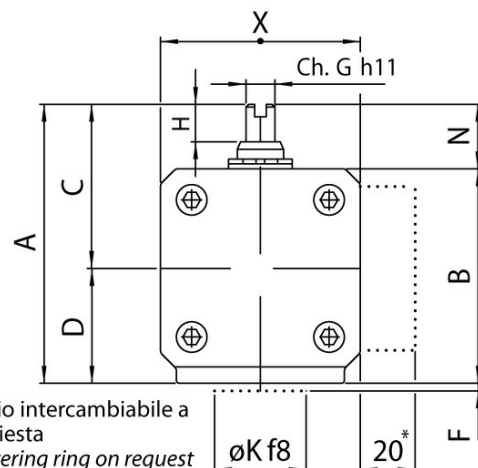


Dispositivo di regolazione della corsa (max 10°)
Manual stroke adjustment (max 10°)

INTERFACCIA NAMUR
NAMUR INTERFACE

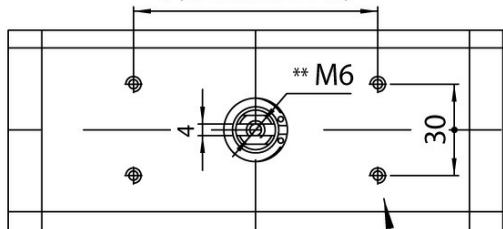


UNI EN ISO 5211



Anello di centraggio intercambiabile a richiesta
Interchangeable centering ring on request

Q (N°4 FILETTI M5)
Q (N°4 THREAD M5)



** DA 8 filetto M4
** DA 8 thread M4

Interfaccia per accessori secondo VDI/VDE 3845, EN 15714-3
Accessories interface VDI/VDE 3845, EN 15714-3

*Per le misure DA8-DA360 è disponibile a richiesta una bassetta con interfaccia NAMUR
*Sizes from DA8 to DA360 can be provided with NAMUR plate on request

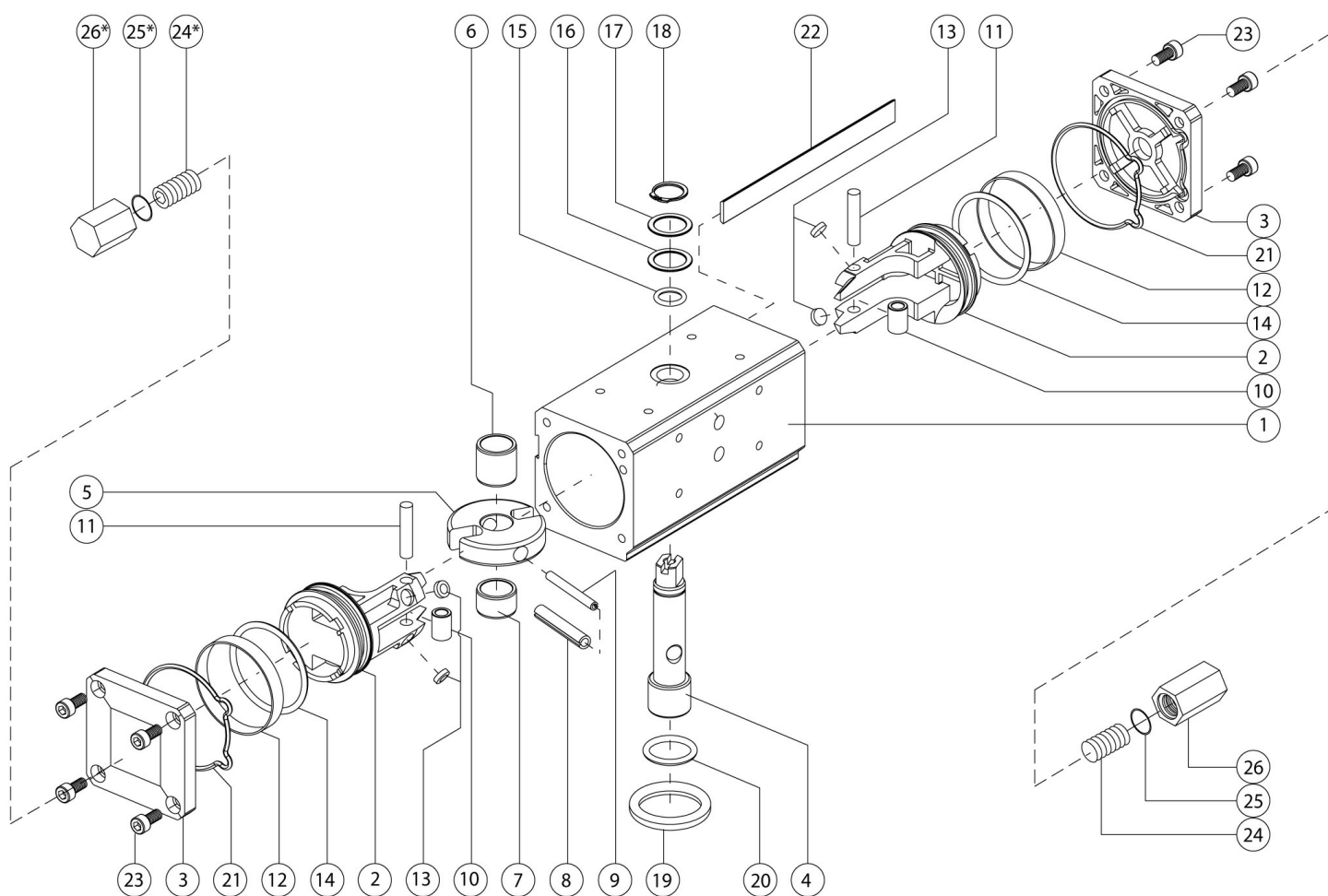
DIMENSION TABLE

| | | | | | |
|---------------|----------------------------------|----------------------------|----------------------------------|----------------------------|----------------------------------|
| code | DA030401S | DA045401S | DA045402S | DA060401S | DA060402S |
| code adj. 10° | DA030411S | DA045411S | DA045412S | DA060411S | DA060412S |
| Spare seals | KGDI0014 | KGDI0015 | KGDI0015 | KGDI0016 | KGDI0016 |
| size | DA 30 F03 - F05 | DA 45 F04 | DA 45 F03 - F05 | DA 60 F04 | DA 60 F03 - F05 |
| L mm. | 130 | 144 | 144 | 152 | 152 |
| L1 mm. | 168 | 182 | 182 | 190 | 190 |
| A mm. | 80,4 | 85,7 | 85,7 | 90,4 | 90,4 |
| B mm. | 60 | 65,7 | 65,7 | 70 | 70 |
| X mm. | 55 | 60 | 60 | 65 | 65 |

| | | | | | |
|----------------------------|--------|-------|--------|-------|--------|
| C mm. | 47,5 | 50 | 50 | 52,5 | 52,5 |
| D mm. | 32,7 | 35,7 | 35,7 | 37,7 | 37,7 |
| E mm. | 9 | 11 | 11 | 11 | 11 |
| J mm. | 10,2 | 12,2 | 12,2 | 12,2 | 12,2 |
| G mm. | 9 | 10 | 10 | 10 | 10 |
| H mm. | 10 | 13 | 13 | 13 | 13 |
| N mm. | 20 | 20 | 20 | 20 | 20 |
| øM x depth. mm. | M 5x6 | M 5x6 | M 5x6 | M 5x6 | M 5x6 |
| øO thread GAS | 1/8" | 1/8" | 1/8" | 1/8" | 1/8" |
| P mm. | 12 | 12,5 | 12,5 | 17,9 | 17,9 |
| Q mm. | 80 | 80 | 80 | 80 | 80 |
| R mm. | 25 | 25 | 25 | 20,5 | 20,5 |
| S mm. | 0 | 0 | 0 | 0 | 0 |
| T mm. | 70 | 70 | 70 | 70 | 70 |
| øU mm. | 50 | --- | 50 | --- | 50 |
| øV mm. | 36 | 42 | 36 | 42 | 36 |
| øK mm. | 25-35 | 30 | 25-35 | 30 | 25-35 |
| F mm. | 2 | 2 | 2 | 2 | 2 |
| øY x depth. mm. | M 5x9 | M 5x9 | M 5x9 | M 5x9 | M 5x9 |
| øW x depth. mm. | M 6x11 | --- | M 6x11 | --- | M 6x11 |
| Z mm. | 36 | 36 | 36 | 36 | 36 |
| air dm ³ /cycle | 0,148 | 0,219 | 0,219 | 0,28 | 0,28 |
| weight Kg. | 1 | 1,25 | 1,25 | 1,56 | 1,56 |

| | | | | | |
|---------------|----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| code | DA090401S | DA120401S | DA180401S | DA240401S | DA360401S |
| code adj. 10° | DA090411S | DA120411S | DA180411S | DA240411S | DA360411S |
| Spare seals | KGDI0017 | KGDI0018 | KGDI0019 | KGDI0020 | KGDI0021 |
| size | DA 90 F05 - F07 | DA 120 F05 - F07 | DA 180 F05 - F07 | DA 240 F05 - F07 | DA 360 F07 - F10 |
| L mm. | 169 | 184 | 212 | 242 | 264 |
| L1 mm. | 225 | 240 | 268 | 314 | 336 |
| A mm. | 97,5 | 116,4 | 126 | 136,4 | 148 |
| B mm. | 77,5 | 86 | 96 | 106 | 118 |
| X mm. | 75 | 80 | 90 | 100 | 112 |
| C mm. | 56,5 | 70 | 75 | 80 | 86 |
| D mm. | 41,5 | 46,4 | 51 | 56,4 | 62 |
| E mm. | 14 | 14 | 17 | 17 | 22 |
| J mm. | 16,3 | 16,3 | 19,3 | 19,3 | 24,3 |
| G mm. | 12 | 12 | 15 | 15 | 19 |
| H mm. | 13 | 13 | 16 | 17 | 19 |

| | | | | | |
|----------------------------|--------|--------|--------|--------|---------|
| N mm. | 20 | 30 | 30 | 30 | 30 |
| øM x depth. mm. | M 5x6 | M 5x6 | M 5x6 | M 5x6 | M 5x6 |
| øO thread GAS | 1/8" | 1/8" | 1/8" | 1/8" | 1/8" |
| P mm. | 17,9 | 21 | 21 | 21 | 25 |
| Q mm. | 80 | 80 | 80 | 80 | 80 |
| R mm. | 20,5 | 25 | 25 | 25 | 25 |
| S mm. | 0 | 0 | 0 | 0 | 0 |
| T mm. | 70 | 70 | 70 | 70 | 70 |
| øU mm. | 70 | 70 | 70 | 70 | 102 |
| øV mm. | 50 | 50 | 50 | 50 | 70 |
| øK mm. | 35-55 | 35-55 | 35-55 | 35-55 | 55-70 |
| F mm. | 3 | 3 | 3 | 3 | 3 |
| øY x depth. mm. | M 6x11 | M 6x11 | M 6x11 | M 6x11 | M 8x15 |
| øW x depth. mm. | M 8x15 | M 8x15 | M 8x15 | M 8x15 | M 10x17 |
| Z mm. | 36 | 36 | 36 | 36 | 36 |
| air dm ³ /cycle | 0,43 | 0,59 | 0,87 | 1,18 | 1,74 |
| weight Kg. | 1,85 | 2,8 | 3,4 | 5,3 | 7,2 |



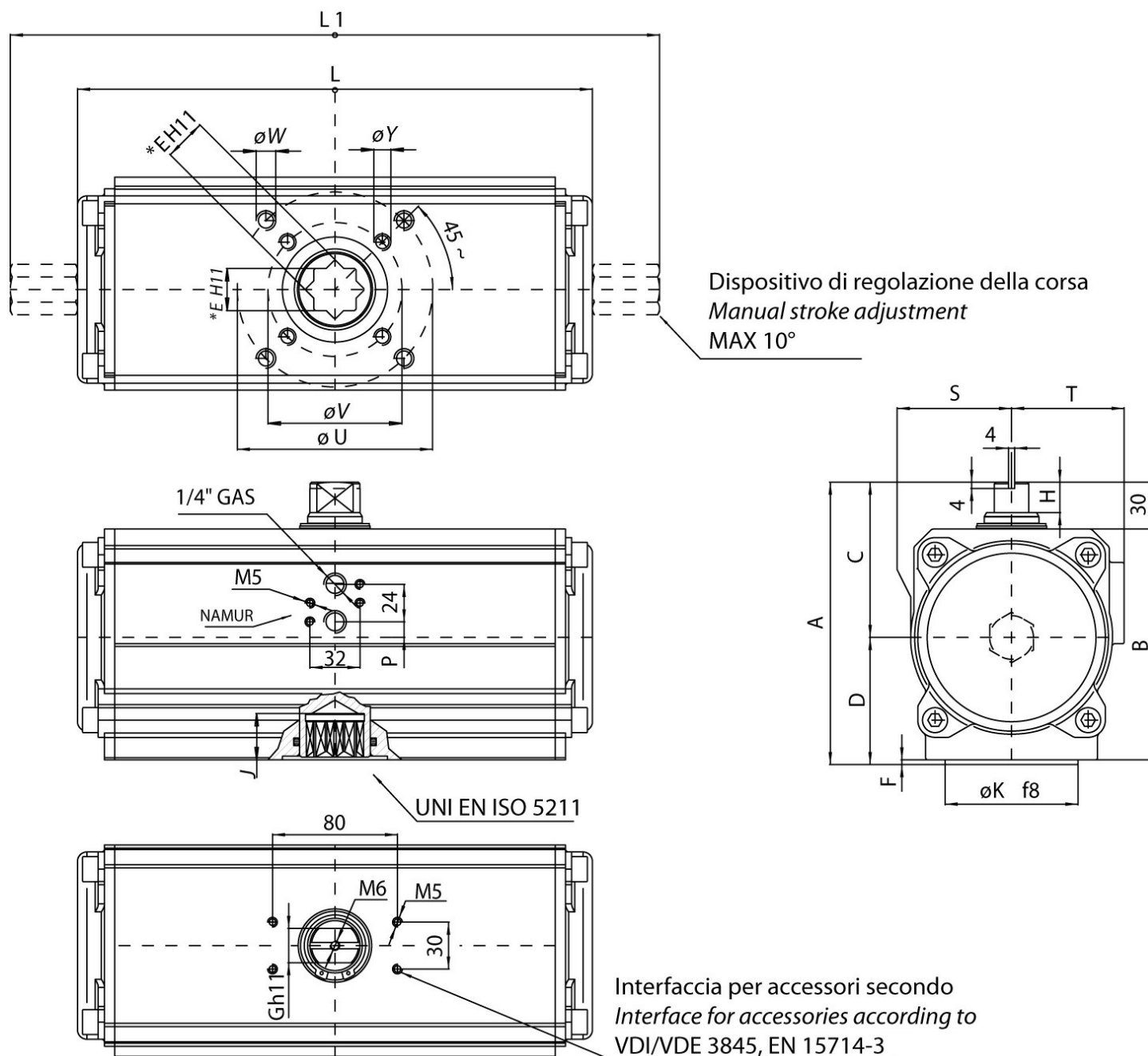
MATERIALS SPECIFICATION

| Pos | Denomination | Q.ty | Material |
|-----|--------------|------|-----------------|
| 1 | Cylinder | 1 | Aluminium alloy |

| | | | |
|--|------------------|---|----------------------------------|
| 2 | Piston | 2 | Aluminium alloy |
| 3 | Cap DA | 2 | Aluminium alloy |
| 4 | Shaft | 1 | Stainless steel |
| 5 | Scotch yoke | 1 | Steel alloy |
| 6 | Bush | 1 | Resina acetalica Acetalic resins |
| 7 | Bush | 1 | Resina acetalica Acetalic resins |
| 8 | Ext. elastic pin | 1 | Steel alloy |
| 9 | Int. elastic pin | 1 | Steel alloy |
| 10 | Bush | 2 | Steel alloy |
| 11 | Sleeve | 2 | Steel alloy |
| 12** | Dynamic seal | 2 | Polyurethan |
| 13** | support disk | 4 | Carbo-graphite filled PTFE |
| 14** | O-ring | 2 | NBR |
| 15** | O-ring | 1 | FKM |
| 16** | Ext.support ring | 1 | Resina acetalica Acetalic resins |
| 17 | Washer | 1 | Stainless steel |
| 18 | Seeger | 1 | Stainless steel |
| 19 | Center ring F03 | 1 | Aluminium alloy |
| 20** | O-ring | 1 | FKM |
| 21** | O-ring | 2 | NBR |
| 22 | Plate | 1 | Aluminium |
| 23 | Screws | 8 | Stainless steel |
| 24* | Grub screws | 2 | Stainless steel |
| 25* | O-ring | 2 | Gomma nitrilica NBR |
| 26* | Adjusting nut | 2 | Aluminium alloy |
| * Actuator with regulation Code: DA__411 | | | |

**Components of spare part kit

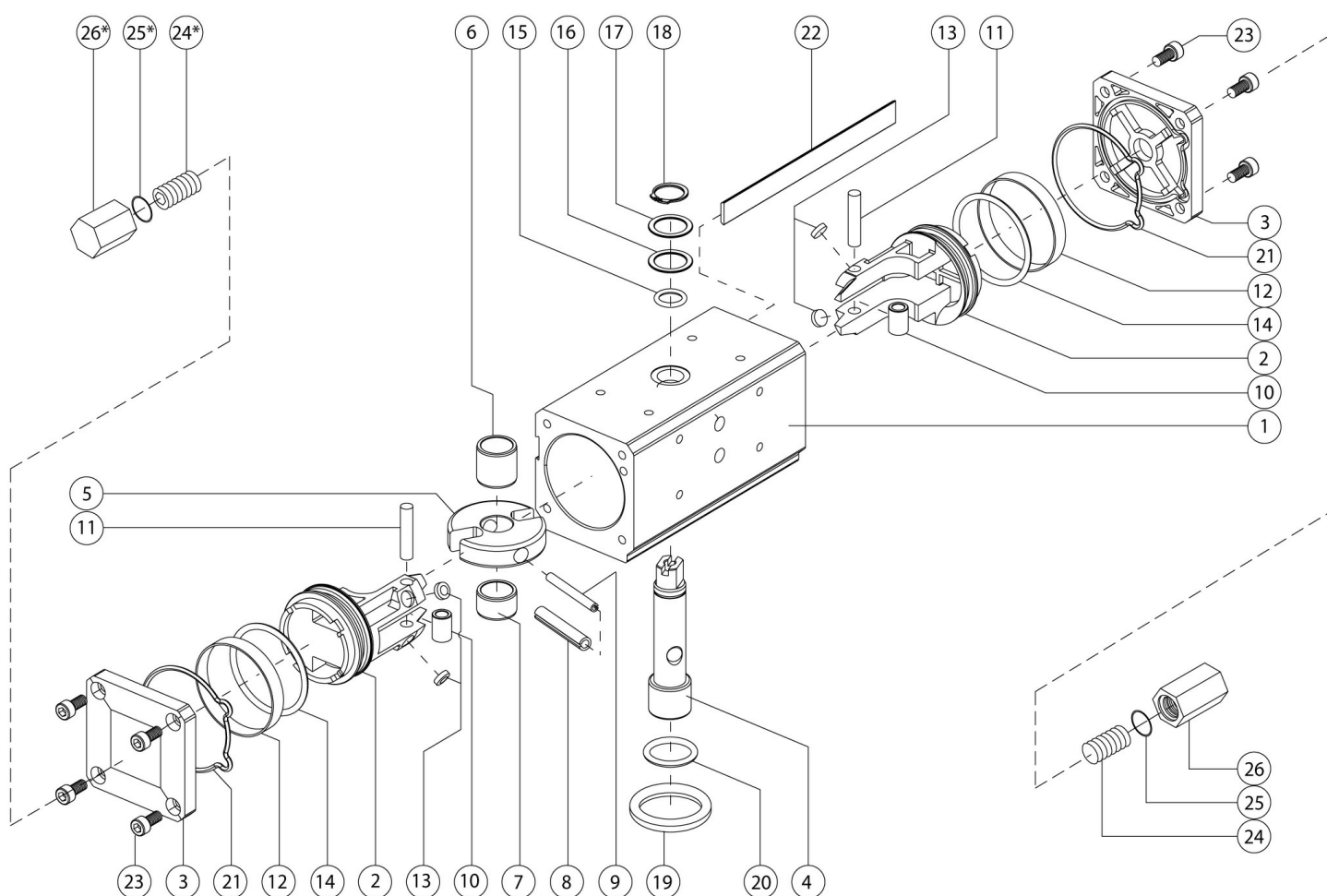
Codes, dimensions and materials - DA480



DIMENSION TABLE

| | |
|--------------|---------------------------|
| code | DA480401S |
| code adj.10° | DA480411S |
| Spare seals | KGDI0022 |
| size | DA 480 F07-F10 |
| L mm. | 295 |
| L1 mm. | 365 |
| A mm. | 160 |
| B mm. | 130 |
| S mm. | 57,7 |
| T mm. | 67 |

| | |
|----------------------------|---------|
| C mm. | 92 |
| D mm. | 68 |
| E mm. | 22 |
| J mm. | 24,3 |
| G mm. | 19 |
| H mm. | 19 |
| P mm. | 2 |
| øU mm. | 102 |
| øV mm. | 70 |
| øK mm. | 55-70 |
| F mm. | 3 |
| øY x prof. depth mm. | M 8x15 |
| øW x prof. depth mm. | M 10x17 |
| air dm ³ /cycle | 2,38 |
| weight Kg. | 8,4 |



MATERIALS SPECIFICATION

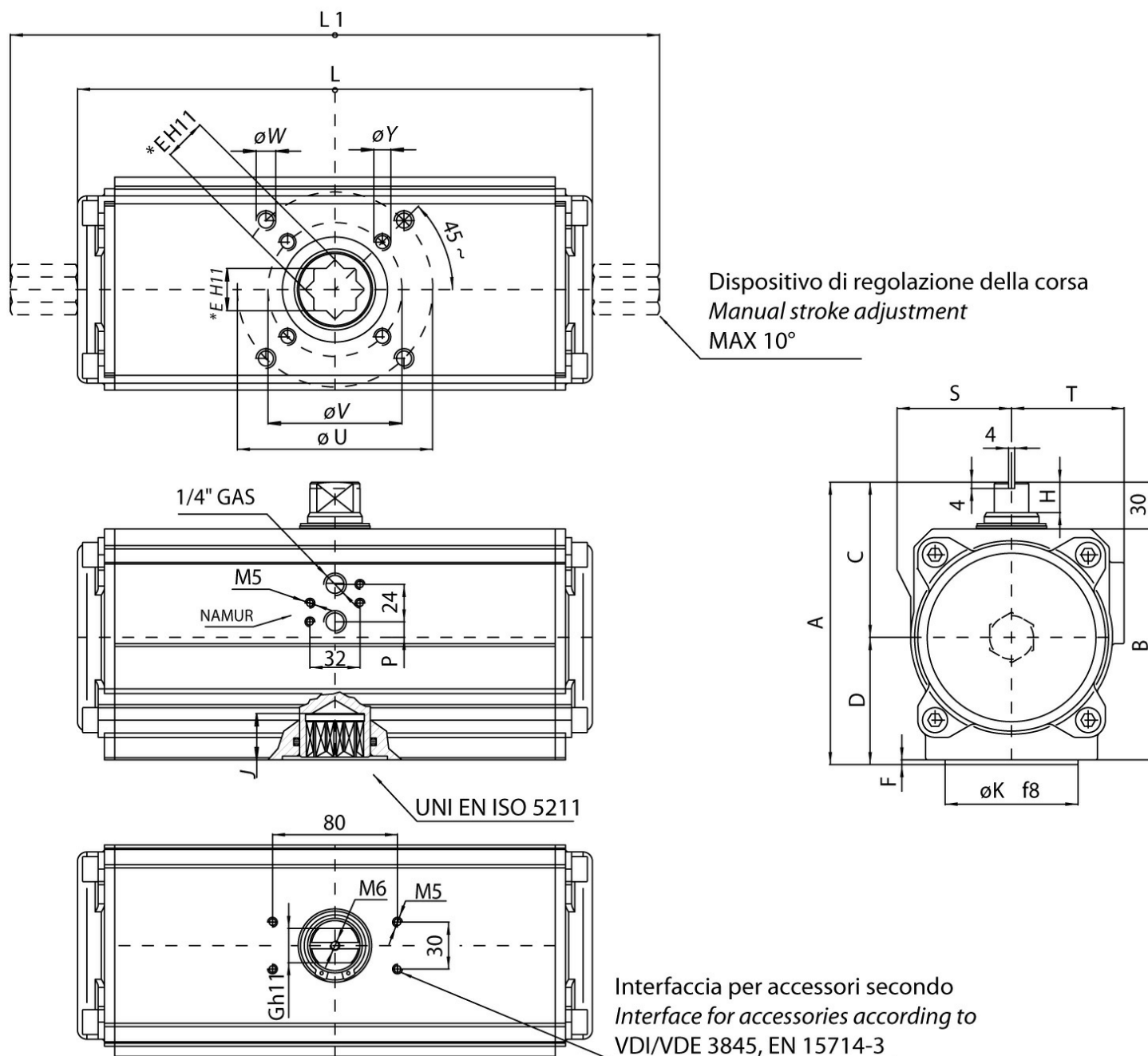
| Pos | Denomination | Q.ty | Material |
|-----|--------------|------|-----------------|
| 1 | Cylinder | 1 | Aluminium alloy |
| 2 | Piston | 2 | Aluminium alloy |
| 3 | Cap DA | 2 | Aluminium alloy |

| | | | |
|------|-------------------|---|----------------------------|
| 4 | Shaft | 1 | Stainless steel |
| 5 | Scotch yoke | 1 | Steel alloy |
| 6 | Bush | 1 | Acetalic resins |
| 7 | Bush | 1 | Acetalic resins |
| 8 | Ext. elastic pin | 1 | Steel alloy |
| 9 | Int. elastic pin | 1 | Steel alloy |
| 10 | Bush | 2 | Steel alloy |
| 11 | Sleeve | 2 | Steel alloy |
| 12** | Dynamic seal | 2 | Polyurethan |
| 13** | suppoert disk | 4 | Carbo-graphite filled PTFE |
| 14** | O-ring | 2 | NBR |
| 15** | O-ring | 1 | Viton |
| 16** | Ext. support ring | 1 | Acetalic resins |
| 17 | Washer | 1 | Stainless steel |
| 18 | Seeger | 1 | Stainless steel |
| 19 | Center ring F03 | 1 | Aluminium alloy |
| 20** | O-ring | 1 | Viton |
| 21** | Gasket | 2 | AFM-38 |
| 22 | Plate | 1 | Aluminium |
| 23 | Screw | 8 | Stainless steel |
| 24* | Grub screw | 2 | Stainless steel |
| 25* | O-ring | 2 | NBR |
| 26* | Adjusting nut | 2 | Alluminium alloy |

* Actuator with regulation Code: DA___411

**Components of spare part kit

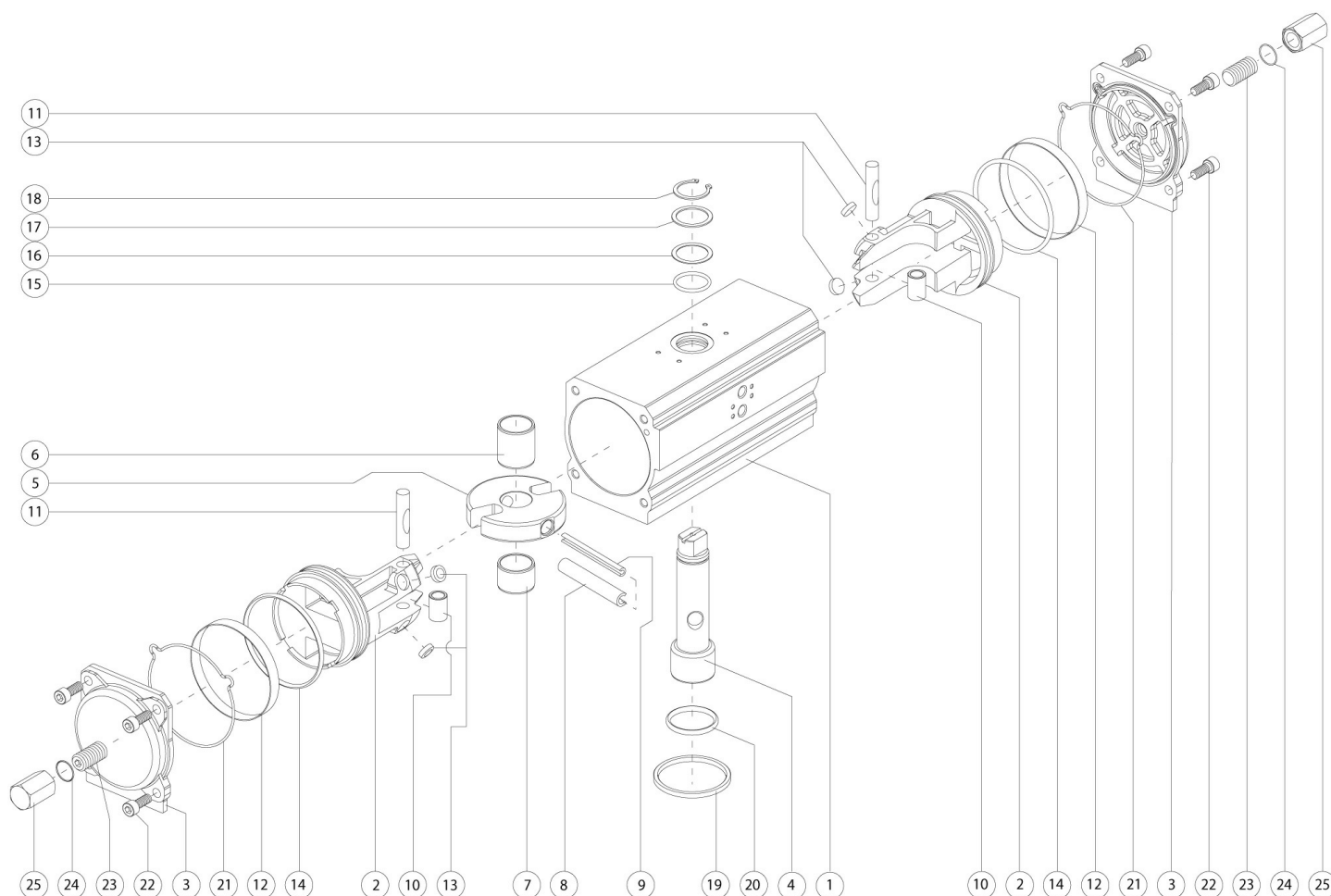
Codes, dimensions and materials - DA720



DIMENSION TABLE

| | |
|--------------|---------------------------|
| code | DA720401S |
| code adj.10° | DA720411S |
| Spare seals | KGDI0023 |
| size | DA 720 F10-F12 |
| L mm. | 329,5 |
| L1 mm. | 401,5 |
| A mm. | 178 |
| B mm. | 148 |
| S mm. | 64,5 |
| T mm. | 72 |

| | |
|----------------------------|---------|
| C mm. | 99,5 |
| D mm. | 78,5 |
| E mm. | 27 |
| J mm. | 29,5 |
| G mm. | 22 |
| H mm. | 19,5 |
| P mm. | 10 |
| øU mm. | 125 |
| øV mm. | 102 |
| øK mm. | 70-85 |
| F mm. | 3 |
| øY x prof. depth mm. | M 10x17 |
| øW x prof. depth mm. | M 12x21 |
| air dm ³ /cycle | 3,51 |
| weight Kg. | 12 |



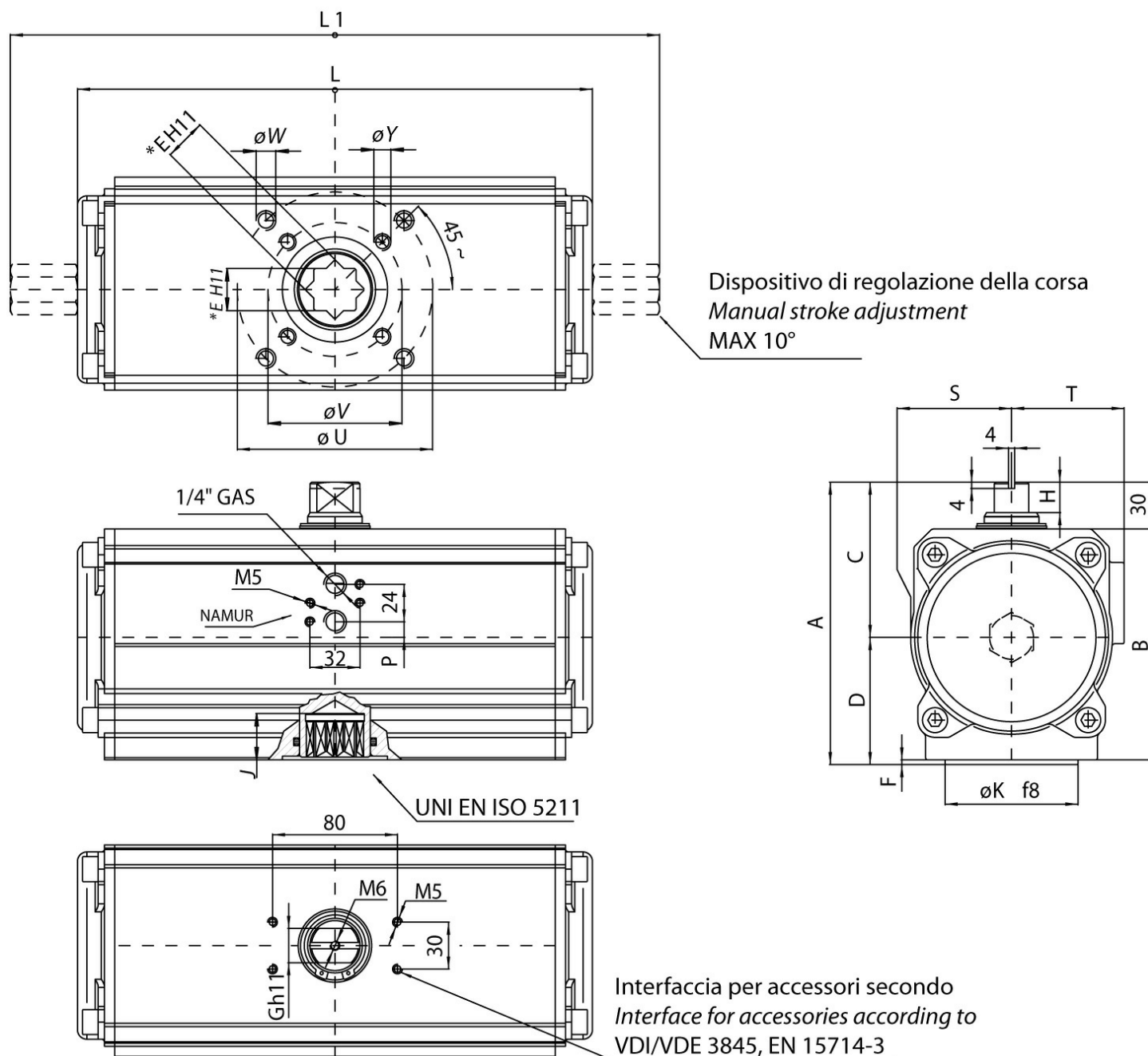
MATERIALS SPECIFICATION

| Pos | Denomination | Q.ty | Material |
|-----|--------------|------|-----------------|
| 1 | Cylinder | 1 | Aluminium alloy |
| 2 | Pyston | 2 | Aluminium alloy |
| 3 | Cap DA | 2 | Aluminium alloy |

| | | | |
|--|------------------|---|----------------------------|
| 4 | Shaft | 1 | Stainless steel |
| 5 | Scotch yoke | 1 | Steel alloy |
| 6 | Bush | 1 | Acetalic resins |
| 7 | Bush | 1 | Acetalic resins |
| 8 | Ext. elastic pin | 1 | Steel alloy |
| 9 | Int. elastic pin | 1 | Steel alloy |
| 10 | Bush | 2 | Steel alloy |
| 11 | Sleeve | 2 | Steel alloy |
| 12** | Dynamic seal | 2 | Polyurethan |
| 13** | Support disk | 4 | Carbo-graphite filled PTFE |
| 14** | O-ring | 2 | NBR |
| 15** | O-ring | 1 | Viton |
| 16** | Ext.support ring | 1 | Acetalic resins |
| 17 | Washer | 1 | Stainless steel |
| 18 | Seeger | 1 | AISI 420 |
| 19 | Center ring F12 | 1 | Aluminium alloy |
| 20** | O-ring | 1 | Viton |
| 21** | O-ring | 2 | NBR |
| 22 | Screws | 8 | Stainless steel |
| 23* | Grub screws | 2 | Steel alloy |
| 24* | O-ring | 2 | NBR |
| 25* | Adjusting nut | 2 | Aluminium alloy |
| * Actuator with regulation Code: DA__411 | | | |

**Components of spare part kit

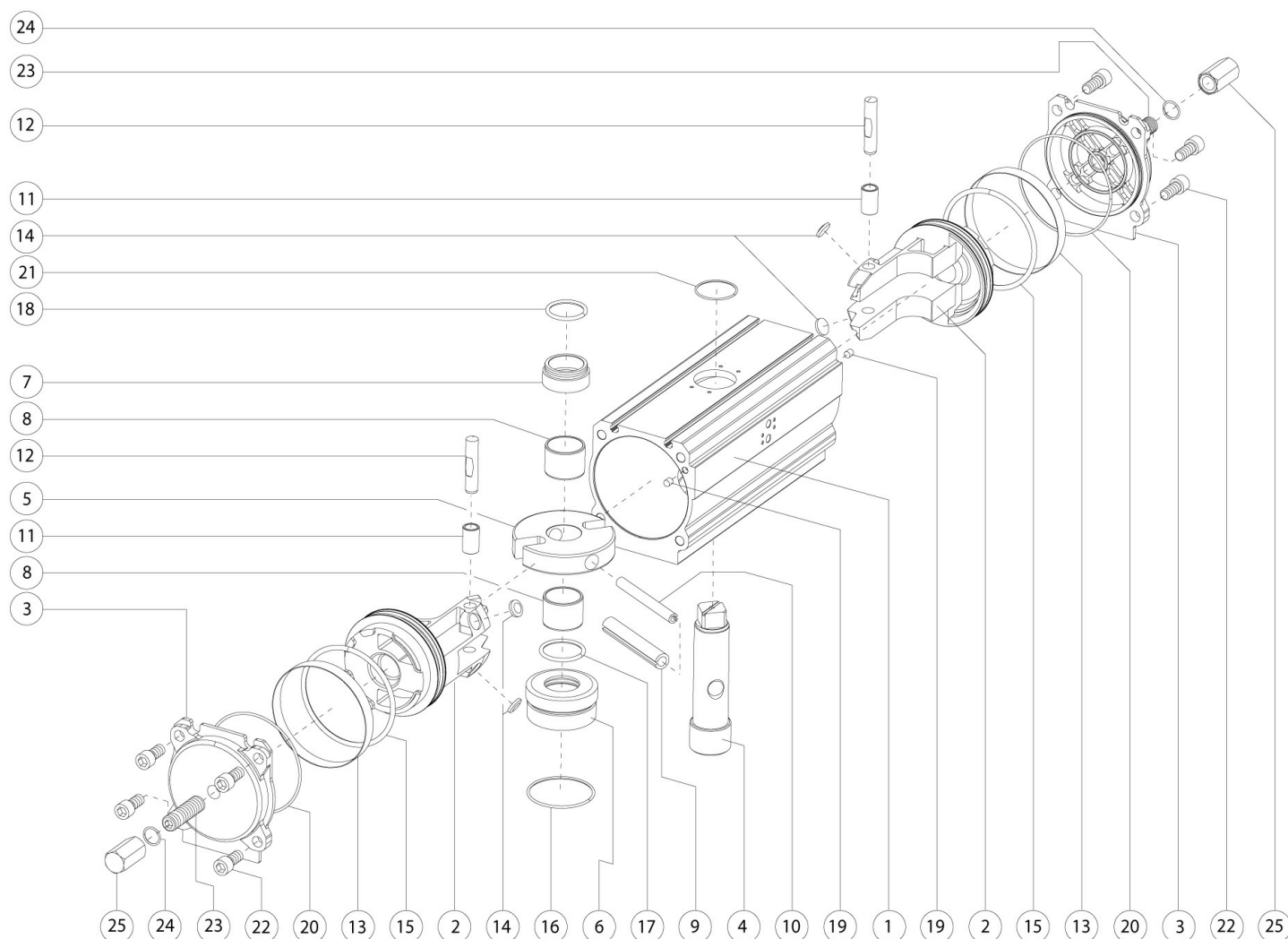
Codes, dimensions and materials - DA960



DIMENSION TABLE

| | |
|--------------|-----------------------|
| code | DA960401S |
| code adj.10° | DA960411S |
| Spare seals | KGDI0024 |
| size | DA 960 F12 |
| L mm. | 377 |
| L1 mm. | 445 |
| A mm. | 186,2 |
| B mm. | 153 |
| S mm. | 69 |
| T mm. | 76 |

| | |
|----------------------------|---------|
| C mm. | 100,3 |
| D mm. | 86,2 |
| E mm. | 27 |
| J mm. | 29,5 |
| G mm. | 24 |
| H mm. | 19,5 |
| P mm. | 14 |
| øU mm. | ---- |
| øV mm. | 125 |
| øK mm. | 85 |
| F mm. | 3 |
| øY x prof. depth mm. | M 12x21 |
| øW x prof. depth mm. | ---- |
| air dm ³ /cycle | 4,67 |
| weight Kg. | 14 |



MATERIALS SPECIFICATION

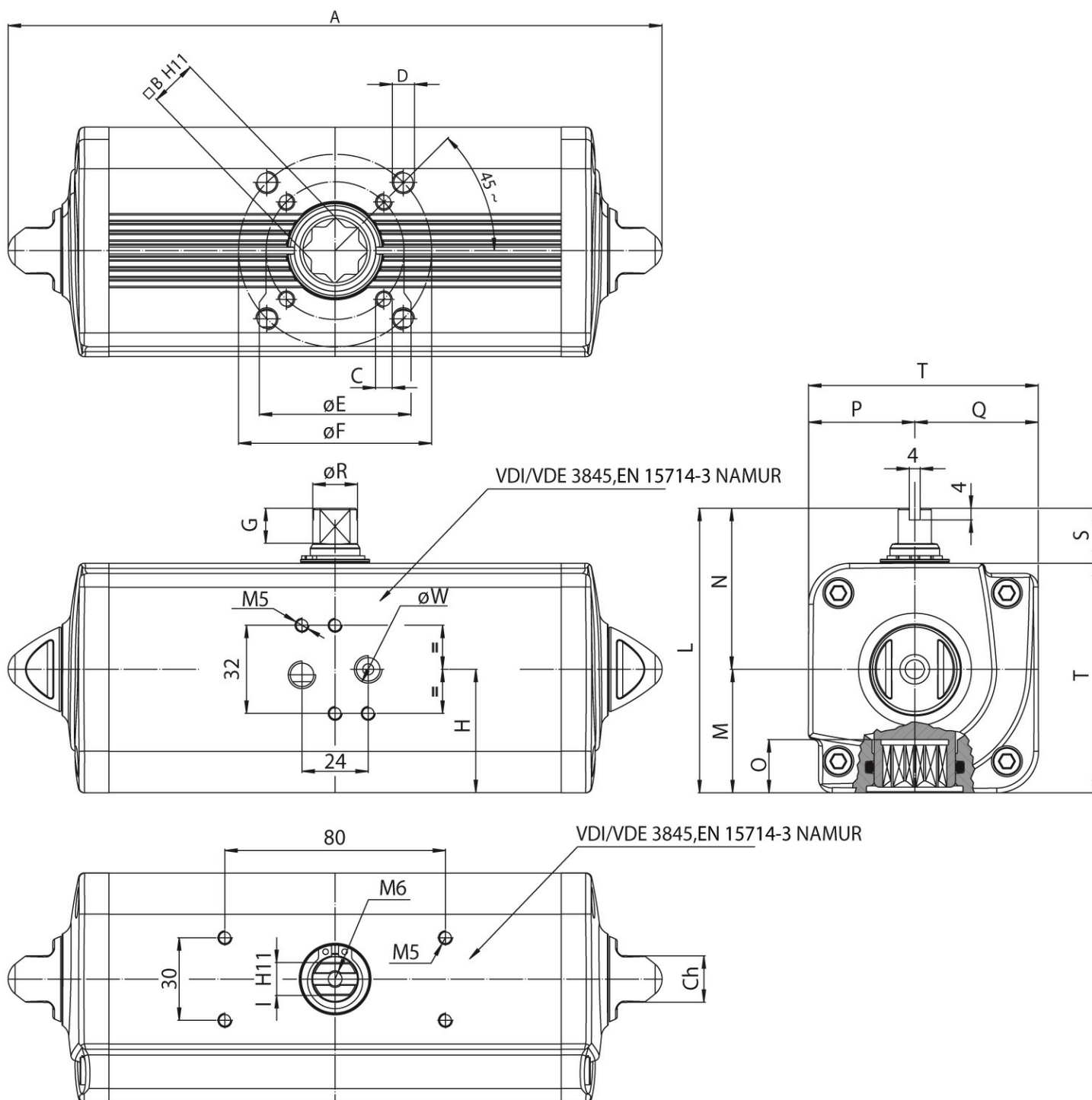
| Pos | Denomination | Q.TA' Q.ty | Material |
|-----|--------------|------------|-----------------|
| 1 | Cylinder | 1 | Aluminium alloy |

| | | | |
|------|------------------|---|----------------------------|
| 2 | Pyston | 2 | Aluminium alloy |
| 3 | Cap DA | 2 | Aluminium alloy |
| 4 | Shaft | 1 | Stainless steel |
| 5 | Scotch yoke | 1 | Stainless steel |
| 6 | Bush | 1 | Aluminium alloy |
| 7 | Bush | 1 | Aluminium alloy |
| 8 | Bush | 2 | Acetalic resins |
| 9 | Ext. elastic pin | 1 | Stainless steel |
| 10 | Int. elastic pin | 1 | Stainless steel |
| 11 | Bush | 2 | Stainless steel |
| 12 | Sleeve | 2 | Stainless steel |
| 13** | Dynamic seal | 2 | Polyurethan |
| 14** | Support disk | 4 | Carbo-graphite filled PTFE |
| 15** | O-ring | 2 | NBR |
| 16 | O-ring | 1 | NBR |
| 17** | O-ring | 1 | Viton |
| 18** | O-ring | 1 | Viton |
| 19 | Plug | 2 | NBR |
| 20** | O-ring | 2 | NBR |
| 21 | O-ring | 1 | NBR |
| 22 | screws | 8 | Stainless steel |
| 23* | Grub screws | 2 | Stainless steel |
| 24* | O-ring | 2 | Gomma nitrilica NBR |
| 25* | Adjusting nut | 2 | Aluminium alloy |

* Actuator with regulation Code: DA___411

**Components of spare part kit

Codes, dimensions and materials - DAN1440 - DAN1920

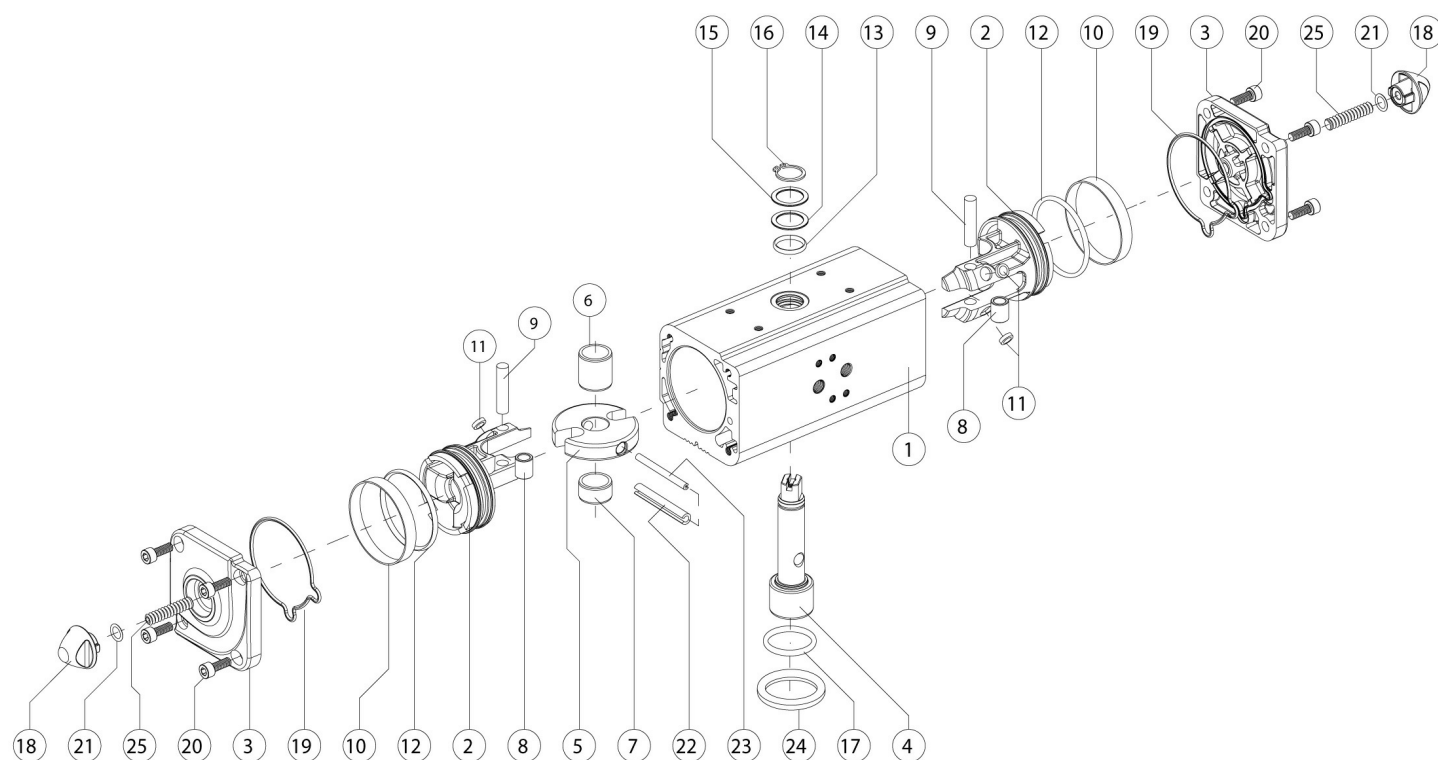


DIMENSION TABLE

| CODE | DAN1440412S | DAN1440411S | DAN1920412S | DAN1920411S |
|-------------|------------------------|------------------------|----------------------------|------------------------|
| Spare seals | KGGI0025 | KGGI0025 | KGGI0026 | KGGI0026 |
| size | DAN1440 F12 | DAN1400 F14 | DAN1920 F12/F16 | DAN1920 F14 |
| A | 567 | 567 | 601 | 601 |
| B | 36 | 36 | 46 | 46 |
| C x depth | M12x18 | M16x24 | M12x18 | M16x24 |
| D x depth | - | - | M20x30 | - |
| E | 125 | 140 | 125 | 140 |

| | | | | |
|----------------------------|-------|-------|-------|-------|
| F | - | - | 165 | - |
| G | 19,5 | 19,5 | 18,5 | 18,5 |
| H | 86,5 | 86,5 | 99,2 | 99,2 |
| I | 27 | 27 | 32 | 32 |
| L | 216 | 216 | 237,7 | 237,7 |
| M | 101,5 | 101,5 | 114,7 | 114,7 |
| N | 114,5 | 114,5 | 123 | 123 |
| O | 38,5 | 38,5 | 48,5 | 48,5 |
| P | 84,5 | 84,5 | 93 | 93 |
| Q | 101,5 | 101,5 | 114,7 | 114,7 |
| R | 41 | 41 | 46 | 46 |
| S | 30 | 30 | 30 | 30 |
| T | 186 | 186 | 207,7 | 207,7 |
| W (Gas) | 1/4" | 1/4" | 1/4" | 1/4" |
| Ch | 36 | 36 | 36 | 36 |
| Weight (Kg) | 23,4 | 23,4 | 32 | 32 |
| air dm ³ /cycle | 7,6 | 7,6 | 10,2 | 10,2 |

H = CENTER OF PLATE'S FIXING



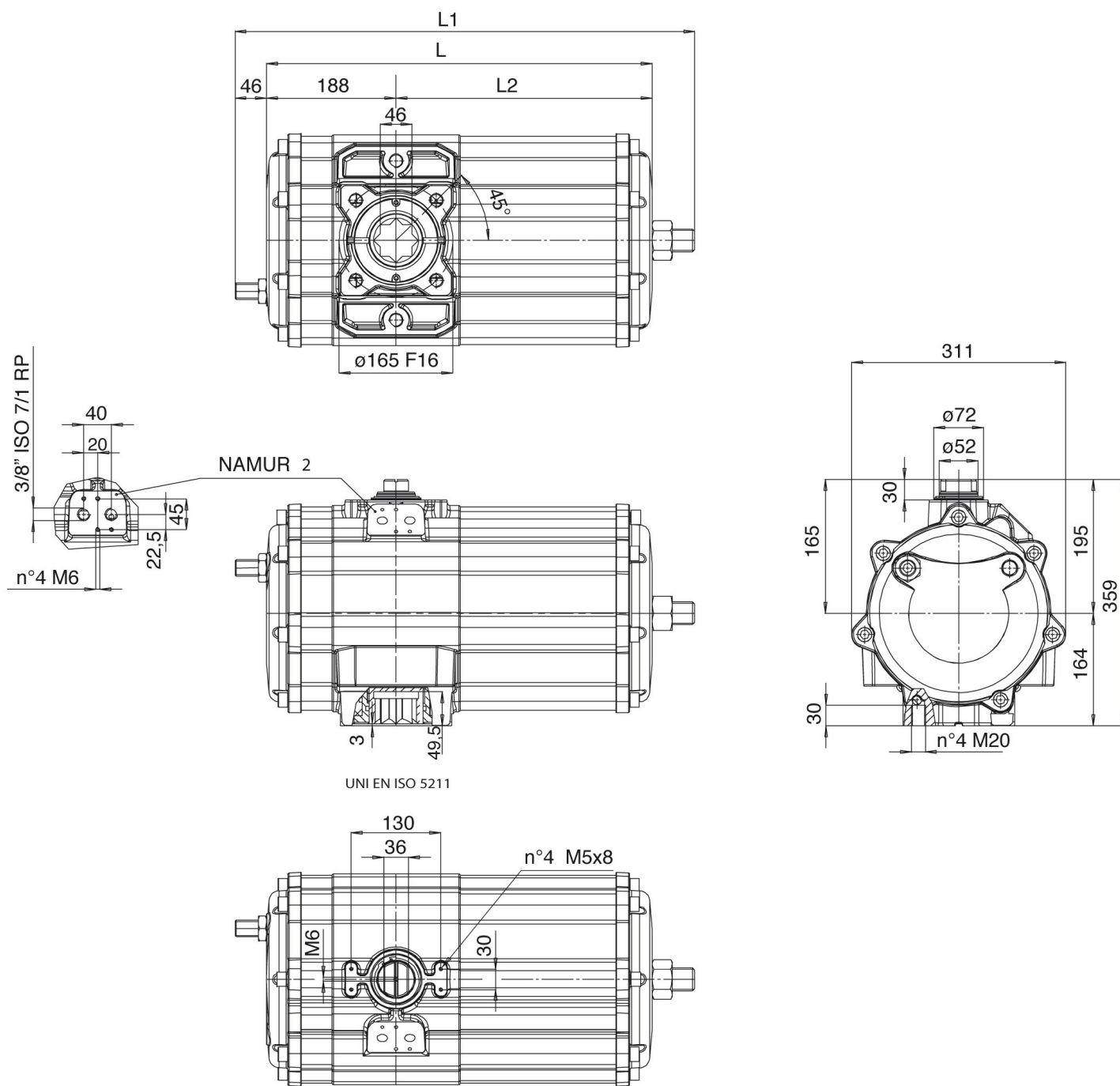
MATERIALS SPECIFICATION

| Pos | Denomination | Q.ty | Material |
|-----|--------------|------|-----------------|
| 1 | Cylinder | 1 | Aluminium alloy |
| 2 | Piston | 2 | Aluminium alloy |
| 3 | Cap | 2 | Aluminium alloy |
| 4 | Shaft | 1 | Stainless steel |

| | | | |
|-----|----------------------------------|---|--------------------------|
| 5 | Scotch yoke | 1 | Steel alloy |
| 6 | Support bush | 1 | Acetalic resin |
| 7 | Shaft support | 1 | Acetalic resin |
| 8 | Bush | 2 | Steel alloy |
| 9 | Rotative sleeve | 2 | Steel alloy |
| 10* | Dynamic seal | 2 | Polyurethan |
| 11* | Piston's suport | 4 | PTFE caric carbo-grafite |
| 12* | O-ring | 2 | Nitrilic rubber |
| 13* | O-ring (upper sealing shaft) | 1 | FKM |
| 14* | External support ring | 1 | Acetalic resins |
| 15 | Washer | 1 | Stainless steel |
| 16 | Seeger | 1 | Stainless steel |
| 17* | O-ring (low sealing shaft) | 1 | FKM |
| 18 | Nut | 2 | Aluminium alloy |
| 19* | Tappo o-ring | 2 | Nitrilic rubber |
| 20 | Screws | 8 | Stainless steel |
| 21 | O-ring | 2 | Nitrilic rubber |
| 22 | External elastic pin of the yoke | 1 | Steel alloy |
| 23 | Internal elastic pin of the yoke | 1 | Steel alloy |
| 24 | Centering ring | 1 | Aluminium alloy |
| 25 | Stroke adjustment screw | 2 | Stainless steel |

*Components of spare part kit

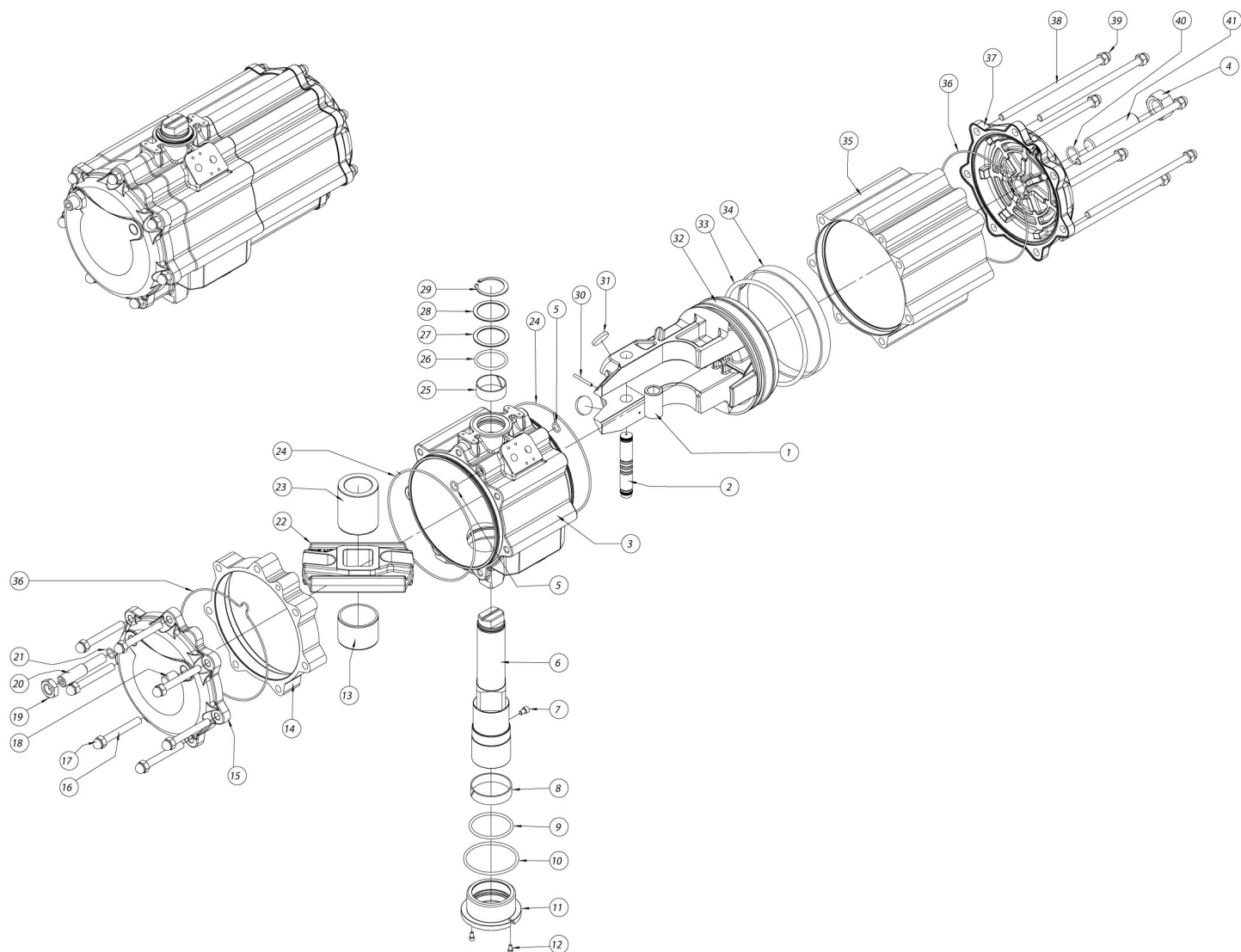
Codes, dimensions and materials - DA2880



Interfaccia per accessori secondo *Interface for accessories according to* **VDI/VDE 3845, EN 15714-3**

DIMENSION TABLE

| dimension | L | L1 | L2 | Weight |
|--------------------------------------|-----------------|-----|-----|--------|
| double acting DA2880E16D0A | 560 | 667 | 372 | 45 |
| air volume dm ³ /cycle | 20 | | | |
| Spare seals | KGDI1035 | | | |



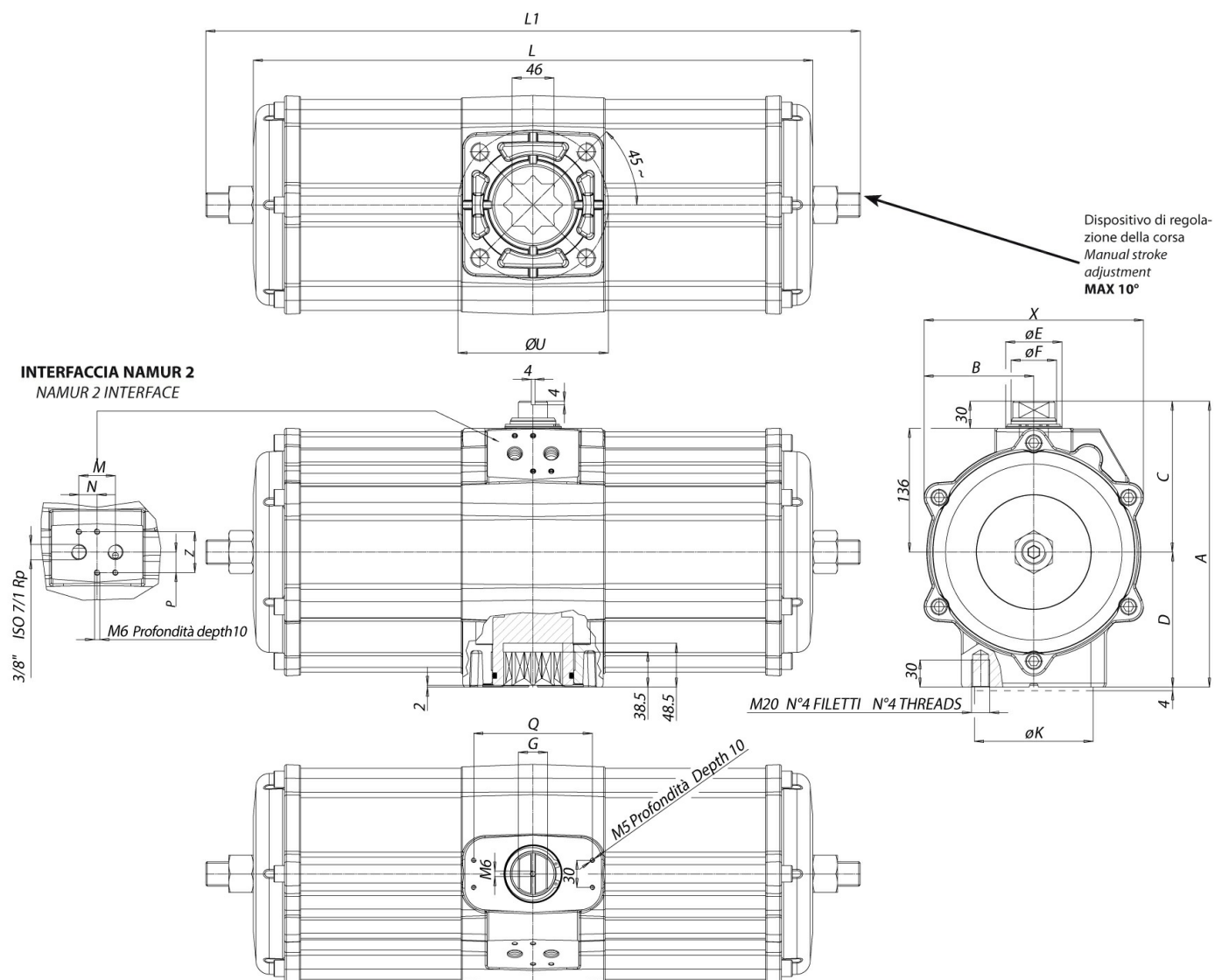
MATERIALS SPECIFICATION

| Pos | Denomination | Q.ty | Material |
|-----|------------------------|------|-----------------|
| 1 | Steel bush | 1 | Steel alloy |
| 2 | Steel pin | 1 | Steel alloy |
| 3 | Body | 1 | Aluminium |
| 4 | Nut | 1 | Steel alloy |
| 5* | O-ring | 2 | NBR |
| 6 | Shaft | 1 | Steel alloy |
| 7 | Screw | 1 | Steel alloy |
| 8* | Bearing (shaft bottom) | 1 | Acetalic resins |
| 9* | O-ring | 1 | FKM |
| 10* | O-ring | 1 | FKM |
| 11 | Low bearing bush | 1 | Aluminium |
| 12 | Screw | 2 | Steel alloy |
| 13 | Bearing shaft | 1 | Acetalic resins |
| 14 | Spacer | 1 | Aluminium |
| 15 | Cap | 1 | Aluminium |
| 16 | Cap screw | 7 | Steel alloy |

| | | | |
|-----|-----------------------|---|----------------|
| 17 | Cap nut | 7 | Steel alloy |
| 18 | Grub screw | 1 | Steel alloy |
| 19 | Nut | 1 | Steel alloy |
| 20 | Grub screw | 1 | Steel alloy |
| 21* | O-ring | 1 | NBR |
| 22 | Scotch yoke | 1 | Steel alloy |
| 23 | Bearing shaft | 1 | Acetalic resin |
| 24* | O-ring | 2 | NBR |
| 25* | Bearing (shaft top) | 1 | Acetalic resin |
| 26* | O-ring | 1 | FKM |
| 27* | Trusth bearing | 1 | Acetalic resin |
| 28 | Washer | 1 | Steel alloy |
| 29 | Seeger | 1 | Steel alloy |
| 30 | Spring pin | 1 | Steel alloy |
| 31* | Bearing (piston back) | 2 | Acetalic resin |
| 32 | Piston | 1 | Aluminium |
| 33* | O-ring | 1 | NBR |
| 34* | Bearing (piston head) | 1 | Acetalic resin |
| 35 | Lateral cylinder | 1 | Aluminium |
| 36* | O-ring | 2 | NBR |
| 37 | Cap | 1 | Aluminium |
| 38 | Cap screw | 7 | Steel alloy |
| 39 | Cap nut | 7 | Steel alloy |
| 40* | O-ring | 1 | NBR |
| 41 | Grub screw | 1 | Steel alloy |

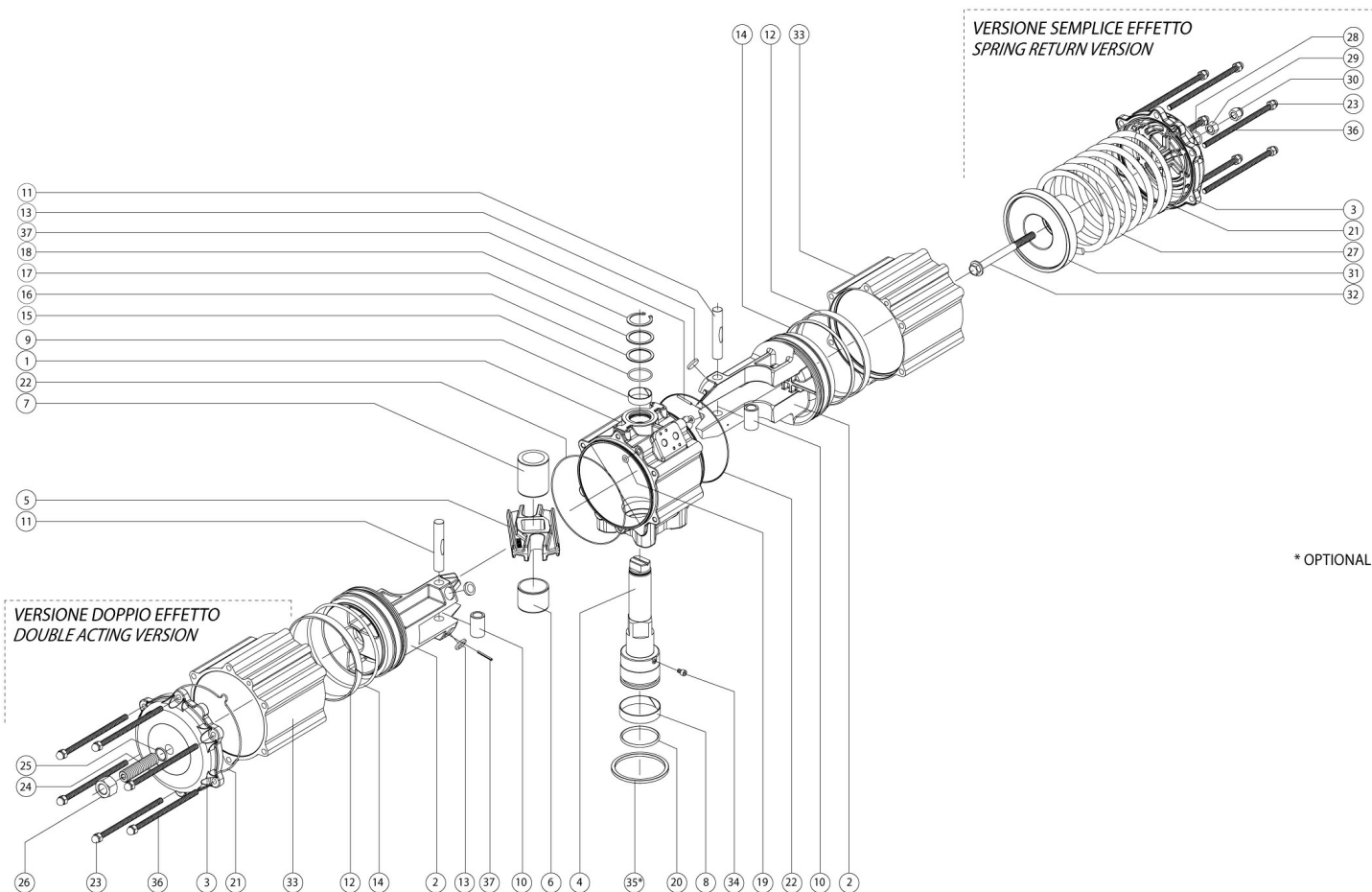
*Components of spare part kit

Codes, dimensions and materials - DA3840



DIMENSION TABLE

| dimension mm | A | b | c | d | $\varnothing e$ | $\varnothing f$ | g | $\varnothing k$ | l | l1 | m | n | p | q | $\varnothing u$ | x | z | Weight |
|-----------------------------------|----------|-------|-----|-------|-----------------|-----------------|----|-----------------|-----|-----|----|----|------|-----|-----------------|-----|----|--------|
| DA3840E1600A | 314,5 | 120,4 | 166 | 148,5 | 62 | 50 | 32 | 130 | 614 | 718 | 40 | 20 | 22,5 | 130 | 165 | 241 | 45 | 49 kg |
| air volume dm ³ /cycle | 23,09 | | | | | | | | | | | | | | | | | |
| Spare seals | KGDI0030 | | | | | | | | | | | | | | | | | |



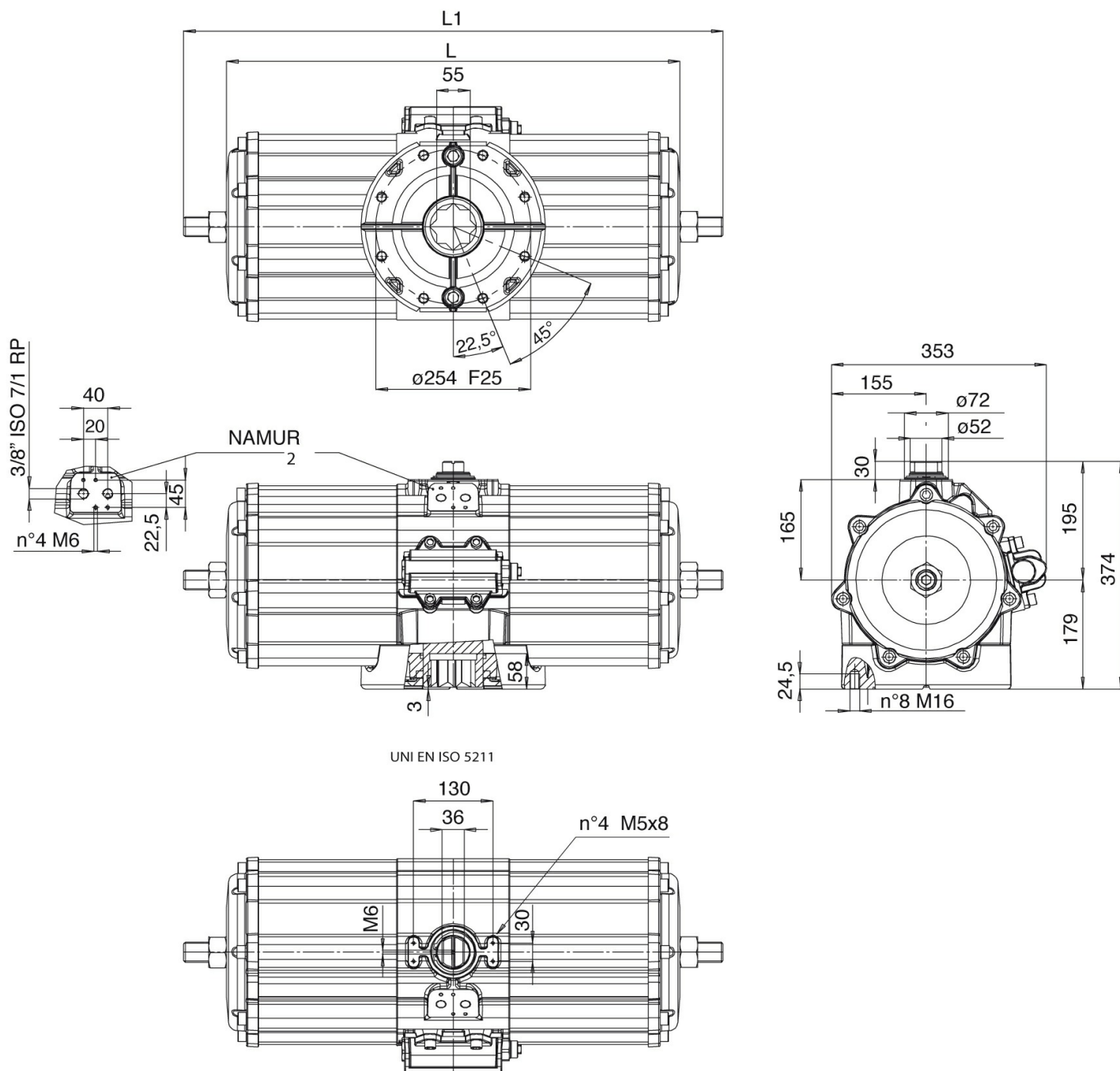
MATERIALS SPECIFICATION

| Pos | Denomination | Q.ty | Material |
|-----|------------------------|------|-----------------|
| 1 | Cylinder | 1 | Aluminium alloy |
| 2 | Piston | 2 | Aluminium alloy |
| 3 | Cap | 2 | Aluminium alloy |
| 4 | Shaft | 1 | Stainless steel |
| 5 | Scotch yoke | 1 | Steel alloy |
| 6 | Bearing shaft | 1 | Acetalic resins |
| 7 | Bearing shaft | 1 | Acetalic resins |
| 8* | Bearing (shaft bottom) | 1 | Acetalic resins |
| 9* | Bearing (shaft top) | 1 | Acetalic resins |
| 10 | Steel bush | 2 | Steel alloy |
| 11 | Steel pin | 2 | Lega acciaio |
| 12* | Bearing (piston head) | 2 | Acetalic resins |
| 13* | Bearing (piston back) | 4 | Acetalic resins |
| 14* | O-ring | 2 | NBR |
| 15* | O-ring | 1 | FKM |
| 16* | Thrust bearing | 1 | Acetalic resins |
| 17 | Washer | 1 | Stainless steel |
| 18 | Seeger | 1 | Stainless steel |
| 19* | O-ring | 2 | NBR |
| 20* | O-ring | 1 | FKM |

| | | | |
|-----|-------------|----|-----------------|
| 21* | O-ring | 2 | NBR |
| 22* | O-ring | 2 | NBR |
| 23 | Cap nut | 12 | Stainless steel |
| 24 | Grub screws | 2 | Stainless steel |
| 25* | O-ring | 2 | NBR |
| 26 | Nut | 2 | Stainless steel |
| 27 | Spring | 4 | Steel alloy |
| 28* | O-ring | 2 | NBR |
| 29 | Nut | 2 | Stainless steel |
| 30 | Cap nut | 2 | Stainless steel |
| 31 | Spring cap | 2 | Aluminium alloy |
| 32 | Screw | 2 | Stainless steel |
| 33 | Cylinder | 2 | Aluminium alloy |
| 34 | Screw | 1 | Stainless steel |
| 35 | Center ring | 1 | Aluminium alloy |
| 36 | Cap screw | 12 | Steel alloy |
| 37 | Spring pin | 2 | Steel alloy |

*Components of spare part kit

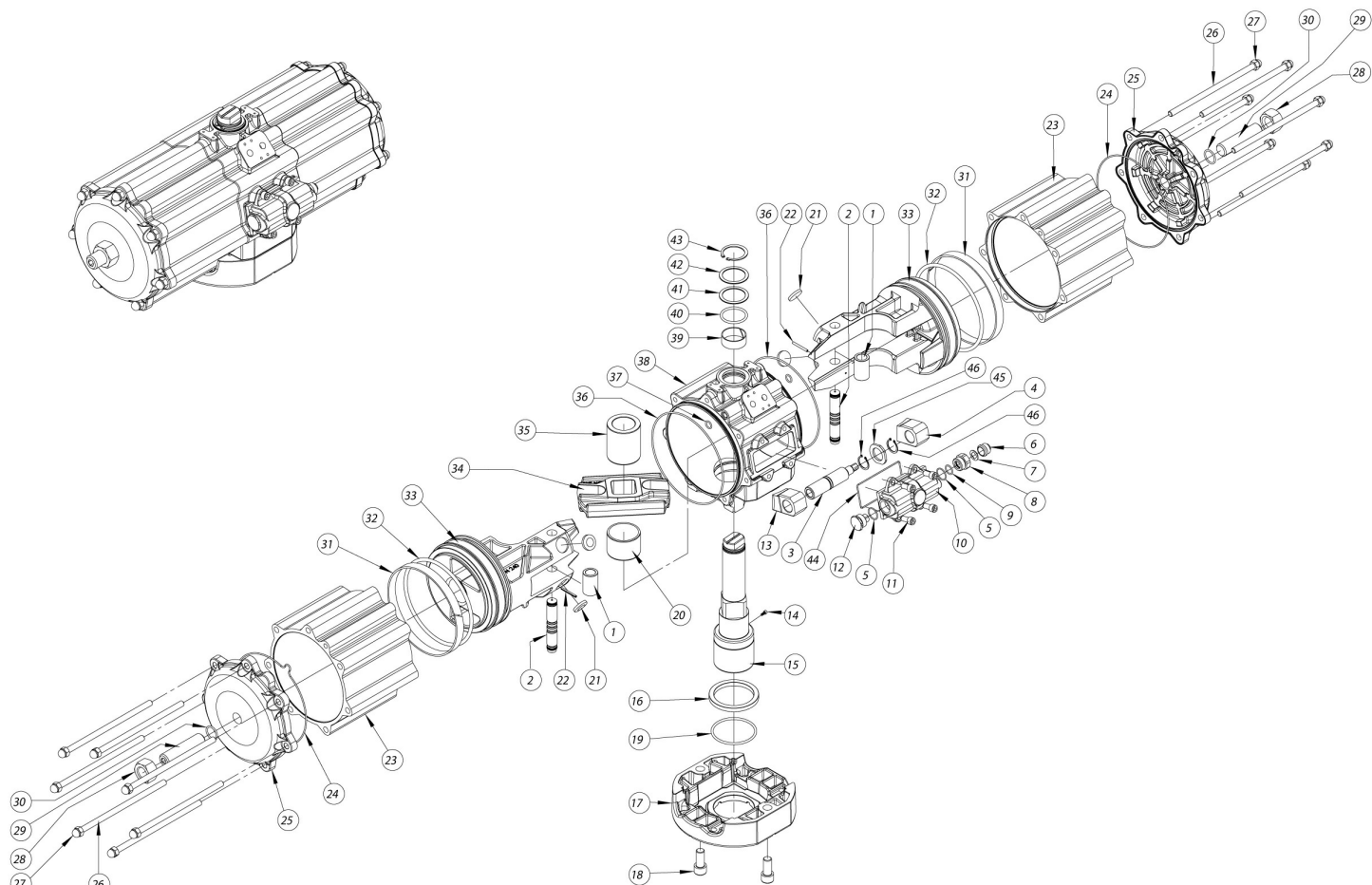
Codes, dimensions and materials - DA5760



Interfaccia per accessori secondo *Interface for accessories according to* **VDI/VDE 3845, EN 15714-3**

DIMENSION TABLE

| | |
|-----------------------------------|--------------------------------------|
| dimension | double acting DA5760E25D0A |
| L mm | 744 |
| L1 mm | 885 |
| Weight Kg | 80 |
| air volume dm ³ /cycle | 38 |
| Spare seals | KGDI2035 |



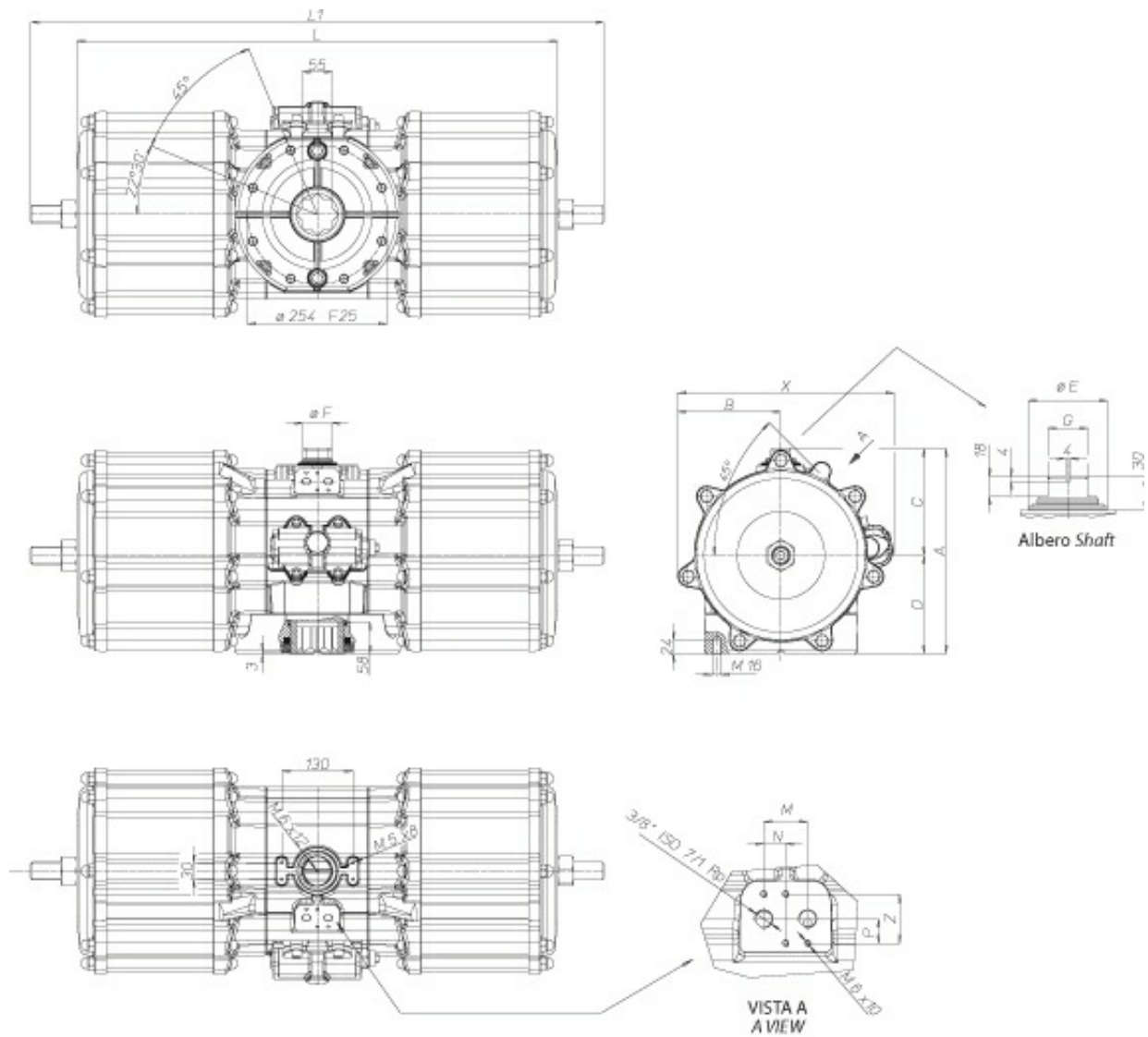
MATERIALS SPECIFICATION

| Pos | Denomination | Q.TA' | Material |
|-----|------------------------|-------|-----------------|
| 1 | Steel bush | 2 | Steel alloy |
| 2 | Steel pin | 2 | Steel alloy |
| 3 | Regolation screw | 1 | Steel alloy |
| 4 | Left stop | 1 | Steel alloy |
| 5* | O-ring | 2 | NBR |
| 6 | Pretection cap | 1 | Aluminium |
| 7 | Antirotation washer | 1 | Steel alloy |
| 8 | Metal ring | 1 | Stainless steel |
| 9* | O-ring | 1 | NBR |
| 10 | Carter | 1 | Aluminium |
| 11 | Screw | 4 | Steel alloy |
| 12 | Metal ring | 1 | Stainless steel |
| 13 | Right stop | 1 | Steel alloy |
| 14 | Screw | 1 | Steel alloy |
| 15 | Shaft | 1 | Steel alloy |
| 16 | Bearing (shaft bottom) | 1 | Acetalic resins |
| 17 | Interface F25 | 1 | Aluminium |
| 18 | Screw | 2 | Steel alloy |
| 19* | O-ring | 1 | FKM |

| | | | |
|-----|-----------------------|----|-----------------|
| 20 | Bearing shaft | 1 | Acetalic resins |
| 21* | Bearing (piston back) | 4 | Acetalic resins |
| 22 | Spring pin | 2 | Steel alloy |
| 23 | Lateral cylinder | 2 | Aluminium |
| 24* | O-ring | 2 | NBR |
| 25 | Cap | 2 | Aluminium |
| 26 | Cap screws | 14 | Steel alloy |
| 27 | Cap nut | 14 | Steel alloy |
| 28 | Nut | 2 | Steel alloy |
| 29 | Grub screws | 2 | Steel alloy |
| 30* | O-ring | 2 | NBR |
| 31* | Bearing (piston head) | 2 | Acetalic resin |
| 32* | O-ring | 2 | NBR |
| 33 | Piston | 2 | Aluminium |
| 34 | Scotch yoke | 1 | Steel alloy |
| 35 | Bearing shaft | 1 | Acetalic resin |
| 36* | O-ring | 2 | NBR |
| 37* | O-ring | 2 | NBR |
| 38 | Body | 1 | Aluminium |
| 39* | Bearing (shaft top) | 1 | Acetalic resin |
| 40* | O-ring | 1 | FKM |
| 41* | Thrust bearing | 1 | acetalic resin |
| 42 | Washer | 1 | Steel alloy |
| 43 | Seeger | 1 | Steel alloy |
| 44* | Gasket | 1 | NBR |
| 45 | Washer | 1 | Steel alloy |
| 46 | Seeger | 2 | Steel alloy |

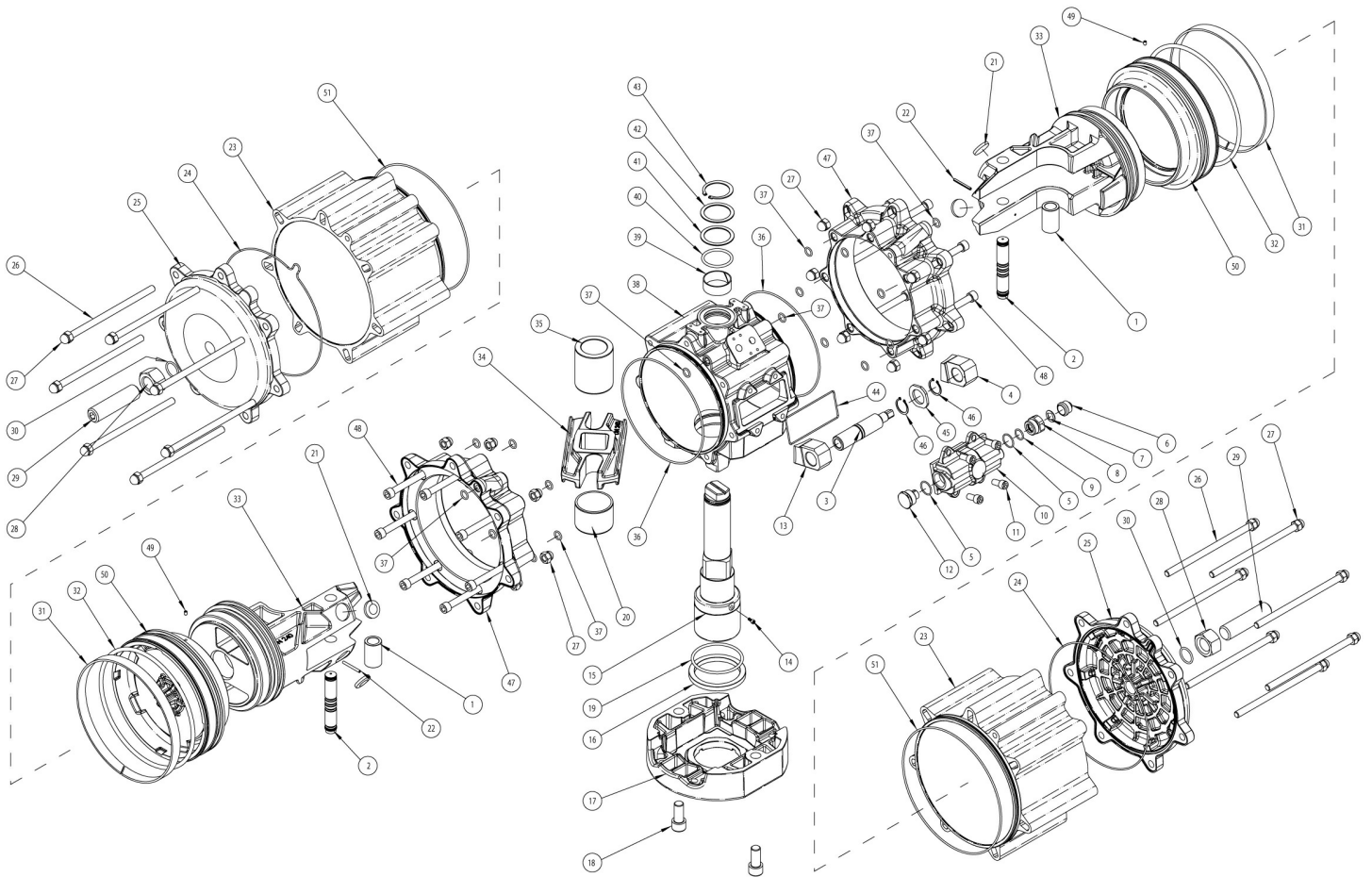
*Components of spare part kit

Codes, dimensions and materials - DA8000



DIMENSION TABLE

| dimension mm | A | b | c | d | $\varnothing e$ | $\varnothing f$ | g | m | n | l | l1 | p | x | z | Weight |
|-----------------------------------|----------|-----|-----|-----|-----------------|-----------------|----|----|----|-----|------|------|-----|----|--------|
| DA8000E25D0A | 374 | 188 | 195 | 179 | 72 | 52 | 36 | 40 | 20 | 877 | 1044 | 22,5 | 394 | 45 | 110 Kg |
| air volume dm ³ /cycle | 65 | | | | | | | | | | | | | | |
| Spare seals | KGD11040 | | | | | | | | | | | | | | |



MATERIALS SPECIFICATION

| Pos | Denomination | Q.TA' | Material |
|-----|------------------------|-------|-----------------|
| 1 | Steel bush | 2 | Steel alloy |
| 2 | Steel pin | 2 | Steel alloy |
| 3 | Regulation screw | 1 | Steel alloy |
| 4 | Left stop | 1 | Steel alloy |
| 5* | O-ring | 2 | NBR |
| 6 | Protection cap | 1 | Aluminium |
| 7 | Antirotation washer | 1 | Steel alloy |
| 8 | Metal ring | 1 | Stainless steel |
| 9* | O-ring | 1 | NBR |
| 10 | Carter | 1 | Aluminium |
| 11 | Screw | 4 | Steel alloy |
| 12 | Metal ring | 1 | Stainless steel |
| 13 | Right stop | 1 | Steel alloy |
| 14 | Screw | 1 | Steel alloy |
| 15 | Shaft | 1 | Steel alloy |
| 16 | Bearing (shaft bottom) | 1 | Acetalic resins |
| 17 | Interface F25 | 1 | Aluminium |
| 18 | Screw | 2 | Steel alloy |
| 19* | O-ring | 1 | FKM |
| 20 | Bearing shaft | 1 | Acetalic resins |

| | | | |
|-----|-----------------------|----|---------------------|
| 21 | Bearing (piston back) | 4 | Acetalic resins |
| 22 | Spring pin | 2 | Acciaio Steel alloy |
| 23 | Lateral cylinder | 2 | Aluminium |
| 24* | O-ring | 2 | NBR |
| 25 | Cap | 2 | Aluminium |
| 26 | Cap screws | 14 | Steel alloy |
| 27 | Cap nut | 28 | Steel alloy |
| 28 | Nut | 2 | Steel alloy |
| 29 | Grub screws | 2 | Steel alloy |
| 30* | O-ring | 2 | NBR |
| 31* | Bearing (piston head) | 2 | Acetalic resins |
| 32* | O-ring | 2 | NBR |
| 33 | Piston | 2 | Aluminium |
| 34 | Scotch yoke | 1 | Steel alloy |
| 35 | Bearing shaft | 1 | Acetalic resins |
| 36* | O-ring | 2 | NBR |
| 37* | O-ring | 18 | NBR |
| 38 | Body | 1 | Aluminium |
| 39* | Bearing (shaft top) | 1 | Acetalic resins |
| 40* | O-ring | 1 | FKM |
| 41* | Thrust bearing | 1 | Resina acetlica |
| 42 | Washer | 1 | Steel alloy |
| 43 | Seeger | 1 | Steel alloy |
| 44* | Gasket | 1 | NBR |
| 45 | Washer | 1 | Steel alloy |
| 46 | Seeger | 2 | Steel alloy |
| 47 | Flange | 2 | Aluminium |
| 48 | Screws | 14 | Steel alloy |
| 49 | Grub screw | 2 | Steel alloy |
| 50 | Flange | 2 | Aluminium |
| 51* | O-ring | 2 | NBR |

*Components of spare part kit