

# DESPIECE

# DISASSEMBLY



2006/42/EC



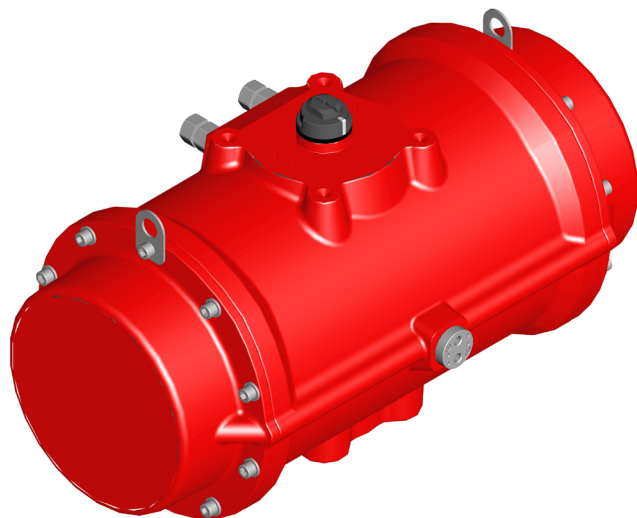
2014/34/UE



IEC 61508



## ACTUADOR NEUMÁTICO DE ALUMINIO ALUMINIUM PNEUMATIC ACTUATOR

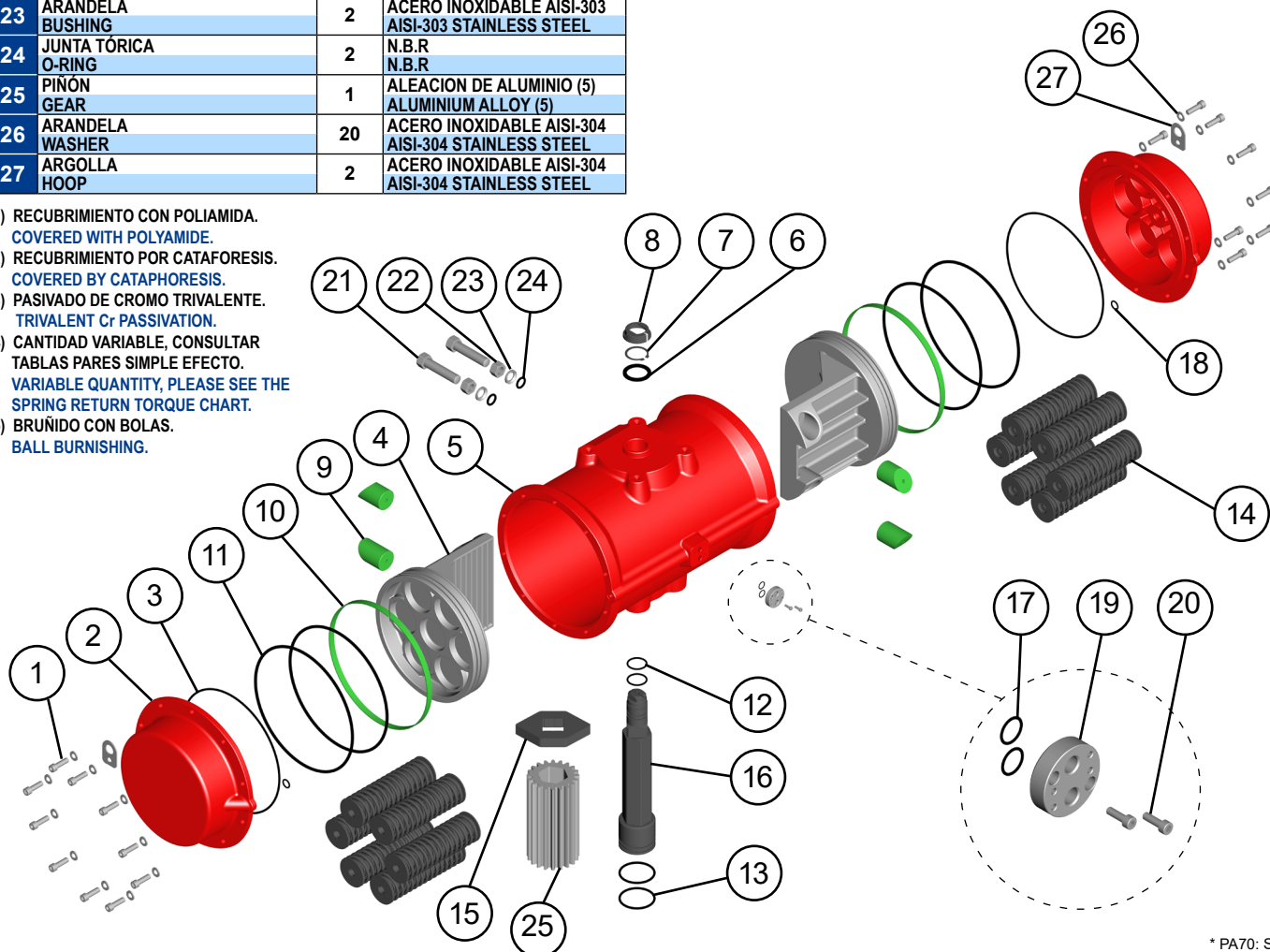


**PA70:** Doble Efecto / Double Acting

**PA70S:** Simple Efecto / Spring Return

| Nº | Descripción<br>Description                             | Cant.<br>Quant. | Material<br>Material                                     |
|----|--------------------------------------------------------|-----------------|----------------------------------------------------------|
| 1  | TORNILLO ALLEN<br>ALLEN SCREW                          | 20              | ACERO INOXIDABLE AISI-304<br>AISI-304 STAINLESS STEEL    |
| 2  | TAPA<br>CAP                                            | 2               | ALEACIÓN ALUMINIO (2) + (1)<br>ALUMINIUM ALLOY (2) + (1) |
| 3  | JUNTA TÓRICA TAPA<br>CAP-O-RING                        | 2               | N.B.R.<br>N.B.R.                                         |
| 4  | EMBOLO<br>PISTON                                       | 2               | ALEACIÓN ALUMINIO<br>ALUMINIUM ALLOY                     |
| 5  | CILINDRO<br>CYLINDER                                   | 1               | ALEACIÓN ALUMINIO (2) + (1)<br>ALUMINIUM ALLOY (2) + (1) |
| 6  | ARANDELA<br>WASHER                                     | 1               | POLIAMIDA 6<br>POLYAMIDA 6                               |
| 7  | ANILLO DE SEGURIDAD<br>SPRING CLIP                     | 1               | ACERO (2)<br>STEEL (2)                                   |
| 8  | INDICADOR VISUAL<br>POSITION INDICATOR                 | 1               | POLIAMIDA<br>POLYAMIDE                                   |
| 9  | GUÍA ÉMBOLO<br>PISTON GUIDE                            | 4               | NYLON<br>NYLON                                           |
| 10 | ANILLO GUÍA<br>GUIDE RING                              | 2               | P.T.F.E + BRONCE<br>P.T.F.E + BRONZE                     |
| 11 | JUNTA TÓRICA ÉMBOLO<br>PISTON O-RING                   | 4               | N.B.R.<br>N.B.R.                                         |
| 12 | JUNTA TÓRICA EJE<br>SHAFT O-RING                       | 2               | N.B.R.<br>N.B.R.                                         |
| 13 | JUNTA TÓRICA EJE<br>SHAFT O-RING                       | 2               | N.B.R.<br>N.B.R.                                         |
| 14 | MUELLES PRECARGADOS<br>PRELOADED SPRINGS               | 12              | DIN-17223-C (2) (4)<br>DIN-17223-C (2) (4)               |
| 15 | LEVA<br>CAM                                            | 1               | ACERO (2)<br>STEEL (2)                                   |
| 16 | EJE<br>SHAFT                                           | 1               | ACERO (2)<br>STEEL (2)                                   |
| 17 | JUNTA TÓRICA PLACA<br>PLATE O-RING                     | 2               | N.B.R.<br>N.B.R.                                         |
| 18 | JUNTA TÓRICA TAPA<br>CAP O-RING                        | 2               | N.B.R.<br>N.B.R.                                         |
| 19 | PLACA CONEXIÓN NEUMÁTICA<br>PNEUMATIC CONNECTION PLATE | 1               | ACERO INOXIDABLE AISI-316<br>AISI-316 STAINLESS STEEL    |
| 20 | TORNILLO ALLEN PLACA<br>PLATE ALLEN SCREW              | 2               | ACERO INOXIDABLE AISI-304<br>AISI-304 STAINLESS STEEL    |
| 21 | TORNILLO HEXAGONAL<br>HEXAGONAL SCREW                  | 2               | ACERO (3)<br>STEEL (3)                                   |
| 22 | TUERCA<br>NUT                                          | 2               | ACERO INOXIDABLE AISI-304<br>AISI-304 STAINLESS STEEL    |
| 23 | ARANDELA<br>BUSHING                                    | 2               | ACERO INOXIDABLE AISI-303<br>AISI-303 STAINLESS STEEL    |
| 24 | JUNTA TÓRICA<br>O-RING                                 | 2               | N.B.R.<br>N.B.R.                                         |
| 25 | PINÓN<br>GEAR                                          | 1               | ALEACION DE ALUMINIO (5)<br>ALUMINIUM ALLOY (5)          |
| 26 | ARANDELA<br>WASHER                                     | 20              | ACERO INOXIDABLE AISI-304<br>AISI-304 STAINLESS STEEL    |
| 27 | ARGOLLA<br>HOOP                                        | 2               | ACERO INOXIDABLE AISI-304<br>AISI-304 STAINLESS STEEL    |

- (1) RECUBRIMIENTO CON POLIAMIDA.  
COVERED WITH POLYAMIDE.
- (2) RECUBRIMIENTO POR CATAFORESIS.  
COVERED BY CATAPHORESIS.
- (3) PASIVADO DE CROMO TRIVALENTE.  
TRIVALENT Cr PASSIVATION.
- (4) CANTIDAD VARIABLE, CONSULTAR  
TABLAS PARES SIMPLE EFECTO.  
VARIABLE QUANTITY, PLEASE SEE THE  
SPRING RETURN TORQUE CHART.
- (5) BRUÑIDO CON BOLAS.  
BALL BURNISHING.



\* PA70: SIL2  
PA70S: SIL1 / SIL2 (SC)

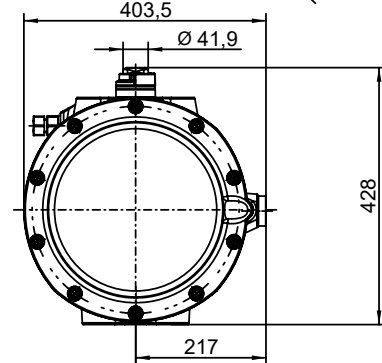
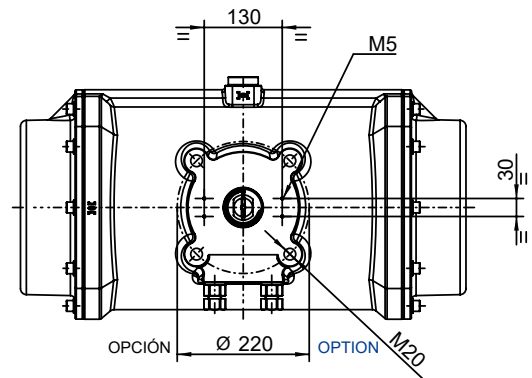
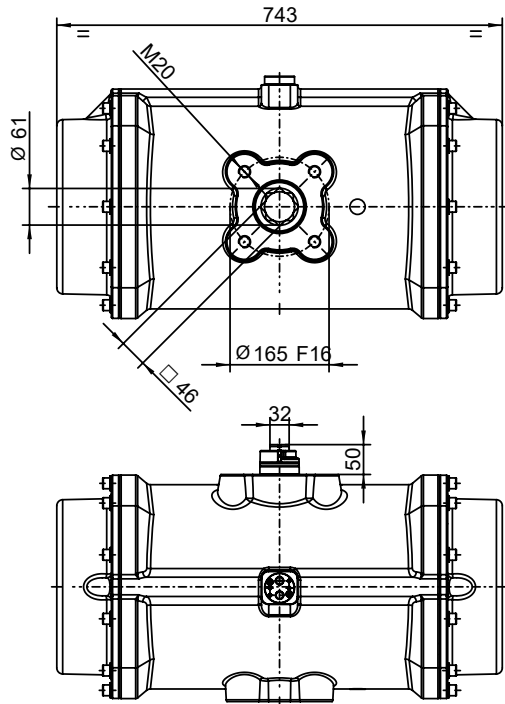
| MODELOS<br><br>MODELS | TIEMPO DE MANIOBRA EN SEG. |             | PESOS   |        | CAPACIDAD EN LITROS |             |
|-----------------------|----------------------------|-------------|---------|--------|---------------------|-------------|
|                       | CYCLE TIME IN SECS.        |             | WEIGHTS |        | CAPACITY IN LITRES  |             |
|                       | PARA ABRIR                 | PARA CERRAR | Kg.     | Lb.    | PARA ABRIR          | PARA CERRAR |
|                       | TO OPEN                    | TO CLOSE    |         |        | TO OPEN             | TO CLOSE    |
| PA70                  | 4                          | 4           | 77,9    | 171,74 | 31                  | 30          |
| PA70S                 | 8                          | 6           | 118,2   | 260,59 | 31                  |             |

Tiempo de maniobra sin par resistente a 6 bar.  
Cycle time w/o resistant torque at 6 bar.

Dimensiones en mm.  
Dimensions in mm.

Para calcular el consumo, multiplicar las cifras del cuadro por la presión real de trabajo.

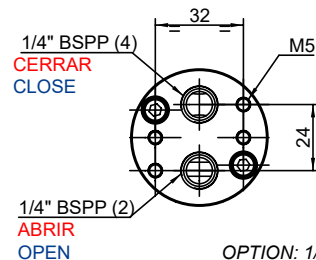
To calculate the consumption, multiply the above figures by the real working pressure.



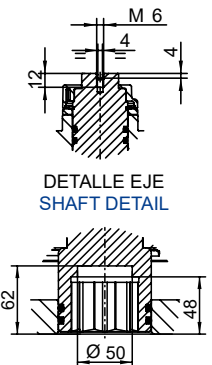
## PARES DOBLE EFECTO DOUBLE ACTING TORQUES

| PA70  | PRESION AIRE<br>AIR PRESSURE |        |        |        |        |        |        |        |
|-------|------------------------------|--------|--------|--------|--------|--------|--------|--------|
| bar   | 3                            | 4      | 4,5    | 5      | 5,5    | 6      | 7      | 8      |
| p.s.i | 43,5                         | 58     | 65,3   | 72,5   | 79,8   | 87     | 101,5  | 116    |
| Nm    | 2.389                        | 3.273  | 3.715  | 4.158  | 4.600  | 5.043  | 5.927  | 6.812  |
| Lb.in | 21.141                       | 28.971 | 32.886 | 36.801 | 40.716 | 44.631 | 52.461 | 60.291 |

NORMA NAMUR E.V  
SOLENOID NAMUR NORM



OPTION: 1/4" NPT



## PARES SIMPLE EFECTO SPRING RETURN TORQUES

| PA70S | PAR MUELLES<br>SPRING TORQUES |              | PAR A LA PRESIÓN INDICADA |              |                    |              |                    |              |                    |              |                    |              |                    |              |                    |              |                    |              | AIR TORQUE AT INDICATED PRESSURE |  |  |  |
|-------|-------------------------------|--------------|---------------------------|--------------|--------------------|--------------|--------------------|--------------|--------------------|--------------|--------------------|--------------|--------------------|--------------|--------------------|--------------|--------------------|--------------|----------------------------------|--|--|--|
|       |                               |              | 3                         |              | 4                  |              | 4,5                |              | 5                  |              | 5,5                |              | 6                  |              | 7                  |              | 8                  |              | bar                              |  |  |  |
|       | 43,5                          |              | 58                        |              | 65,3               |              | 72,5               |              | 79,8               |              | 87                 |              | 101,5              |              | 116                |              | p.s.i              |              |                                  |  |  |  |
| N     | INICIAL<br>INITIAL            | FINAL<br>END | INICIAL<br>INITIAL        | FINAL<br>END | INICIAL<br>INITIAL | FINAL<br>END | INICIAL<br>INITIAL | FINAL<br>END | INICIAL<br>INITIAL | FINAL<br>END | INICIAL<br>INITIAL | FINAL<br>END | INICIAL<br>INITIAL | FINAL<br>END | INICIAL<br>INITIAL | FINAL<br>END | INICIAL<br>INITIAL | FINAL<br>END |                                  |  |  |  |
| 6*    | 3.539                         | 1.769        |                           |              |                    |              |                    |              | 2.389              | 619          | 2.831              | 1.062        | 3.273              | 1.504        | 4.158              | 2.389        | 5.043              | 2.273        | Nm                               |  |  |  |
|       | 31.320                        | 15.660       |                           |              |                    |              |                    |              | 21.142             | 5.481        | 25.056             | 9.396        | 28.971             | 13.311       | 36.801             | 21.141       | 44.632             | 28.971       | Lb.in                            |  |  |  |
| 5     | 2.949                         | 1.475        |                           |              |                    |              | 2.240              | 766,5        | 2.684              | 1.209        | 3.126              | 1.651        | 3.568              | 2.094        | 4.453              | 2.978        | 5.338              | 3.683        | Nm                               |  |  |  |
|       | 26.100                        | 13.050       |                           |              |                    |              | 19.836             | 6.786        | 23.751             | 10.701       | 27.666             | 14.616       | 31.580             | 18.531       | 39.411             | 26.361       | 47.241             | 34.191       | Lb.in                            |  |  |  |
| 4     | 2.359                         | 1.180        |                           |              | 2.094              | 914          | 2.535              | 1.356        | 2.978              | 1.799        | 3.421              | 2.241        | 3.863              | 2.684        | 4.748              | 3.568        | 5.632              | 4.453        | Nm                               |  |  |  |
|       | 20.880                        | 10.440       |                           |              | 18.531             | 8.091        | 22.446             | 12.006       | 26.361             | 15.922       | 30.276             | 19.836       | 34.190             | 23.751       | 42.021             | 31.581       | 49.851             | 39.411       | Lb.in                            |  |  |  |
| 3     | 1.769                         | 885          | 1.504                     | 619          | 2.389              | 1.504        | 2.830              | 1.946        | 3.273              | 2.389        | 3.716              | 2.831        | 4.158              | 3.273        | 5.043              | 4.158        |                    |              | Nm                               |  |  |  |
|       | 16.660                        | 7.830        | 13.311                    | 5.481        | 21.141             | 13.311       | 25.056             | 16.226       | 28.971             | 21.142       | 32.886             | 25.056       | 36.800             | 28.971       | 44.631             | 36.801       |                    |              | Lb.in                            |  |  |  |
| 2     | 1.180                         | 590          | 1.799                     | 1.209        | 2.684              | 2.094        | 3.125              | 2.535        | 3.568              | 2.978        | 4.011              | 3.421        | 4.453              | 3.863        |                    |              |                    |              | Nm                               |  |  |  |
|       | 10.440                        | 5.220        | 15.921                    | 10.701       | 23.751             | 18.531       | 27.666             | 22.446       | 31.581             | 26.361       | 35.496             | 30.276       | 39.411             | 34.190       |                    |              |                    |              | Lb.in                            |  |  |  |

N: Número de muelles por banda  
Number of springs per side

\* Número de muelles estándar  
\* Standard number of springs