

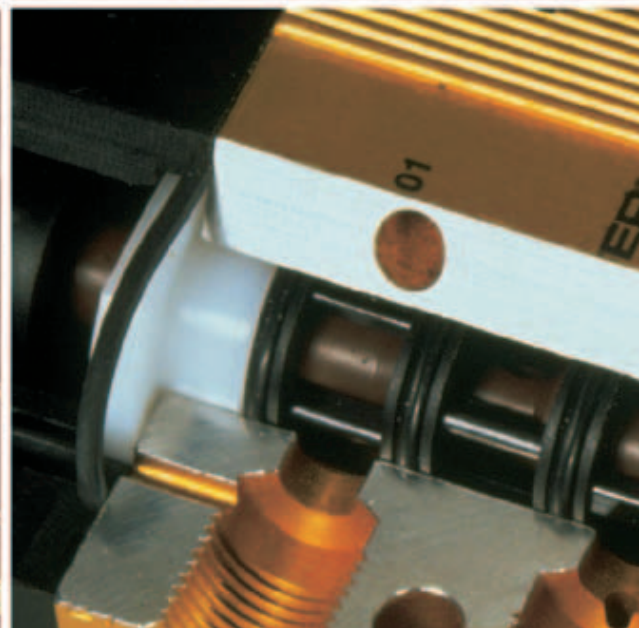
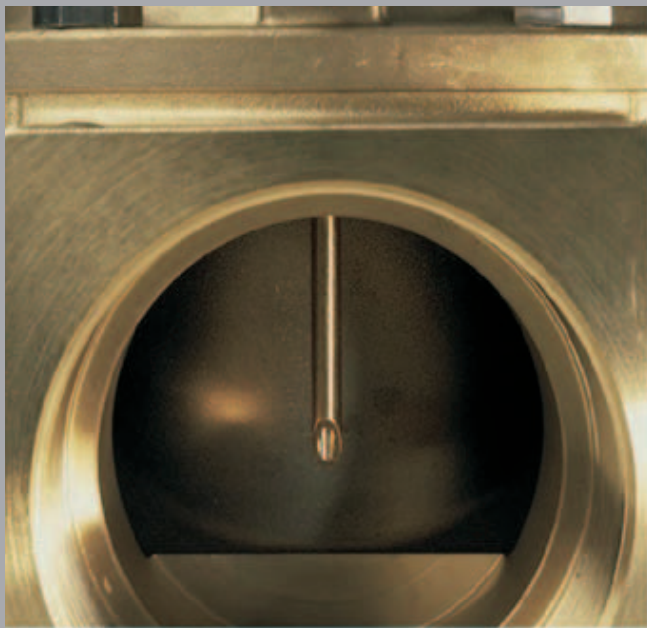
**LUCIFER®**

# ***General Catalogue Solenoid Valves***

## ***3- & 4-way valves for actuator control***

Catalogue 8930/GB

**CONTENTS ►**



## Parker Lucifer SA

### ***Perfect compatibility between a multinational approach and integration into the local industrial community.***

Parker Lucifer's Valve Division, manufacturing fluid control solenoid valves and pressure regulators, is located in Carouge-Geneva, Switzerland with manufacturing sites both in Geneva and Gessate near Milan, Italy.

With the multinational structure of the Parker Group we now have support that enables us to face the international market. To date we are represented in over 50 Countries with an established network of distributors in each industrial market open to us. Parker Lucifer is located in Geneva, Switzerland, a European communications and traffic centre.

### ***Mastering technologies in anticipation of your needs.***

We aim always to stay a step ahead of our customers' demands. You are looking for someone who has expertise in the latest technology, who has a solid body of know-how and who will participate directly in the development of your products.

Parker Lucifer takes advantage of the developments made in various divisions of Parker Corporation and, in doing so, of all the skills and synergy generated by our Group.

Parker's technology transfer policy provides us with the know-how of a global corporation. You derive direct advantage from this for our expertise in these technologies, which enables us to anticipate your needs.

### ***Total quality and innovation. Our strong points for building the future with you***

Quality has now become the essential condition for the survival of a corporation. You know it. We know it.

Your future depends on offering your customers ever more efficient, more reliable products. To do that, you have to be able to rely on first-rate suppliers who share your vision of the future and are capable of understanding your needs.

In order to better meet your demands and to ensure that we can offer you full guarantees of reliability, we have perfected a Total Quality program. At the same time, we pursue a strategy of innovation both in our processes and functions as well as in safety.

### ***Environmental management bears witness to our desire to protect essential values.***

Parker Lucifer is committed to respecting and protecting our environment by applying its own solutions. Although not mandatory, the ISO 14001 standards concern the environmental commitment of the company to supply products and service that will help our customers improve environmental quality. It relates to waste reduction, elimination of harmful materials, recycling and development of environment-friendly products. This Certified Management System to ISO 9001 / 14001 will also play a key role as a competitive differentiation in the marketplace.



# Contents

|                                                                                                                      | Page    |
|----------------------------------------------------------------------------------------------------------------------|---------|
| <b>Introduction</b> . . . . .                                                                                        | 2       |
| How to select your valve . . . . .                                                                                   | 3       |
| How to order your valve . . . . .                                                                                    | 3       |
| <br><b>2-way valves</b> . . . . .                                                                                    | <br>5   |
| General application valves for dry or lubricated air<br>neutral gases and liquids . . . . .                          | <br>7   |
| Miniature valves (2-way direct operated) . . . . .                                                                   | 37      |
| Valves for water and neutral liquids . . . . .                                                                       | 45      |
| Anti-water hammer valves . . . . .                                                                                   | 63      |
| Hot water - steam valves . . . . .                                                                                   | 71      |
| Valves for hydraulic oil and neutral liquids (max. 100 bar) . . . . .                                                | 85      |
| High corrosion resistant valves (Stainless Steel) . . . . .                                                          | 95      |
| Oil burner valves (incl. TÜV approved types) . . . . .                                                               | 101     |
| Dry operator valves for corrosive fluids . . . . .                                                                   | 113     |
| Fast switching valves . . . . .                                                                                      | 117     |
| <br><b>3-way valves</b> . . . . .                                                                                    | <br>121 |
| General application valves for dry or lubricated air<br>neutral gases and liquids . . . . .                          | <br>123 |
| Miniature valves (3-way direct operated) . . . . .                                                                   | 161     |
| Valves for hydraulic oil and neutral liquids (max. 75 bar) . . . . .                                                 | 175     |
| High corrosion resistant valves (Stainless Steel) . . . . .                                                          | 181     |
| <br><b>3- &amp; 4-way valves for Pneumatic application</b> . . . . .                                                 | <br>185 |
| 4-way pneumatic valves for pipe connection/Sub-base mounting . . . . .                                               | 187     |
| <br><b>3- &amp; 4-way pneumatic valves for actuator control</b><br>(pipe mounted and with NAMUR interface) . . . . . | <br>225 |
| 3-way stackable solenoid valves for actuator control . . . . .                                                       | 233     |
| <b>3- &amp; 4-way pneumatic valves for actuator control</b><br>(pipe mounted and with NAMUR interface) . . . . .     | 238     |
| 316L St. Steel 3- & 4-way pneumatic valves for Offshore applications) . . . . .                                      | 273     |
| 316L St. Steel 3- & 4-way pneumatic valves for actuator control<br>(pipe mounted and with NAMUR interface) . . . . . | 287     |
| <br><b>EExPress Bus Manifold for actuator control</b> . . . . .                                                      | <br>317 |
| <br><b>Electropneumatic Pressure regulators - EPP Series</b> . . . . .                                               | <br>323 |
| <br><b>Electrical parts (coils &amp; housings)</b> . . . . .                                                         | <br>333 |
| <br><b>Additional information</b> . . . . .                                                                          | <br>384 |
| Technical information about Lucifer valves . . . . .                                                                 | 385     |
| Fluid compatibility chart . . . . .                                                                                  | 388     |
| Index by reference numbers - cross reference list . . . . .                                                          | 390     |
| Distribution network . . . . .                                                                                       | 398     |

# Parker Lucifer - the experts in fluid control

Welcome to the Parker Lucifer catalogue. It's your entry point to an entire programme of solenoid valves based on the unique Lucifer modular concept. This gives you the widest choice of specifications and options to match your requirements exactly.

## Making business as simple as possible

The catalogue is just one part of a very special kind of supplier-specifier relationship. In short, we want to make doing business as simple as possible. It begins with organising **products by application** for the quickest selection of a product for a specified application. It extends to ease of ordering, fast delivery, and additional customer services. All backed by highly qualified support engineers willing and able to discuss your needs and suggest solutions. Work with us, for example, to create customised products; we have a proud record of customer partnership projects resulting in innovative products - and satisfied customers.

## The Parker Lucifer

The Parker Lucifer Series products have been designed to offer customers the ultimate in performance. Every valve is engineered for optimal operation, is constructed with modern machinery that use stringent processes, and provides standard features not necessarily offered in any competitive line.

The Parker Lucifer Series portfolio offers a broad range of solenoid valves. Sizes range from G1/8 to G3, with  $K_v$  as high as 1385 L/min. Pressure capabilities range up to 100 bar; the whole range is available with various seal materials, such as NBR, FKM, EPDM, PTFE, PCTFE, PUR and Ruby. Brass, stainless steel and plastic valves are available to control a wide variety of air, neutral gases and liquids, water, oils, process fluids and steam.



## Availability

With over 750 product listings, the valve you need is probably available from our standard range. What's more, the same valves are **available from our distributors anywhere in the world**. So wherever you are you can order with complete confidence.

Thanks to the breadth of our product offering, the flexibility of the modular architecture, and the use of automated manufacturing processes, you can count on the ready availability of the valve you require.

**Modular construction** ensures that even unusual configurations can be assembled from stock components. It provides a high degree of "mix & match" flexibility with a minimum number of parts, giving Parker Lucifer the ability to quickly deliver a great variety of valves.

## Quality assured

Certification by SQS (the Swiss Association for Quality Certification), Category ISO 9001/14001, is formal recognition of Parker Lucifer's commitment to total Quality. It is the outward sign of a company dedicated to customer satisfaction at every level of the organisation. It was first achieved back in 1987, long before Quality certification became an everyday business issue, and Parker Lucifer was one of the first to qualify in Switzerland.

## All the approvals you need

A wide range of valves and electrical parts are approved by recognised organisations (BASEEFA in UK, PTB in Germany, LCIE in France, CESI in Italy etc.) and meet CENELEC, IEC, and ISO standards. Lucifer valves are also certified by organisations such as TÜV, VDE, SEV/ASE, UL, CSA, etc.



# How to select your valve

This catalogue has been designed to make selection as easy as possible. The structure allows you to find your valve step by step, beginning with the most basic features and gradually focusing on more and more precise details.

First, decide what kind of valve you want: 2-way, 3-way, pneumatic or special. Then check the contents page and turn to the beginning of the relevant section.

For ease of use, each valve section is divided by application. At the front of the application sub-section you choose, you will find an overview table of the products featured (see sample below).

Using the table as a guide, decide what kind of actuation you want, then go across the columns, choosing the body material, function, connection, orifice size and maximum pressure: this

process takes you to the specific page number with your product,

Further technical information to help with specification is given in the final section of the catalogue.

## General application valves for dry or lubricated air, neutral gases and liquids 2/2

| ACTUATION       | BODY MATERIAL | FUNCTION        | CONNECTION | ORIFICE (MM) | MAX. PRESSURE (BAR) | PAGE |
|-----------------|---------------|-----------------|------------|--------------|---------------------|------|
| Direct operated | Brass body    | Normally closed | 1/8        | 1.5 to 3     | 70.0                | 8    |
|                 |               |                 | 1/4        | 1.2 to 5     | 100.0               | 8    |
|                 |               |                 | 3/8        | 4 to 6       | 10.0                | 12   |
|                 |               |                 | 1/2        | 8.5 to 11    | 4.0                 | 12   |
|                 |               |                 | SB         | 1.5 to 3     | 100.0               | 14   |

# How to order a valve

Normally a complete valve is composed of 3 elements: the valve itself (body + pilot), the coil and the housing. For integrated coil/housings, the housing reference indicates the fixing nut and nameplate.

Two valve body references are indicated in the tables:

- the Lucifer reference
- the global reference

Either reference can be used when ordering. The Global valve reference permits a common numbering system between Lucifer and Skinner products. A complete cross-reference list of valve reference numbers can be found at the end of this catalogue. In both cases, it is necessary to order the coil and housing reference as well.

| Port size                | Orifice (mm) | Flow factors (L/min) |            |          | Admissible differential pressure bar |     |    | Fluid temp. °C |        |     | Seat disc | Reference numbers      |                     |         |        | Power consumption (W) |     | Wt. (g) | El. Part Group | Dim ref. |
|--------------------------|--------------|----------------------|------------|----------|--------------------------------------|-----|----|----------------|--------|-----|-----------|------------------------|---------------------|---------|--------|-----------------------|-----|---------|----------------|----------|
|                          |              | Liquids lvs          | Gases Qmax | Gases Qn | Min                                  | DC  | AC | Gas            | Liquid | Oil |           | Global valve reference | Valve reference no. | Housing | Coil   | DC                    | AC  |         |                |          |
| G                        |              |                      |            |          |                                      |     |    |                |        |     |           |                        |                     |         |        |                       |     |         |                |          |
| Brass body/Pipe mounting |              |                      |            |          |                                      |     |    |                |        |     |           |                        |                     |         |        |                       |     |         |                |          |
| 1/8                      | 1.5          | 1.5                  | 6          | 80       | 0                                    | 20  | 20 | 75             | 75     | 75  | FKM       | 7121CBG1GV00           | 121C14              | 2995    | 481865 | 9                     | 8   | 270     | 2              | 2        |
|                          | 1.5          | 1.5                  | 6          | 80       | 0                                    | 20  | 20 | 75             | 75     | 75  | FKM       |                        | 4270                | 481000  | 8      | 8                     | 390 | 2       |                |          |
|                          | 1.5          | 1.5                  | 6          | 80       | 0                                    | 20  | 20 | 75             | 75     | 75  | FKM       |                        | 2995                | 482730  | 7      | 6                     | 270 | 2       |                |          |
|                          | 1.5          | 0.9                  | 2.4        | 70       | 0                                    | 12  | 20 | 75             | 75     | 75  | FKM       |                        | 121M14              | 8993    | 481180 | 5                     | 4   | 150     | 1              | 1        |
|                          | 1.5          | 0.9                  | 2.4        | 70       | 0                                    | 4   | 20 | 75             | 75     | 75  | FKM       |                        |                     | 8993    | 488980 | 2.5                   | 2   | 150     | 1              |          |
|                          | 1.5          | 1.5                  | 12.5       | 80       | 0                                    | 25  | 60 | 75             | 75     | 75  | PCTFE     | 7121KBG1GF00           | E121K14             | 2995    | 481865 | 9                     | 8   | 300     | 2              | 3        |
|                          | 1.5          | 1.5                  | 12.5       | 80       | 0                                    | 30  | 70 | 75             | 75     | 75  | PCTFE     |                        | 4270                | 481000  | 8      | 8                     | 420 | 2       |                |          |
|                          | 1.5          | 1.5                  | 12.5       | 80       | 0                                    | 55  | 70 | 75             | 75     | 75  | PCTFE     |                        | 4270                | 486265  | 14     | 14                    | 430 |         |                |          |
|                          | 2            | 2                    | 8          | 160      | 0                                    | 7   | 10 | 75             | 75     | 75  | FKM       |                        | 121M13              | 8993    | 481180 | 5                     | 4   | 150     | 1              | 1        |
|                          | 2            | 2                    | 8          | 160      | 0                                    | 2.5 | 10 | 75             | 75     | 75  | FKM       |                        | 8993                | 488980  | 2.5    | 2                     | 150 | 1       |                |          |
|                          | 2.5          | 2.8                  | 8.5        | 220      | 0                                    | 10  | 10 | 75             | 75     | 75  | FKM       | 7121CBG1LV00           | E121C13             | 2995    | 481865 | 9                     | 8   | 270     | 2              | 2        |

Therefore please specify:

- Valve reference **or** Global valve reference
- Housing
- Coil
- Voltage or voltage code (see tables in the Electrical parts section).

Ordering example:

121K0756-2995-481865-220/50  
**or**  
7121KBG2LVM0-2995-481865-220/50

**Important** : valve, housing or coil can be ordered separately for use as a replacement or spare part.

# Solenoid valves for actuator control

| ACTUATION                                                 | CONNECTION | ORIFICE (MM) | MAX. PRESSURE (BAR) | PAGE        |
|-----------------------------------------------------------|------------|--------------|---------------------|-------------|
| Direct operated                                           | 1/8        | 1.2 to 1.5   | 10.0                | 226         |
|                                                           | 1/4        | 1.5 to 5.0   | 16.0                | 226         |
| Pilot operated                                            | 1/8        | 4.0          | 10.0                | 238/248     |
|                                                           | 1/4        | 8.0          | 10.0                | 244/250/254 |
| Pilot operated - Integrated pilot                         | 1/8        | 4.0          | 10.0                | 238         |
|                                                           | 1/4        | 8.0          | 10.0                | 242         |
| Impulse coil                                              | 1/8        | 4.0          | 10.0                | 242         |
| Two solenoids and main pressure supply                    | 1/8        | 4.0          | 10.0                | 240/254     |
|                                                           | 1/4        | 8.0          | 10.0                | 246/252     |
| Two solenoids and main pressure supply - Integrated pilot | 1/8        | 4.0          | 10.0                | 240         |
|                                                           | 1/4        | 8.0          | 10.0                | 246         |
| Pilot operated with external pressure supply              | 1/8        | 4.0          | 10.0                | 242         |
| External pressure supply                                  | 1/8        | 4.0          | 10.0                | 244         |

Notes:

# Solenoid valves for actuator control

# 3/2

## Applications

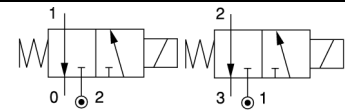
3-way directional valves for control of single acting pneumatic actuators.



| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure bar |     |     | Fluid temp. °C |     | Seat disc | Reference numbers      |                     |         |      | Power consumption (W) |    | Wt. (g) | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|-----|----------------|-----|-----------|------------------------|---------------------|---------|------|-----------------------|----|---------|------------------|----------|
|           |              |                      | Min                                  | Max | Max | Min            | Max |           | Global valve reference | Valve reference no. | Housing | Coil | DC                    | AC |         |                  |          |
| G         |              | Qn                   |                                      |     |     |                |     |           |                        |                     |         |      |                       |    |         |                  |          |

## Brass body/Pipe mounting

Direct operated



E, K, V Series T, M Series

|     |       |       |   |    |    |     |     |     |              |                        |      |                        |     |   |     |   |    |
|-----|-------|-------|---|----|----|-----|-----|-----|--------------|------------------------|------|------------------------|-----|---|-----|---|----|
| 1/8 | 1.2   | 50    | 0 | 10 | 10 | -10 | 75  | FKM | -            | 131M15                 | 8993 | 488980                 | 2.5 | 2 | 150 | 1 | 14 |
|     | (1.5) | (70)  | 0 | 10 | 10 | -10 | 75  | FKM |              |                        | 8993 | 488980                 | 2.5 | 2 | 150 | 1 |    |
|     | 1.5   | 70    | 0 | 7  | 7  | -10 | 75  | FKM | -            | 131M14                 | 8993 | 488980                 | 2.5 | 2 | 150 | 1 | 14 |
| 1/4 | 1     | 38    | 0 | 10 | -  | -10 | 75  | FKM | 7131KBG2CV90 | 131K0490               | -    | 483580.01 <sup>1</sup> | 0.4 | - | 285 | 7 | 77 |
|     | 1.5   | 80    | 0 | 7  | -  | -10 | 75  | FKM | 7131KBG2GVL5 | 131K0480               | 2995 | 482740                 | 1.6 | - | 310 | 6 | 17 |
|     | 1.5   | 80    | 0 | 15 | 15 | -10 | 100 | FKM | 7131KBG2GVM0 | E131K0450 <sup>2</sup> | 2995 | 481865                 | 9   | 8 | 310 | 2 | 17 |
|     | 1.5   | 80    | 0 | 15 | 15 | -10 | 120 | FKM |              |                        | 4270 | 481000                 | 8   | 8 | 430 | 2 |    |
|     | 1.5   | 80    | 0 | 15 | 15 | -10 | 100 | FKM | 7131KBG2GV00 | E131K04                | 2995 | 481865                 | 9   | 8 | 310 | 2 | 17 |
|     | 1.5   | 80    | 0 | 15 | 15 | -10 | 120 | FKM |              |                        | 4270 | 481000                 | 8   | 8 | 430 | 2 |    |
|     | 2     | 140   | 0 | 10 | 10 | -10 | 100 | FKM | 7131KBG2JVM0 | E131K0650 <sup>2</sup> | 2995 | 481865                 | 9   | 8 | 310 | 2 | 17 |
|     | (2.5) | (220) | 0 | 10 | 10 | -10 | 100 | FKM |              |                        | 2995 | 481865                 | 9   | 8 | 310 | 2 |    |
|     | 2     | 140   | 0 | 10 | 10 | -10 | 120 | FKM |              |                        | 4270 | 481000                 | 8   | 8 | 430 | 2 |    |
|     | (2.5) | (220) | 0 | 10 | 10 | -10 | 120 | FKM |              |                        | 4270 | 481000                 | 8   | 8 | 430 | 2 |    |
|     | 2     | 140   | 0 | 10 | 10 | -10 | 100 | FKM | 7131KBG2JV00 | E131K06                | 2995 | 481865                 | 9   | 8 | 310 | 2 | 17 |
|     | (2.5) | (220) | 0 | 10 | 10 | -10 | 100 | FKM |              |                        | 2995 | 481865                 | 9   | 8 | 310 | 2 |    |
|     | 2     | 140   | 0 | 10 | 10 | -10 | 120 | FKM |              |                        | 4270 | 481000                 | 8   | 8 | 430 | 2 |    |
|     | (2.5) | (220) | 0 | 10 | 10 | -10 | 120 | FKM |              |                        | 4270 | 481000                 | 8   | 8 | 430 | 2 |    |

Table continued on page 228

## Notes:

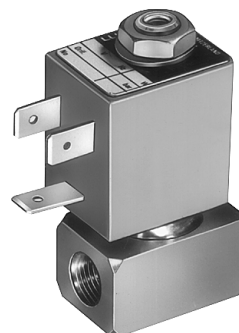
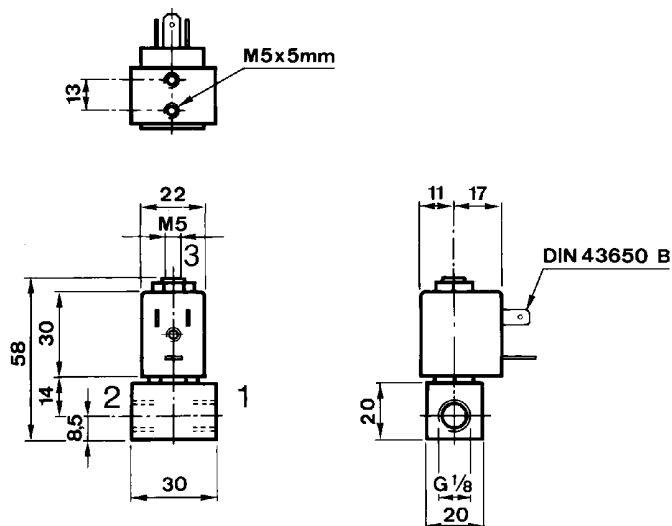
\* See Electrical Parts Group table at end of section

1. Other coil-housing available: 488650.01, 488660.01, 488670.01 (refer to electrical parts at end of this section)

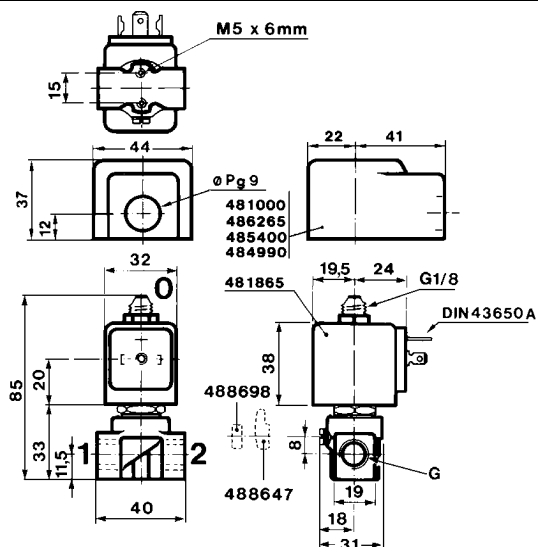
2. Manual override standard

Values shown within brackets are valid for exhaust port only.

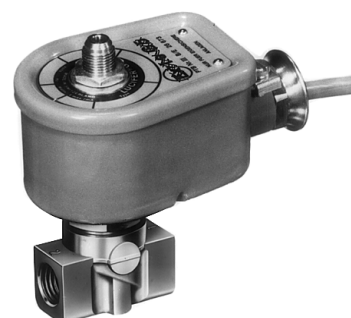
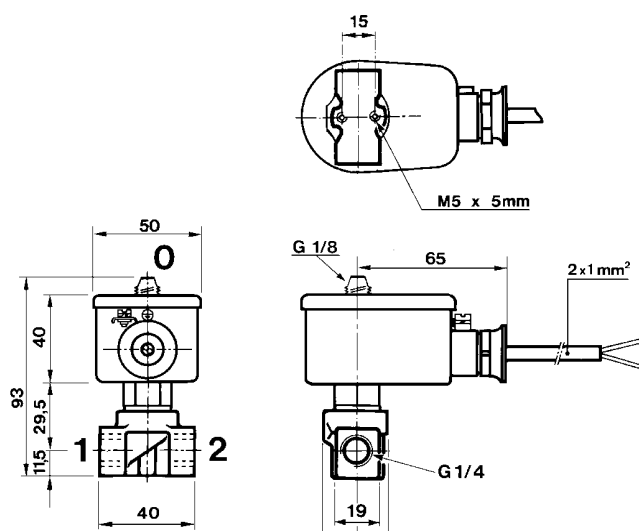
### Solenoid valves for actuator control - 3/2 valves - Pipe connection



### Dimension reference 14



### Dimension reference 17



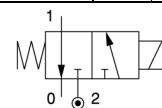
### Dimension reference 77

### Solenoid valves for actuator control - 3/2 valves - Pipe connection

[illegible]

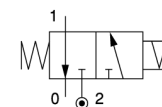
### Brass body/Pipe mounting

**Direct operated**



|     |     |        |     |    |     |     |     |     |              |             |              |             |              |              |        |      |     |      |
|-----|-----|--------|-----|----|-----|-----|-----|-----|--------------|-------------|--------------|-------------|--------------|--------------|--------|------|-----|------|
| 1/4 | 2   | 140    | 0   | 10 | 10  | -40 | 80  | PUR | 7131KBG2JP1D | E131K06081D | <sup>1</sup> | -           | 483250       | 8            | 8      | 1255 | 5   | 3845 |
|     | 2.5 | 220    | 0   | 7  | 7   | -10 | 100 | FKM | 7131KBG2LVM0 | E131K0350   | <sup>2</sup> | 2995        | 481865       | 9            | 8      | 310  | 2   | 17   |
|     | 2.5 | 220    | 0   | 7  | 7   | -10 | 120 | FKM |              |             |              | 4270        | 481000       | 8            | 8      | 430  | 2   |      |
|     | 2.5 | 220    | 0.1 | 7  | 7   | -10 | 75  | NBR | 7131EBG2LN00 | E131E03     |              | 2995        | 481865       | 9            | 8      | 650  | 2   | 19   |
|     | (6) | (1100) | 0.1 | 7  | 7   | -10 | 75  | NBR |              |             |              | 2995        | 481865       | 9            | 8      | 650  | 2   |      |
|     | 2.5 | 220    | 0.1 | 7  | 7   | -10 | 75  | NBR |              |             |              | 4270        | 481000       | 8            | 8      | 770  | 2   |      |
|     | (6) | (1100) | 0.1 | 7  | 7   | -10 | 75  | NBR |              |             |              | 4270        | 481000       | 8            | 8      | 770  | 2   |      |
|     | 2.5 | 220    | 0   | 7  | 7   | -10 | 80  | NBR |              |             | 7131KBG2LV1D | E131K03001D |              | -            | 483250 | 8    | 8   |      |
|     | 2.5 | 220    | 0   | 7  | 7   | -40 | 75  | PUR | 7131KBG2LP1D | E131K03081D | <sup>1</sup> | -           | 483250       | 8            | 8      | 1255 | 5   | 3845 |
|     | 2.5 | 220    | 0   | 7  | 7   | -40 | 75  | PUR | 7131KBG2LP00 | E131K0308   | <sup>1</sup> | 2995        | 481865       | 9            | 8      | 180  | 2   | 17   |
|     | 2.5 | 220    | 0   | 7  | 7   | -40 | 75  | PUR |              |             |              | 4270        | 481000       | 8            | 8      | 180  | 2   |      |
|     | 2.5 | 220    | 0   | 7  | 7   | -40 | 75  | PUR | 7131KBG2LPM0 | E131K0358   | <sup>2</sup> | 2995        | 481865       | <sup>1</sup> | 9      | 8    | 180 | 2    |
| 2.5 | 220 | 0      | 7   | 7  | -40 | 75  | PUR |     |              |             | 4270         | 481000      | <sup>1</sup> | 8            | 8      | 180  | 2   |      |

**Direct operated**



### Brass body/Pipe mounting

|     |     |     |   |    |    |     |     |     |              |        |      |        |    |    |     |   |    |
|-----|-----|-----|---|----|----|-----|-----|-----|--------------|--------|------|--------|----|----|-----|---|----|
| 1/4 | 1.5 | 80  | 0 | -  | 16 | -10 | 100 | FKM | 7135KBG2GV00 | 135K04 | 4269 | 484990 | -  | 11 | 450 | 4 | 17 |
|     | 1.5 | 80  | 0 | 16 | -  | -10 | 100 | FKM |              |        | 4269 | 485400 | 13 | -  | 450 | 4 |    |
|     | 2.5 | 220 | 0 | -  | 7  | -10 | 100 | FKM | 7135KBG2LV00 | 135K03 | 4269 | 484990 | -  | 11 | 450 | 4 | 17 |
|     | 2.5 | 220 | 0 | 7  | -  | -10 | 100 | FKM |              |        | 4269 | 485400 | 13 | -  | 450 | 4 |    |

Table continued on page 230

**Notes:**

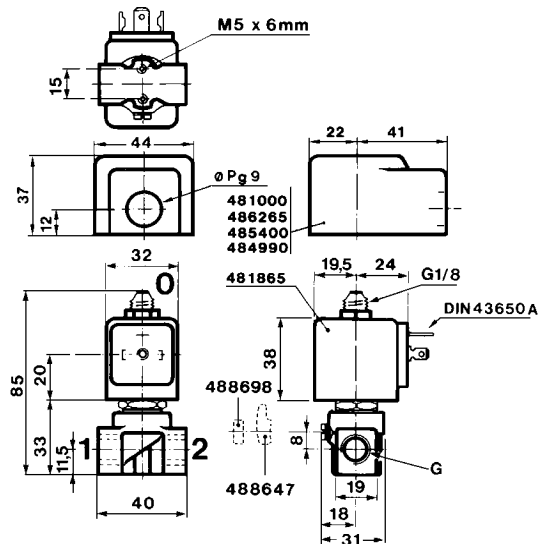
\* See Electrical Parts Group table at end of section

1. Operates with low temperatures down to -40 deg. C

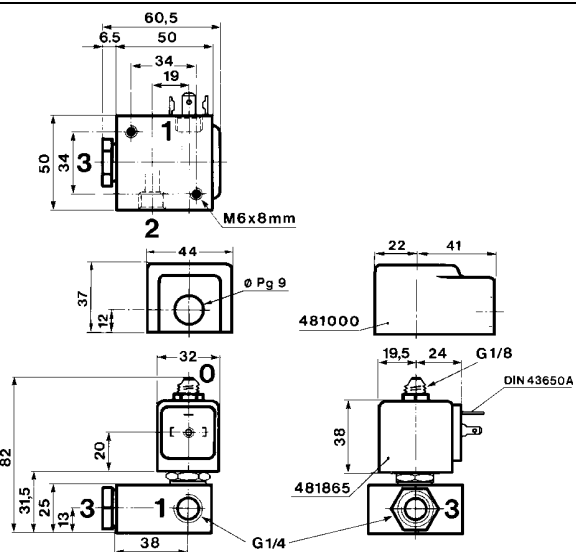
1. Operates with low temperature
2. Manual override standard

Values shown within brackets are valid for exhaust port only.

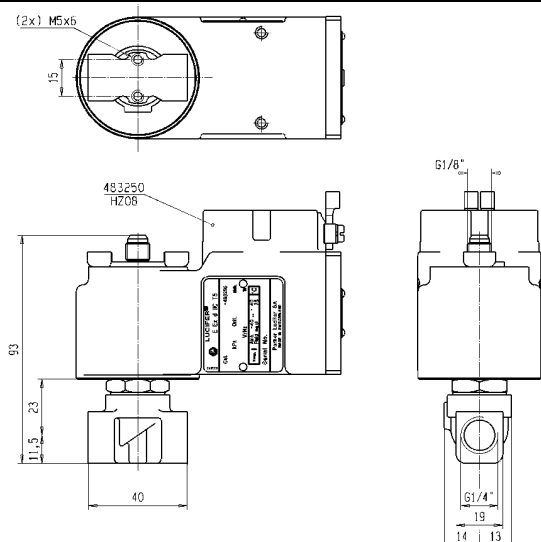
### Solenoid valves for actuator control - 3/2 valves - Pipe connection



### Dimension reference 17



### Dimension reference 19



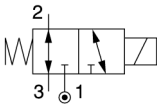
**Dimension reference 3845**

# Solenoid valves for actuator control - 3/2 valves - Pipe connection

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure bar |     |    | Fluid temp. °C |     | Seat disc | Reference numbers      |                     |         |      | Power consumption (W) | Wt. (g) | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----|----------------|-----|-----------|------------------------|---------------------|---------|------|-----------------------|---------|------------------|----------|
|           |              |                      | Min                                  | Max | AC | Min            | Max |           | Global valve reference | Valve reference no. | Housing | Coil | DC                    | AC      |                  |          |
| G         |              | Qn                   |                                      |     |    |                |     |           |                        |                     |         |      |                       |         |                  |          |

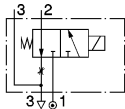
## Anod. aluminium body/Pipe mounting

Direct operated



|     |   |     |   |    |    |     |    |     |   |        |   |   |           |   |     |   |     |   |    |
|-----|---|-----|---|----|----|-----|----|-----|---|--------|---|---|-----------|---|-----|---|-----|---|----|
| 1/4 | 5 | 680 | 0 | 10 | -  | -25 | 65 | NBR | - | 133X01 | 1 | - | 492965.01 | 2 | 0.8 | - | 860 | 9 | 83 |
|     | 5 | 680 | 0 | 10 | 10 | -25 | 65 | NBR |   |        |   | - | 492300    | 2 | 6   | 6 | 860 | 9 |    |

Direct operated



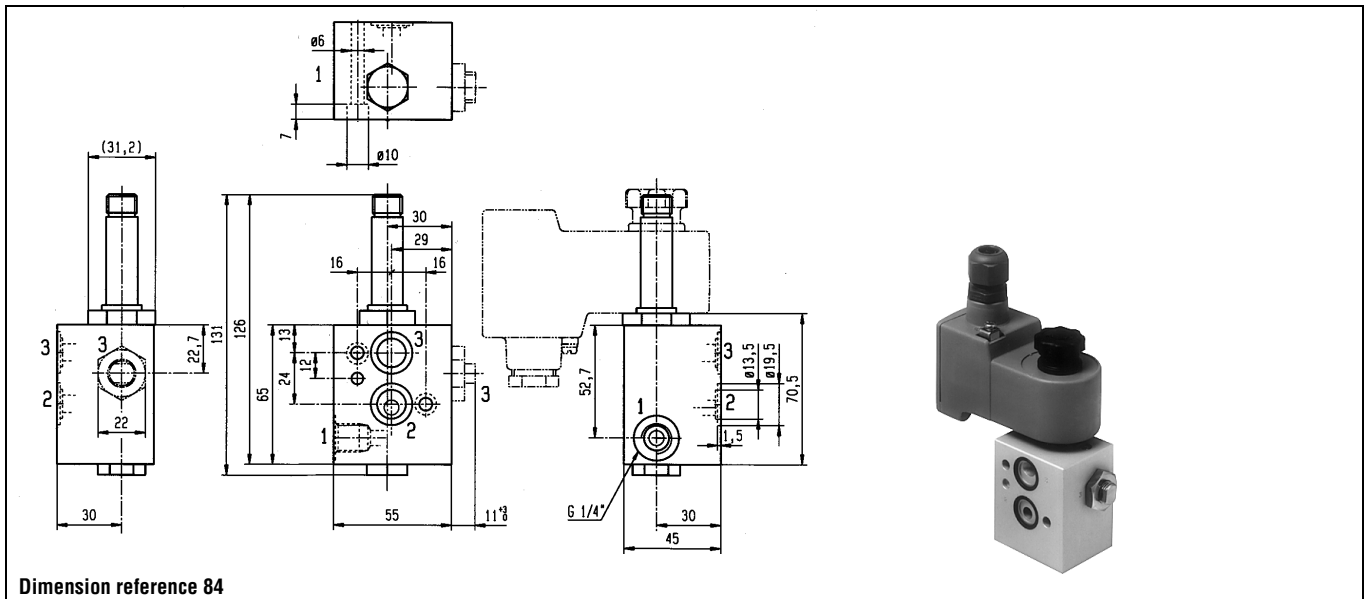
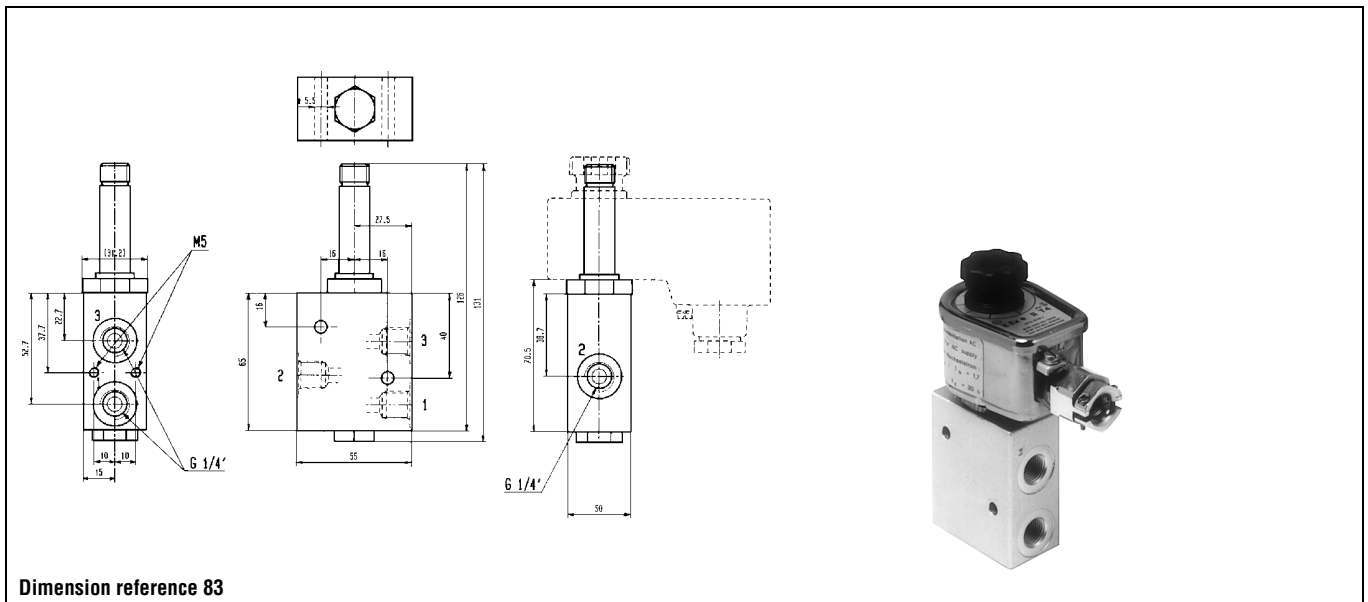
## Anod. aluminium body/NAMUR interface

|     |   |     |   |    |    |     |    |     |              |          |   |           |   |      |   |      |   |    |
|-----|---|-----|---|----|----|-----|----|-----|--------------|----------|---|-----------|---|------|---|------|---|----|
| 1/4 | 5 | 680 | 0 | 10 | 10 | -25 | 75 | NBR | 7131XAKLVN00 | 131X1101 | - | 492300    | 2 | 6    | 6 | 1000 | 9 | 84 |
|     | 5 | 680 | 0 | 10 | -  | -25 | 75 | NBR |              |          | - | 483330.01 | 2 | 0.85 | - | 1000 | 9 |    |

### Notes:

- \* See Electrical Parts Group table at end of section
- 1. Optional manual override available on request - add suffix 50 to the basic reference number
- 2. This reference no. is for the complete electrical part (coil + housing)

### Solenoid valves for actuator control - 3/2 valves - Pipe connection





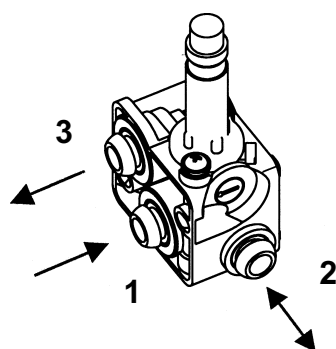
| ACTUATION       | CONNECTION | ORIFICE<br>(MM) | MAX. PRESSURE<br>(BAR) | PAGE |
|-----------------|------------|-----------------|------------------------|------|
| Direct operated | 6 6 6      | 1.3 to 1.5      | 10.0                   | 234  |
|                 | 8 6 8      | 1.3 to 1.5      | 10.0                   | 234  |
|                 | - 6 -      | 1.3 to 1.5      | 10.0                   | 234  |

Notes:

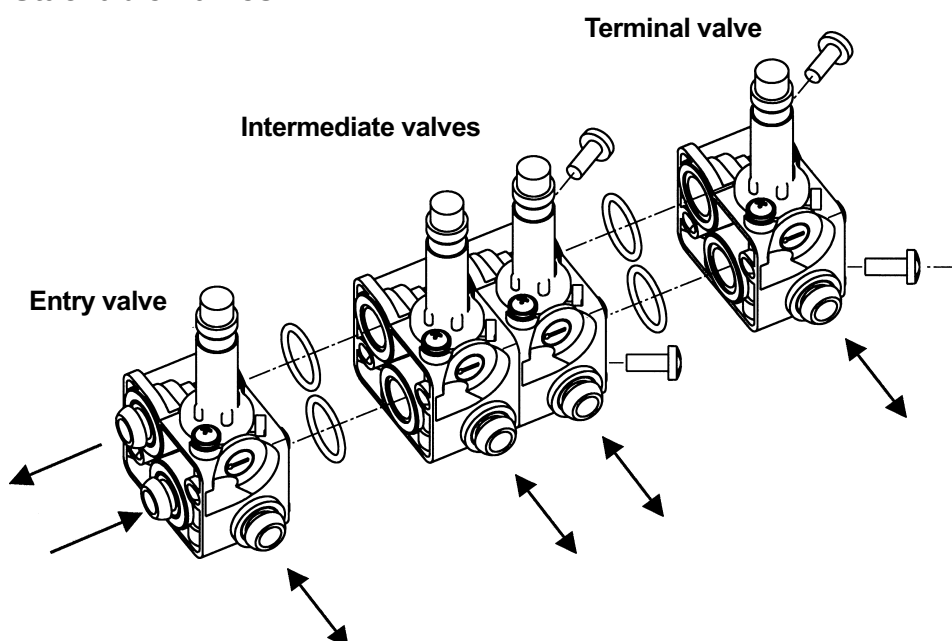
## TECHNICAL DATA

|                                     |                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Valve function</b>               | 3/2 solenoid valve, normally closed                                                                                                                                                                                                                                                                                                               |
| <b>Valve design</b>                 | Direct operated poppet valve.                                                                                                                                                                                                                                                                                                                     |
| <b>Mounting</b>                     | Direct pipe mounting (single valve) by self tapping screws 3.6x16<br>Battery mounting screws M4x10mm (supplied with the valves)<br>For battery on DIN rail EN50022/35mm<br>kit No. 494205 (fixing plate + screws).<br>For battery mounting: recommended maximum number of valves operating simultaneously: 10 valves for 8 mm / 6 valves for 6 mm |
| <b>Mounting position</b>            | Unrestricted.                                                                                                                                                                                                                                                                                                                                     |
| <b>Material specifications</b>      | Body made of Polyamid PA66 33%GF. Internal parts from stainless steel.<br>Sealing material from synthetic rubber (FKM).                                                                                                                                                                                                                           |
| <b>Manual override</b>              | Screw driver operated manual override is standard.<br>Horizontal position of the slot on the screw head corresponds to the «closed» valve position; vertical position = «open».                                                                                                                                                                   |
| <b>Media</b>                        | Dry or lubricated air, inert gases                                                                                                                                                                                                                                                                                                                |
| <b>Lubrication</b>                  | Not required.                                                                                                                                                                                                                                                                                                                                     |
| <b>Fluid temperature</b>            | Min. – 10°C<br>Max. +75°C                                                                                                                                                                                                                                                                                                                         |
| <b>Ambient temperature</b>          | – 10 °C up to + 50°C.                                                                                                                                                                                                                                                                                                                             |
| <b>Voltage tolerance</b>            | – 10% to +15% of nominal.                                                                                                                                                                                                                                                                                                                         |
| <b>Class of insulation material</b> | Class F 155°C                                                                                                                                                                                                                                                                                                                                     |
| <b>Solenoid duty</b>                | Continuous duty solenoid                                                                                                                                                                                                                                                                                                                          |
| <b>Life expectancy</b>              | Indicative: 10 Mio. cycles                                                                                                                                                                                                                                                                                                                        |

## Single valve

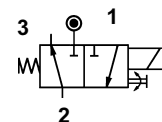


## Stackable valves



## VALVE TYPES OVERVIEW

| Push-in<br>Connection | Orifice | Qn    | Pressure<br>(Bar) |     | Max<br>media<br>temp. | Seat<br>Disc<br>Material | Valve reference | El. Parts<br>group |
|-----------------------|---------|-------|-------------------|-----|-----------------------|--------------------------|-----------------|--------------------|
| Ø<br>(mm)             | (mm)    | L/min | min               | max | (°C)                  |                          |                 |                    |



## SINGLE VALVE

| 1 | 2 | 3 | 1 = Inlet - 2 = user - 3 = exhaust |            |   |    |    |     |              |   |
|---|---|---|------------------------------------|------------|---|----|----|-----|--------------|---|
| 6 | 6 | 6 | 1.5                                | 50         | 0 | 7  | 75 | FKM | 2131TNF6GVMS | 1 |
| 6 | 6 | 6 | 1.3<br>(1.5)                       | 50<br>(62) | 0 | 10 | 75 | FKM | 2131TNF6EVMS |   |

## STACKABLE

### Entry Valve

|   |   |   |              |            |   |    |    |     |              |   |
|---|---|---|--------------|------------|---|----|----|-----|--------------|---|
| 6 | 6 | 6 | 1.5          | 62         | 0 | 7  | 75 | FKM | 2131TNF6GVME | 1 |
| 8 | 6 | 8 | 1.5          | 62         | 0 | 7  | 75 | FKM | 2131TNF8GVME |   |
| 6 | 6 | 6 | 1.3<br>(1.5) | 50<br>(62) | 0 | 10 | 75 | FKM | 2131TNF6EVME |   |
| 8 | 6 | 8 | 1.3<br>(1.5) | 50<br>(62) | 0 | 10 | 75 | FKM | 2131TNF8EVME |   |

### Intermediate valve

|   |   |   |              |            |   |    |    |     |              |   |
|---|---|---|--------------|------------|---|----|----|-----|--------------|---|
| – | 6 | – | 1.5          | 62         | 0 | 7  | 75 | FKM | 2131TNF6GVMI | 1 |
| – | 6 | – | 1.3<br>(1.5) | 50<br>(62) | 0 | 10 | 75 | FKM | 2131TNF6EVMI |   |

### Terminal valve

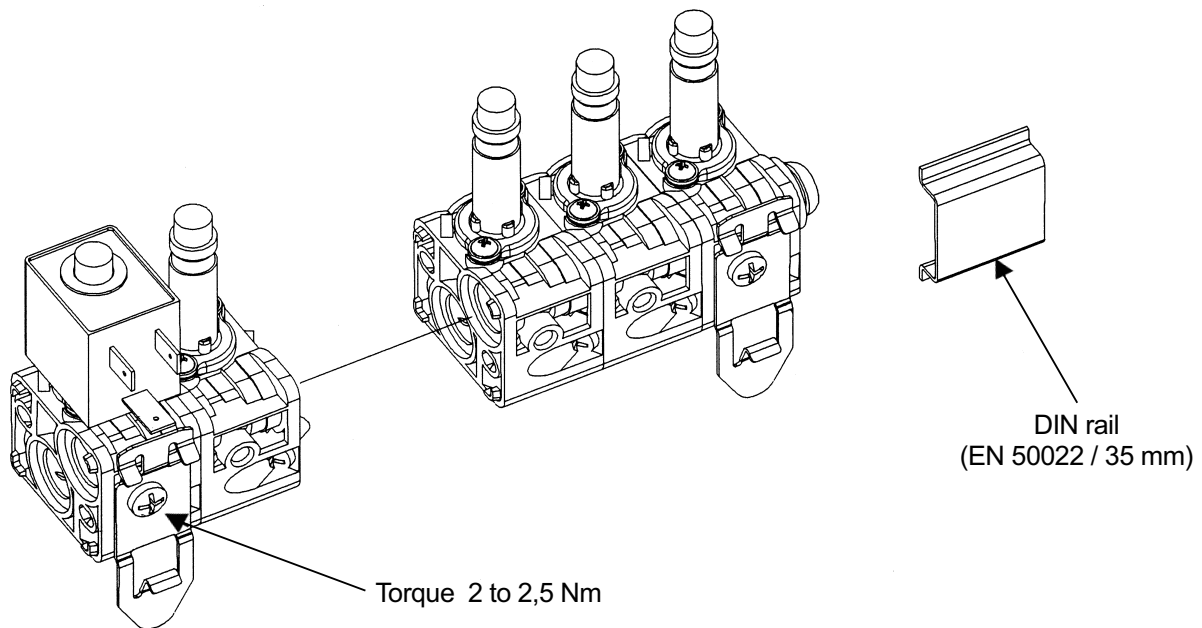
|   |   |   |              |            |   |    |    |     |              |   |
|---|---|---|--------------|------------|---|----|----|-----|--------------|---|
| – | 6 | – | 1.5          | 62         | 0 | 7  | 75 | FKM | 2131TNF6GVMT | 1 |
| – | 6 | – | 1.3<br>(1.5) | 50<br>(62) | 0 | 10 | 75 | FKM | 2131TNF6EVMT |   |

**Note:** Values shown within brackets are valid for exhaust port only.

## ELECTRICAL DATA

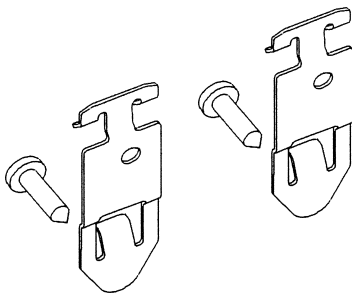
| Coil<br>Ref.<br>No. | Coil<br>Order<br>No. | Protection<br>Class        | Power<br>W)<br>DC   AC |   | Connection    | Housing<br>Ref.<br>No. | Housing<br>Order<br>No. | Ambient<br>temperature<br>(°C)<br>min   max |    | El. Parts<br>Group |
|---------------------|----------------------|----------------------------|------------------------|---|---------------|------------------------|-------------------------|---------------------------------------------|----|--------------------|
| 488980              | DA01                 | Without DIN Plug - Class F | 2.5                    | 2 | DIN Plug      | 8993                   | A0                      | – 10                                        | 50 | 1                  |
| 481045              | DA02                 | With DIN Plug Class F IP65 | 2.5                    | 2 | DIN Plug      | 8993                   | A0                      | – 10                                        | 50 |                    |
| 482606              | VA02                 | Ex m II T5 – IP65          | 2.5                    | 2 | Cable 1500 mm | –                      | –                       | – 40                                        | 50 |                    |

## MOUNTING ON DIN RAIL



## ACCESSORIES

Fixing kit for DIN rail EN 50022 / 35mm



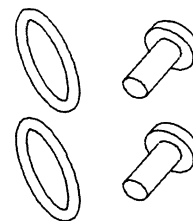
**494205**

2 x mounting plates  
2 x Screws Ø 4.2 x 16

To be ordered separately

## SPARE PARTS KIT

Spare parts kit for stackable valve

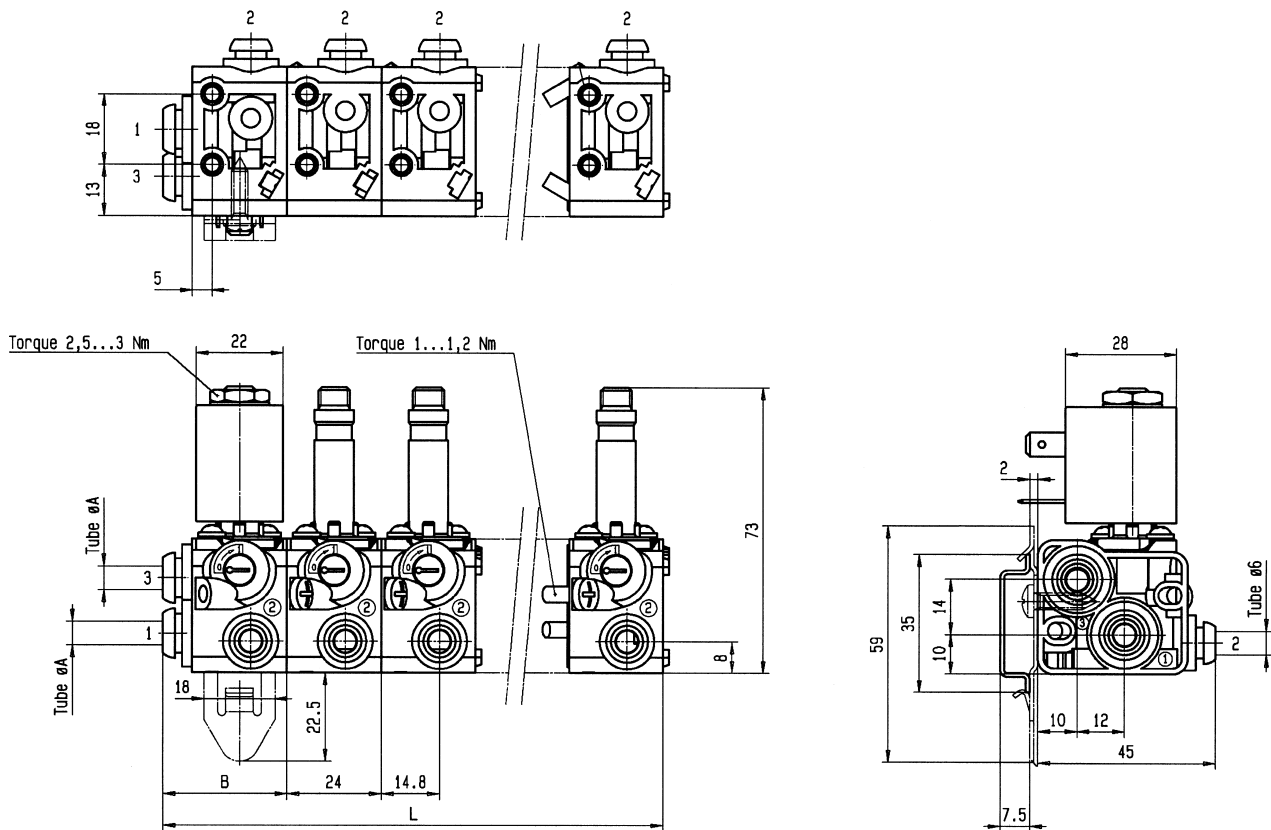


**495102**

2 x Screws M4 x 10  
2 x O-Rings Øint. 14 x 1.78

Supplied with valves

## DIMENSIONAL DRAWINGS



Unit weight without coil: 50 g.

|                                                |               |               |
|------------------------------------------------|---------------|---------------|
| Ø A [mm]                                       | 6             | 8             |
| B [mm]                                         | 29            | 34            |
| L [mm]                                         | 24 (n-1) + 29 | 24 (n-1) + 34 |
| n = number of valves, maximum recommended = 10 |               |               |

# Solenoid valves for actuator control

# 5/2

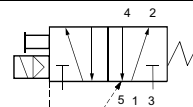
## Applications

3- or 4-way directional valves for control of single or double acting pneumatic actuators.



| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure bar |     | Fluid temp. °C |     | Seat disc | Reference numbers      |                     |         |      | Power consumption (W) | Wt. (g) | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----------------|-----|-----------|------------------------|---------------------|---------|------|-----------------------|---------|------------------|----------|
|           |              |                      | Min                                  | Max | Min            | Max |           | Global valve reference | Valve reference no. | Housing | Coil | DC                    | AC      |                  |          |

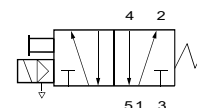
Pilot operated - Integrated pilot



## Anod. aluminium body/Pipe mounting - Spool design

|     |   |     |   |    |    |     |    |     |              |        |   |      |        |     |   |     |   |     |
|-----|---|-----|---|----|----|-----|----|-----|--------------|--------|---|------|--------|-----|---|-----|---|-----|
| 1/8 | 4 | 600 | 2 | 10 | 10 | -25 | 80 | NBR | 2341PAG1JNM0 | 341P01 | 1 | 8993 | 488980 | 2.5 | 2 | 310 | 1 | 201 |
|-----|---|-----|---|----|----|-----|----|-----|--------------|--------|---|------|--------|-----|---|-----|---|-----|

Pilot operated



## Anod. aluminium body/Pipe mounting - Spool design

|     |   |     |   |    |    |     |    |     |              |          |   |      |           |     |     |     |     |      |
|-----|---|-----|---|----|----|-----|----|-----|--------------|----------|---|------|-----------|-----|-----|-----|-----|------|
| 1/8 | 4 | 600 | 2 | 10 | 10 | -25 | 80 | NBR | 7341PAG1JNM0 | 341P21   |   | 2995 | 481865    | 9   | 8   | 360 | 2   | 202  |
|     | 4 | 600 | 2 | 10 | 10 | -25 | 80 | NBR |              |          |   | 4270 | 481000    | 8   | 8   | 470 | 2   |      |
|     | 4 | 600 | 2 | 10 | 10 | -40 | 65 | NBR | 7341PAG1JPM0 | 341P2108 | 2 | 2995 | 481865    | 9   | 8   | 360 | 2   | 202  |
|     | 4 | 600 | 2 | 10 | 10 | -40 | 65 | NBR |              |          |   | 4270 | 481000    | 8   | 8   | 470 | 2   |      |
|     | 4 | 600 | 2 | 10 | -  | -25 | 80 | NBR | 7341PAG1JNL2 | 341P2180 |   | 2995 | 482740    | 1.6 | -   | 470 | 6   | 202  |
|     | 4 | 600 | 2 | 10 | -  | -25 | 80 | NBR | 7341PAG1JN90 | 341P2190 |   | -    | 483580.01 | 3   | 0.4 | -   | 470 | 7351 |

Table continued on page 240

## Notes:

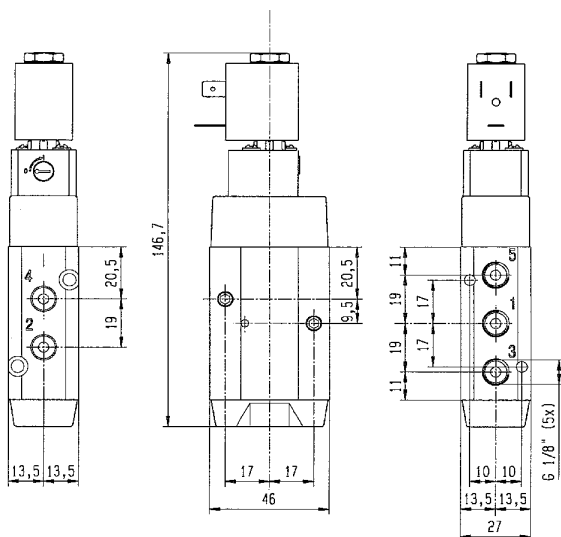
\* See Electrical Parts Group table at end of section

1. Manual override standard

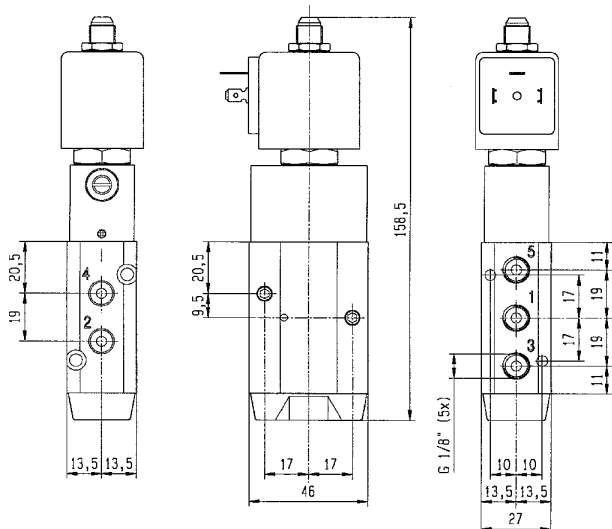
2. Operates with low temperatures down to -40 deg. C

3. Other coil-housing available: 488650.01, 488660.01, 4888670.01 (refer to electrical parts at end of this section)

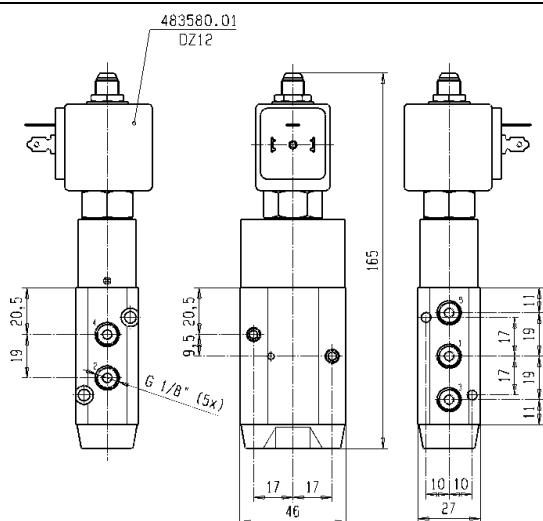
## Solenoid valves for actuator control - 5/2 valves - Pipe connection-Spool design



### Dimension reference 201



**Dimension reference 202**



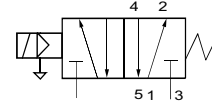
**Dimension reference 7351**



## Solenoid valves for actuator control - 5/2 valves - Pipe connection-Spool design

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure bar |     |    | Fluid temp. °C |     | Seat disc | Reference numbers      |                     |         |      | Power consumption (W) | Wt. (g) | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----|----------------|-----|-----------|------------------------|---------------------|---------|------|-----------------------|---------|------------------|----------|
|           |              |                      | Min                                  | Max | AC | Min            | Max |           | Global valve reference | Valve reference no. | Housing | Coil | DC                    | AC      |                  |          |

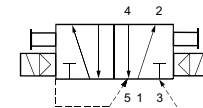
Pilot operated



### Anod. aluminium body/Pipe mounting - Spool design

|     |   |     |   |    |    |     |    |     |              |            |   |        |   |   |      |   |      |
|-----|---|-----|---|----|----|-----|----|-----|--------------|------------|---|--------|---|---|------|---|------|
| 1/8 | 4 | 600 | 2 | 10 | 10 | -25 | 65 | NBR | 7341PAG1JN1D | 341P21001D | - | 483250 | 8 | 8 | 1450 | 5 | 7636 |
|-----|---|-----|---|----|----|-----|----|-----|--------------|------------|---|--------|---|---|------|---|------|

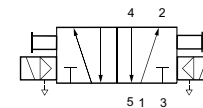
Two solenoids and main pressure supply - Integrated pilot



### Anod. aluminium body/Pipe mounting - Spool design

|     |   |     |   |    |    |     |    |     |              |        |      |        |   |     |   |     |   |     |
|-----|---|-----|---|----|----|-----|----|-----|--------------|--------|------|--------|---|-----|---|-----|---|-----|
| 1/8 | 4 | 400 | 2 | 10 | 10 | -25 | 80 | NBR | 2347PAG1HNM0 | 347P01 | 8993 | 488980 | 1 | 2.5 | 2 | 460 | 1 | 207 |
|-----|---|-----|---|----|----|-----|----|-----|--------------|--------|------|--------|---|-----|---|-----|---|-----|

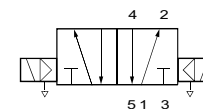
Two solenoids and main pressure supply



### Anod. aluminium body/Pipe mounting - Spool design

|     |   |     |   |    |    |     |    |     |              |        |      |        |   |   |   |     |   |     |
|-----|---|-----|---|----|----|-----|----|-----|--------------|--------|------|--------|---|---|---|-----|---|-----|
| 1/8 | 4 | 400 | 2 | 10 | 10 | -25 | 80 | NBR | 7347PAG1HNM0 | 347P21 | 2995 | 481865 | 1 | 9 | 8 | 500 | 2 | 206 |
|     | 4 | 400 | 2 | 10 | 10 | -25 | 80 | NBR |              |        | 4270 | 481000 | 1 | 8 | 8 | 720 | 2 |     |

Two solenoids and main pressure supply



### Anod. aluminium body/Pipe mounting - Spool design

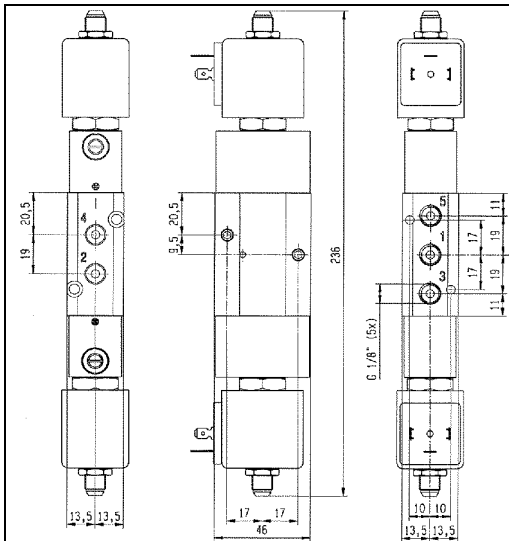
|     |   |     |   |    |   |     |    |     |              |          |   |           |   |     |   |     |   |     |
|-----|---|-----|---|----|---|-----|----|-----|--------------|----------|---|-----------|---|-----|---|-----|---|-----|
| 1/8 | 4 | 400 | 2 | 10 | - | -25 | 80 | NBR | 7347PAG1HN90 | 347P2190 | - | 483580.01 | 2 | 0.4 | - | 720 | 7 | 206 |
|-----|---|-----|---|----|---|-----|----|-----|--------------|----------|---|-----------|---|-----|---|-----|---|-----|

Table continued on page 242

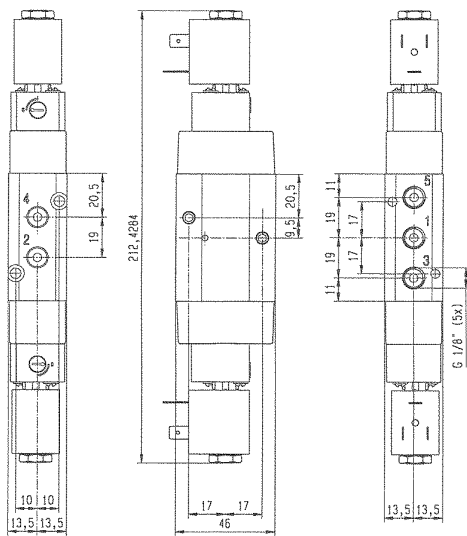
#### Notes:

- \* See Electrical Parts Group table at end of section
- 1. Please order two housings and coils for each valve
- 2. Other coil-housing available: 488650.01, 488660.01, 488670.01 (refer to electrical parts at end of this section)

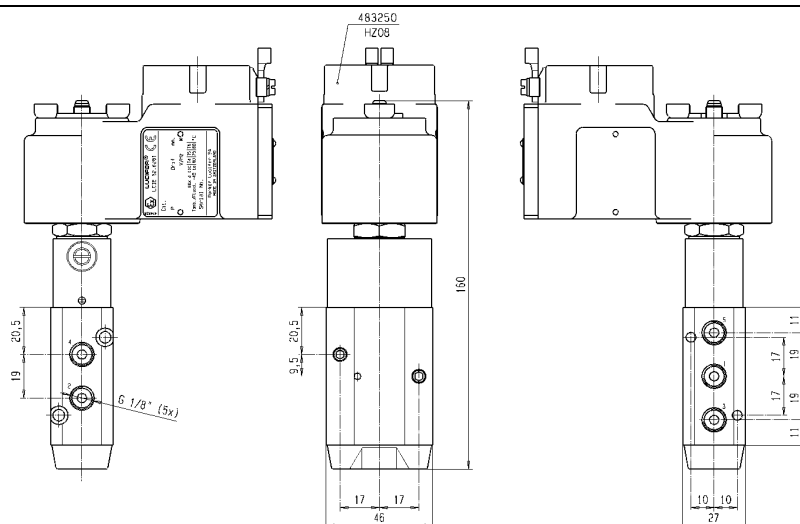
## Solenoid valves for actuator control - 5/2 valves - Pipe connection-Spool design



**Dimension reference 206**



**Dimension reference 207**

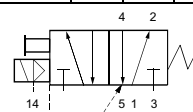


**Dimension reference 7636**

## Solenoid valves for actuator control - 5/2 valves - Pipe connection-Spool design

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure bar |     |    | Fluid temp. °C |     | Seat disc | Reference numbers      |                     |         |      | Power consumption (W) | Wt. (g) | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----|----------------|-----|-----------|------------------------|---------------------|---------|------|-----------------------|---------|------------------|----------|
|           |              |                      | Min                                  | Max | AC | Min            | Max |           | Global valve reference | Valve reference no. | Housing | Coil | DC                    | AC      |                  |          |
| G         |              | Qn                   |                                      |     |    |                |     |           |                        |                     |         |      |                       |         |                  |          |

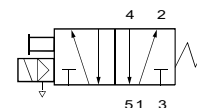
Pilot operated with external pressure supply



### Anod. aluminium body/Pipe mounting - Spool design

|     |   |     |   |    |    |     |    |     |              |          |   |      |        |   |   |     |   |     |
|-----|---|-----|---|----|----|-----|----|-----|--------------|----------|---|------|--------|---|---|-----|---|-----|
| 1/8 | 4 | 600 | 2 | 10 | 10 | -40 | 65 | NBR | 7441PAG1JPM0 | 441P2108 | 1 | 2995 | 481865 | 9 | 8 | 360 | 2 | 204 |
|     | 4 | 600 | 2 | 10 | 10 | -40 | 65 | NBR |              |          |   | 4270 | 481000 | 8 | 8 | 470 | 2 |     |

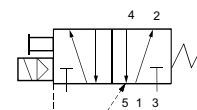
Impulse coil



### Anod. aluminium body/NAMUR interface - Spool design

|     |   |     |   |    |    |     |    |     |              |        |   |   |        |    |    |     |   |     |
|-----|---|-----|---|----|----|-----|----|-----|--------------|--------|---|---|--------|----|----|-----|---|-----|
| 1/8 | 4 | 600 | 2 | -  | 10 | -25 | 80 | NBR | 7345PAG1JNM0 | 345P21 | - | - | 484990 | -  | 11 | 330 | 4 | 202 |
|     | 4 | 600 | 2 | 10 | -  | -25 | 80 | NBR |              |        | - | - | 485400 | 13 | -  | 330 | 4 |     |

Pilot operated - Integrated pilot



### Anod. aluminium body/Pipe mounting - Spool design

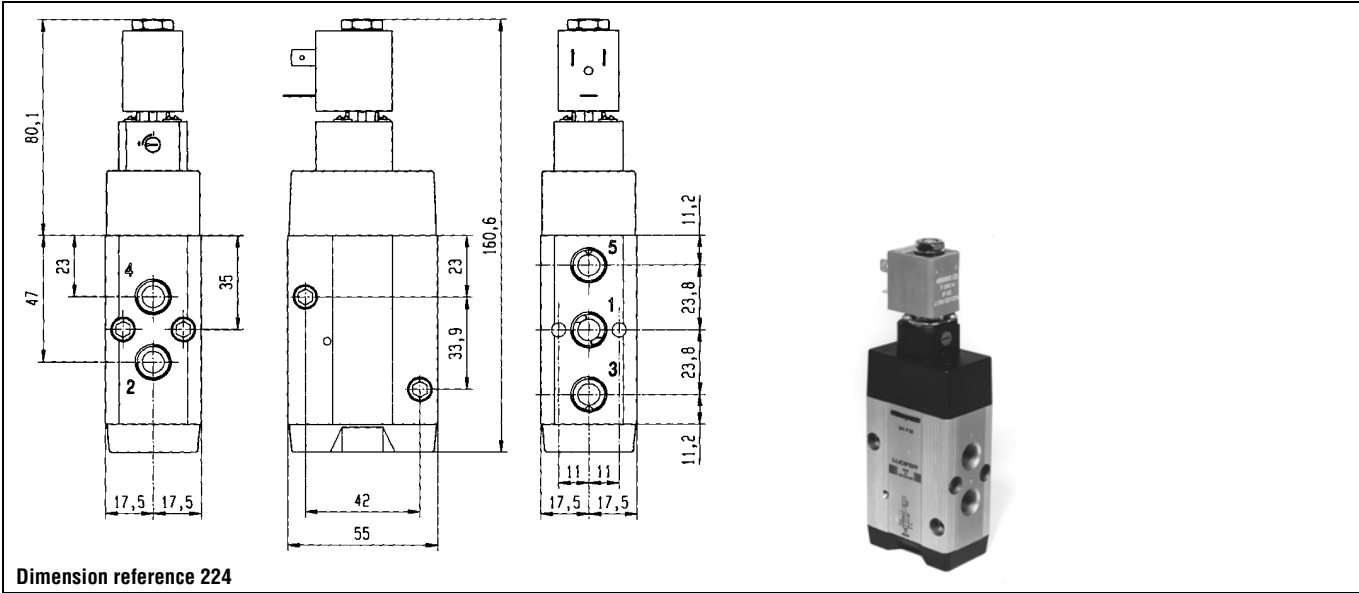
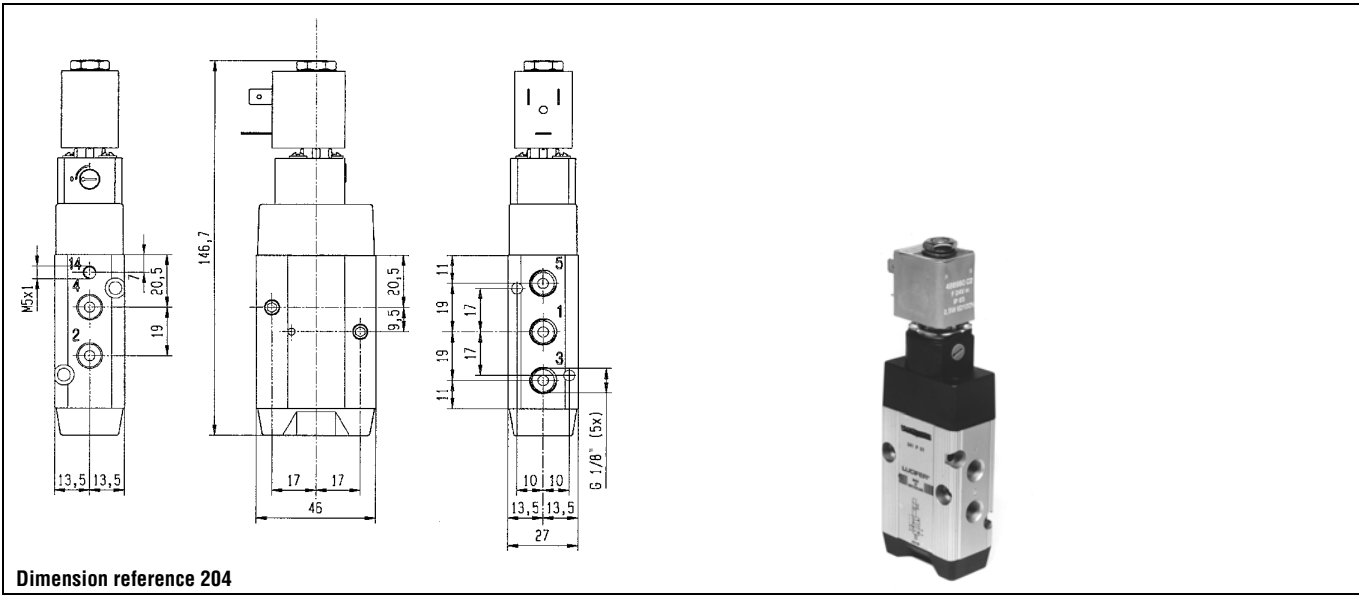
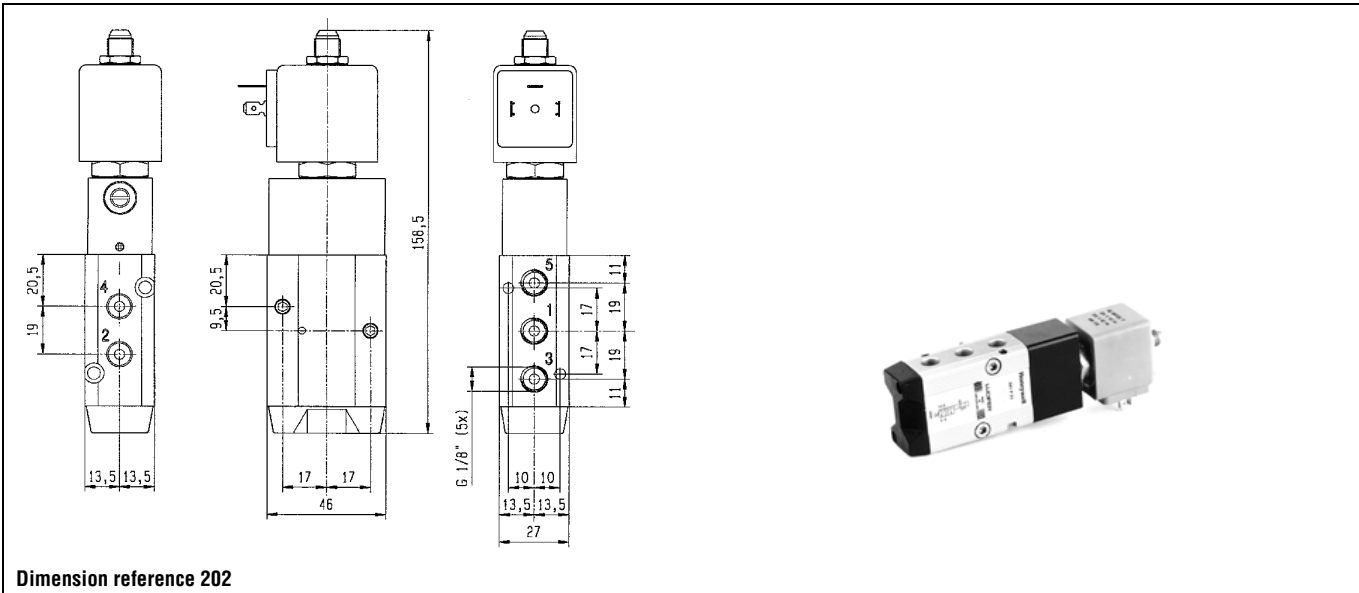
|     |   |      |   |    |    |     |    |     |              |        |  |      |        |     |   |     |   |     |
|-----|---|------|---|----|----|-----|----|-----|--------------|--------|--|------|--------|-----|---|-----|---|-----|
| 1/4 | 8 | 1400 | 2 | 10 | 10 | -25 | 80 | NBR | 2341PAG2HNM0 | 341P02 |  | 8993 | 488980 | 2.5 | 2 | 380 | 1 | 224 |
|-----|---|------|---|----|----|-----|----|-----|--------------|--------|--|------|--------|-----|---|-----|---|-----|

Table continued on page 244

#### Notes:

- \* See Electrical Parts Group table at end of section
- 1. Operates with low temperatures down to -40 deg. C

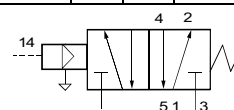
# Solenoid valves for actuator control - 5/2 valves - Pipe connection-Spool design



## Solenoid valves for actuator control - 5/2 valves - Pipe connection-Spool design

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure bar |     |    | Fluid temp. °C |     | Seat disc | Reference numbers      |                     |         |      | OR | Power consumption (W) |    | Wt. (g) | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----|----------------|-----|-----------|------------------------|---------------------|---------|------|----|-----------------------|----|---------|------------------|----------|
|           |              |                      | Min                                  | Max | AC | Min            | Max |           | Global valve reference | Valve reference no. | Housing | Coil |    | DC                    | AC |         |                  |          |
| G         |              | Qn                   |                                      |     |    |                |     |           |                        |                     |         |      |    |                       |    |         |                  |          |

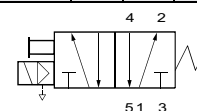
External pressure supply



### Anod. aluminium body/NAMUR interface - Spool design

|     |   |     |   |    |    |     |    |     |              |          |   |   |   |   |   |     |   |     |
|-----|---|-----|---|----|----|-----|----|-----|--------------|----------|---|---|---|---|---|-----|---|-----|
| 1/8 | 4 | 600 | 2 | 10 | 10 | -40 | 65 | PUR | 7541PAG1JP00 | 541P0108 | 1 | - | - | - | - | 270 | - | 205 |
|-----|---|-----|---|----|----|-----|----|-----|--------------|----------|---|---|---|---|---|-----|---|-----|

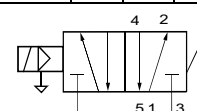
Pilot operated



### Anod. aluminium body/Pipe mounting - Spool design

|     |   |      |   |    |    |     |    |     |              |          |      |        |     |   |     |   |     |
|-----|---|------|---|----|----|-----|----|-----|--------------|----------|------|--------|-----|---|-----|---|-----|
| 1/4 | 8 | 1400 | 2 | 10 | 10 | -25 | 80 | NBR | 7341PAG2PNM0 | 341P22   | 2995 | 481865 | 9   | 8 | 450 | 2 | 218 |
|     | 8 | 1400 | 2 | 10 | 10 | -25 | 80 | NBR |              |          | 4270 | 481000 | 8   | 8 | 560 | 2 |     |
|     | 8 | 1400 | 2 | 10 | -  | -25 | 80 | NBR | 7341PAG2PNL2 | 341P2280 | 2995 | 482740 | 1.6 | - | 450 | 6 | 218 |
|     | 8 | 1400 | 2 | 10 | -  | -25 | 80 | NBR |              |          | -    | 491117 | 2.5 | - | 810 | 6 |     |

Pilot operated



### Anod. aluminium body/Pipe mounting - Spool design

|     |   |      |   |    |   |     |    |     |              |          |   |           |   |     |   |     |   |     |
|-----|---|------|---|----|---|-----|----|-----|--------------|----------|---|-----------|---|-----|---|-----|---|-----|
| 1/4 | 8 | 1400 | 2 | 10 | - | -25 | 80 | NBR | 7341PAG2PN90 | 341P2290 | - | 483580.01 | 2 | 0.4 | - | 560 | 7 | 218 |
|-----|---|------|---|----|---|-----|----|-----|--------------|----------|---|-----------|---|-----|---|-----|---|-----|

Table continued on page 246

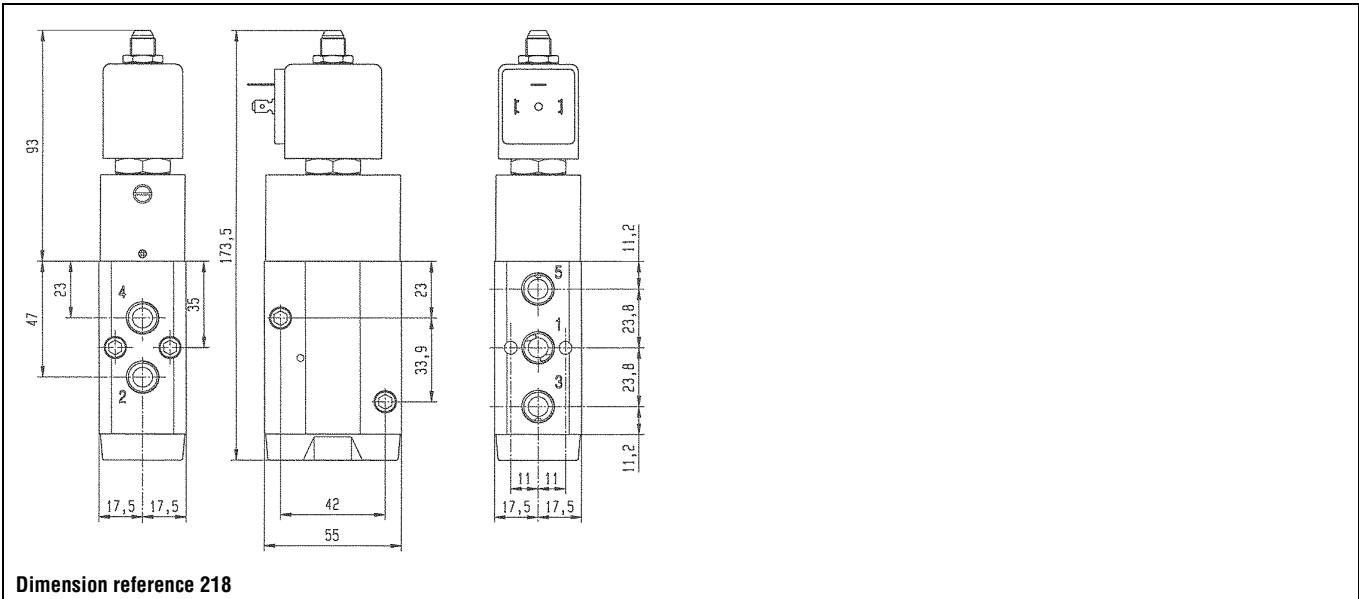
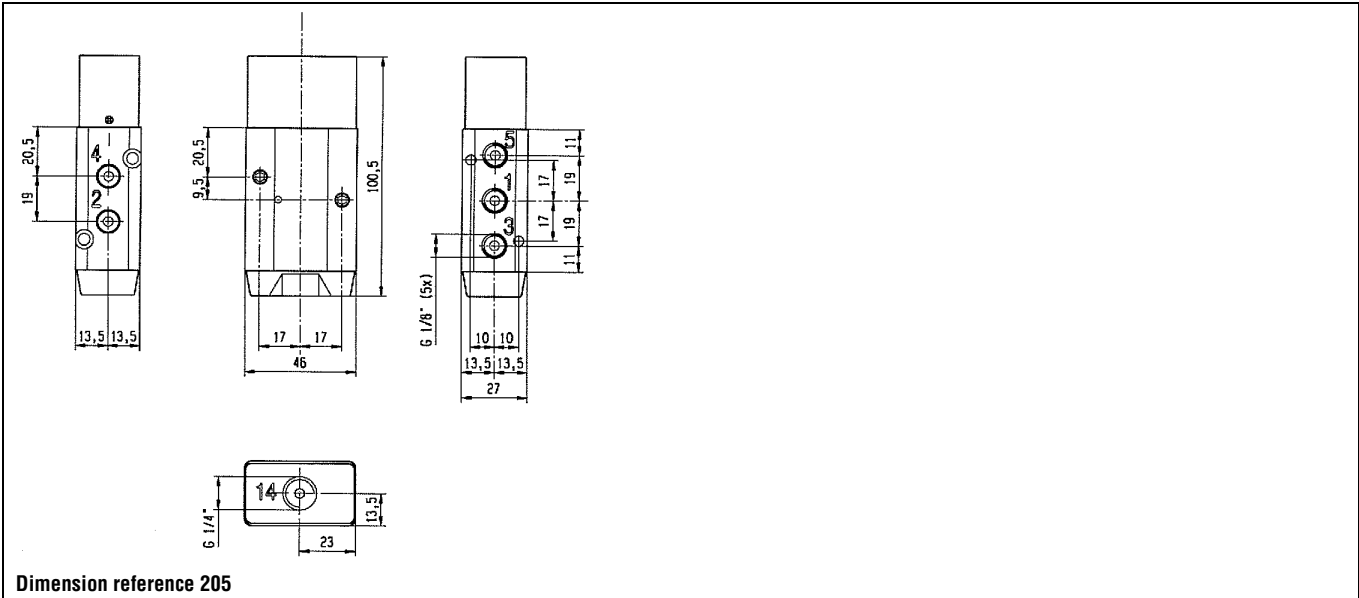
#### Notes:

\* See Electrical Parts Group table at end of section

1. Operates with low temperatures down to -40 deg. C

2. Other coil-housing available: 488650.01, 488660.01, 4888670.01 (refer to electrical parts at end of this section)

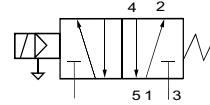
# Solenoid valves for actuator control - 5/2 valves - Pipe connection-Spool design



## Solenoid valves for actuator control - 5/2 valves - Pipe connection-Spool design

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure bar |     |    | Fluid temp. °C |     | Seat disc | Reference numbers      |                     |         |      | Power consumption (W) |    | Wt. (g) | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----|----------------|-----|-----------|------------------------|---------------------|---------|------|-----------------------|----|---------|------------------|----------|
|           |              |                      | Min                                  | Max | AC | Min            | Max |           | Global valve reference | Valve reference no. | Housing | Coil | DC                    | AC |         |                  |          |

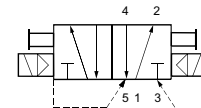
Pilot operated



### Anod. aluminium body/Pipe mounting - Spool design

|     |   |      |   |    |    |     |    |     |              |            |   |        |   |   |      |   |      |
|-----|---|------|---|----|----|-----|----|-----|--------------|------------|---|--------|---|---|------|---|------|
| 1/4 | 8 | 1400 | 2 | 10 | 10 | -25 | 80 | NBR | 7341PAG2PN1D | 341P22001D | - | 483250 | 8 | 8 | 1450 | 5 | 7755 |
|-----|---|------|---|----|----|-----|----|-----|--------------|------------|---|--------|---|---|------|---|------|

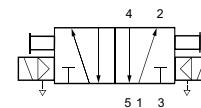
Two solenoids and main pressure supply - Integrated pilot



### Anod. aluminium body/Pipe mounting - Spool design

|     |   |      |   |    |    |     |    |     |              |        |      |        |   |     |   |     |   |     |
|-----|---|------|---|----|----|-----|----|-----|--------------|--------|------|--------|---|-----|---|-----|---|-----|
| 1/4 | 8 | 1400 | 2 | 10 | 10 | -25 | 80 | NBR | 2347PAG2PNM0 | 347P02 | 8993 | 488980 | 1 | 2.5 | 2 | 450 | 1 | 225 |
|-----|---|------|---|----|----|-----|----|-----|--------------|--------|------|--------|---|-----|---|-----|---|-----|

Two solenoids and main pressure supply



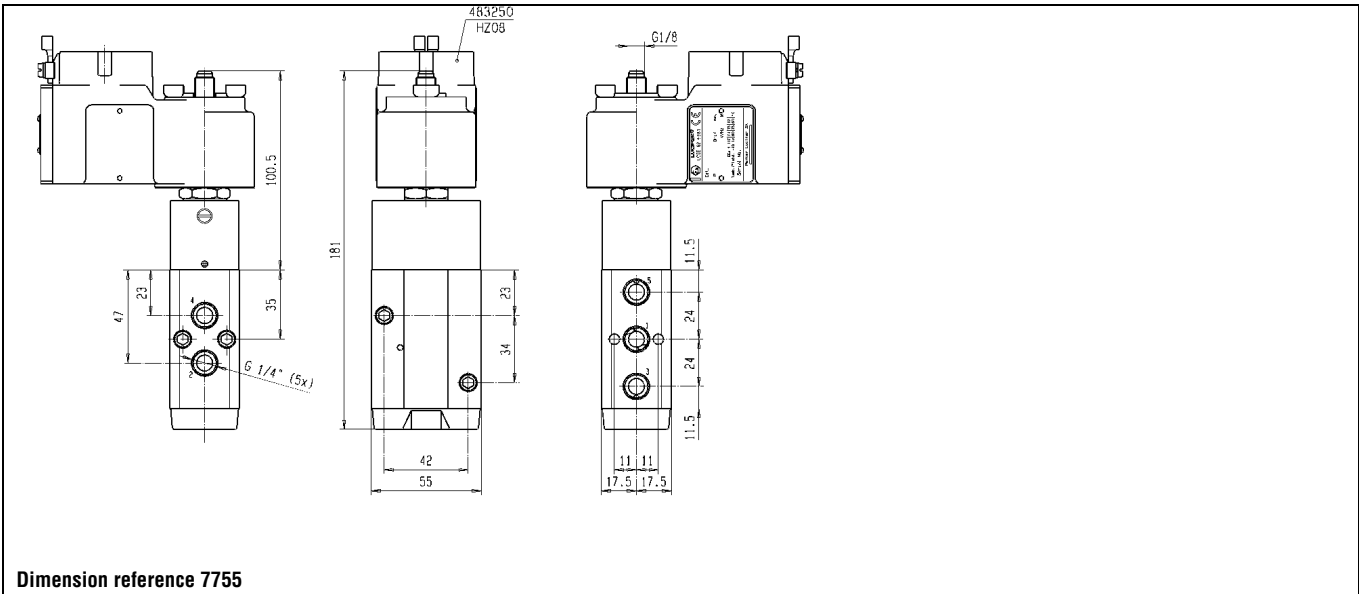
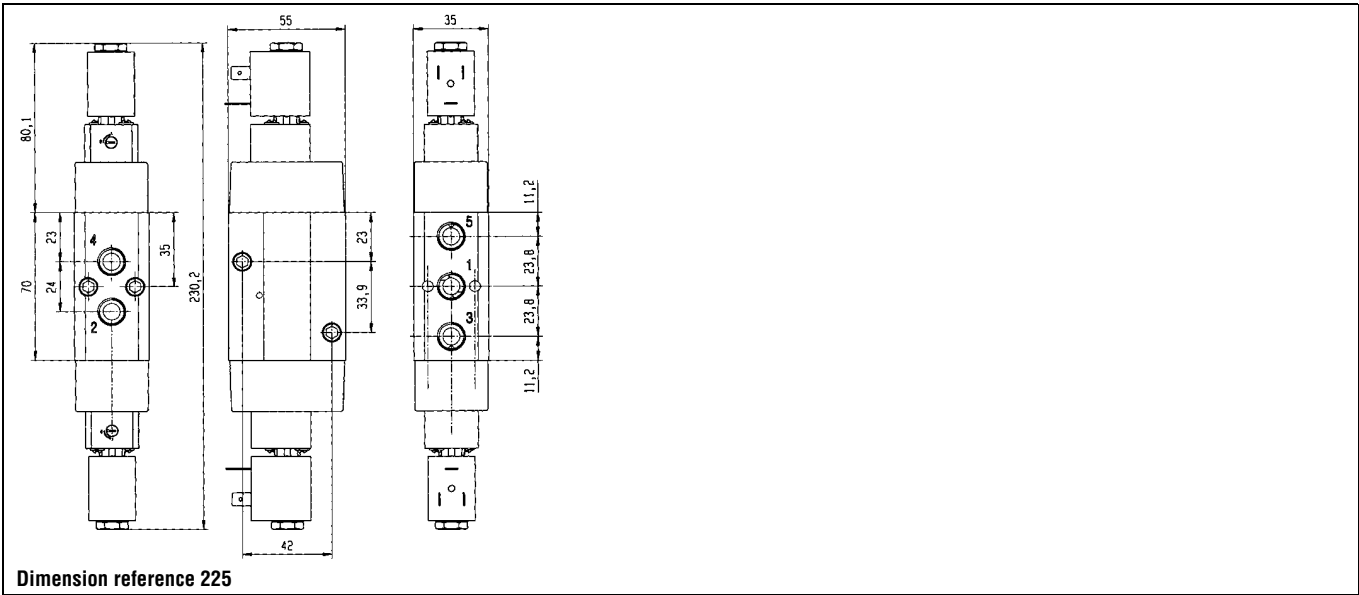
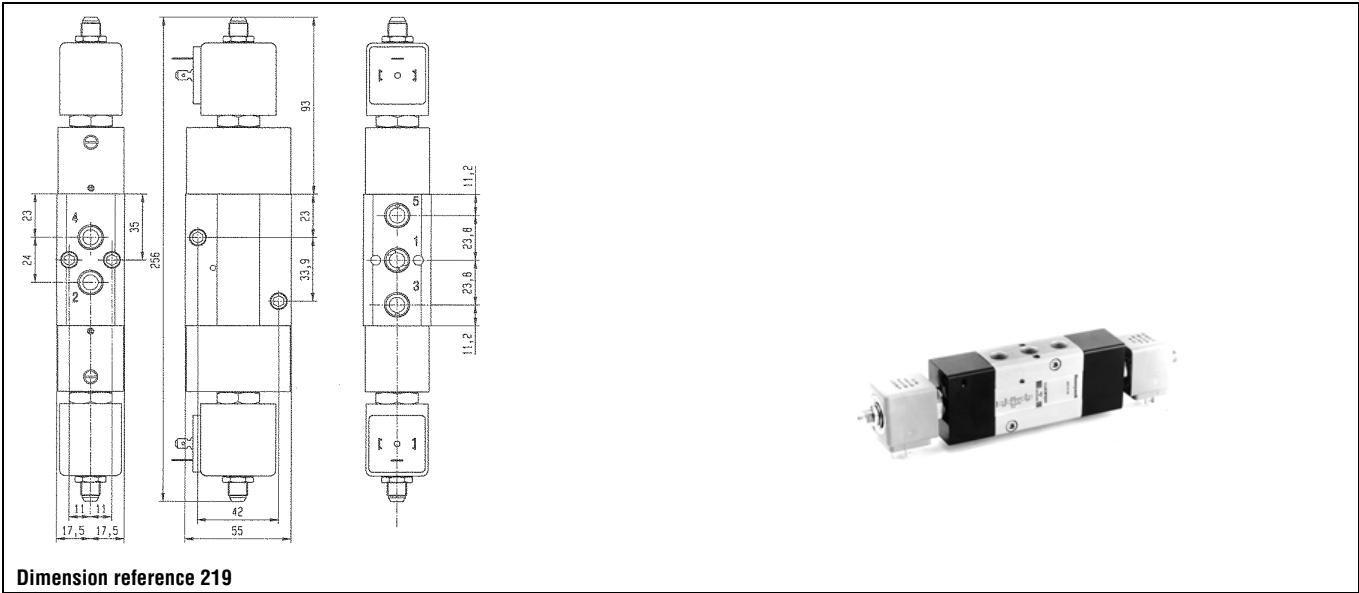
### Anod. aluminium body/Pipe mounting - Spool design

|     |   |      |   |    |    |     |    |     |              |        |      |        |   |   |   |     |   |     |
|-----|---|------|---|----|----|-----|----|-----|--------------|--------|------|--------|---|---|---|-----|---|-----|
| 1/4 | 8 | 1400 | 2 | 10 | 10 | -25 | 80 | NBR | 7347PAG2PNM0 | 347P22 | 2995 | 481865 | 1 | 9 | 8 | 590 | 2 | 219 |
|     | 8 | 1400 | 2 | 10 | 10 | -25 | 80 | NBR |              |        | 4270 | 481000 | 1 | 8 | 8 | 810 | 2 |     |

#### Notes:

- \* See Electrical Parts Group table at end of section
- 1. Please order two housings and coils for each valve

# Solenoid valves for actuator control - 5/2 valves - Pipe connection-Spool design



# Solenoid valves for actuator control

## Applications

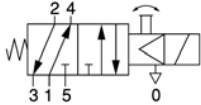
3- or 4-way directional valves for control of single - or double acting pneumatic actuators.



# 5/2

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure bar |     |  | Fluid temp. °C |     | Seat disc | Reference numbers      |                     |         |      | OR | Power consumption (W) |    | Wt. (g) | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|--|----------------|-----|-----------|------------------------|---------------------|---------|------|----|-----------------------|----|---------|------------------|----------|
|           |              |                      | Min                                  | Max |  | Min            | Max |           | Global valve reference | Valve reference no. | Housing | Coil |    | DC                    | AC |         |                  |          |
| G         |              | Qn                   |                                      |     |  |                |     |           |                        |                     |         |      |    |                       |    |         |                  |          |

Pilot operated



## Aluminium alloy and brass body/Pipe mounting - Poppet design

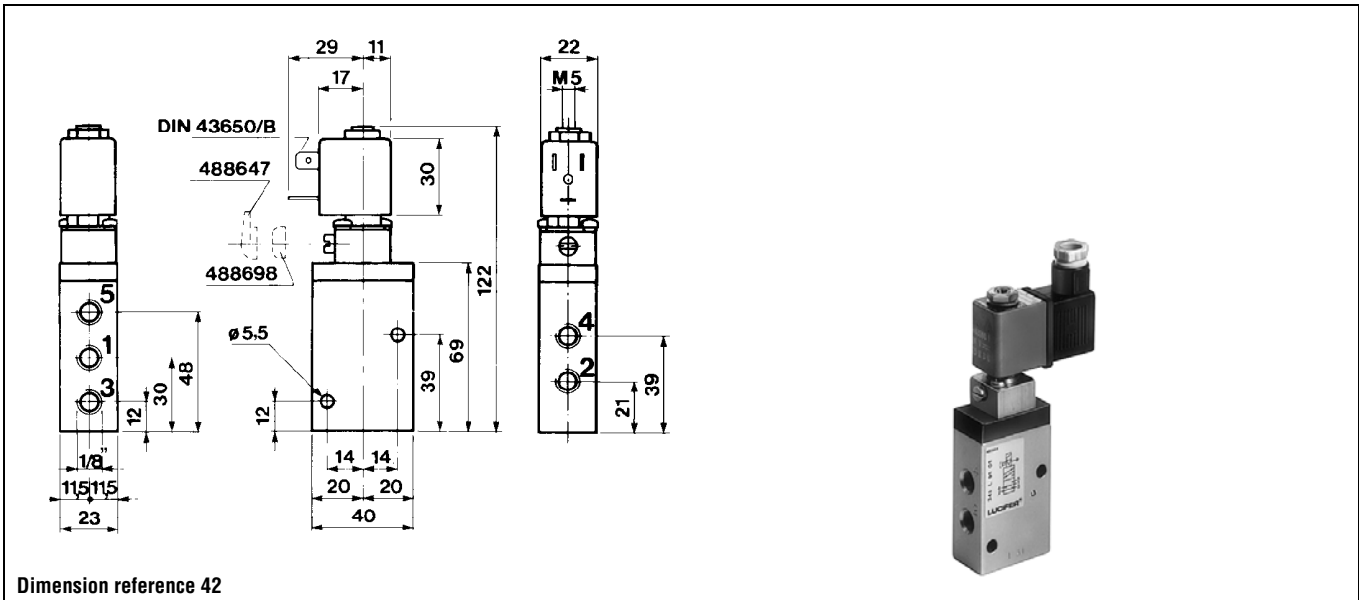
|     |   |     |   |    |    |     |    |     |   |          |      |        |     |   |     |   |    |
|-----|---|-----|---|----|----|-----|----|-----|---|----------|------|--------|-----|---|-----|---|----|
| 1/8 | 4 | 400 | 1 | 10 | 10 | -10 | 75 | NBR | - | 341L9101 | 8993 | 488980 | 2.5 | 2 | 270 | 1 | 42 |
|-----|---|-----|---|----|----|-----|----|-----|---|----------|------|--------|-----|---|-----|---|----|

Table continued on page 250

### Notes:

\* See Electrical Parts Group table at end of section

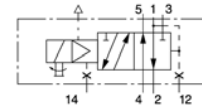
Solenoid valves for actuator control - 5/2 valves - Pipe connection-Poppet design



## Solenoid valves for actuator control - 5/2 valves - Pipe connection-Poppet design

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure bar |     |    | Fluid temp. °C |     | Seat disc | Reference numbers      |                     |         |      | Power consumption (W) | Wt. (g) | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----|----------------|-----|-----------|------------------------|---------------------|---------|------|-----------------------|---------|------------------|----------|
|           |              |                      | Min                                  | Max | AC | Min            | Max |           | Global valve reference | Valve reference no. | Housing | Coil | DC                    | AC      |                  |          |
| G         |              | Qn                   |                                      |     |    |                |     |           |                        |                     |         |      |                       |         |                  |          |

Pilot operated



### Die-cast zinc body/Pipe mounting - Poppet design

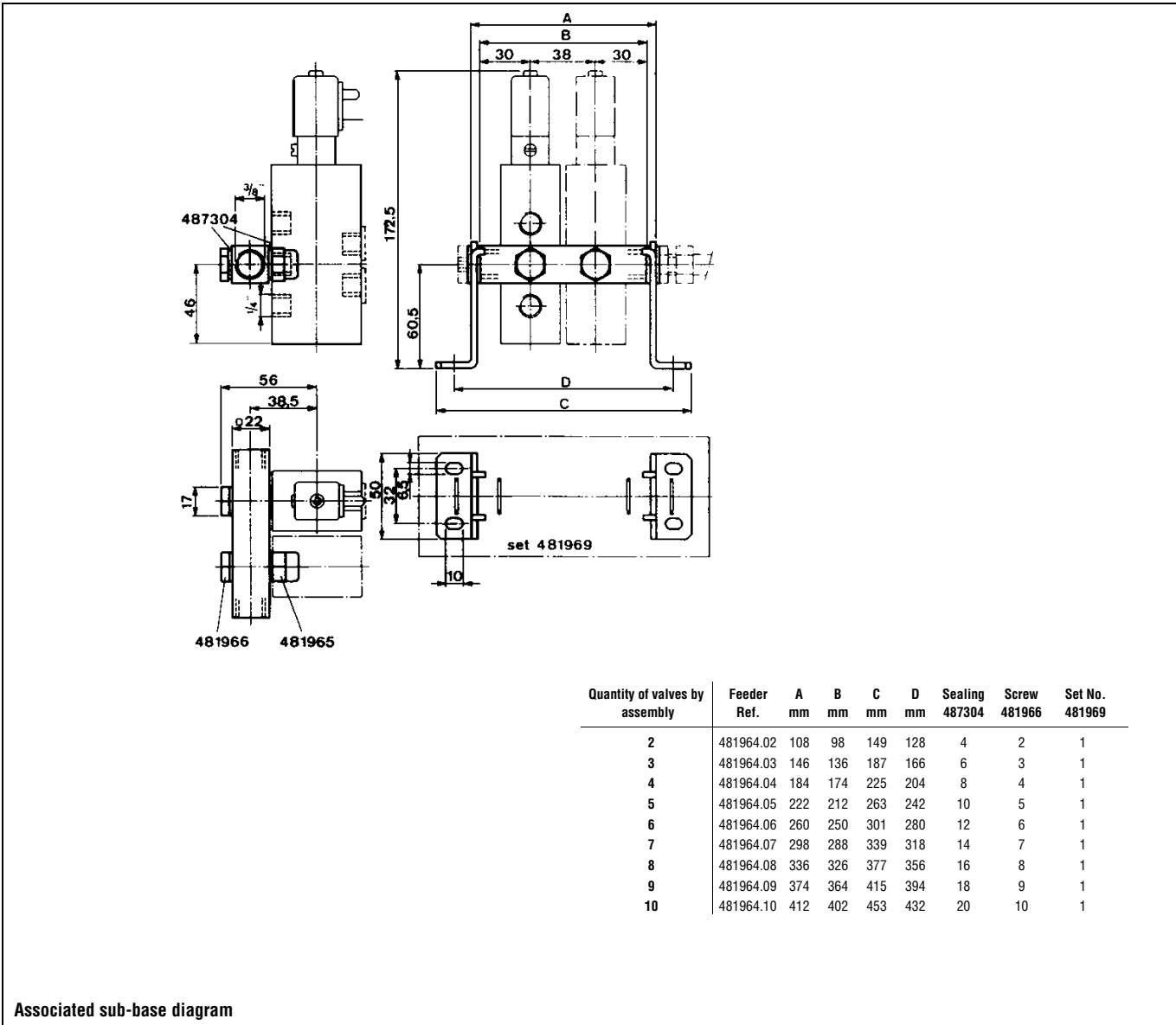
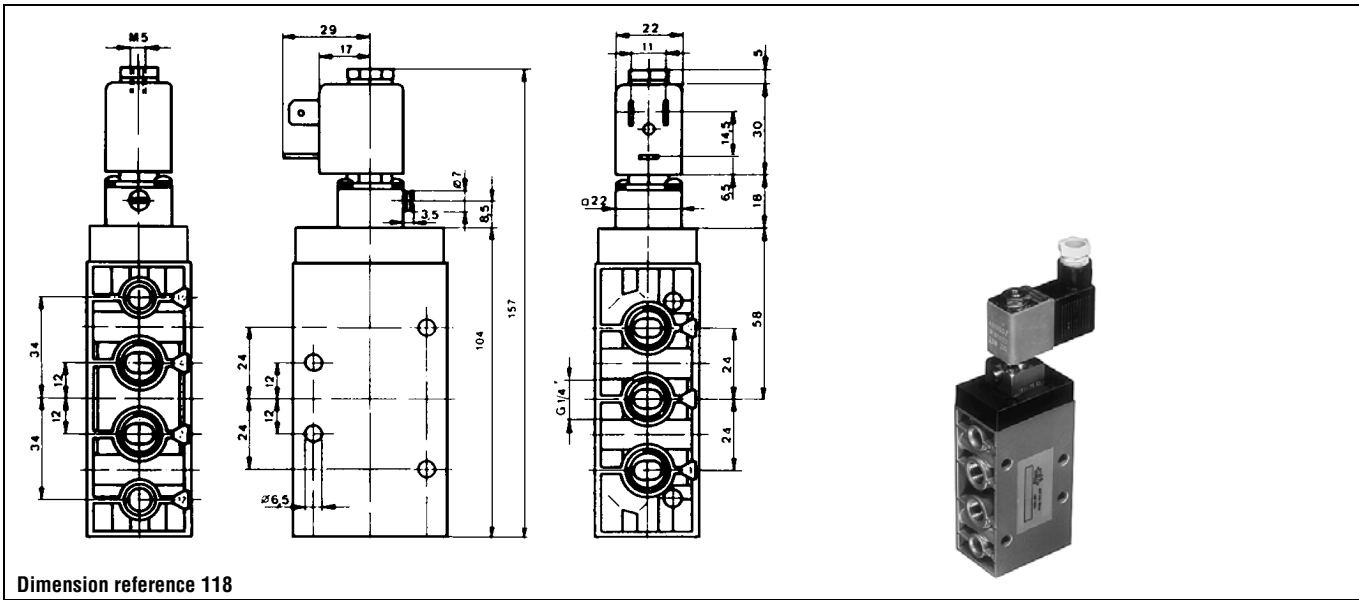
|     |   |      |   |    |    |     |    |     |   |        |      |        |     |   |     |   |     |
|-----|---|------|---|----|----|-----|----|-----|---|--------|------|--------|-----|---|-----|---|-----|
| 1/4 | 8 | 1400 | 1 | 10 | 10 | -10 | 75 | NBR | - | 341L11 | 8993 | 488980 | 2.5 | 2 | 690 | 1 | 118 |
|-----|---|------|---|----|----|-----|----|-----|---|--------|------|--------|-----|---|-----|---|-----|

Table continued on page 252

#### Notes:

\* See Electrical Parts Group table at end of section

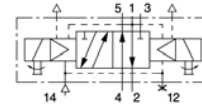
Solenoid valves for actuator control - 5/2 valves - Pipe connection-Poppet design



## Solenoid valves for actuator control - 5/2 valves - Pipe connection-Poppet design

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure bar |     |    | Fluid temp. °C |     | Seat disc | Reference numbers      |                     |         |      | Power consumption (W) | Wt. (g) | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----|----------------|-----|-----------|------------------------|---------------------|---------|------|-----------------------|---------|------------------|----------|
|           |              |                      | Min                                  | Max | AC | Min            | Max |           | Global valve reference | Valve reference no. | Housing | Coil | DC                    | AC      |                  |          |
| G         |              | Qn                   |                                      |     |    |                |     |           |                        |                     |         |      |                       |         |                  |          |

Two solenoids and main pressure supply



### Die-cast zinc body/Pipe mounting - Poppet design

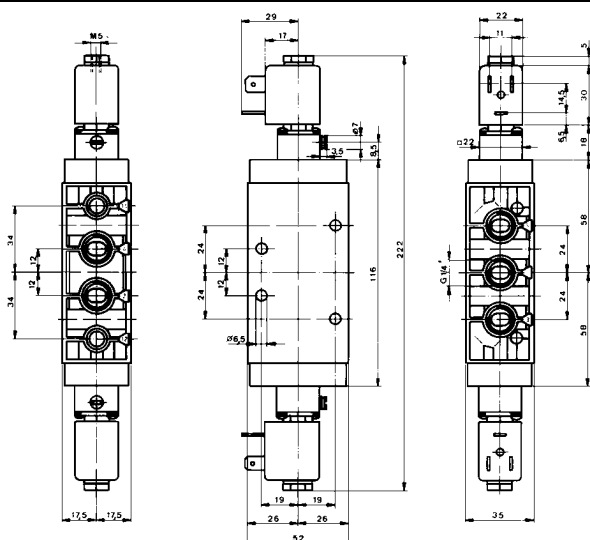
|     |   |      |   |    |    |     |    |     |   |        |      |        |   |     |   |     |   |    |
|-----|---|------|---|----|----|-----|----|-----|---|--------|------|--------|---|-----|---|-----|---|----|
| 1/4 | 8 | 1400 | 1 | 10 | 10 | -10 | 75 | NBR | - | 347L11 | 8993 | 488980 | 1 | 2.5 | 2 | 750 | 1 | 46 |
|-----|---|------|---|----|----|-----|----|-----|---|--------|------|--------|---|-----|---|-----|---|----|

Table continued on page 254

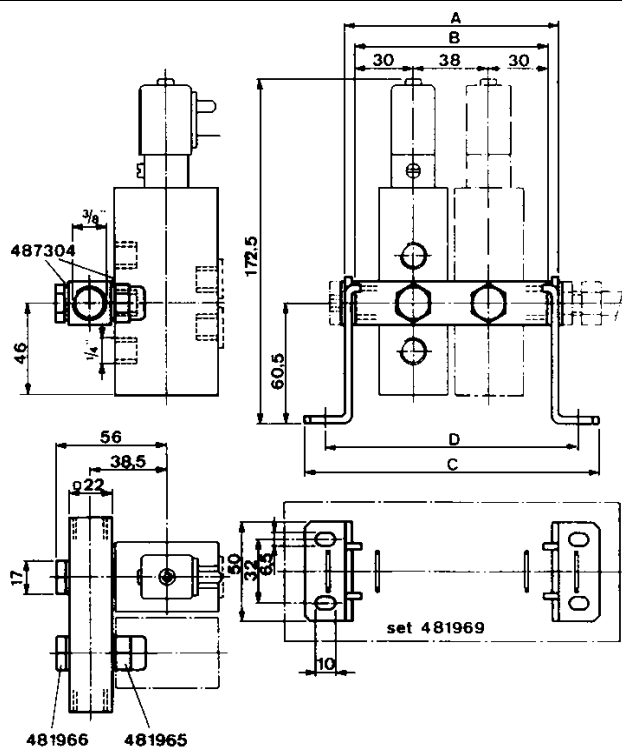
#### Notes:

- \* See Electrical Parts Group table at end of section
- 1. Please order two housings and coils for each valve

## Solenoid valves for actuator control - 5/2 valves - Pipe connection-Poppet design



### Dimension reference 46



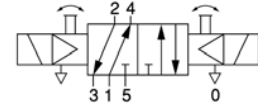
| Quantity of valves by assembly | Feeder Ref. | A mm | B mm | C mm | D mm | Sealing 487304 | Screw 481966 | Set No. 481969 |
|--------------------------------|-------------|------|------|------|------|----------------|--------------|----------------|
| 2                              | 481964.02   | 108  | 98   | 149  | 128  | 4              | 2            | 1              |
| 3                              | 481964.03   | 146  | 136  | 187  | 166  | 6              | 3            | 1              |
| 4                              | 481964.04   | 184  | 174  | 225  | 204  | 8              | 4            | 1              |
| 5                              | 481964.05   | 222  | 212  | 263  | 242  | 10             | 5            | 1              |
| 6                              | 481964.06   | 260  | 250  | 301  | 280  | 12             | 6            | 1              |
| 7                              | 481964.07   | 298  | 288  | 339  | 318  | 14             | 7            | 1              |
| 8                              | 481964.08   | 336  | 326  | 377  | 356  | 16             | 8            | 1              |
| 9                              | 481964.09   | 374  | 364  | 415  | 394  | 18             | 9            | 1              |
| 10                             | 481964.10   | 412  | 402  | 453  | 432  | 20             | 10           | 1              |

**Associated sub-base diagram**

## Solenoid valves for actuator control - 5/2 valves - Pipe connection-Poppet design

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure bar |     |    | Fluid temp. °C |     | Seat disc | Reference numbers      |                     |         |      | OR | Power consumption (W) |    | Wt. (g) | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----|----------------|-----|-----------|------------------------|---------------------|---------|------|----|-----------------------|----|---------|------------------|----------|
|           |              |                      | Min                                  | Max | AC | Min            | Max |           | Global valve reference | Valve reference no. | Housing | Coil |    | DC                    | AC |         |                  |          |
| G         |              | Qn                   |                                      |     |    |                |     |           |                        |                     |         |      |    |                       |    |         |                  |          |

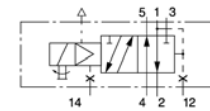
Two solenoids and main pressure supply



### Aluminium alloy and brass body/Pipe mounting - Poppet design

|     |   |     |   |    |    |     |    |     |   |          |      |        |   |     |   |     |   |     |
|-----|---|-----|---|----|----|-----|----|-----|---|----------|------|--------|---|-----|---|-----|---|-----|
| 1/8 | 4 | 315 | 2 | 10 | 10 | -10 | 75 | NBR | - | 347L9101 | 8993 | 488980 | 1 | 2.5 | 2 | 430 | 1 | 117 |
|-----|---|-----|---|----|----|-----|----|-----|---|----------|------|--------|---|-----|---|-----|---|-----|

Pilot operated



### Die-cast zinc body/Pipe mounting - Poppet design

|     |   |      |   |    |    |     |    |     |              |           |      |           |   |     |   |     |      |
|-----|---|------|---|----|----|-----|----|-----|--------------|-----------|------|-----------|---|-----|---|-----|------|
| 1/4 | 8 | 1400 | 1 | 10 | 10 | -10 | 75 | NBR | 7341LMG2NNM0 | E341L1130 | 2995 | 481865    | 9 | 8   | - | 2   | 3539 |
|     | 8 | 1400 | 1 | 10 | 10 | -10 | 75 | NBR | 7341LMG2NNM0 |           | 4270 | 481000    | 8 | 8   | - | 2   | 3539 |
|     | 8 | 1400 | 1 | 10 | 10 | -10 | 75 | NBR | -            | 341L1190  | -    | 483580.01 | 2 | 0.4 | - | 690 | 7478 |

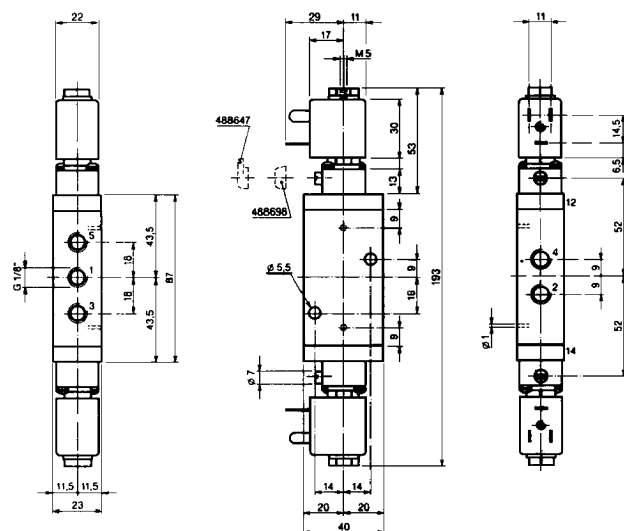
#### Notes:

\* See Electrical Parts Group table at end of section

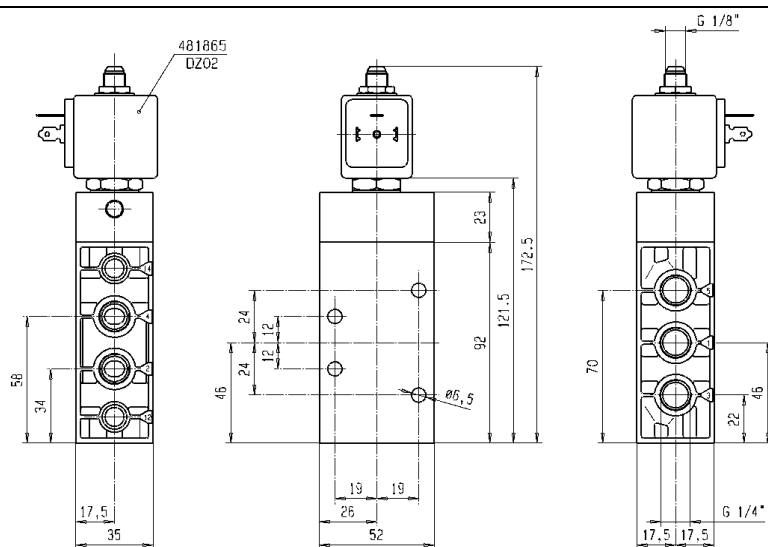
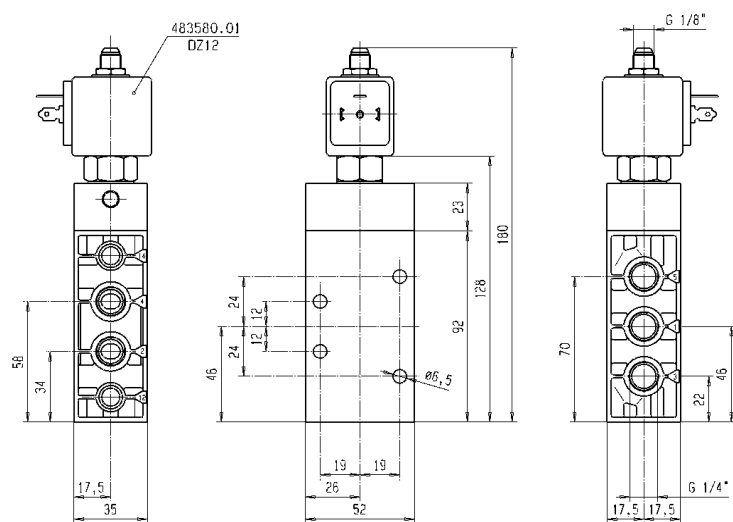
1. Please order two of these items per valve

2. Other coil-housing available: 488650.01, 488660.01, 4888670.01 (refer to electrical parts at end of this section)

## Solenoid valves for actuator control - 5/2 valves - Pipe connection-Poppet design



### Dimension reference 117

**Dimension reference 3539**

**Dimension reference 7478**



# Solenoid valves for actuator control – NAMUR interface

| ACTUATION                                                 | CONNECTION | ORIFICE<br>(MM) | MAX. PRESSURE<br>(BAR)<br><KPA> | PAGE        |
|-----------------------------------------------------------|------------|-----------------|---------------------------------|-------------|
| Pilot operated                                            | 1/4        | 8               | 10.0                            | 264/266     |
|                                                           | 1/4 - 1/8  | 4               | 10.0                            | 258/260/270 |
| Pilot operated - Integrated pilot                         | 1/4        | 8               | 10.0                            | 264         |
|                                                           | 1/4 - 1/8  | 4               | 10.0                            | 258         |
| Two solenoids and main pressure supply                    | 1/4        | 8               | 10.0                            | 268         |
|                                                           | 1/4 - 1/8  | 4               | 10.0                            | 262         |
| Two solenoids and main pressure supply - Integrated pilot | 1/4        | 8               | 10.0                            | 268         |
|                                                           | 1/4 - 1/8  | 4               | 10.0                            | 262         |
| Solenoid and external pressure supply                     | 1/4 - 1/8  | 4               | 10.0                            | 260         |
| External pressure supply                                  | 1/4 - 1/8  | 4               | 10.0                            | 262         |

Notes:

# Solenoid valves for actuator control

## Applications

3- or 4-way directional valves for control of single - or double acting pneumatic actuators.

A patented sealing plate is incorporated to the body - providing on-site conversion of the valve from 5/2 to the 3/2 function (or vice versa) by simply rotating the plate through 180°. In the 3/2 function it provides venting of spring chambers to prevent corrosion which normally occurs when environmental air penetrates into the actuator.

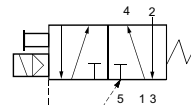
The interface design corresponds to the German NAMUR standard and the VDI/VDE 3845 recommendations of the actuator industry and permits a compact design of the actuator/valve unit.



# 3/2 5/2

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure bar |     | Fluid temp. °C |     | Seat disc | Reference numbers      |                     |         |      | OR | Power consumption (W) |    | Wt. (g) | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----------------|-----|-----------|------------------------|---------------------|---------|------|----|-----------------------|----|---------|------------------|----------|
|           |              |                      | Min                                  | Max | Min            | Max |           | Global valve reference | Valve reference no. | Housing | Coil |    | DC                    | AC |         |                  |          |
| G         |              | Qn                   |                                      |     |                |     |           |                        |                     |         |      |    |                       |    |         |                  |          |

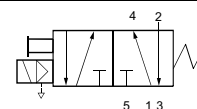
Pilot operated - Integrated pilot



## Anod. aluminium body/NAMUR interface - Spool design

|           |   |     |   |    |    |     |    |     |              |        |   |      |        |     |   |     |   |     |
|-----------|---|-----|---|----|----|-----|----|-----|--------------|--------|---|------|--------|-----|---|-----|---|-----|
| 1/4 - 1/8 | 4 | 600 | 2 | 10 | 10 | -25 | 80 | NBR | 2341NAKBJNM1 | 341N01 | 1 | 8993 | 488980 | 2.5 | 2 | 320 | 1 | 209 |
|           | 4 | 600 | 2 | 10 | 10 | -25 | 80 | NBR | 2341NAKBJNM0 | 341N11 |   | 8993 | 488980 | 2.5 | 2 | 320 | 1 | 208 |

Pilot operated



## Anod. aluminium body/NAMUR interface - Spool design

|           |   |     |   |    |    |     |    |     |              |        |  |      |        |   |   |     |   |     |
|-----------|---|-----|---|----|----|-----|----|-----|--------------|--------|--|------|--------|---|---|-----|---|-----|
| 1/4 - 1/8 | 4 | 600 | 2 | 10 | 10 | -25 | 80 | NBR | 7341NAKBJNM1 | 341N21 |  | 2995 | 481865 | 9 | 8 | 390 | 2 | 210 |
|           | 4 | 600 | 2 | 10 | 10 | -25 | 80 | NBR |              |        |  | 4270 | 481000 | 8 | 8 | 500 | 2 |     |

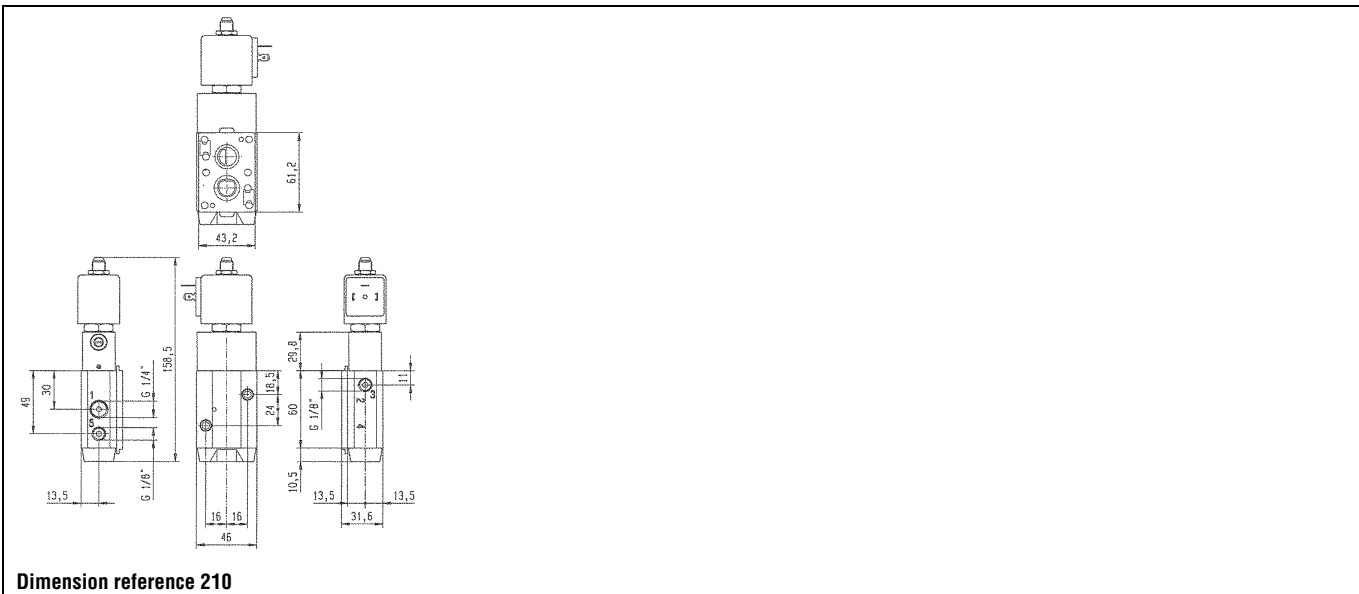
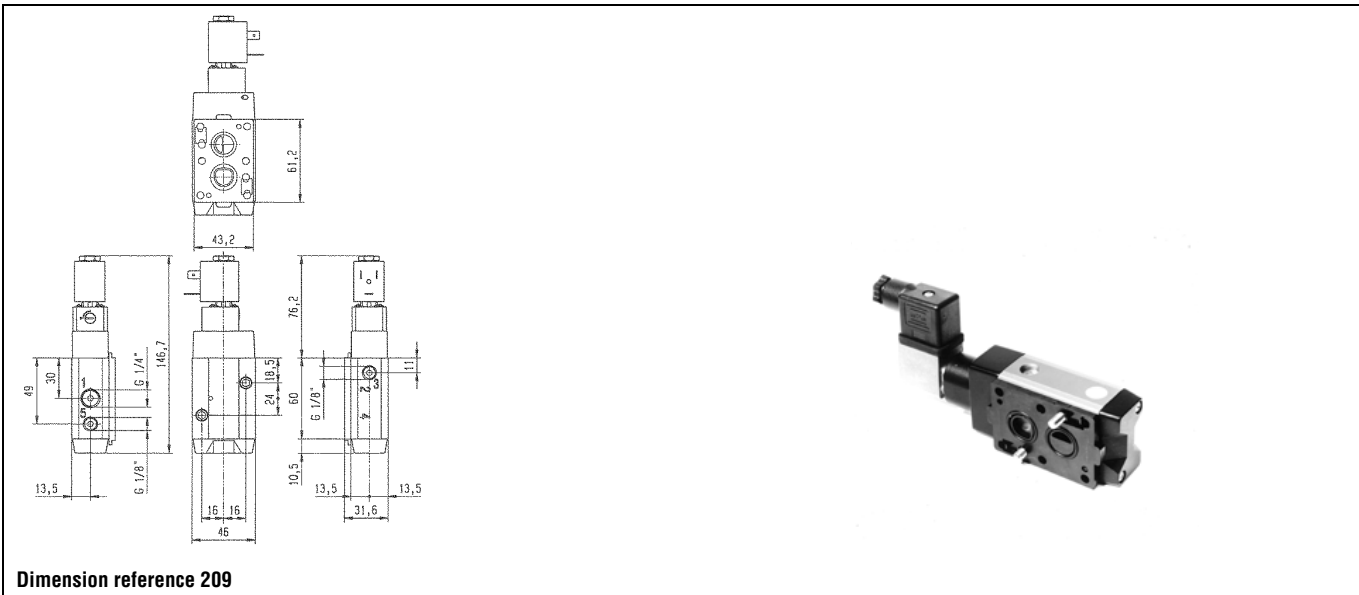
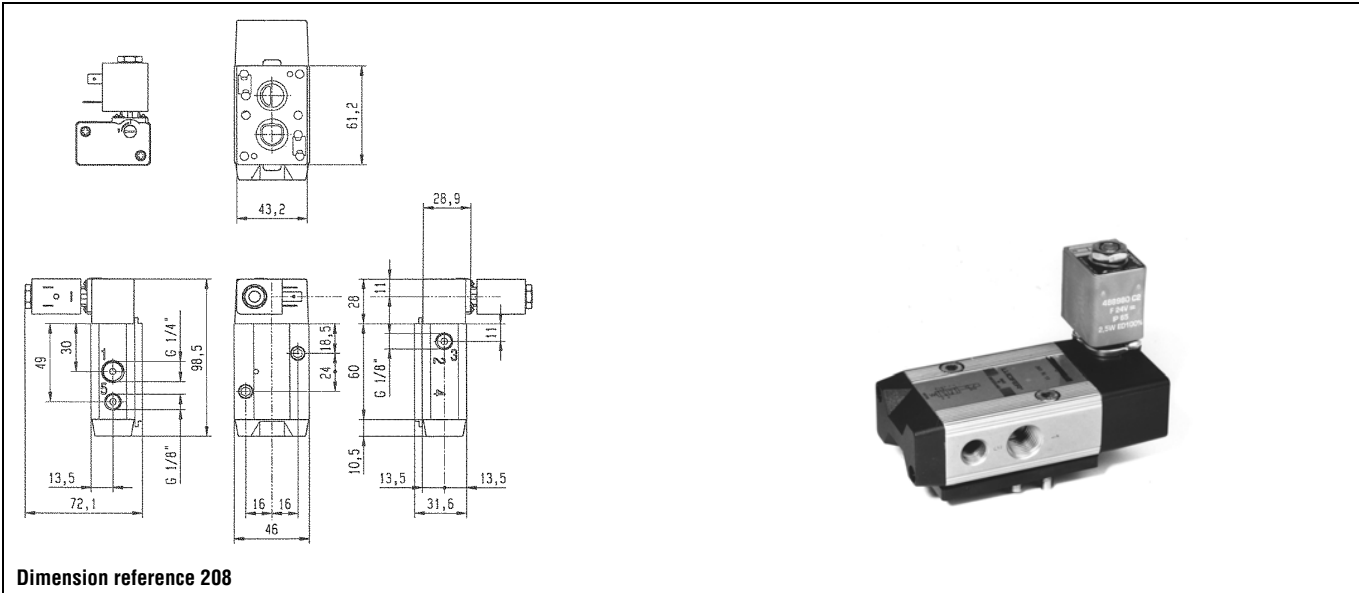
Table continued on page 260

## Notes:

\* See Electrical Parts Group table at end of section

1. Manual override standard

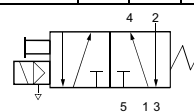
Solenoid valves for actuator control - 3/2 or 5/2 valves - NAMUR interface-Spool design



## Solenoid valves for actuator control - 3/2 or 5/2 valves - NAMUR interface-Spool design

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure bar |     |    | Fluid temp. °C |     | Seat disc | Reference numbers      |                     |         |      | Power consumption (W) | Wt. (g) | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----|----------------|-----|-----------|------------------------|---------------------|---------|------|-----------------------|---------|------------------|----------|
|           |              |                      | Min                                  | Max | AC | Min            | Max |           | Global valve reference | Valve reference no. | Housing | Coil | DC                    | AC      |                  |          |
| G         |              | Qn                   |                                      |     |    |                |     |           |                        |                     |         |      |                       |         |                  |          |

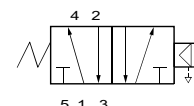
Pilot operated



### Anod. aluminium body/NAMUR interface - Spool design

|           |   |     |   |    |    |     |    |     |              |          |      |        |     |   |     |   |     |
|-----------|---|-----|---|----|----|-----|----|-----|--------------|----------|------|--------|-----|---|-----|---|-----|
| 1/4 - 1/8 | 4 | 600 | 2 | 10 | 10 | -25 | 80 | NBR | 7341NAKBJNMO | 341N31   | 2995 | 481865 | 9   | 8 | 510 | 2 | 211 |
|           | 4 | 600 | 2 | 10 | 10 | -25 | 80 | NBR |              |          | 4270 | 481000 | 8   | 8 | 620 | 2 |     |
|           | 4 | 600 | 2 | 10 | 10 | -40 | 65 | NBR | 7341NAKBJPMO | 341N3108 | 2995 | 481865 | 9   | 8 | 510 | 2 | 211 |
|           | 4 | 600 | 2 | 10 | 10 | -40 | 65 | NBR |              |          | 4270 | 481000 | 8   | 8 | 620 | 2 |     |
|           | 4 | 600 | 2 | 10 | -  | -25 | 80 | NBR | 7341NAKBJNL2 | 341N3180 | 2995 | 482740 | 1.6 | - | 510 | 6 | 211 |
|           |   |     |   |    |    |     |    |     |              |          |      |        |     |   |     |   |     |
|           |   |     |   |    |    |     |    |     |              |          |      |        |     |   |     |   |     |
|           |   |     |   |    |    |     |    |     |              |          |      |        |     |   |     |   |     |

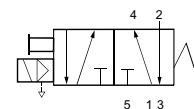
Pilot operated



### Anod. aluminium body/NAMUR interface - Spool design

|           |   |     |   |    |    |     |    |     |              |          |   |           |   |     |   |     |   |     |
|-----------|---|-----|---|----|----|-----|----|-----|--------------|----------|---|-----------|---|-----|---|-----|---|-----|
| 1/4 - 1/8 | 4 | 400 | 2 | 10 | 10 | -25 | 80 | NBR | 7341NAKBHN90 | 341N3190 | - | 483580.01 | 2 | 0.4 | - | 640 | 7 | 211 |
|-----------|---|-----|---|----|----|-----|----|-----|--------------|----------|---|-----------|---|-----|---|-----|---|-----|

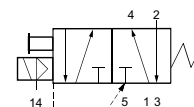
Pilot operated



### Anod. aluminium body/NAMUR interface - Spool design

|           |   |     |   |    |    |     |    |     |              |            |   |        |   |   |      |   |      |
|-----------|---|-----|---|----|----|-----|----|-----|--------------|------------|---|--------|---|---|------|---|------|
| 1/4 - 1/8 | 4 | 600 | 2 | 10 | 10 | -25 | 80 | NBR | 7341NAKBJN1D | 341N31001D | - | 483250 | 8 | 8 | 1520 | 5 | 7753 |
|           | 4 | 600 | 2 | 10 | 10 | -40 | 65 | NBR | 7341NAKBJP1D | 341N31081D | - | 483250 | 8 | 8 | 1520 | 5 | 7753 |

Solenoid and external pressure supply



### Anod. aluminium body/NAMUR interface - Spool design

|           |   |     |   |    |    |     |    |     |              |          |      |        |   |   |     |   |     |
|-----------|---|-----|---|----|----|-----|----|-----|--------------|----------|------|--------|---|---|-----|---|-----|
| 1/4 - 1/8 | 4 | 600 | 2 | 10 | 10 | -40 | 65 | NBR | 7441NAKBJPMO | 441N3108 | 2995 | 481865 | 9 | 8 | 510 | 2 | 211 |
|           | 4 | 600 | 2 | 10 | 10 | -40 | 65 | NBR |              |          | 4270 | 481000 | 8 | 8 | 620 | 2 |     |

Table continued on page 262

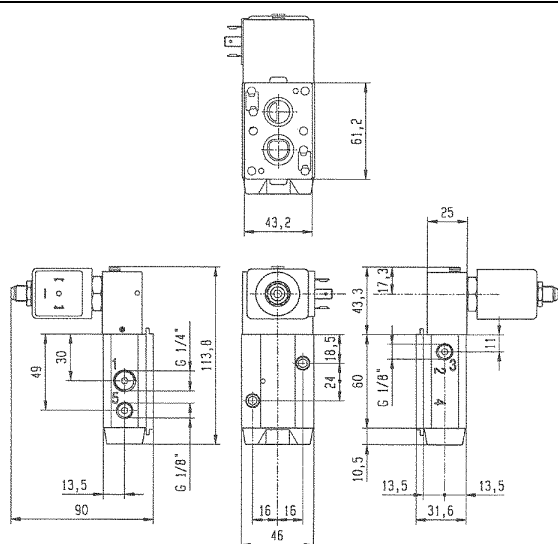
#### Notes:

\* See Electrical Parts Group table at end of section

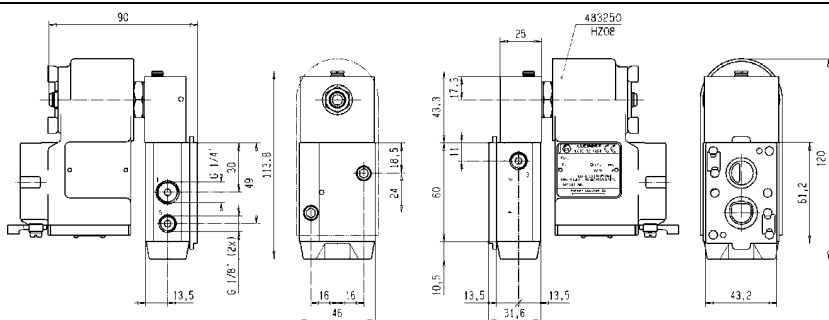
1. Operates with low temperatures down to -40 deg. C

2. Other coil-housing available: 488650.01, 488660.01, 488670.01 (refer to electrical parts at end of this section)

## Solenoid valves for actuator control - 3/2 or 5/2 valves - NAMUR interface-Spool design



### Dimension reference 211

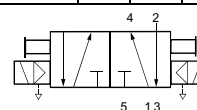


**Dimension reference 7753**

## Solenoid valves for actuator control - 3/2 or 5/2 valves - NAMUR interface-Spool design

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure bar |     |    | Fluid temp. °C |     | Seat disc | Reference numbers      |                     |         |      | OR | Power consumption (W) |    | Wt. (g) | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----|----------------|-----|-----------|------------------------|---------------------|---------|------|----|-----------------------|----|---------|------------------|----------|
|           |              |                      | Min                                  | Max | AC | Min            | Max |           | Global valve reference | Valve reference no. | Housing | Coil |    | DC                    | AC |         |                  |          |
| G         |              | Qn                   |                                      |     |    |                |     |           |                        |                     |         |      |    |                       |    |         |                  |          |

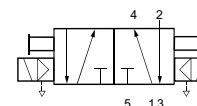
Two solenoids and main pressure supply - Integrated pilot



### Anod. aluminium body/NAMUR interface - Spool design

|           |   |     |   |    |    |     |    |     |              |        |      |        |   |     |   |     |   |     |
|-----------|---|-----|---|----|----|-----|----|-----|--------------|--------|------|--------|---|-----|---|-----|---|-----|
| 1/4 - 1/8 | 4 | 400 | 2 | 10 | 10 | -25 | 80 | NBR | 2347NAKBHNM0 | 347N11 | 8993 | 488980 | 1 | 2.5 | 2 | 530 | 1 | 213 |
|-----------|---|-----|---|----|----|-----|----|-----|--------------|--------|------|--------|---|-----|---|-----|---|-----|

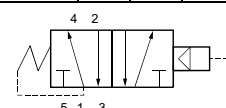
Two solenoids and main pressure supply



### Anod. aluminium body/NAMUR interface - Spool design

|           |   |     |   |    |    |     |    |     |              |        |      |        |   |   |   |     |   |     |
|-----------|---|-----|---|----|----|-----|----|-----|--------------|--------|------|--------|---|---|---|-----|---|-----|
| 1/4 - 1/8 | 4 | 400 | 2 | 10 | 10 | -25 | 80 | NBR | 7347NAKBHNM0 | 347N31 | 2995 | 481865 | 1 | 9 | 8 | 670 | 2 | 216 |
|           | 4 | 400 | 2 | 10 | 10 | -25 | 80 | NBR |              |        | 4270 | 481000 | 1 | 8 | 8 | 890 | 2 | 216 |

External pressure supply



### Anod. aluminium body/NAMUR interface - Spool design

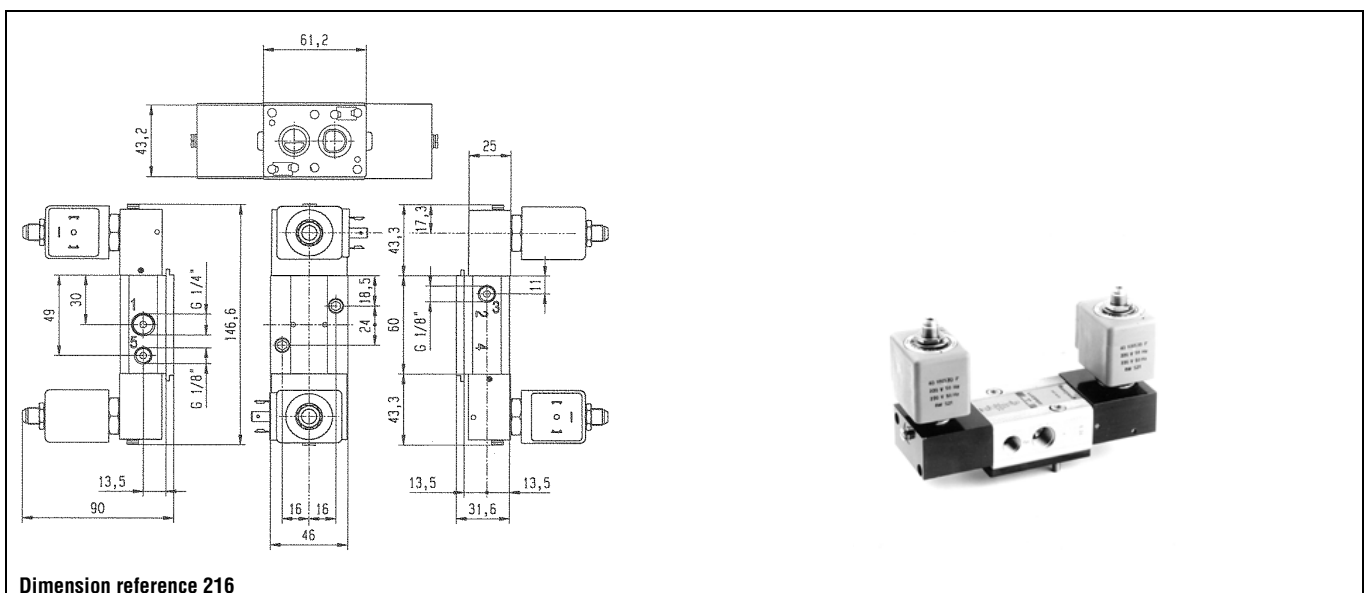
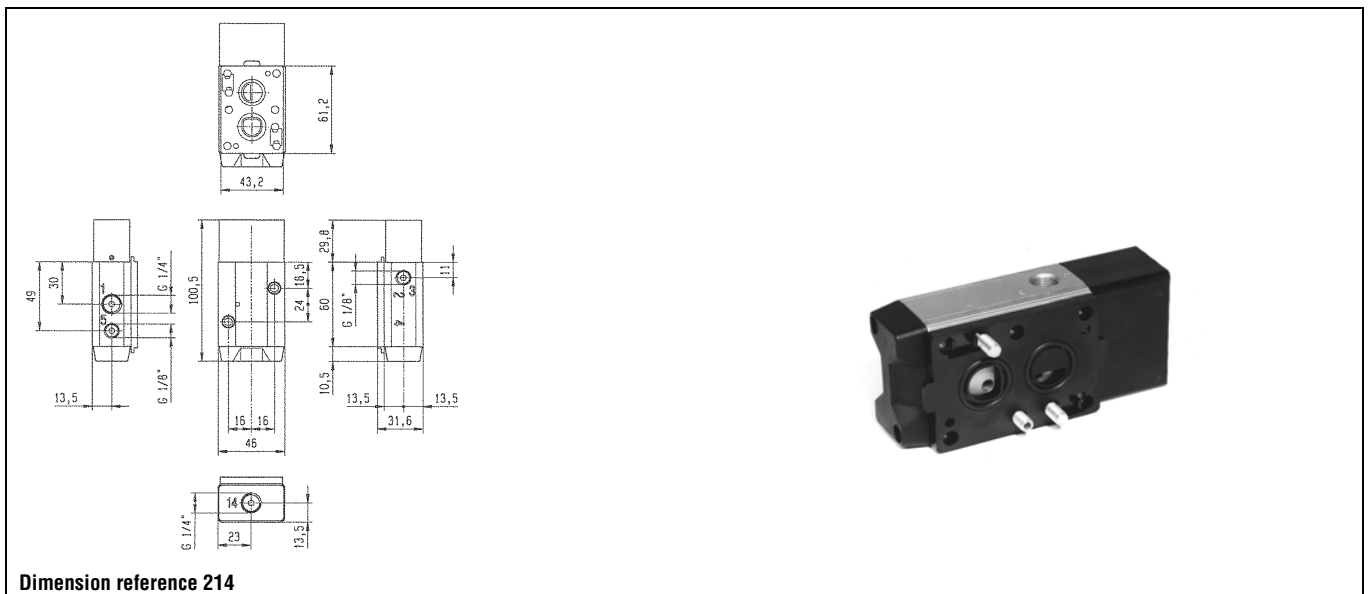
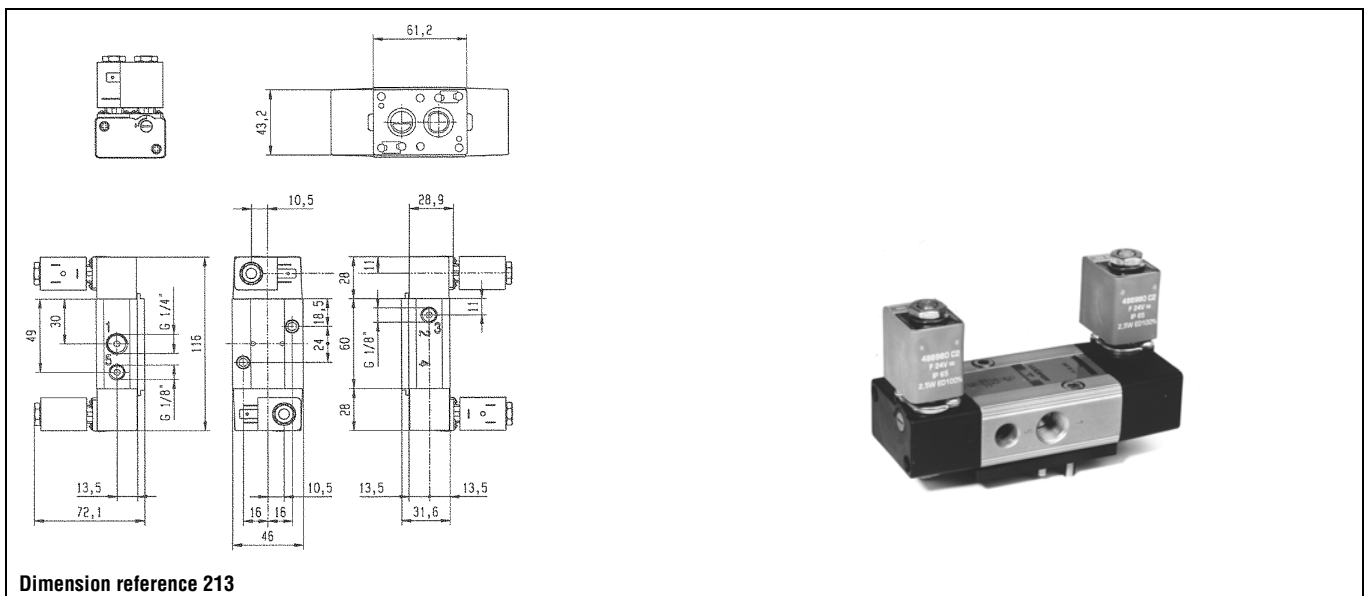
|           |   |     |   |    |    |     |    |     |              |          |   |   |   |   |   |     |   |     |
|-----------|---|-----|---|----|----|-----|----|-----|--------------|----------|---|---|---|---|---|-----|---|-----|
| 1/4 - 1/8 | 4 | 600 | 2 | 10 | 10 | -25 | 80 | FKM | 7541NAKBJN00 | 541N01   | - | - | - | - | - | 300 | - | 214 |
|           | 4 | 600 | 2 | 10 | 10 | -40 | 65 | NBR | 7541NAKBJN00 | 541N0108 | 2 | - | - | - | - | 300 | - | 214 |

Table continued on page 264

#### Notes:

- \* See Electrical Parts Group table at end of section
- 1. Please order two housings and coils for each valve
- 2. Operates with low temperatures down to -40 deg. C

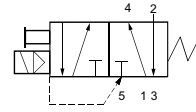
## Solenoid valves for actuator control - 3/2 or 5/2 valves - NAMUR interface-Spool design



## Solenoid valves for actuator control - 3/2 or 5/2 valves - NAMUR interface-Spool design

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure bar |     |    | Fluid temp. °C |     | Seat disc | Reference numbers      |                     |         |      | Power consumption (W) | Wt. (g) | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----|----------------|-----|-----------|------------------------|---------------------|---------|------|-----------------------|---------|------------------|----------|
|           |              |                      | Min                                  | Max | AC | Min            | Max |           | Global valve reference | Valve reference no. | Housing | Coil | DC                    | AC      |                  |          |

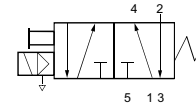
Pilot operated - Integrated pilot



### Anod. aluminium body/NAMUR interface - Spool design

|     |   |      |   |    |    |     |    |     |              |        |      |        |     |   |     |   |     |
|-----|---|------|---|----|----|-----|----|-----|--------------|--------|------|--------|-----|---|-----|---|-----|
| 1/4 | 8 | 1400 | 2 | 10 | 10 | -25 | 80 | NBR | 2341NAKBPNM1 | 341N02 | 8993 | 488980 | 2.5 | 2 | 470 | 1 | 220 |
|     | 8 | 1400 | 2 | 10 | 10 | -25 | 80 | NBR | 2341NAKBNNM0 | 341N12 | 8993 | 488980 | 2.5 | 2 | 470 | 1 | 221 |

Pilot operated



### Anod. aluminium body/NAMUR interface - Spool design

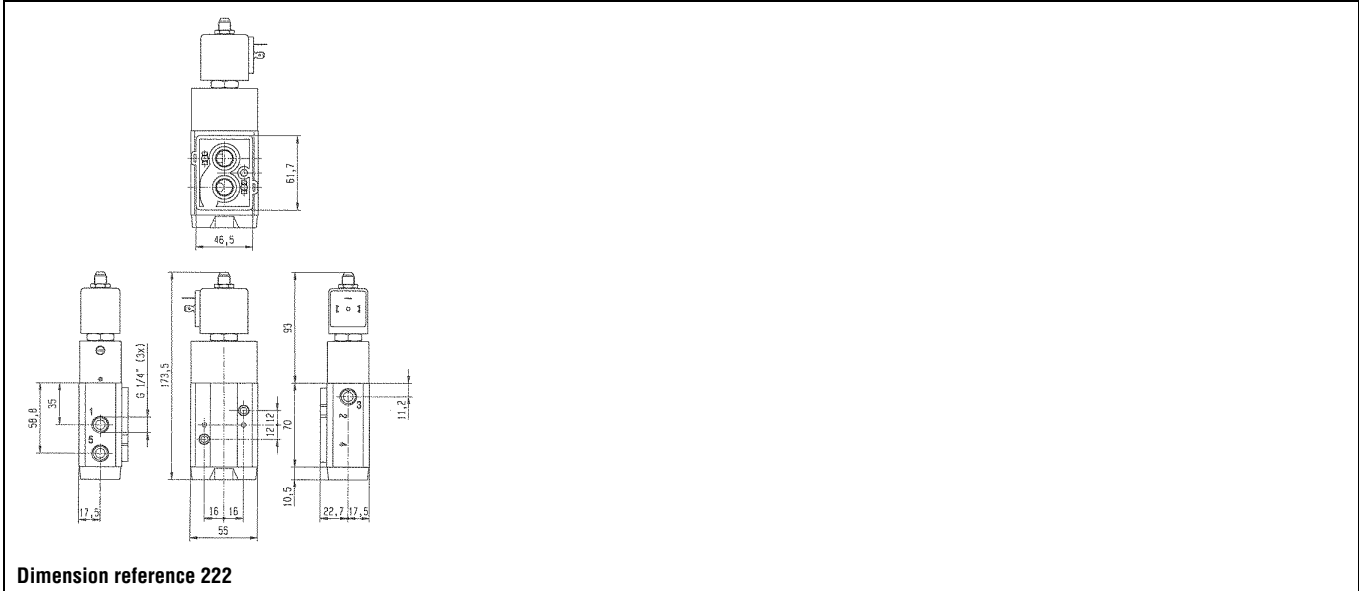
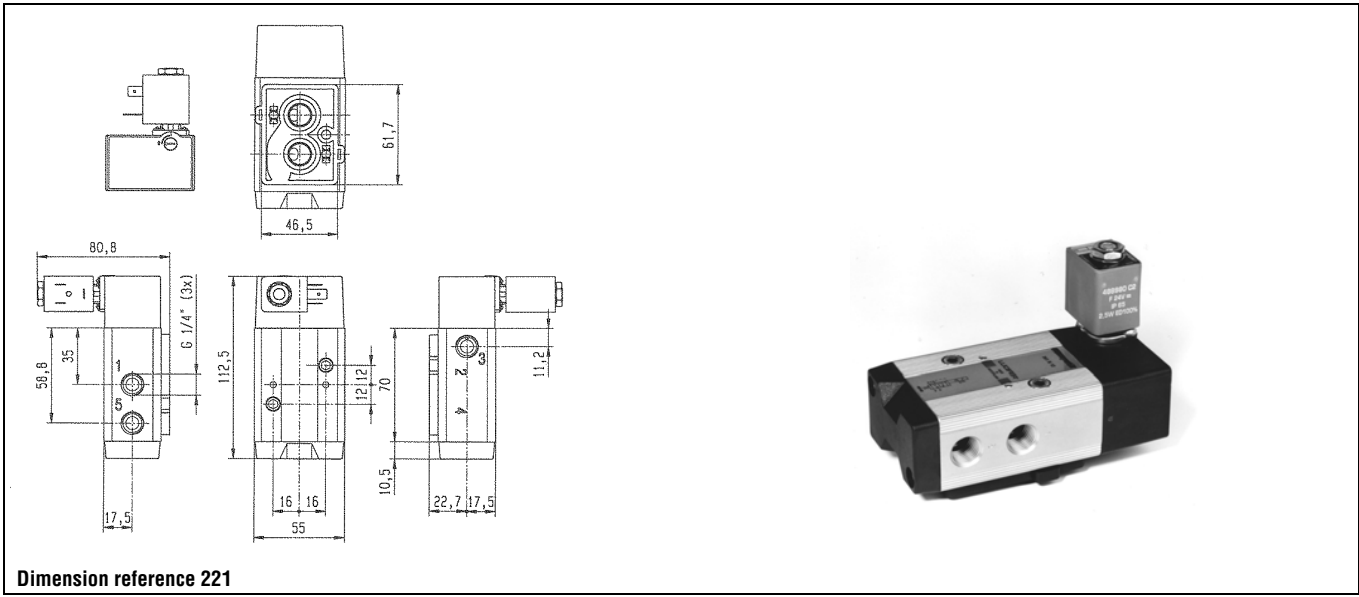
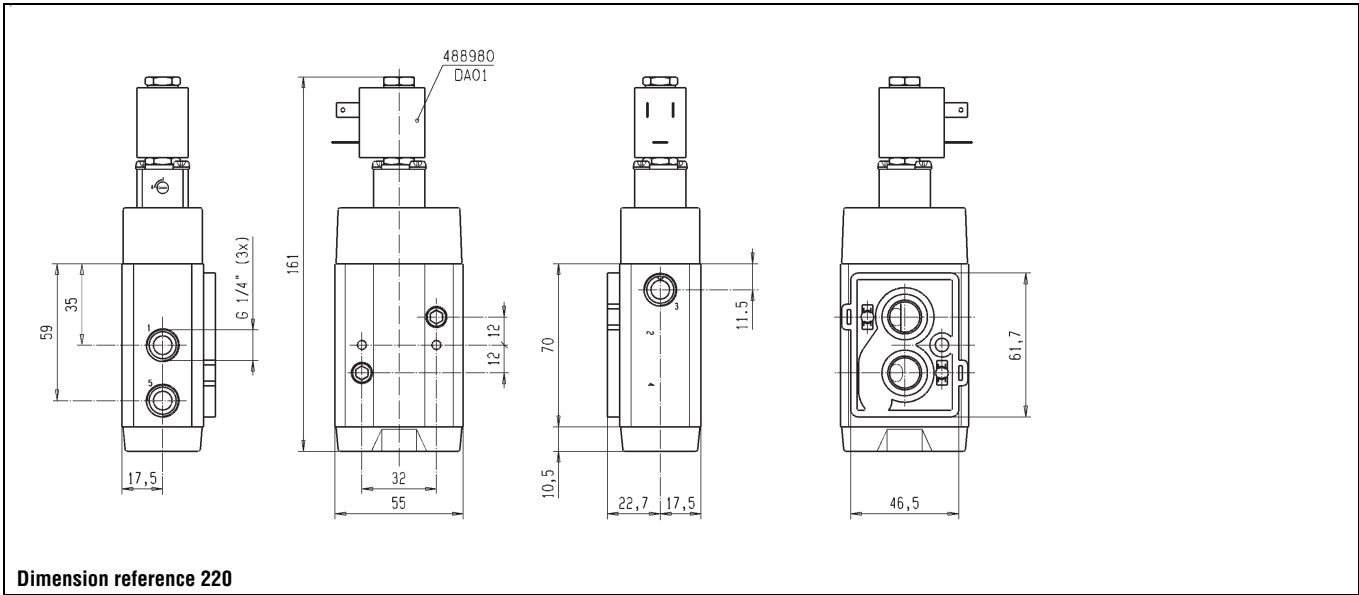
|     |   |      |   |    |    |     |    |     |              |        |      |        |   |   |     |   |     |
|-----|---|------|---|----|----|-----|----|-----|--------------|--------|------|--------|---|---|-----|---|-----|
| 1/4 | 8 | 1400 | 2 | 10 | 10 | -25 | 80 | NBR | 7341NAKBPNM1 | 341N22 | 2995 | 481865 | 9 | 8 | 690 | 2 | 222 |
|     | 8 | 1400 | 2 | 10 | 10 | -25 | 80 | NBR |              |        | 4270 | 481000 | 8 | 8 | 800 | 2 |     |

Table continued on page 266

#### Notes:

\* See Electrical Parts Group table at end of section

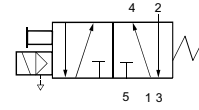
# Solenoid valves for actuator control - 3/2 or 5/2 valves - NAMUR interface-Spool design



## Solenoid valves for actuator control - 3/2 or 5/2 valves - NAMUR interface-Spool design

| Port size<br>G | Orifice<br>(mm) | Flow<br>factors<br>(L/min) | Admissible<br>differential<br>pressure bar |     |    | Fluid<br>temp.<br>°C |     | Seat<br>disc | Reference numbers         |                     |         |      | Power<br>consumption<br>(W) |    | Wt.<br>(g) | El. Part<br>Group<br>* | Dim<br>ref. |
|----------------|-----------------|----------------------------|--------------------------------------------|-----|----|----------------------|-----|--------------|---------------------------|---------------------|---------|------|-----------------------------|----|------------|------------------------|-------------|
|                |                 |                            | Min                                        | Max | AC | Min                  | Max |              | Global valve<br>reference | Valve reference no. | Housing | Coil | DC                          | AC |            |                        |             |

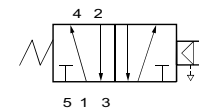
Pilot operated



### Anod. aluminium body/NAMUR interface - Spool design

|     |   |      |   |    |    |     |    |     |              |          |      |        |     |   |     |   |     |
|-----|---|------|---|----|----|-----|----|-----|--------------|----------|------|--------|-----|---|-----|---|-----|
| 1/4 | 8 | 1400 | 2 | 10 | 10 | -25 | 80 | NBR | 7341NAKBPNM0 | 341N32   | 2995 | 481865 | 9   | 8 | 740 | 2 | 223 |
|     | 8 | 1400 | 2 | 10 | 10 | -25 | 80 | NBR |              |          | 4270 | 481000 | 8   | 8 | 850 | 2 |     |
|     | 8 | 1400 | 2 | 10 | -  | -25 | 80 | FKM | 7341NAKBPNL2 | 341N3280 | 2995 | 482740 | 1.6 | - | 740 | 6 | 223 |
|     | 8 | 1400 | 2 | 10 | -  | -25 | 80 | FKM |              |          | -    | 491117 | 2.5 | - | 740 | 6 |     |

Pilot operated



### Anod. aluminium body/NAMUR interface - Spool design

|     |   |      |   |    |    |     |    |     |              |            |   |                        |     |   |      |   |      |
|-----|---|------|---|----|----|-----|----|-----|--------------|------------|---|------------------------|-----|---|------|---|------|
| 1/4 | 8 | 1400 | 2 | 10 | -  | -25 | 80 | NBR | 7341NAKBPN90 | 341N3290   | - | 483580.01 <sup>1</sup> | 0.4 | - | 850  | 7 | 223  |
|     | 8 | 1400 | 2 | 10 | 10 | -25 | 80 | NBR | 7341NAKBPN1D | 341N32001D | - | 483250                 | 8   | 8 | 1730 | 5 | 7754 |

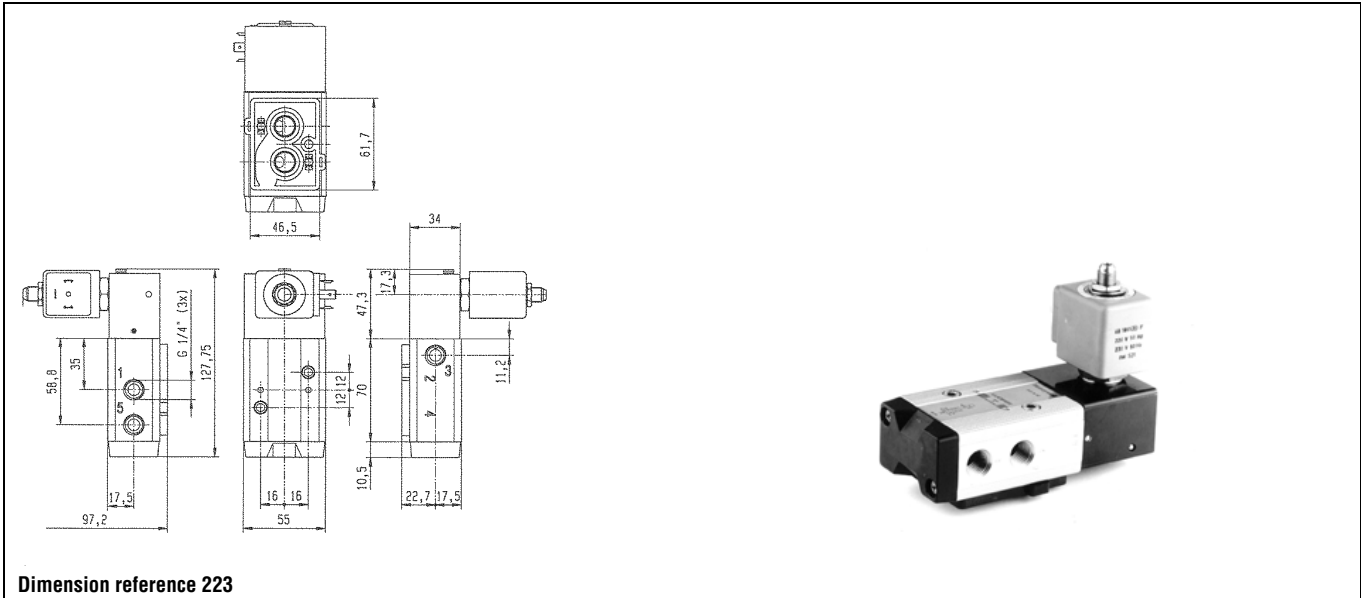
Table continued on page 268

#### Notes:

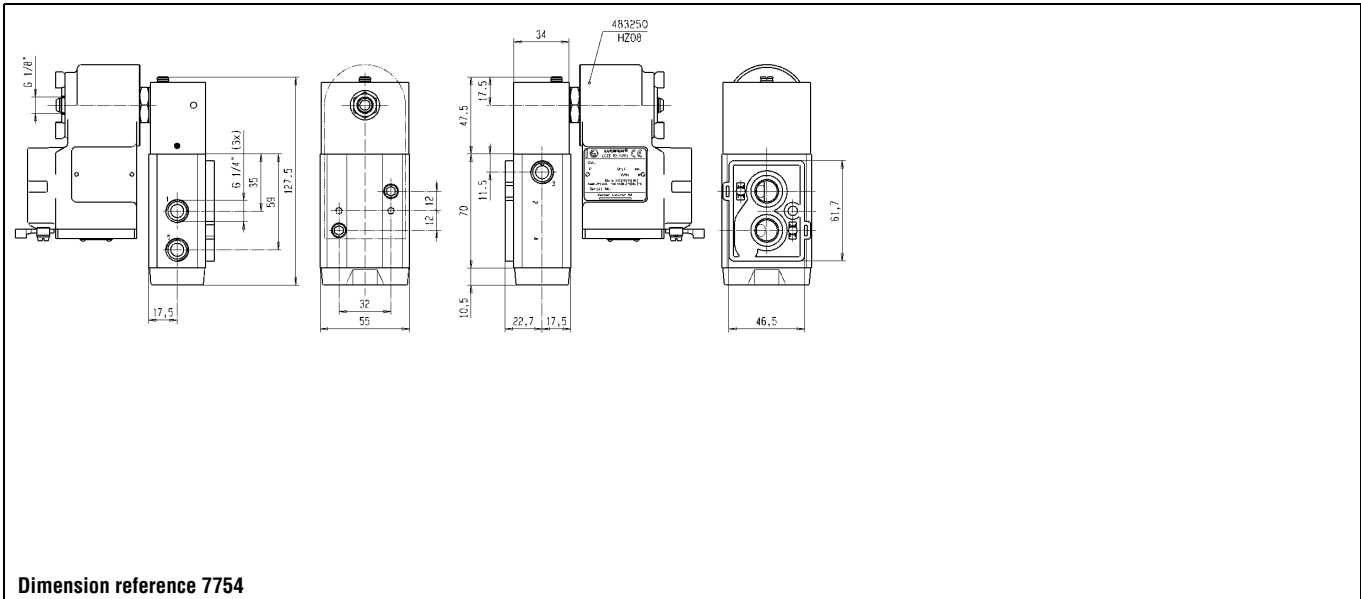
\* See Electrical Parts Group table at end of section

1. Other coil-housing available: 488650.01, 488660.01, 488670.01 (refer to electrical parts at end of this section)

# Solenoid valves for actuator control - 3/2 or 5/2 valves - NAMUR interface-Spool design



Dimension reference 223

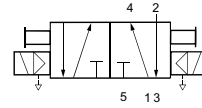


Dimension reference 7754

## Solenoid valves for actuator control - 3/2 or 5/2 valves - NAMUR interface-Spool design

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure bar |     |    | Fluid temp. °C |     | Seat disc | Reference numbers      |                     |         |      | OR | Power consumption (W) |    | Wt. (g) | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----|----------------|-----|-----------|------------------------|---------------------|---------|------|----|-----------------------|----|---------|------------------|----------|
|           |              |                      | Min                                  | Max | AC | Min            | Max |           | Global valve reference | Valve reference no. | Housing | Coil |    | DC                    | AC |         |                  |          |
| G         |              | Qn                   |                                      |     |    |                |     |           |                        |                     |         |      |    |                       |    |         |                  |          |

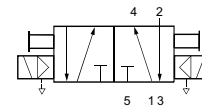
Two solenoids and main pressure supply - Integrated pilot



### Anod. aluminium body/NAMUR interface - Spool design

|     |   |      |   |    |    |     |    |     |              |        |      |        |   |     |   |     |   |      |
|-----|---|------|---|----|----|-----|----|-----|--------------|--------|------|--------|---|-----|---|-----|---|------|
| 1/4 | 8 | 1400 | 2 | 10 | 10 | -25 | 80 | NBR | 2347NAKBPNM0 | 347N12 | 8993 | 488980 | 1 | 2.5 | 2 | 640 | 1 | 7315 |
|-----|---|------|---|----|----|-----|----|-----|--------------|--------|------|--------|---|-----|---|-----|---|------|

Two solenoids and main pressure supply



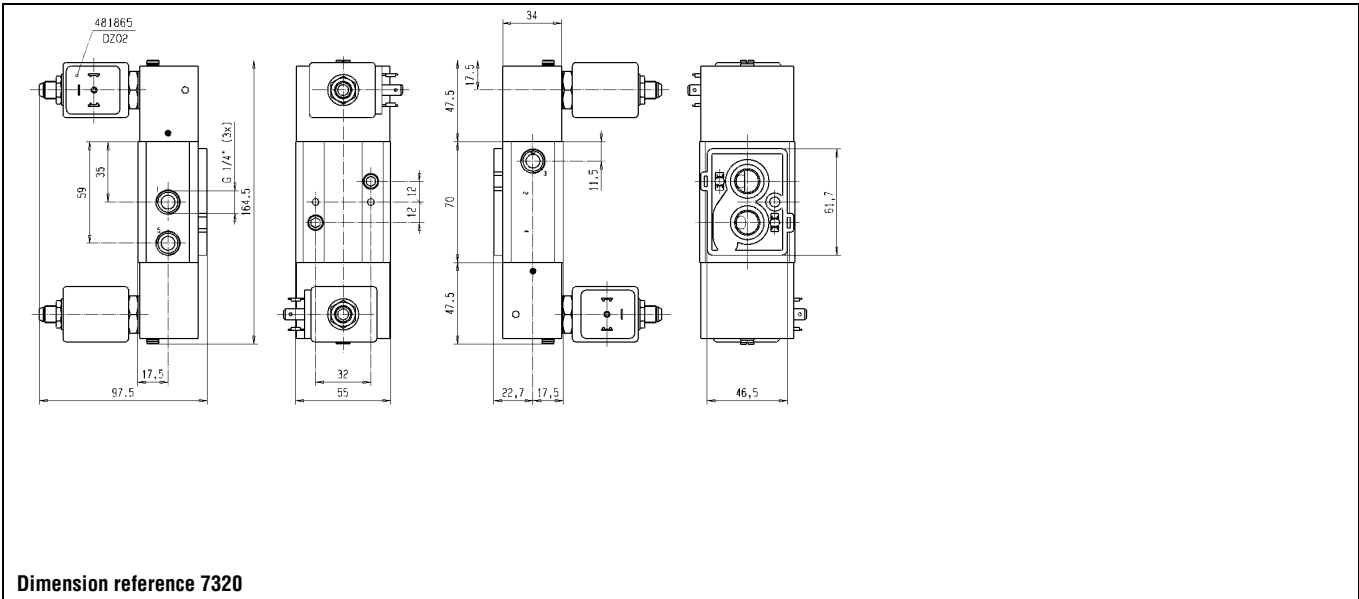
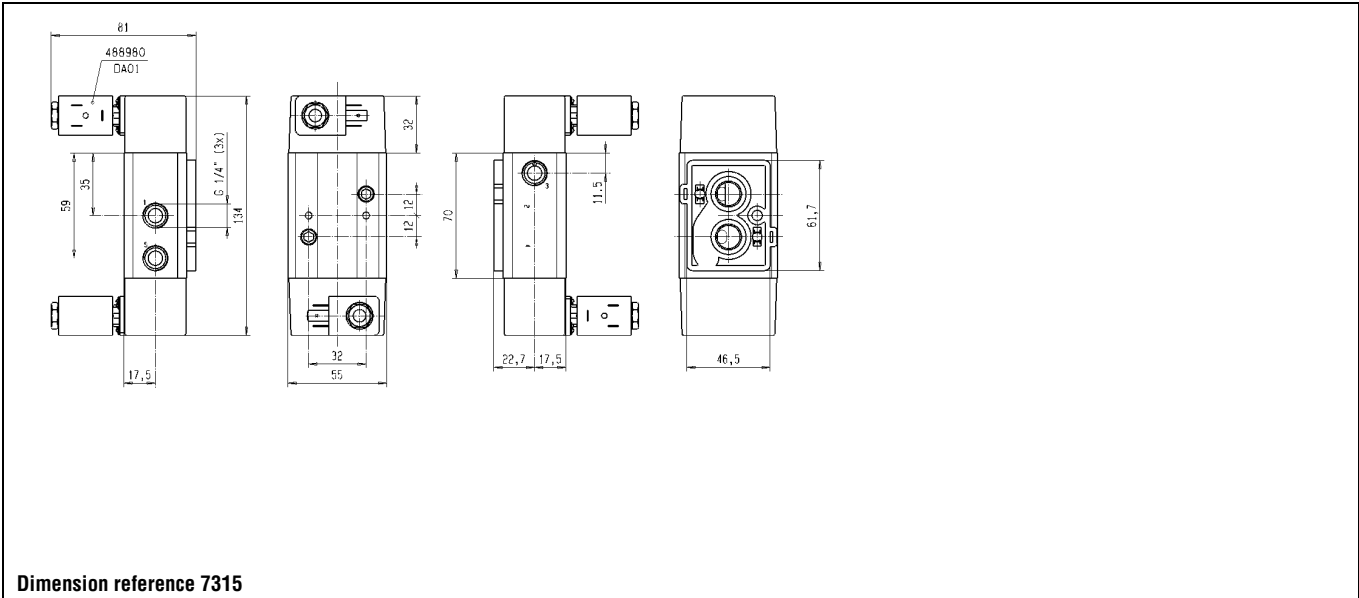
### Anod. aluminium body/NAMUR interface - Spool design

|     |   |      |   |    |    |     |    |     |              |        |      |        |   |   |   |     |   |      |
|-----|---|------|---|----|----|-----|----|-----|--------------|--------|------|--------|---|---|---|-----|---|------|
| 1/4 | 8 | 1400 | 2 | 10 | 10 | -25 | 80 | NBR | 7347NAKBPNM0 | 347N32 | 2995 | 481865 | 1 | 9 | 8 | 770 | 2 | 7320 |
|     | 8 | 1400 | 2 | 10 | 10 | -25 | 80 | NBR |              |        | 4270 | 481000 | 1 | 8 | 8 | 980 | 2 |      |

#### Notes:

- \* See Electrical Parts Group table at end of section
- 1. Please order two housings and coils for each valve

Solenoid valves for actuator control - 3/2 or 5/2 valves - NAMUR interface-Spool design



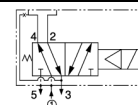
# Solenoid valves for actuator control



# 3/2 5/2

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure bar |     | Fluid temp. °C |     | Seat disc | Reference numbers      |                     |         |      | Power consumption (W) |    | Wt. (g) | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----------------|-----|-----------|------------------------|---------------------|---------|------|-----------------------|----|---------|------------------|----------|
|           |              |                      | Min                                  | Max | Min            | Max |           | Global valve reference | Valve reference no. | Housing | Coil | DC                    | AC |         |                  |          |
| G         |              | Qn                   |                                      |     |                |     |           |                        |                     |         |      |                       |    |         |                  |          |

Pilot operated



## Anod. aluminium body/NAMUR interface - Poppet design

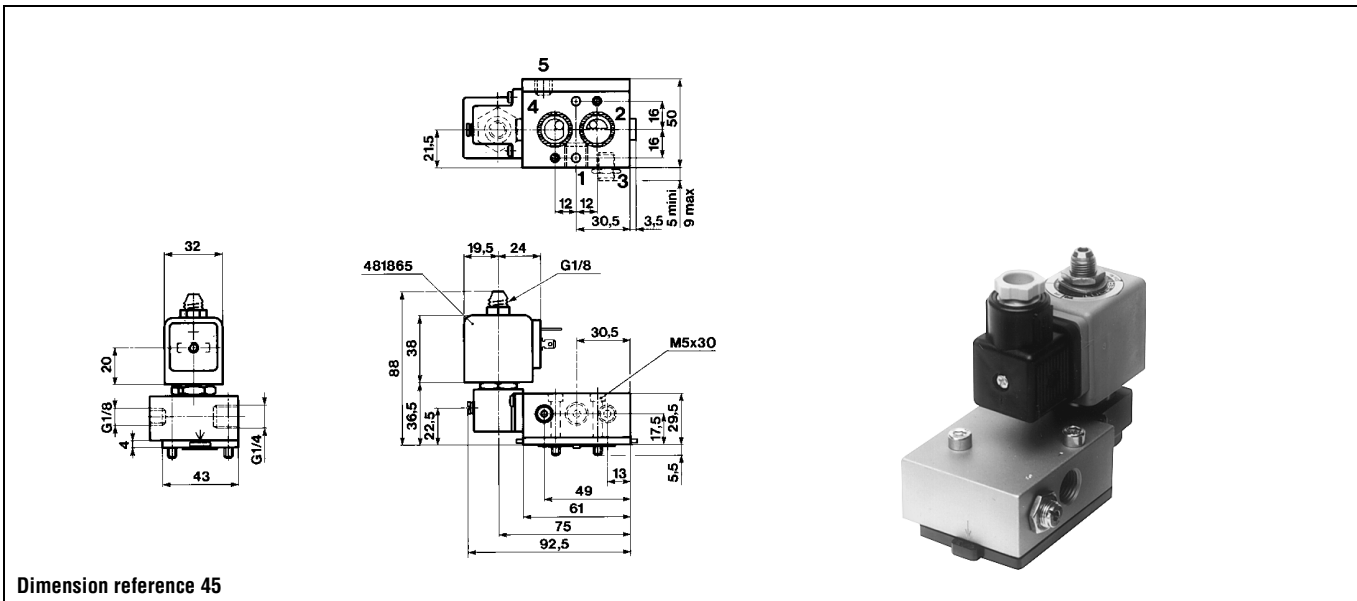
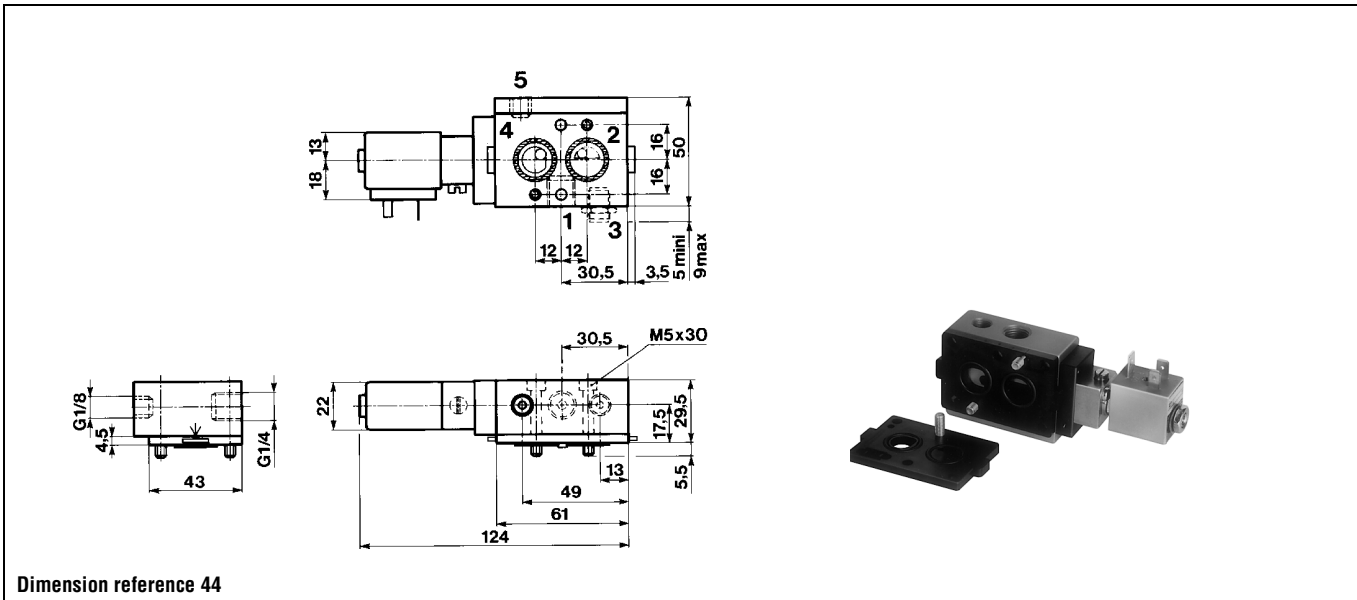
|           |   |     |   |    |    |     |    |     |              |            |      |                        |     |   |      |   |    |
|-----------|---|-----|---|----|----|-----|----|-----|--------------|------------|------|------------------------|-----|---|------|---|----|
| 1/4 - 1/8 | 4 | 355 | 1 | 10 | 10 | -10 | 75 | NBR | -            | 341L9504   | 8993 | 488980                 | 2.5 | 2 | 360  | 1 | 44 |
|           | 4 | 355 | 1 | 10 | 10 | -10 | 75 | NBR | 7341LAKBGN1D | 341L95341D | -    | 483250                 | 8   | 8 | 1470 | 5 | 45 |
|           | 4 | 355 | 1 | 10 | 10 | -10 | 75 | NBR | 7341LAKBGNM0 | 341L9534   | 2995 | 481865                 | 9   | 8 | 470  | 2 | 45 |
|           | 4 | 355 | 1 | 10 | -  | -10 | 75 | NBR | 7341LAKBGNL2 | 341L9584   | -    | 482740                 | 1.6 | - | 470  | 6 | 45 |
|           | 4 | 355 | 1 | 10 | -  | -10 | 75 | NBR | 7341LAKBGN90 | 341L9594   | -    | 483580.01 <sup>1</sup> | 0.4 | - | 470  | 7 | 45 |
|           | 4 | 355 | 2 | 10 | -  | -25 | 65 | PUR | 7341LAPBGPL2 | 341L9588   | -    | 482740                 | 1.6 | - | 470  | 6 | 45 |
|           | 4 | 355 | 2 | 10 | -  | -25 | 75 | PUR | -            | 341L9598   | -    | 483580.01 <sup>1</sup> | 0.4 | - | 470  | 7 | 45 |

### Notes:

\* See Electrical Parts Group table at end of section

1. Other coil-housing available: 488650.01, 488660.01, 4888670.01 (refer to electrical parts at end of this section)

Solenoid valves for actuator control - 3/2 or 5/2 valves - NAMUR interface-Poppet design



## Electrical parts options with 3/2, 5/2 valves for pneumatic actuator control

| El.part<br>Group | Coil                  | Protection class | Protection class /<br>Temperature class | Power |       | Coil<br>Order No. | Coil<br>Ref. No. | Connection                    | Housing<br>Order No. | Housing<br>Ref. No. | Ambient temp. |          |
|------------------|-----------------------|------------------|-----------------------------------------|-------|-------|-------------------|------------------|-------------------------------|----------------------|---------------------|---------------|----------|
|                  |                       |                  |                                         | DC    | AC    |                   |                  |                               |                      |                     | min.          | max.     |
| 1                | 22 mm                 | IP 65            | Class F                                 | 2.5 W | 2 W   | DA01              | 488980           | for DIN plug                  | A0                   | 8993                | -40           | 50       |
|                  |                       | IP 65            | Class F                                 | 2.5 W | 2 W   | DA02              | 481045           | with DIN plug                 | A0                   | 8993                | -40           | 50       |
|                  |                       | IP 65            | Class F                                 | 5 W   | 4 W   | DA03              | 481180           | for DIN plug                  | A0                   | 8993                | -40           | 50       |
|                  |                       | IP 65            | Class F                                 | 5 W   | 4 W   | DA04              | 481530           | with DIN plug                 | A0                   | 8993                | -40           | 50       |
|                  |                       | IP 65            | EEx m II T4                             | 5 W   | 4 W   | VA01              | 482605           | with 1500mm cable             | 00                   | -                   | -40           | 50       |
|                  |                       | IP 65            | EEx m II T5                             | 2.5 W | 2 W   | VA02              | 482606           | with 1500mm cable             | 00                   | -                   | -40           | 50       |
| 2                | 32 mm<br>(Std)        | IP 65            | Class F                                 | 9 W   | 8 W   | DZ02              | 481865           | for DIN plug                  | N1                   | 2995                | -40           | 50       |
|                  |                       | IP 65            |                                         | 9 W   | 8 W   | DZ03              | 482725           | with DIN plug                 | N1                   | 2995                | -40           | 50       |
|                  |                       | IP 65            | Class H                                 | 9 W   | 8 W   | DZ04              | 482453           | for DIN plug                  | N1                   | 2995                | -40           | 50       |
|                  |                       | IP 65            |                                         | 9 W   | 8 W   | DZ05              | 492726           | with DIN plug                 | N1                   | 2995                | -40           | 50       |
|                  |                       | IP 65            | Class F, 50/60 Hz                       | -     | 9 W   | DZ06              | 483510           | for DIN plug                  | N1                   | 2995                | -40           | 50       |
|                  |                       | IP 65            |                                         | -     | 9 W   | DZ07              | 482635           | with DIN plug                 | N1                   | 2995                | -40           | 50       |
|                  |                       | IP 65            | EEx m II T4                             | 9 W   | 8 W   | HZ05              | 492670           | with 3000mm cable             | 00                   | -                   | -40           | 40       |
|                  |                       | IP 65            | Class H                                 | 14 W  | 14 W  | DZ08              | 492425           | for DIN plug                  | N1                   | 2995                | -40           | 50       |
|                  | 50 mm<br>(Std)        | IP 65            |                                         | 14 W  | 14 W  | DZ09              | 492727           | with DIN plug                 | N1                   | 2995                | -40           | 50       |
|                  |                       | IP10 / IP 44     | Class F                                 | 8 W   | 8 W   | EZ01              | 481000           | screw-terminals               | E0                   | 4270                | -40           | 50       |
|                  |                       | IP10 / IP 44     | Class H                                 | 8 W   | 8 W   | EZ02              | 485100           | screw-terminals               | E0                   | 4270                | -40           | 50       |
|                  |                       | IP 67            | Class F, M20x1.5                        | 8 W   | 8 W   | EZ01              | 481000           | screw-terminals               | G1                   | 4538                | -40           | 50       |
|                  |                       | IP 65            | EEx m II T5/T4                          | 9 W   | 8 W   | VZ01              | 492070           | with 1500mm cable             | 00                   | -                   | -40           | 40/65    |
|                  |                       | IP 67            | EEx me II T4                            | 8 W   | 8 W   | HZ06              | 483371           | for cable connection          | 00                   | -                   | -40           | 65       |
|                  |                       | IP 66            | EEx me II T3/T4                         | 11 W  | 9 W   | VZ03              | 492190           | for cable connection          | 00                   | -                   | -40           | 75/40    |
|                  |                       |                  |                                         |       |       |                   |                  |                               |                      |                     |               |          |
| 3                | 32 mm                 | IP 65            | Class H                                 | -     | 14 W  | DZ08              | 492425           | for DIN plug                  | N1                   | 2995                | -40           | 50       |
| 4                | 50 mm<br>(impulse)    | IP10 / IP 44     | Class F                                 | -     | 11 W  | MZ01              | 484990           | screw-terminals               | E1                   | 4269                | -25           | 50       |
|                  |                       | IP10 / IP 44     | Class F                                 | 13 W  | -     | MZ02              | 485400           | screw-terminals               | E1                   | 4269                | -25           | 50       |
| 5                | 50 mm                 | IP 54            | EEx d IIC T4/T5/T6                      | 8 W   | 8 W   | HZ08              | 483250           | for cable connection, 1/2 NPT | 00                   | -                   | -40           | 80/75/60 |
| 6                | 32 mm<br>(Miniwatt)   | IP 65            | Class F                                 | 1.6 W | -     | DZ10              | 482740           | for DIN plug                  | N1                   | 2995                | -40           | 50       |
|                  |                       | IP 65            | Class F                                 | 1.6W  | -     | DZ11              | 482745           | with DIN plug                 | N1                   | 2995                | -40           | 50       |
|                  | 50 mm<br>(Miniwatt)   | IP 67            | EEx me II T5                            | 2.5 W | -     | VZ04              | 491117           | for cable connection          | 00                   | -                   | -40           | 65       |
|                  |                       | IP 67            | EEx m II T5/T4                          | 2.5 W | 2.5 W | VZ05              | 492370           | with 1500mm cable             | 00                   | -                   | -40           | 40/65    |
|                  |                       | IP 66            | EEx me II T6/T5                         | 2.5 W | 2.5 W | VZ06              | 492390           | for cable connection          | 00                   | -                   | -40           | 40/75    |
| 7                | 32 mm                 | IP 65            | EEx ia II C T6                          | 0.4 W | -     | DZ12              | 483580.01        | for DIN plug                  | N1                   | 2995                | -25           | 55       |
|                  |                       | IP 65            |                                         | 0.4 W | -     | DZ13              | 483960.01        | with DIN plug                 | N1                   | 2995                | -25           | 55       |
|                  | 50 mm                 | IP 66            | EEx ia II C T6                          | 0.4 W | -     | VZ07              | 488650.01        | for cable connection          | 00                   | -                   | -25           | 65       |
|                  |                       | IP 67            |                                         | 0.4 W | -     | VZ08              | 488660.01        | with 2000mm cable             | 00                   | -                   | -25           | 65       |
|                  |                       | IP 65            |                                         | 0.4 W | -     | VZ09              | 488670.01        | with DIN plug                 | 00                   | -                   | -25           | 65       |
| 9                | 32 mm<br>50 mm<br>CPR | IP 65            | Class F                                 | 9 W   | 9 W   | DZ93              | 492387           | with DIN plug                 | N9                   | 8886                | -40           | 50       |
|                  |                       | IP 67            | EEx me II T4                            | 8 W   | -     | HZ14              | 483371.01        | for cable connection          | 00                   | -                   | -40           | 65       |
|                  |                       | IP 66            | EEx me II T6/T5                         | 1.5 W | -     | VZ13              | 492200           | for cable connection          | 00                   | -                   | -40           | 40/75    |
|                  |                       | IP 66            | EEx me II T5/T4                         | 6 W   | 6 W   | VZ14              | 492300           | for cable connection          | 00                   | -                   | -40           | 40/75    |
|                  |                       | IP 67            | EEx m II T5/T4                          | 5 W   | 5 W   | VZ02              | 492270           | with 1500mm cable             | 00                   | -                   | -40           | 40/65    |
|                  |                       | IP 66            | EEx ib IIB T6                           | 0.8 W | -     | VZ11              | 482660           | for cable connection          | 00                   | -                   | -40           | 75       |
|                  |                       | IP 66            | EEx ib IIC T6                           | 0.8 W | -     | VZ12              | 483330.01        | for cable connection          | 00                   | -                   | -40           | 75       |
|                  |                       | IP 66            | EEx ia IIC T6                           | 0.8W  | -     | VZ92              | 492965.02        | for cable connection          | 00                   | -                   | -40           | 65       |
| 10               | 50 mm<br>OFFSHORE     | IP 66            | EEx me II T6/T5                         | 1.5 W | -     | VZ26              | 492210           | for cable connection          | 00                   | -                   | -40           | 40/75    |
|                  |                       | IP 66            | EEx me II T5/T4                         | 6 W   | 6 W   | VZ27              | 492310           | for cable connection          | 00                   | -                   | -40           | 40/75    |
|                  |                       | IP 66            | EEx ib IIB T6                           | 0.8 W | -     | VZ11              | 482660           | for cable connection          | 00                   | -                   | -40           | 75       |
|                  |                       | IP 66            | EEx ib IIC T6                           | 0.8 W | -     | VZ12              | 483330.01        | for cable connection          | 00                   | -                   | -40           | 75       |
|                  |                       | IP 66            | EEx ia IIC T6                           | 0.8W  | -     | VZ91              | 492965.01        | for cable connection          | 00                   | -                   | -40           | 65       |
| 11               | 50 mm                 | IP 65            | EEx d II C T4/T5/T6                     | 8 W   | 8 W   | HZ19              | 483270           | for cable , M20x1.5           | 00                   | -                   | -40           | 80/75/60 |
|                  |                       | IP 65            | EEx d II C T4/T5/T6                     | 8 W   | 8 W   | HZ21              | 483270.02        | for cable , 1/2 NPT           | 00                   | -                   | -40           | 80/75/60 |
| 12               | 50 mm                 | IP 66            | EEx me II T5/T4                         | 6 W   | 6 W   | VZ27              | 492310           | for cable connection          | 00                   | -                   | -40           | 40/75    |
|                  |                       | IP 66            | EEx ib IIB T6                           | 0.8 W | -     | VZ22              | 482160.01        | for cable connection          | 00                   | -                   | -40           | 65       |
|                  |                       | IP 66            | EEx ib IIC T6                           | 0.8 W | -     | VZ23              | 482870.01        | for cable connection          | 00                   | -                   | -40           | 65       |

Note: This table is indicative only. Please contact your distributor to confirm your selection.

# 316 St. Steel valves for chemical, petrochemical and offshore applications

| ACTUATION                         | CONNECTION | ORIFICE (MM) | MAX. PRESSURE (BAR) | PAGE    |
|-----------------------------------|------------|--------------|---------------------|---------|
| Direct operated                   | 1/4        | 2.5 to 5.0   | 1000.0              | 274/278 |
|                                   | 3/8        | 5.0          | 1000.0              | 282     |
|                                   | SB         | 2.5          | 1400.0              | 276/278 |
| Direct operated with manual reset | 1/4        | 5.0          | 1000.0              | 274/280 |
|                                   | 3/8        | 5.0          | 1000.0              | 274/276 |

Notes:

# 316 St. Steel valves for chemical, petrochemical and offshore applications

# 3/2

## Applications

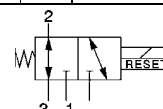
Directional control and fail/safe function in valve actuator circuits in corrosive and hazardous environment.

Solenoid pilots for main stage valves in corrosive and hazardous locations.



| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure kPa |     | Fluid temp. °C | Admissible ambient temp. °C | Seat disc | Reference numbers   |      | Power consumption (W) |    | Degree of protection Ex | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----------------|-----------------------------|-----------|---------------------|------|-----------------------|----|-------------------------|------------------|----------|
|           |              |                      | Min                                  | Max |                |                             |           | Valve reference no. | Coil | DC                    | AC |                         |                  |          |
| NPT       |              | Qn                   |                                      |     |                |                             |           |                     |      |                       |    |                         |                  |          |

Direct operated with manual reset



## 316L Stainless Steel body/Pipe mounting

|     |   |     |   |      |      |            |            |     |             |              |           |              |     |   |                    |    |      |
|-----|---|-----|---|------|------|------------|------------|-----|-------------|--------------|-----------|--------------|-----|---|--------------------|----|------|
| 1/4 | 5 | 680 | 0 | 1000 | 1000 | -25 to +65 | -25 to +65 | NBR | U033X51561D | <sup>1</sup> | 483270    | <sup>2</sup> | 8   | 8 | EEx d IIC T4/T5/T6 | 11 | 7030 |
|     | 5 | 680 | 0 | 1000 | 1000 | -25 to +65 | -25 to +65 | NBR |             |              | 483270.02 | <sup>2</sup> | 8   | 8 | EEx d IIC T5       | 11 |      |
|     | 5 | 680 | 0 | 1000 | -    | -25 to +65 | -25 to +65 | NBR | U033X5156   | <sup>1</sup> | 482870.01 | <sup>2</sup> | 0.8 | - | EEx ia IIC T6      | 12 | 7771 |
|     | 5 | 680 | 0 | 1000 | 1000 | -25 to +65 | -25 to +65 | NBR |             |              | 492310    | <sup>2</sup> | 6   | 6 | EEx me II T4(T5)   | 12 |      |
| 3/8 | 5 | 680 | 0 | 1000 | 1000 | -25 to +65 | -25 to +65 | NBR | U033X52561D | <sup>1</sup> | 483270    | <sup>2</sup> | 8   | 8 | EEx d II C T4(T6)  | 11 | 7672 |
|     | 5 | 680 | 0 | 1000 | 1000 | -25 to +65 | -25 to +65 | NBR |             |              | 483270.02 | <sup>2</sup> | 8   | 8 | EEx d II C T4(T6)  | 11 |      |

Table continued on page 276

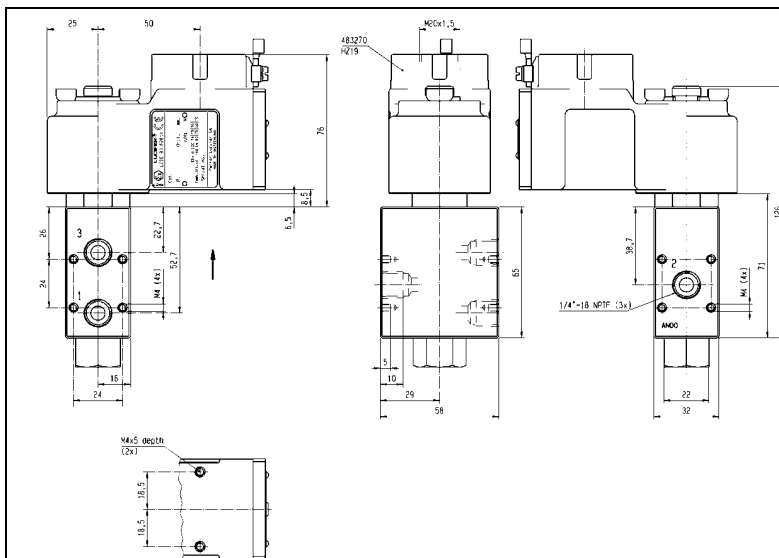
## Notes:

\* See Electrical Parts Group table at end of section

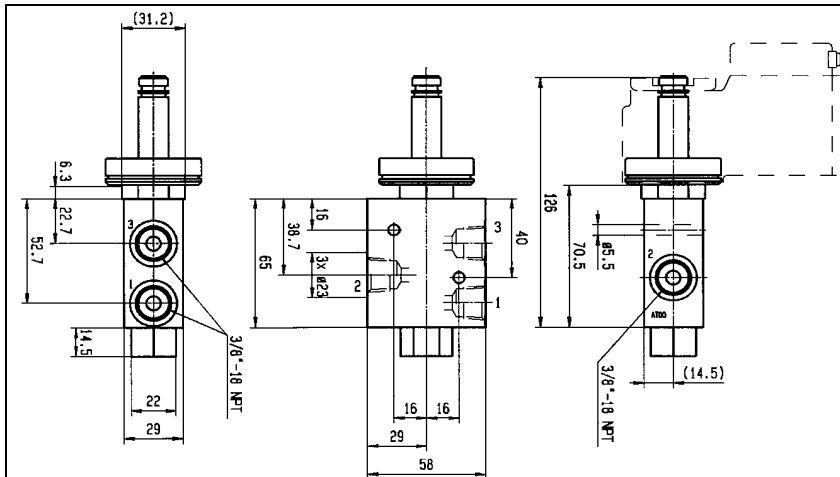
1. With manual reset

2. Valve with NPT ports

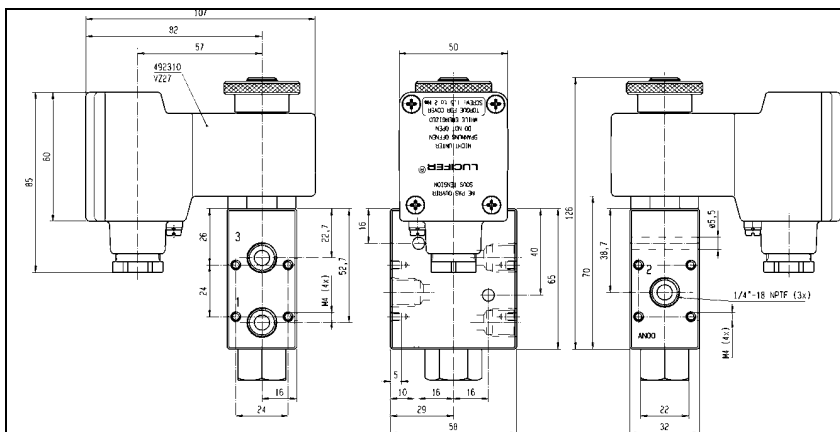
## 316 St. Steel valves for chemical, petrochemical and offshore applications



**Dimension reference 7030**



**Dimension reference 7672**



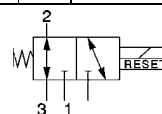
**Dimension reference 7771**



## 316 St. Steel valves for chemical, petrochemical and offshore applications

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure kPa |     |    | Fluid temp. °C | Admissible ambient temp. °C | Seat disc | Reference numbers   |      | Power consumption (W) |    | Degree of protection Ex | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----|----------------|-----------------------------|-----------|---------------------|------|-----------------------|----|-------------------------|------------------|----------|
|           |              |                      | Min                                  | Max | AC |                |                             |           | Valve reference no. | Coil | DC                    | AC |                         |                  |          |
| NPT       |              | Qn                   |                                      |     |    |                |                             |           |                     |      |                       |    |                         |                  |          |

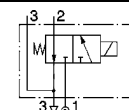
Direct operated with manual reset



### 316L Stainless Steel body/Pipe mounting

|     |   |     |   |      |      |            |            |     |           |   |           |   |     |   |                  |    |      |
|-----|---|-----|---|------|------|------------|------------|-----|-----------|---|-----------|---|-----|---|------------------|----|------|
| 3/8 | 5 | 680 | 0 | 1000 | -    | -25 to +65 | -25 to +65 | NBR | U033X5256 | 1 | 482870.01 | 2 | 0.8 | - | EEx ia IIC T6    | 12 | 7671 |
|     | 5 | 680 | 0 | 1000 | 1000 | -25 to +65 | -25 to +65 | NBR |           |   | 492310    | 2 | 6   | 6 | EEx me II T4(T5) | 12 |      |

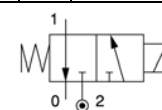
Direct operated



### 316L Stainless Steel body/NAMUR interface

|     |   |     |   |      |      |            |            |     |           |   |           |     |   |                  |      |      |
|-----|---|-----|---|------|------|------------|------------|-----|-----------|---|-----------|-----|---|------------------|------|------|
| 3/8 | 5 | 680 | 0 | 1000 | 1000 | -25 to +65 | -25 to +65 | NBR | U131X1201 | 2 | 492965.01 | 0.8 | - | EEx ia IIC T6    | 9,10 | 7668 |
|     | 5 | 680 | 0 | 1000 | 1000 | -25 to +65 | -25 to +65 | NBR |           |   | 492310    | 6   | 6 | EEx me II T4(T5) | 9,10 |      |

Direct operated



### 316L Stainless Steel body/Sub-base mounting

|    |     |     |   |      |      |            |            |     |           |   |           |     |   |                  |    |    |
|----|-----|-----|---|------|------|------------|------------|-----|-----------|---|-----------|-----|---|------------------|----|----|
| SB | 2.5 | 220 | 0 | 1000 | -    | -25 to +65 | -25 to +50 | FKM | U131F5695 | 2 | 492965.01 | 0.8 | - | EEx ia IIC T6    | 10 | 85 |
|    | 2.5 | 220 | 0 | 1000 | 1000 | -25 to +75 | -25 to +50 | FKM |           |   | 492310    | 6   | 6 | EEx me II T4(T5) | 10 |    |

Table continued on page 278

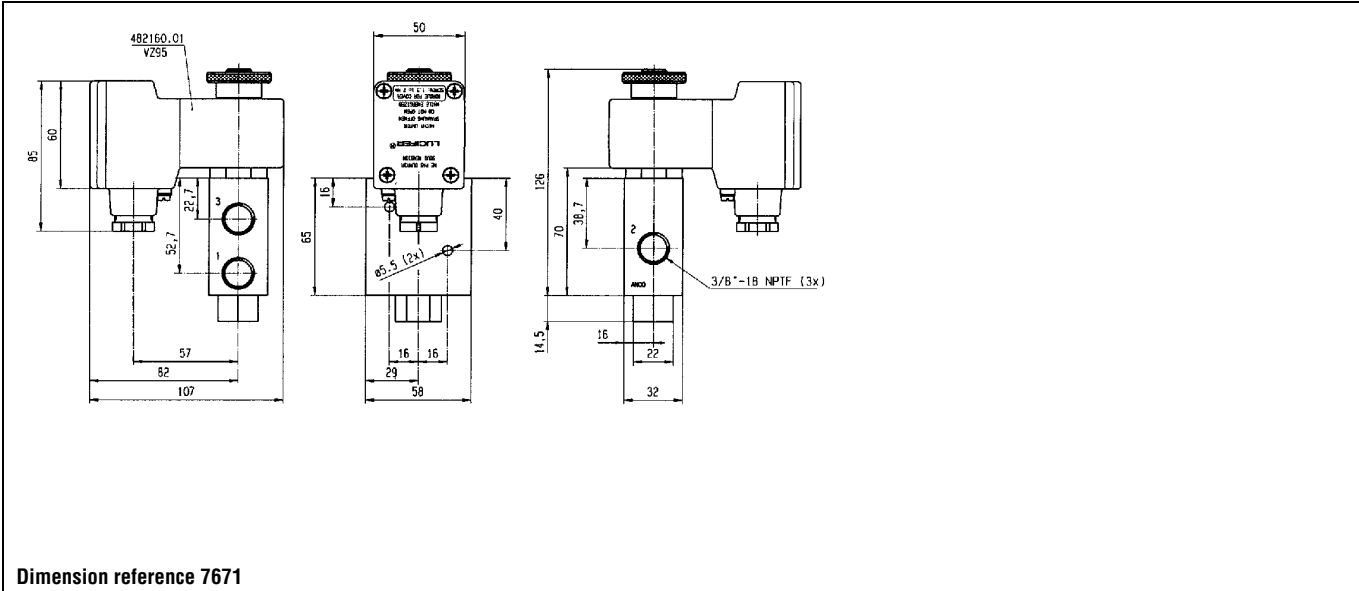
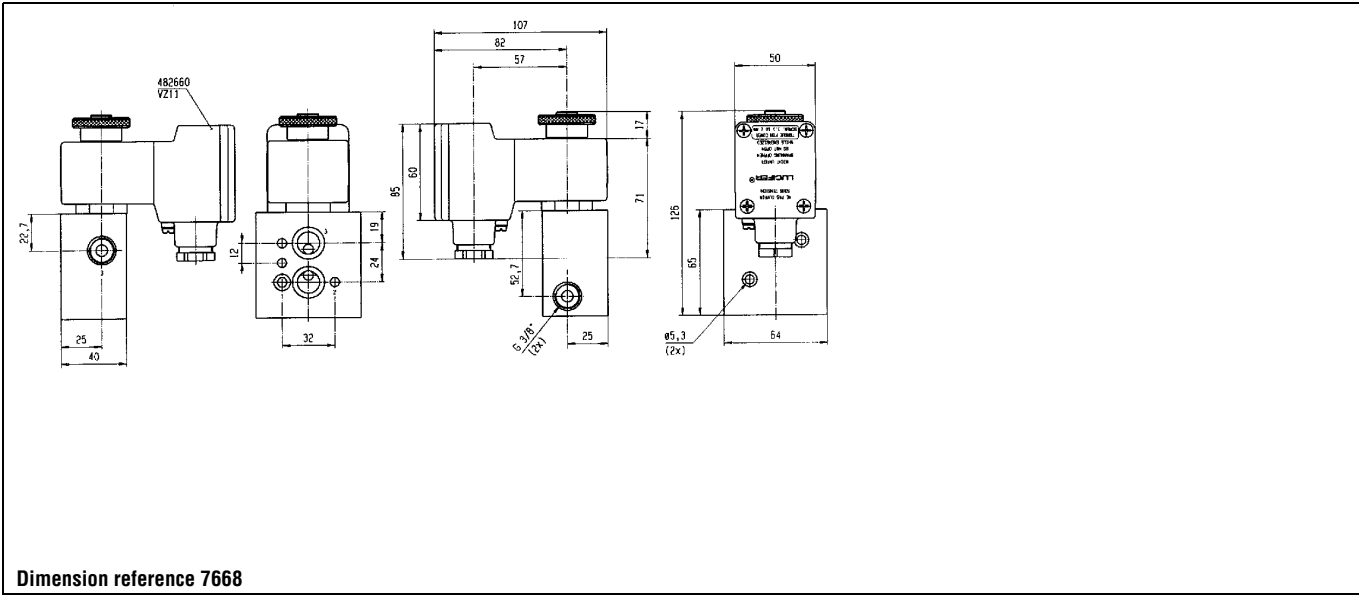
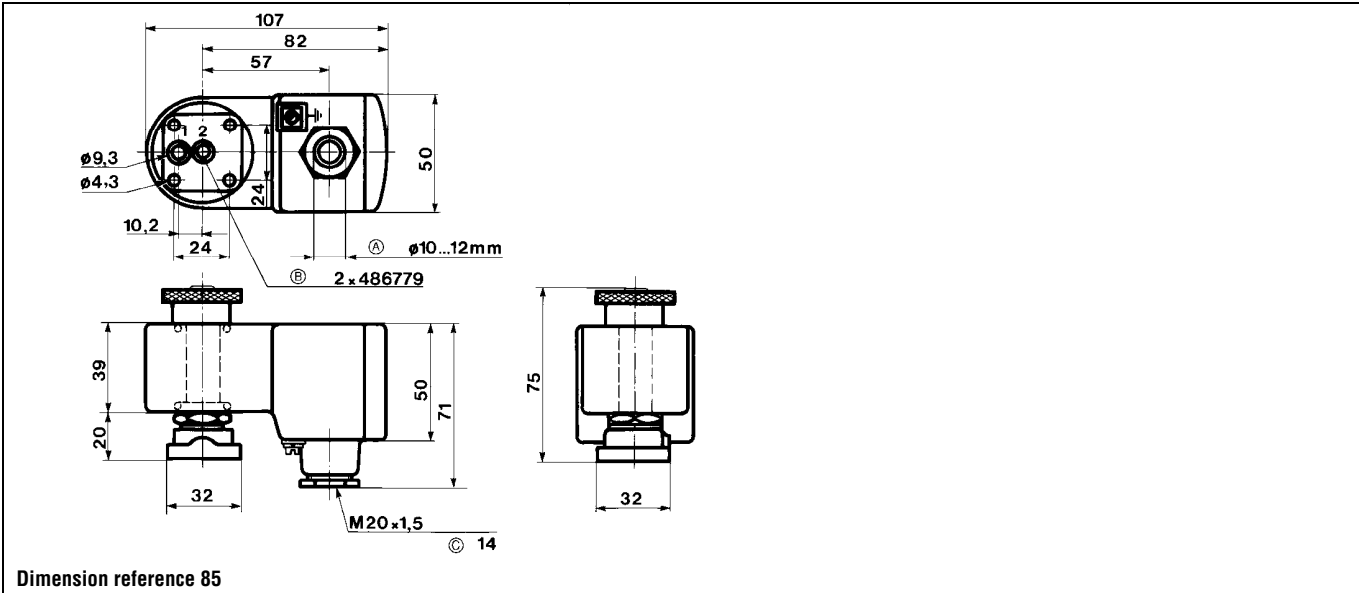
#### Notes:

\* See Electrical Parts Group table at end of section

1. With manual reset

2. Valve with NPT ports

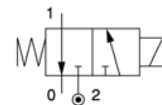
# 316 St. Steel valves for chemical, petrochemical and offshore applications



## 316 St. Steel valves for chemical, petrochemical and offshore applications

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure kPa |     |    | Fluid temp. °C | Admissible ambient temp. °C | Seat disc | Reference numbers   |      | Power consumption (W) |    | Degree of protection Ex | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----|----------------|-----------------------------|-----------|---------------------|------|-----------------------|----|-------------------------|------------------|----------|
|           |              |                      | Min                                  | Max | AC |                |                             |           | Valve reference no. | Coil | DC                    | AC |                         |                  |          |
| NPT       |              | Qn                   |                                      |     |    |                |                             |           |                     |      |                       |    |                         |                  |          |

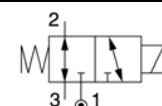
Direct operated



### 316L Stainless Steel body/Sub-base mounting

|    |     |     |   |      |      |            |            |     |                          |           |   |   |              |    |      |
|----|-----|-----|---|------|------|------------|------------|-----|--------------------------|-----------|---|---|--------------|----|------|
| SB | 2.5 | 220 | 0 | 1400 | 1400 | -25 to +80 | -25 to +50 | FKM | U131F56951D <sup>1</sup> | 483270    | 8 | 8 | EEx d IIC T5 | 11 | 3783 |
|    | 2.5 | 220 | 0 | 1400 | 1400 | -25 to +80 | -25 to +50 | FKM |                          | 483270.02 | 8 | 8 | EEx d IIC T5 | 11 |      |

Direct operated



### 316L Stainless Steel body/Pipe mounting

|     |     |     |   |     |     |            |            |     |                          |                        |     |   |                  |    |      |
|-----|-----|-----|---|-----|-----|------------|------------|-----|--------------------------|------------------------|-----|---|------------------|----|------|
| 1/4 | 2.5 | 220 | 0 | 850 | -   | -25 to +75 | -25 to +50 | FKM | U133V5695 <sup>1</sup>   | 492965.01 <sup>2</sup> | 0.8 | - | EEx ia IIC T6    | 10 | 86   |
|     | 2.5 | 220 | 0 | 850 | 850 | -25 to +75 | -25 to +50 | FKM |                          | 492310 <sup>3</sup>    | 6   | 6 | EEx me II T4(T5) | 10 |      |
|     | 2.5 | 220 | 0 | 850 | 850 | -25 to +75 | -25 to +50 | FKM | U133V56951D <sup>1</sup> | 483270                 | 8   | 8 | EEx d IIC T5     | 11 | 6714 |
|     | 2.5 | 220 | 0 | 850 | 850 | -25 to +75 | -25 to +50 | FKM |                          | 483270.02              | 8   | 8 | EEx d IIC T5     | 11 |      |

Table continued on page 280

#### Notes:

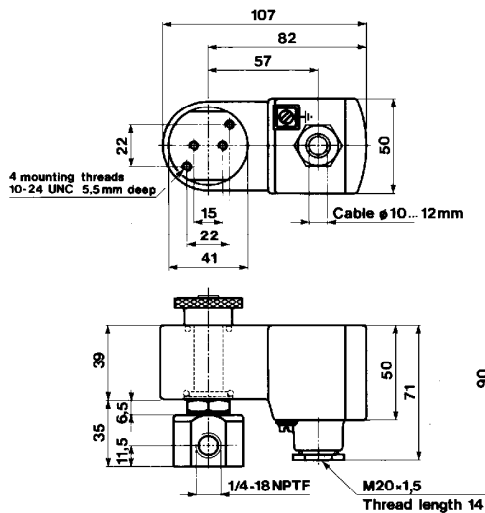
\* See Electrical Parts Group table at end of section

1. Valve with NPT ports

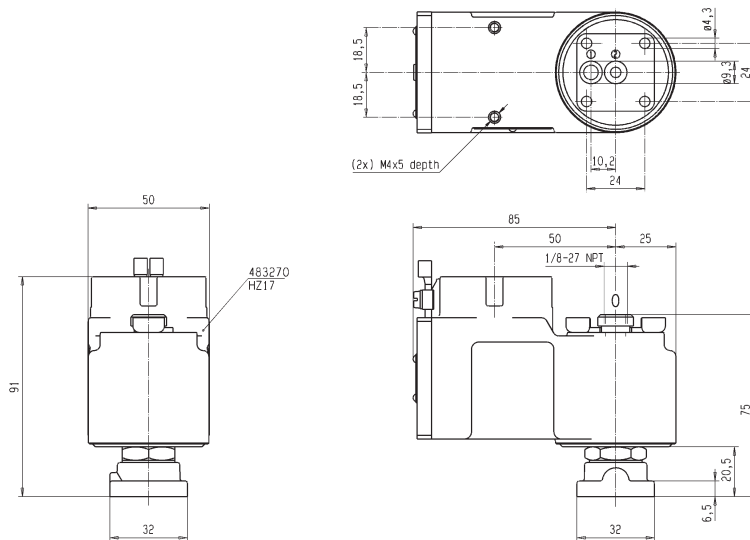
2. Max. power consumption DC = 1 W with connected cable length max. 4 km (2 km back and forth), section 1 mm<sup>2</sup>

3. Other coil-housing available

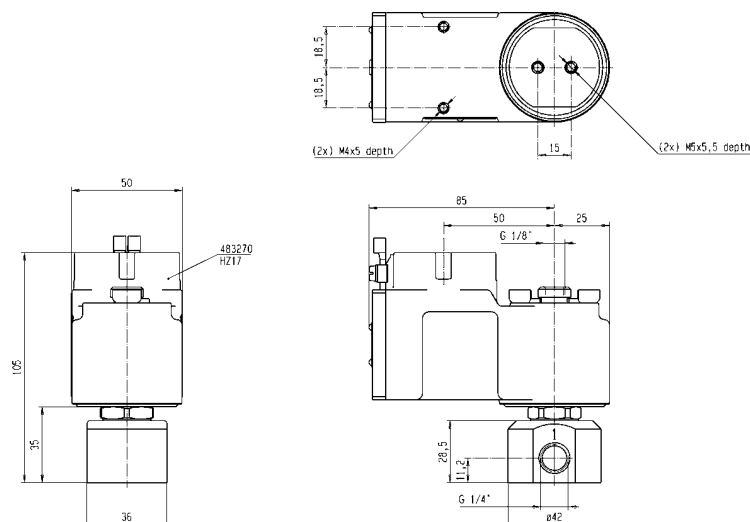
## 316 St. Steel valves for chemical, petrochemical and offshore applications



### Dimension reference 86



**Dimension reference 3783**

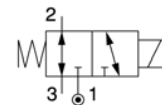


**Dimension reference 6714**

## 316 St. Steel valves for chemical, petrochemical and offshore applications

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure kPa |     |    | Fluid temp. °C | Admissible ambient temp. °C | Seat disc | Reference numbers   |      | Power consumption (W) |    | Degree of protection Ex | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----|----------------|-----------------------------|-----------|---------------------|------|-----------------------|----|-------------------------|------------------|----------|
|           |              |                      | Min                                  | Max | AC |                |                             |           | Valve reference no. | Coil | DC                    | AC |                         |                  |          |
| NPT       |              | Qn                   |                                      |     |    |                |                             |           |                     |      |                       |    |                         |                  |          |

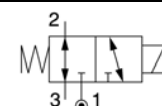
Direct operated



### 316L Stainless Steel body/Pipe mounting

|     |   |     |   |      |      |            |            |     |           |   |           |     |   |                  |    |      |
|-----|---|-----|---|------|------|------------|------------|-----|-----------|---|-----------|-----|---|------------------|----|------|
| 1/4 | 5 | 680 | 0 | 1000 | -    | -25 to +65 | -25 to +65 | NBR | U133X5156 | 1 | 492965.01 | 0.8 | - | EEx ia IIC T6    | 10 | 7770 |
|     | 5 | 680 | 0 | 1000 | 1000 | -25 to +65 | -25 to +65 | NBR |           |   | 492310    | 6   | 6 | EEx me II T4(T5) | 10 |      |

Direct operated



### 316L Stainless Steel body/Pipe mounting

|     |   |     |   |      |      |            |            |     |             |   |           |     |   |                    |    |      |
|-----|---|-----|---|------|------|------------|------------|-----|-------------|---|-----------|-----|---|--------------------|----|------|
| 1/4 | 5 | 680 | 0 | 1000 | 1000 | -25 to +65 | -25 to +65 | NBR | U133X51561D | 1 | 483270    | 8   | 8 | EEx d IIC T4/T5/T6 | 11 | 7011 |
|     | 5 | 680 | 0 | 1000 | 1000 | -25 to +65 | -25 to +65 | NBR |             |   | 483270.02 | 8   | 8 | EEx d IIC T4/T5/T6 | 11 |      |
|     | 5 | 680 | 0 | 1000 | -    | -25 to +65 | -25 to +65 | NBR | U133X5196   | 2 | 492965.01 | 0.8 | - | EEx ia IIC T6      | 10 | 7770 |
|     | 5 | 680 | 0 | 1000 | 1000 | -25 to +65 | -25 to +65 | NBR |             |   | 492310    | 6   | 6 | EEx me II T4(T5)   | 10 |      |
|     | 5 | 680 | 0 | 1000 | 1000 | -25 to +65 | -25 to +65 | NBR | U133X51961D | 1 | 483270    | 8   | 8 | EEx d IIC T5       | 11 | 7038 |
|     | 5 | 680 | 0 | 1000 | 1000 | -25 to +65 | -25 to +65 | NBR |             |   | 483270.02 | 8   | 8 | EEx d IIC T5       | 11 |      |

Table continued on page 282

#### Notes:

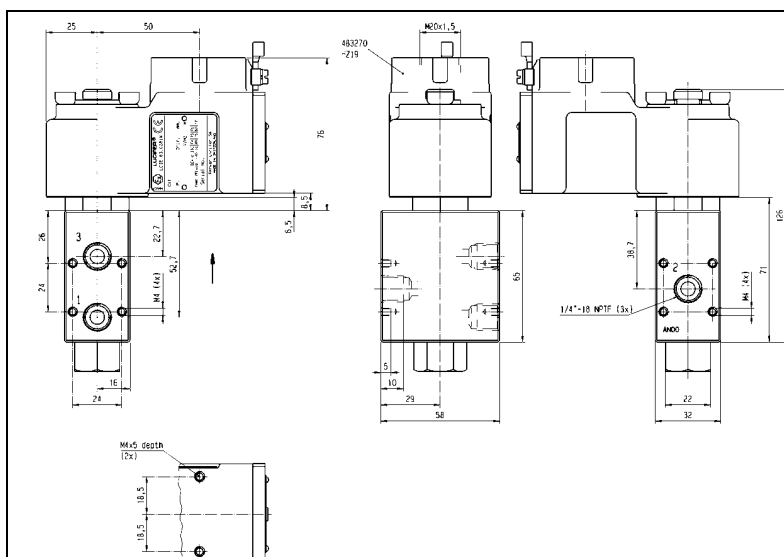
\* See Electrical Parts Group table at end of section

1. Valve with NPT ports

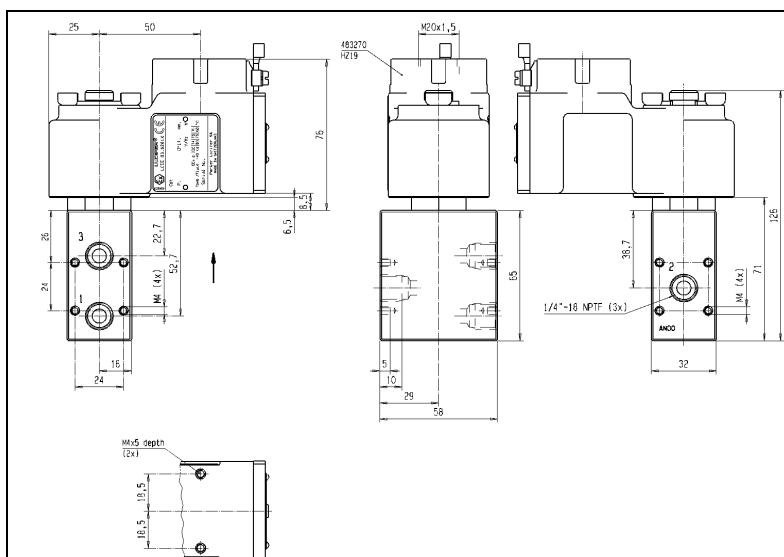
2. Optional manual override available on request - change suffix 96 to 56

Valve with NPT ports

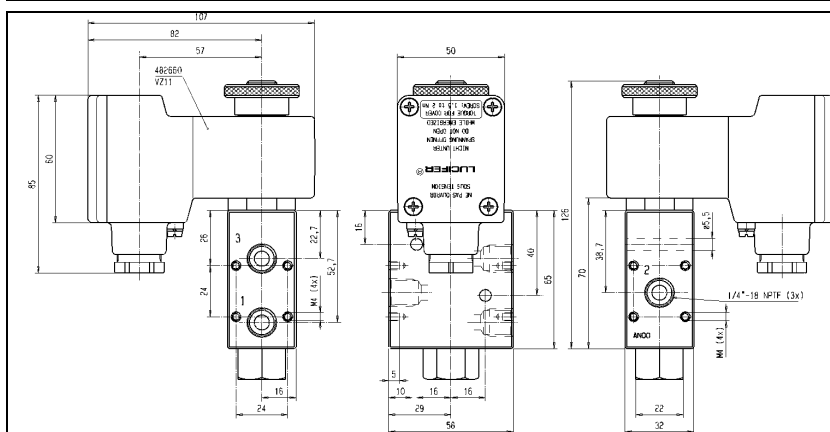
## 316 St. Steel valves for chemical, petrochemical and offshore applications



**Dimension reference 7011**



**Dimension reference 7038**



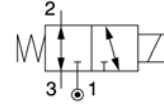
**Dimension reference 7770**



## 316 St. Steel valves for chemical, petrochemical and offshore applications

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure kPa |     |    | Fluid temp. °C | Admissible ambient temp. °C | Seat disc | Reference numbers   |      | Power consumption (W) |    | Degree of protection Ex | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----|----------------|-----------------------------|-----------|---------------------|------|-----------------------|----|-------------------------|------------------|----------|
|           |              |                      | Min                                  | Max | AC |                |                             |           | Valve reference no. | Coil | DC                    | AC |                         |                  |          |
| NPT       |              | Qn                   |                                      |     |    |                |                             |           |                     |      |                       |    |                         |                  |          |

Direct operated



### 316L Stainless Steel body/Pipe mounting

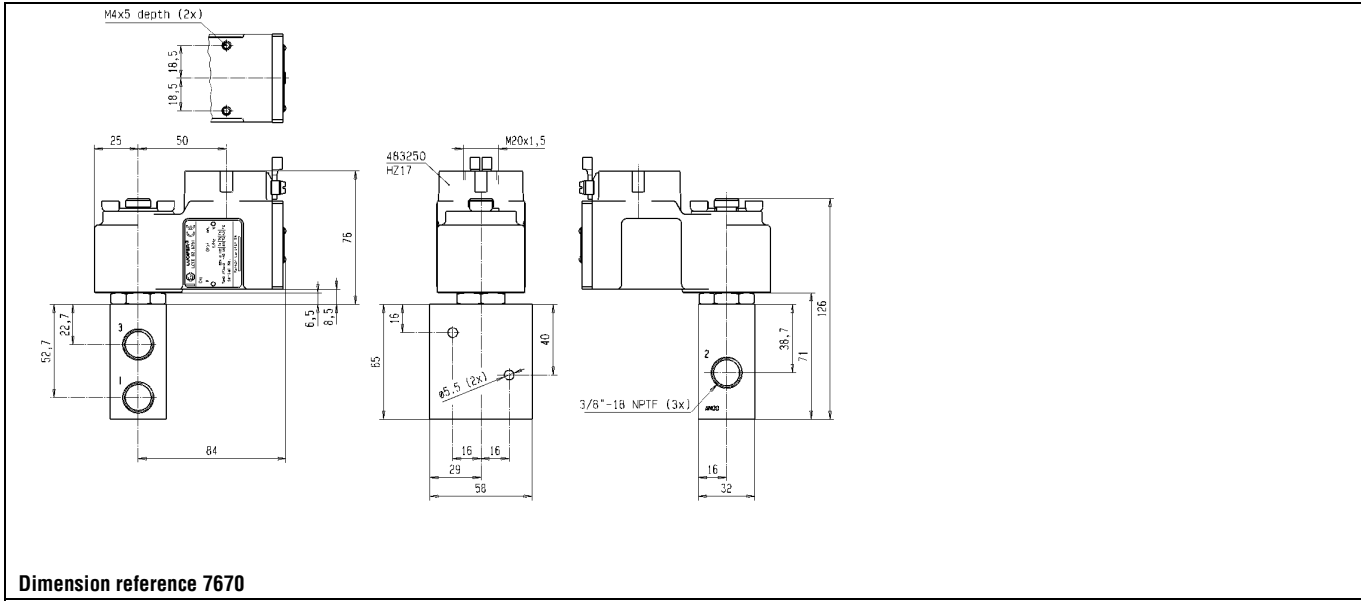
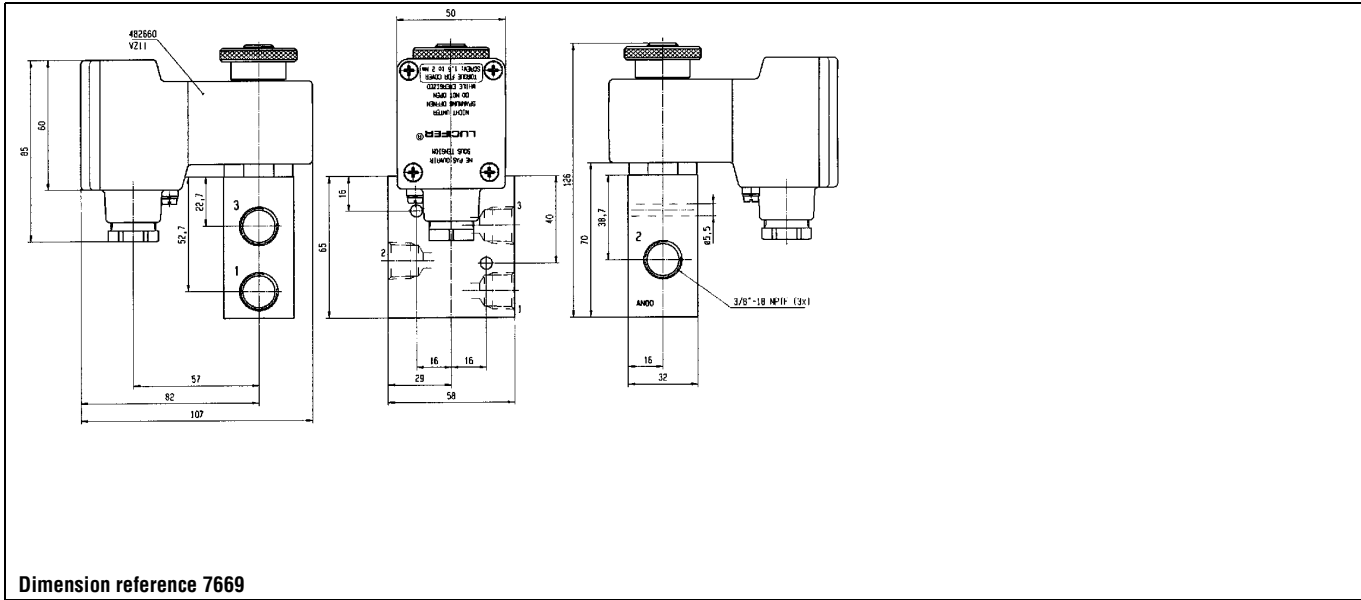
|     |   |     |   |      |      |            |            |     |             |   |           |     |   |                    |    |      |
|-----|---|-----|---|------|------|------------|------------|-----|-------------|---|-----------|-----|---|--------------------|----|------|
| 3/8 | 5 | 680 | 0 | 1000 | 1000 | -25 to +65 | -25 to +65 | NBR | U133X5296   | 1 | 492965.01 | 0.8 | - | EEx ia IIC T6      | 10 | 7669 |
|     | 5 | 680 | 0 | 1000 | 1000 | -25 to +65 | -25 to +65 | NBR |             |   | 492310    | 6   | 6 | EEx me II T4(T5)   | 10 |      |
|     | 5 | 680 | 0 | 1000 | 1000 | -25 to +65 | -25 to +65 | NBR | U133X52961D | 1 | 483270    | 8   | 8 | EEx d IIC T4/T5/T6 | 10 | 7670 |
|     | 5 | 680 | 0 | 1000 | 1000 | -25 to +65 | -25 to +65 | NBR |             |   | 483270.02 | 8   | 8 | EEx d IIC T4/T5/T6 | 10 |      |

#### Notes:

\* See Electrical Parts Group table at end of section

1. Valve with NPT ports

# 316 St. Steel valves for chemical, petrochemical and offshore applications



## NOTES

## NOTES

## Electrical parts options with 3/2 - 316L Stainless steel valves for chemical, petrochemical & Offshore applications

| El.part Group | Coil        | Protection class | Protection class / Temperature class | Power |    | Coil Order No. | Coil Ref. No. | Connection           | Housing Order No. | Housing Ref. No. | Ambient temp. |          |
|---------------|-------------|------------------|--------------------------------------|-------|----|----------------|---------------|----------------------|-------------------|------------------|---------------|----------|
|               |             |                  |                                      | DC    | AC |                |               |                      |                   |                  | min.          | max.     |
| 1             | 22 mm       | IP65             | Class F                              | 2.5   | 2  | DA01           | 488980        | for DIN B plug       | A2                | 8993             | -40           | 50       |
|               |             | IP65             | Class F                              | 2.5   | 2  | DA02           | 481045        | with DIN B plug      | A2                | 8993             | -40           | 50       |
|               |             | IP65             | EEx m II T5                          | 2.5   | 2  | VA12           | 482606.10     | with 1500mm cable    | 00                | -                | -40           | 50       |
|               |             |                  |                                      |       |    |                |               |                      |                   |                  |               |          |
| 2             | 32 mm (Std) | IP65             | Class F                              | 9     | 8  | DZ02           | 481865        | for DIN A plug       | NL                | 8132             | -40           | 50       |
|               |             | IP65             | Class F                              | 9     | 8  | DZ03           | 482725        | with DIN A plug      | NL                | 8132             | -40           | 50       |
|               |             | IP65             | Class H                              | 9     | 8  | DZ04           | 492453        | for DIN A plug       | NL                | 8132             | -40           | 50       |
|               |             | IP65             | Class H                              | 9     | 8  | DZ05           | 492726        | with DIN A plug      | NL                | 8132             | -40           | 50       |
|               | 50 mm (Std) | IP65             | Class F, 50/60 Hz                    | -     | 9  | DZ06           | 483510        | for DIN A plug       | NL                | 8132             | -40           | 50       |
|               |             | IP65             | Class F, 50/60 Hz                    | -     | 9  | DZ07           | 482635        | with DIN A plug      | NL                | 8132             | -40           | 50       |
|               |             | IP65             | EEx m II T4                          | 9     | 8  | HZ90           | 492670.10     | with 3000mm cable    | 00                | -                | -25           | 40       |
|               |             | IP10/IP44        | Class F                              | 8     | 8  | EZ01           | 481000        | screw-terminals      | E0                | 4270             | -40           | 50       |
|               |             | IP10/IP44        | Class H                              | 8     | 8  | EZ02           | 485100        | screw-terminals      | E0                | 4270             | -40           | 50       |
|               |             | IP67             | Class F, IP 67, M20x1.5              | 8     | 8  | EZ01           | 481000        | screw-terminals      | G1                | 4538             | -40           | 50       |
|               |             | IP65             | EEx m II T4/T5                       | 9     | 8  | VZ01           | 492070        | with 1500mm cable    | 00                | -                | -40           | 40/65    |
|               |             | IP67             | EEx me II T4                         | 8     | 8  | HZ06           | 483371        | for cable connection | 00                | -                | -40           | 65       |
|               |             | IP66             | EEx me II T3/T4                      | 11    | 9  | VZ90           | 492190.10     | for cable connection | 00                | -                | -40           | 75/40    |
|               |             | IP67             | EEx me II T3/T4                      | 8     | 8  | HZ23           | 494040        | for cable connection | 00                | -                | -40           | 90/65    |
|               |             | IP65             | EEx md IIC T4/T5                     | 8     | 8  | HZ09           | 493640        | with 1500mm cable    | 00                | -                | -40           | 75/40    |
|               |             |                  |                                      |       |    |                |               |                      |                   |                  |               |          |
| 5             | 50 mm       | IP54             | EEx d IIC T4/T5/T6                   | 8     | 8  | HZ08           | 483250        | for cable, 1/2 NPT   | 00                | -                | -40           | 80/75/60 |
| 7             | 32 mm I.S.  | IP65             | EEx ia II C T6                       | 0.4   | -  | DZ12           | 483580.01     | for DIN A plug       | NL                | 8132             | -40           | 55       |
|               |             | IP65             | EEx ia II C T6                       | 0.4   | -  | DZ13           | 483960.01     | with DIN A plug      | NL                | 8132             | -40           | 55       |
|               | 50 mm I.S.  | IP66             | EEx ia II C T6                       | 0.4   | -  | VZ93           | 494035.10     | for cable connection | 00                | -                | -40           | 65       |
|               |             | IP67             | EEx ia II C T6                       | 0.4   | -  | VZ08           | 488660.01     | with 2000mm cable    | 00                | -                | -40           | 65       |
|               |             | IP65             | EEx ia II C T6                       | 0.4   | -  | VZ09           | 488670.01     | with DIN A plug      | 00                | -                | -40           | 65       |
| 9             | 32 mm 50 mm | IP65             | Class F                              | 9     | 9  | DZ93           | 492387        | with DIN A plug      | N9                | 8886             | -40           | 50       |
|               |             | IP66             | EEx me II T5/T6                      | 1.5   | -  | VZ13           | 492200        | for cable connection | 00                | -                | -40           | 75/40    |
|               |             | IP67             | EEx me II T4                         | 8     | -  | VZ14           | 483371.01     | for cable connection | 00                | -                | -40           | 65       |
|               |             | IP66             | EEx me II T4/T5                      | 6     | 6  | VZ15           | 492300        | for cable connection | 00                | -                | -40           | 75/40    |
|               |             | IP67             | EEx m II T4/T5                       | 5     | 5  | VZ02           | 492270        | with 1500mm cable    | 00                | -                | -40           | 65/40    |
|               |             | IP65             | EEx ib IIB T6                        | 0.8   | -  | VZ11           | 482660        | for cable connection | 00                | -                | -40           | 75       |
|               |             | IP66             | EEx ib IIC T6                        | 0.8   | -  | VZ12           | 483330.01     | for cable connection | 00                | -                | -40           | 75       |
|               |             | IP66             | EEx ia IIC T6                        | 0.8   | -  | VZ92           | 492965.02     | for cable connection | 00                | -                | -40           | 65       |
| 10            | 50 mm       | IP66             | EEx me II T5/T6                      | 1.5   | -  | VZ26           | 492210        | for cable connection | 00                | -                | -40           | 75/40    |
|               |             | IP66             | EEx me II T4/T5                      | 6     | 6  | VZ27           | 492310        | for cable connection | 00                | -                | -40           | 75/40    |
|               |             | IP65             | EEx ib IIB T6                        | 0.8   | -  | VZ11           | 482660        | for cable connection | 00                | -                | -40           | 75       |
|               |             | IP66             | EEx ib IIC T6                        | 0.8   | -  | VZ12           | 483330.01     | for cable connection | 00                | -                | -40           | 75       |
|               |             | IP66             | EEx ia IIC T6                        | 0.8   | -  | VZ91           | 492965.01     | for cable connection | 00                | -                | -40           | 65       |
| 11            | 50 mm EEx d | IP65             | EEx d II C T4/T5/T6                  | 8     | 8  | HZ19           | 483270        | for cable , M20x1.5  | 00                | -                | -40           | 80/75/60 |
|               |             | IP65             | EEx d II C T4/T5/T6                  | 8     | 8  | HZ21           | 483270.02     | for cable , 1/2 NPT  | 00                | -                | -40           | 80/75/60 |
| 12            | 50 mm       | IP66             | EEx me II T4/T5                      | 6     | 6  | VZ27           | 492310        | for cable connection | 00                | -                | -40           | 75/40    |
|               |             | IP66             | EEx ia IIB T6                        | 0.8   | -  | VZ22           | 482160.01     | for cable connection | 00                | -                | -40           | 65       |
|               |             | IP66             | EEx ia IIC T6                        | 0.8   | -  | VZ23           | 482870.01     | for cable connection | 00                | -                | -40           | 65       |

Note: This table is indicative only. Please contact your distributor to confirm your selection.

# 316L St. Steel valves for actuator control

| ACTUATION                                    | CONNECTION | ORIFICE<br>(MM) | MAX. PRESSURE<br>(BAR)<br><KPA> | PAGE            |
|----------------------------------------------|------------|-----------------|---------------------------------|-----------------|
| Direct operated                              | 1/4        | 2.5 to 5        | <1000.0>                        | 288             |
|                                              | 3/8        | 5               | <1000.0>                        | 290/292         |
|                                              | SB         | 2.5             | <1000.0>                        | 292             |
| Pilot operated                               | 1/4 - 1/8  | 4               | 10.0                            | 296/298/308/310 |
|                                              | 3/8 - 1/4  | 8               | 10.0                            | 300/302/312     |
| Pilot operated - Integrated pilot            | 1/4 - 1/8  | 4               | 10.0                            | 296/308         |
|                                              | 3/8 - 1/4  | 8               | 10.0                            | 298/310         |
| Two solenoids and main pressure supply       | 1/4 - 1/8  | 4               | 10.0                            | 304/314         |
|                                              | 3/8 - 1/4  | 8               | 10.0                            | 304/306/314     |
| Pilot operated with external pressure supply | 3/8 - 1/4  | 8               | 10.0                            | 302             |
| External pressure supply                     | 3/8 - 1/4  | 8               | 10.0                            | 302             |
| Direct operated with manual reset            | 1/4        | 5               | <1000.0>                        | 292/294         |
|                                              | 3/8        | 5               | <1000.0>                        | 294             |

Notes:

# 316 St. Steel valves for actuator control

# 3/2

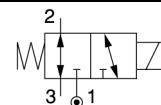
## Applications

Directional control and fail/safe function in valve actuator circuits in corrosive and hazardous environment.

Solenoid pilots for main stage valves in corrosive and hazardous locations.

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure kPa |     |     | Fluid temp. °C |     | Seat disc | Reference numbers      |                     |         |      | Power consumption (W) | Wt. (g) | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|-----|----------------|-----|-----------|------------------------|---------------------|---------|------|-----------------------|---------|------------------|----------|
|           |              |                      | Min                                  | Max | Max | Min            | Max |           | Global valve reference | Valve reference no. | Housing | Coil | DC                    | AC      |                  |          |
| NPT       |              | Qn                   |                                      |     |     |                |     |           |                        |                     |         |      |                       |         |                  |          |

Direct operated



## 316L Stainless Steel body/Pipe mounting

|     |     |     |   |      |      |     |    |     |              |             |   |   |           |     |   |      |    |      |
|-----|-----|-----|---|------|------|-----|----|-----|--------------|-------------|---|---|-----------|-----|---|------|----|------|
| 1/4 | 2.5 | 220 | 0 | 850  | 850  | -25 | 75 | FKM | 7133VRN2LV9D | U133V56951D | 1 | - | 483270    | 8   | 8 | -    | 11 | 6714 |
|     | 2.5 | 220 | 0 | 850  | 850  | -25 | 75 | FKM |              |             |   | - | 483270.02 | 8   | 8 | -    | 11 |      |
|     | 2.5 | 220 | 0 | 850  | -    | -25 | 75 | FKM | 7133VRN2LV95 | U133V5695   | 1 | - | 492965.01 | 0.8 | - | -    | 10 | 86   |
|     | 2.5 | 220 | 0 | 850  | 850  | -25 | 75 | FKM |              |             |   | - | 492310    | 6   | 6 | -    | 10 |      |
|     | 5   | 680 | 0 | 1000 | 1000 | -25 | 65 | NBR | 7133XRN2SV1D | U133X51561D | 1 | - | 483270    | 8   | 8 | 1960 | 11 | 7011 |
|     | 5   | 680 | 0 | 1000 | 1000 | -25 | 65 | NBR |              |             |   | - | 483270.02 | 8   | 8 | 1960 | 11 |      |

Table continued on page 290

### Notes:

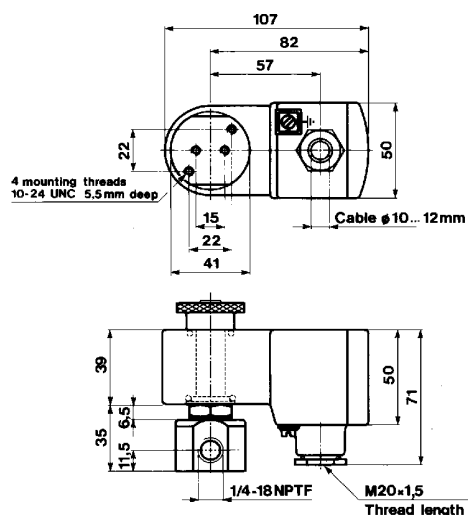
\* See Electrical Parts Group table at end of section

1. Valve with NPT ports

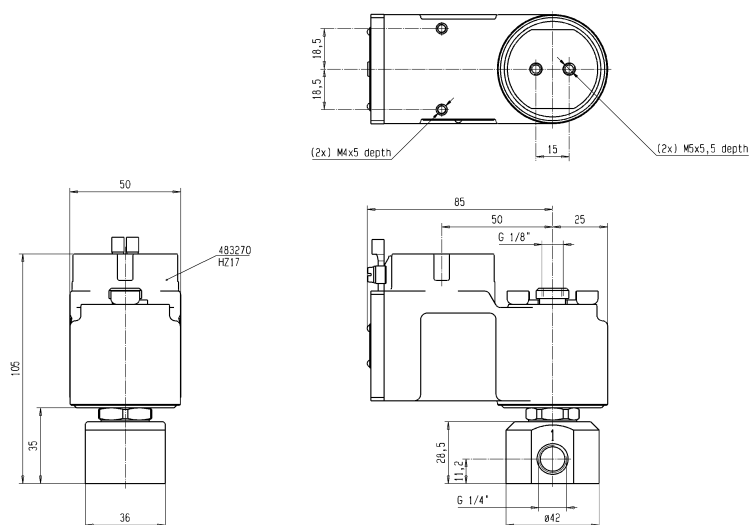
2. Max. power consumption DC = 1 W with connected cable length max. 4 km (2 km back and forth), section 1 mm²

3. Other coil-housing available

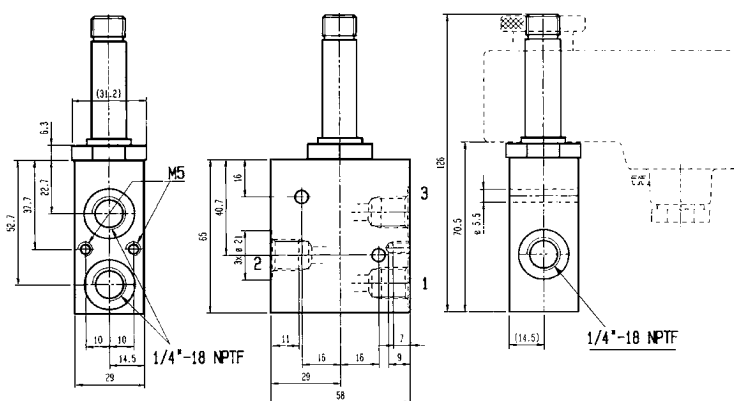
### 316 St. Steel valves for actuator control



### Dimension reference 86



**Dimension reference 6714**

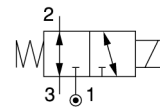


**Dimension reference 7011**

## 316 St. Steel valves for actuator control

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure kPa |     |    | Fluid temp. °C |     | Seat disc | Reference numbers      |                     |         |      | Power consumption (W) |    | Wt. (g) | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----|----------------|-----|-----------|------------------------|---------------------|---------|------|-----------------------|----|---------|------------------|----------|
|           |              |                      | Min                                  | Max | AC | Min            | Max |           | Global valve reference | Valve reference no. | Housing | Coil | DC                    | AC |         |                  |          |
| NPT       |              | Qn                   |                                      |     |    |                |     |           |                        |                     |         |      |                       |    |         |                  |          |

Direct operated



## 316L Stainless Steel body/Pipe mounting

|     |   |     |   |      |      |     |    |     |              |                    |   |   |                  |     |   |      |    |      |
|-----|---|-----|---|------|------|-----|----|-----|--------------|--------------------|---|---|------------------|-----|---|------|----|------|
| 1/4 | 5 | 680 | 0 | 1000 | -    | -25 | 65 | NBR | 7133XRN2SV00 | <b>U133X5156</b>   | 1 | - | <b>492965.01</b> | 0.8 | - | 1340 | 10 | 7770 |
|     | 5 | 680 | 0 | 1000 | 1000 | -25 | 65 | NBR |              |                    |   | - | <b>492310</b>    | 6   | 6 | 1340 | 10 |      |
| 3/8 | 5 | 680 | 0 | 1000 | 1000 | -25 | 65 | NBR | 7133XRN3SN9H | <b>U133X52961D</b> | 1 | - | <b>483270</b>    | 8   | 8 | 1940 | 10 | 7670 |
|     | 5 | 680 | 0 | 1000 | 1000 | -25 | 65 | NBR |              |                    |   | - | <b>483270.02</b> | 8   | 8 | 1940 | 10 |      |
|     | 5 | 680 | 0 | 1000 | 1000 | -25 | 65 | NBR | 7133XRN3SN96 | <b>U133X5296</b>   | 1 | - | <b>492965.01</b> | 0.8 | - | -    | 10 | 7669 |
|     | 5 | 680 | 0 | 1000 | 1000 | -25 | 65 | NBR |              |                    |   | - | <b>492310</b>    | 6   | 6 | -    | 10 |      |

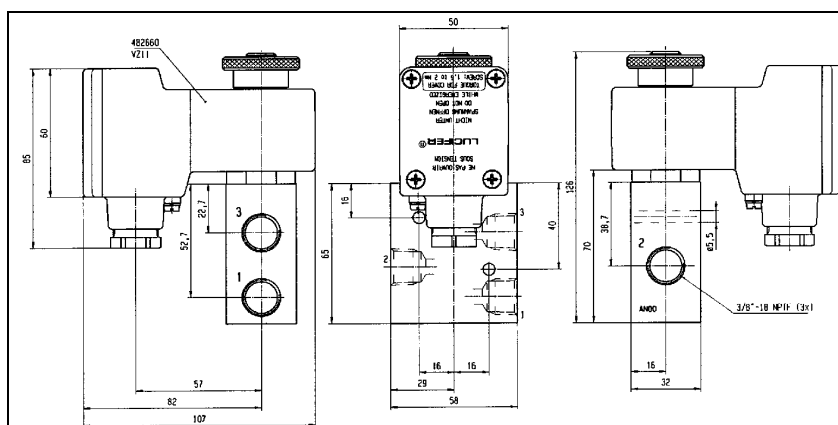
Table continued on page 292

### Notes:

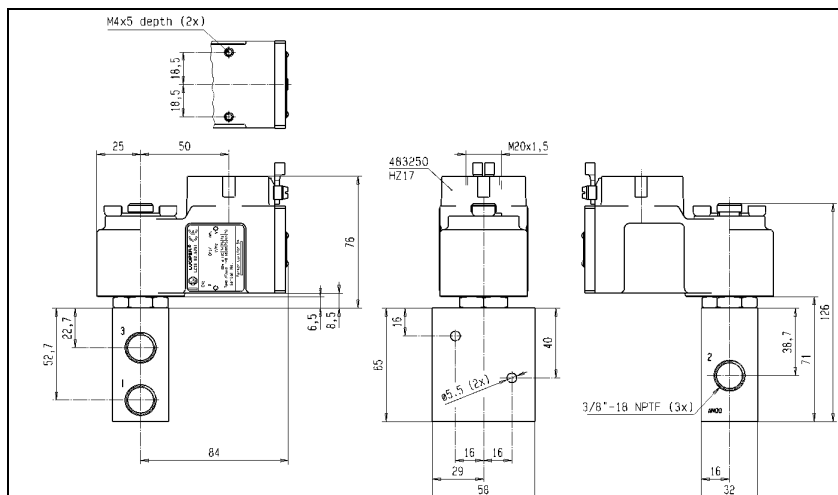
\* See Electrical Parts Group table at end of section

1. Valve with NPT ports

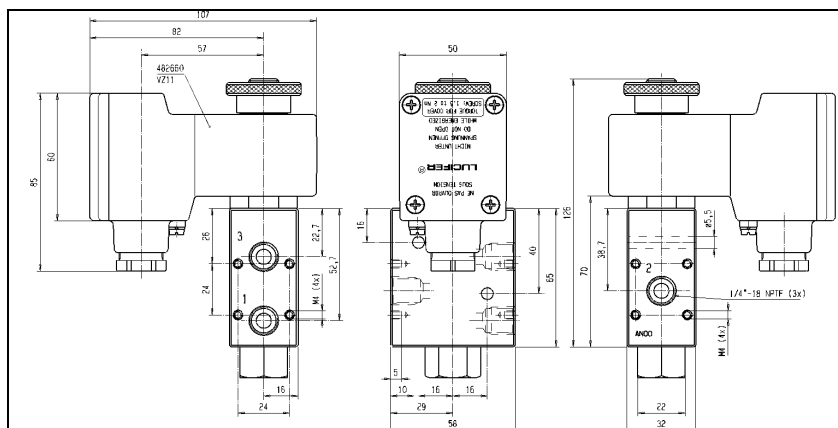
## 316 St. Steel valves for actuator control



Dimension reference 7669



Dimension reference 7670



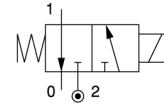
Dimension reference 7770



## 316 St. Steel valves for actuator control

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure kPa |     |    | Fluid temp. °C |     | Seat disc | Reference numbers |                        |                     |         | Power consumption (W) |    | Wt. (g) | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----|----------------|-----|-----------|-------------------|------------------------|---------------------|---------|-----------------------|----|---------|------------------|----------|
|           |              |                      | Min                                  | Max | DC | AC             | Min |           | Max               | Global valve reference | Valve reference no. | Housing | Coil                  | DC |         |                  |          |
| NPT       |              | Qn                   |                                      |     |    |                |     |           |                   |                        |                     |         |                       |    |         |                  |          |

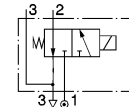
Direct operated



### 316L Stainless Steel body/Sub-base mounting

|    |     |     |   |      |      |     |    |     |              |           |   |   |           |     |   |     |    |    |
|----|-----|-----|---|------|------|-----|----|-----|--------------|-----------|---|---|-----------|-----|---|-----|----|----|
| SB | 2.5 | 220 | 0 | 1000 | -    | -25 | 65 | FKM | 7131FRF2LV95 | U131F5695 | 1 | - | 492965.01 | 0.8 | - | 700 | 10 | 85 |
|    | 2.5 | 220 | 0 | 1000 | 1000 | -25 | 75 | FKM |              |           |   | - | 492310    | 6   | 6 | 700 | 10 |    |

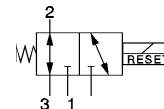
Direct operated



### 316L Stainless Steel body/NAMUR interface

|     |   |     |   |      |      |     |    |     |              |           |   |   |           |     |   |   |      |      |
|-----|---|-----|---|------|------|-----|----|-----|--------------|-----------|---|---|-----------|-----|---|---|------|------|
| 3/8 | 5 | 680 | 0 | 1000 | 1000 | -25 | 65 | NBR | 7131XRKMVN00 | U131X1201 | 1 | - | 492965.01 | 0.8 | - | - | 9,10 | 7668 |
|     | 5 | 680 | 0 | 1000 | 1000 | -25 | 65 | NBR |              |           |   | - | 492310    | 6   | 6 | - | 9,10 |      |

Direct operated with manual reset



### 316L Stainless Steel body/Pipe mounting

|     |   |     |   |      |      |     |    |     |              |             |   |   |           |   |   |   |      |    |      |
|-----|---|-----|---|------|------|-----|----|-----|--------------|-------------|---|---|-----------|---|---|---|------|----|------|
| 1/4 | 5 | 680 | 0 | 1000 | 1000 | -25 | 65 | NBR | 7033XRN2SN1D | U033X51561D | 2 | - | 483270    | 1 | 8 | 8 | 2150 | 11 | 7030 |
|     | 5 | 680 | 0 | 1000 | 1000 | -25 | 65 | NBR |              |             |   | - | 483270.02 | 1 | 8 | 8 | 2150 | 11 |      |

Table continued on page 294

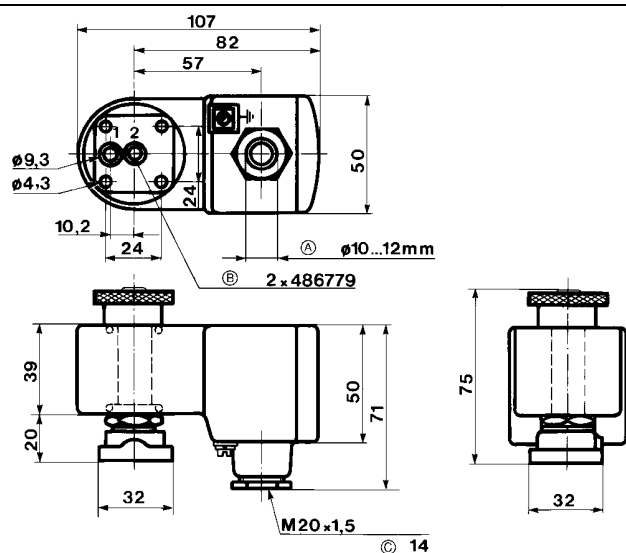
#### Notes:

\* See Electrical Parts Group table at end of section

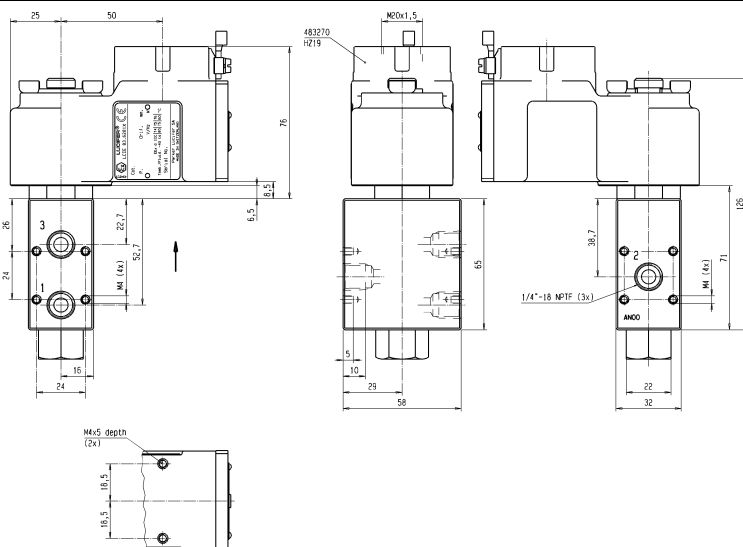
1. Valve with NPT ports

2. With manual reset

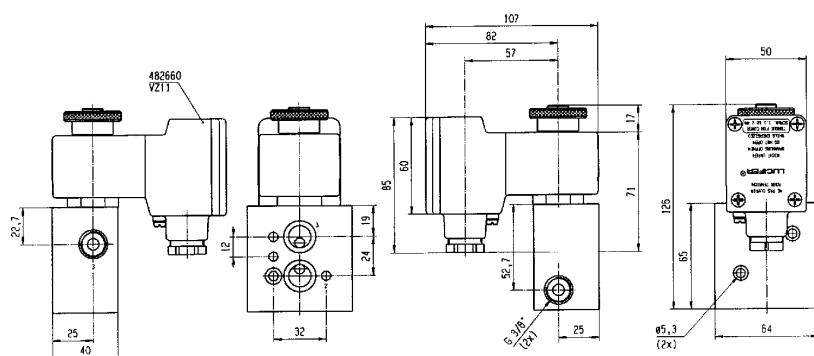
### 316 St. Steel valves for actuator control



### Dimension reference 85



**Dimension reference 7030**



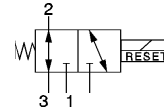
**Dimension reference 7668**

## 316 St. Steel valves for actuator control

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure kPa |     |    | Fluid temp. °C |     | Seat disc | Reference numbers |                        |                     |         | Power consumption (W) |    | Wt. (g) | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----|----------------|-----|-----------|-------------------|------------------------|---------------------|---------|-----------------------|----|---------|------------------|----------|
|           |              |                      | Min                                  | Max | DC | AC             | Min |           | Max               | Global valve reference | Valve reference no. | Housing | Coil                  | DC |         |                  |          |
| NPT       |              | Qn                   |                                      |     |    |                |     |           |                   |                        |                     |         |                       |    |         |                  |          |

## 316L Stainless Steel body/Pipe mounting

Direct operated with manual reset



|     |   |     |   |      |      |     |    |     |              |                    |   |   |                  |   |     |   |      |    |      |
|-----|---|-----|---|------|------|-----|----|-----|--------------|--------------------|---|---|------------------|---|-----|---|------|----|------|
| 1/4 | 5 | 680 | 0 | 1000 | -    | -25 | 65 | NBR | 7033XRN2SN00 | <b>U033X5156</b>   | 1 | - | <b>482870.01</b> | 2 | 0.8 | - | 1300 | 12 | 7771 |
|     | 5 | 680 | 0 | 1000 | 1000 | -25 | 65 | NBR |              |                    |   | - | <b>492310</b>    | 2 | 6   | 6 | 1300 | 12 |      |
| 3/8 | 5 | 680 | 0 | 1000 | 1000 | -25 | 65 | NBR | 7033XRN3SN1D | <b>U033X52561D</b> | 1 | - | <b>483270</b>    | 2 | 8   | 8 | 1980 | 11 | 7672 |
|     | 5 | 680 | 0 | 1000 | 1000 | -25 | 65 | NBR |              |                    |   | - | <b>483270.02</b> | 2 | 8   | 8 | 1980 | 11 |      |
|     | 5 | 680 | 0 | 1000 | -    | -25 | 65 | NBR | 7033XRN3SN00 | <b>U033X5256</b>   | 1 | - | <b>482870.01</b> | 2 | 0.8 | - | 1300 | 12 | 7671 |
|     | 5 | 680 | 0 | 1000 | 1000 | -25 | 65 | NBR |              |                    |   | - | <b>492310</b>    | 2 | 6   | 6 | 1300 | 12 |      |

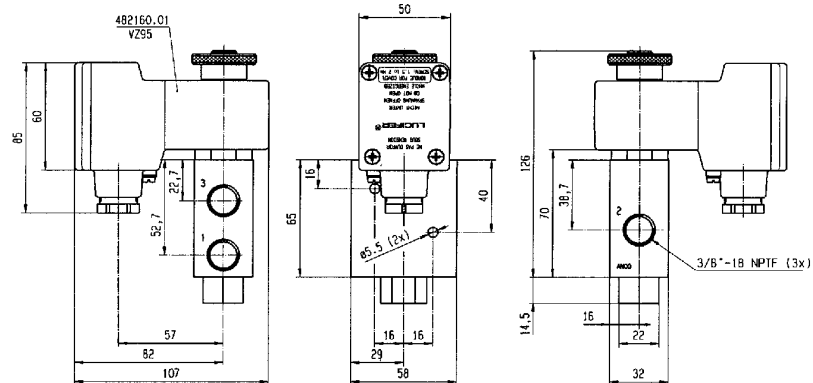
### Notes:

\* See Electrical Parts Group table at end of section

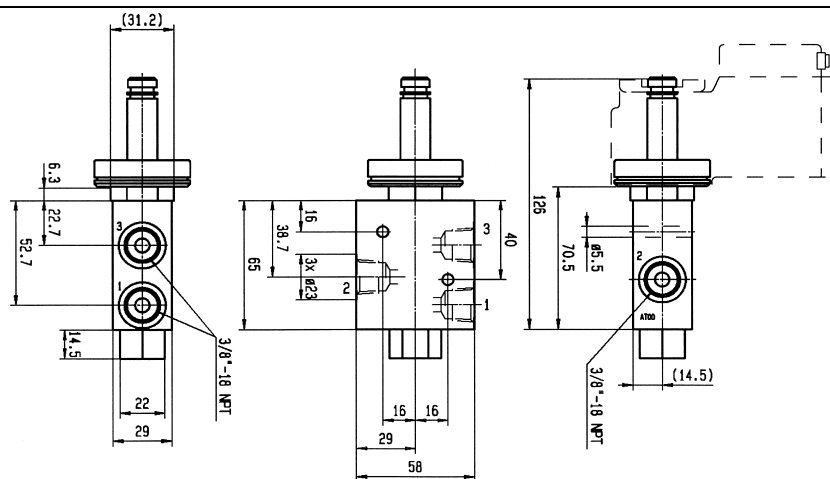
1. With manual reset

2. Valve with NPT ports

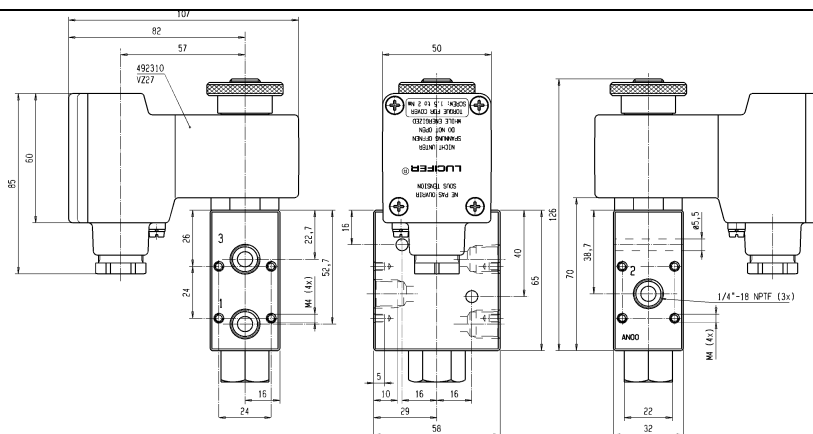
## 316 St. Steel valves for actuator control



Dimension reference 7671



Dimension reference 7672



Dimension reference 7771



# 316L St. Steel valves for actuator control

# 5/2

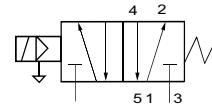
## Applications

Directional control and fail/safe function in valve actuator circuits in corrosive and hazardous environment.

Solenoid pilots for main stage valves in corrosive and hazardous locations.

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure bar |     |    | Fluid temp. °C |     | Seat disc | Reference numbers      |                     |         |      | Power consumption (W) | Wt. (g) | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----|----------------|-----|-----------|------------------------|---------------------|---------|------|-----------------------|---------|------------------|----------|
|           |              |                      | Min                                  | Max | AC | Min            | Max |           | Global valve reference | Valve reference no. | Housing | Coil | DC                    | AC      |                  |          |
| NPT       |              | Qn                   |                                      |     |    |                |     |           |                        |                     |         |      |                       |         |                  |          |

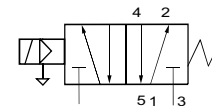
Pilot operated - Integrated pilot



## 316L Stainless Steel body/Pipe mounting

|           |   |     |   |    |    |     |    |     |              |           |   |    |        |   |     |   |     |   |      |
|-----------|---|-----|---|----|----|-----|----|-----|--------------|-----------|---|----|--------|---|-----|---|-----|---|------|
| 1/4 - 1/8 | 4 | 600 | 2 | 10 | 10 | -25 | 80 | NBR | 2341PRN2JNM1 | U341P0150 | 1 | A2 | 488980 | 2 | 2.5 | 2 | 220 | 1 | 7576 |
|-----------|---|-----|---|----|----|-----|----|-----|--------------|-----------|---|----|--------|---|-----|---|-----|---|------|

Pilot operated



## 316L Stainless Steel body/Pipe mounting

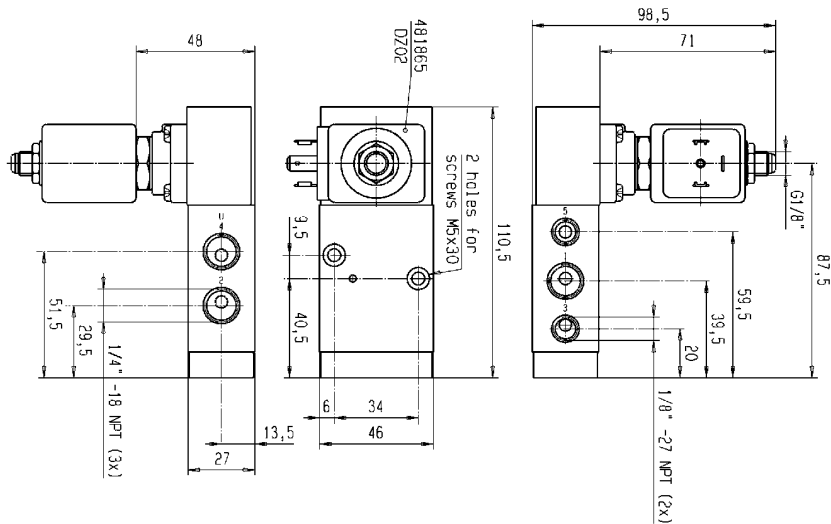
|           |   |     |   |    |    |     |    |     |              |           |   |    |           |     |   |     |   |      |
|-----------|---|-----|---|----|----|-----|----|-----|--------------|-----------|---|----|-----------|-----|---|-----|---|------|
| 1/4 - 1/8 | 4 | 600 | 2 | 10 | 10 | -25 | 80 | NBR | 7341PRN2JN00 | U341P3150 | 2 | NL | 481865    | 9   | 8 | 420 | 2 | 7547 |
|           | 4 | 600 | 2 | 10 | 10 | -25 | 80 | NBR |              |           |   | E0 | 481000    | 8   | 8 | 420 | 2 |      |
|           | 4 | 600 | 2 | 10 | 10 | -25 | 55 | NBR | 7341PRN2JN92 | U341P3192 | 2 | NL | 483580.01 | 0.4 | - | 420 | 7 | 7549 |

Table continued on page 298

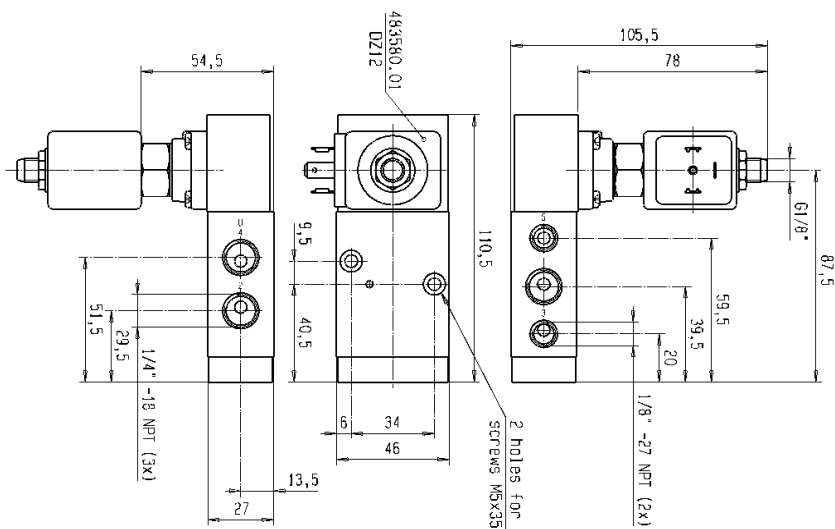
## Notes:

- \* See Electrical Parts Group table at end of section
- 1. Manual override standard
- 2. Valve with NPT ports

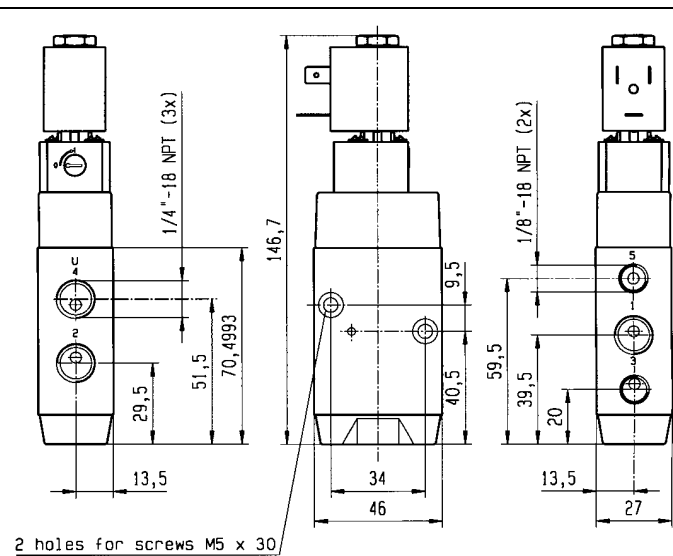
## 316L Stainless Steel valves for actuator control - 5/2 valves - Pipe connection



Dimension reference 7547



Dimension reference 7549

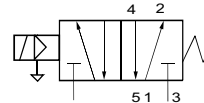


Dimension reference 7576

## 316L Stainless Steel valves for actuator control - 5/2 valves - Pipe connection

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure bar |     |    | Fluid temp. °C |     | Seat disc | Reference numbers      |                     |         |      | Power consumption (W) | Wt. (g) | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----|----------------|-----|-----------|------------------------|---------------------|---------|------|-----------------------|---------|------------------|----------|
|           |              |                      | Min                                  | Max | AC | Min            | Max |           | Global valve reference | Valve reference no. | Housing | Coil | DC                    | AC      |                  |          |
| NPT       |              | Qn                   |                                      |     |    |                |     |           |                        |                     |         |      |                       |         |                  |          |

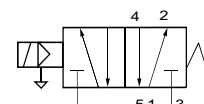
Pilot operated



### 316L Stainless Steel body/Pipe mounting

|           |   |     |   |    |    |     |    |     |              |             |   |   |           |     |   |   |    |      |
|-----------|---|-----|---|----|----|-----|----|-----|--------------|-------------|---|---|-----------|-----|---|---|----|------|
| 1/4 - 1/8 | 4 | 600 | 2 | 10 | 10 | -25 | 75 | NBR | 7341PRN2JN95 | U341P3195   | 1 | - | 492965.01 | 0.8 | - | - | 10 | 7550 |
|           | 4 | 600 | 2 | 10 | 10 | -25 | 75 | NBR |              |             |   | - | 492310    | 6   | 6 | - | 10 |      |
|           | 4 | 600 | 2 | 10 | 10 | -10 | 75 | NBR | 7341PRN2JN9D | U341P31951D | 1 | - | 483270    | 8   | 8 | - | 11 | 7551 |
|           | 4 | 600 | 2 | 10 | 10 | -10 | 75 | NBR |              |             |   | - | 483270.02 | 8   | 8 | - | 11 |      |

Pilot operated - Integrated pilot



### 316L Stainless Steel body/Pipe mounting

|           |   |      |   |    |    |     |    |     |              |           |   |    |        |   |     |   |   |   |      |
|-----------|---|------|---|----|----|-----|----|-----|--------------|-----------|---|----|--------|---|-----|---|---|---|------|
| 3/8 - 1/4 | 8 | 1400 | 2 | 10 | 10 | -25 | 80 | NBR | 2341PRN3NNM1 | U341P0250 | 2 | A2 | 488980 | 1 | 2.5 | 2 | - | 1 | 7578 |
|-----------|---|------|---|----|----|-----|----|-----|--------------|-----------|---|----|--------|---|-----|---|---|---|------|

Table continued on page 300

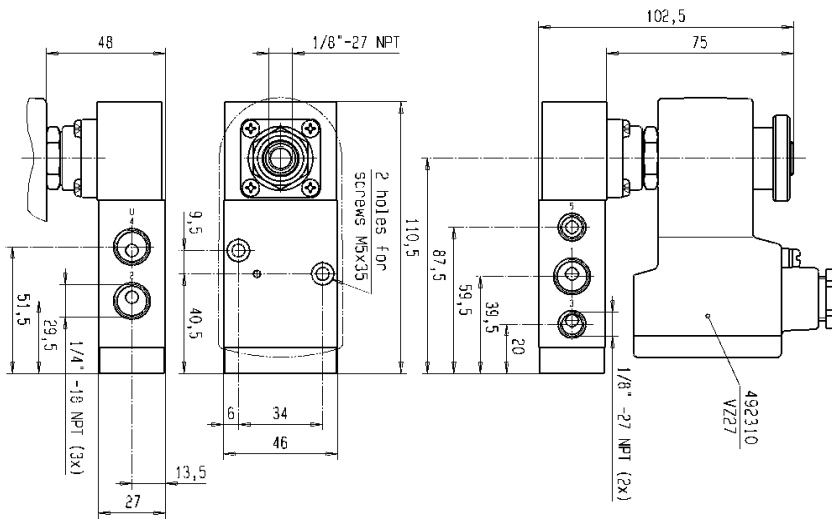
#### Notes:

\* See Electrical Parts Group table at end of section

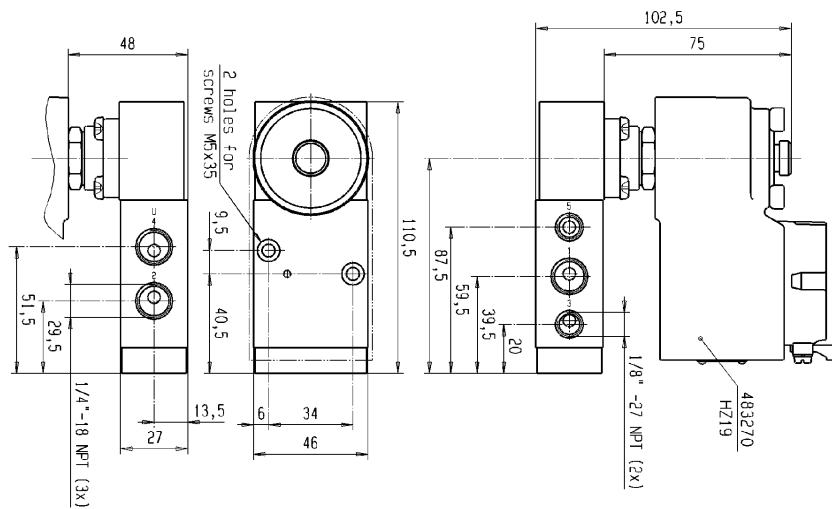
1. Valve with NPT ports

2. Manual override standard

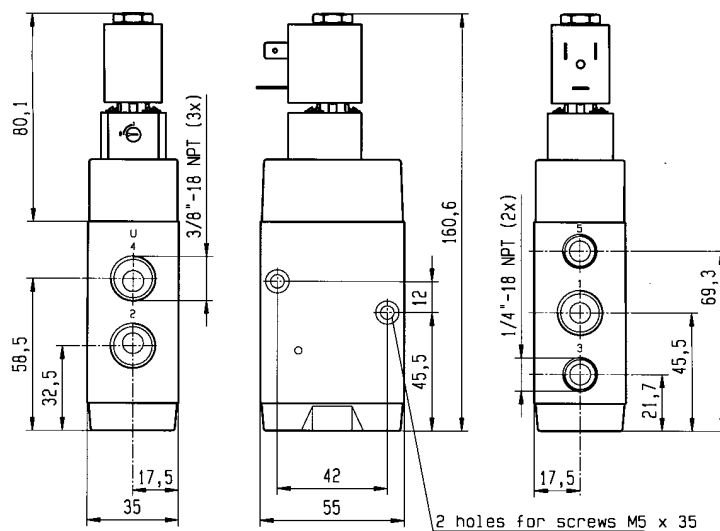
## 316L Stainless Steel valves for actuator control - 5/2 valves - Pipe connection



Dimension reference 7550



Dimension reference 7551

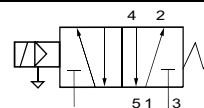


Dimension reference 7578

## 316L Stainless Steel valves for actuator control - 5/2 valves - Pipe connection

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure bar |     |    | Fluid temp. °C |     | Seat disc | Reference numbers      |                     |         |      | Power consumption (W) | Wt. (g) | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----|----------------|-----|-----------|------------------------|---------------------|---------|------|-----------------------|---------|------------------|----------|
|           |              |                      | Min                                  | Max | AC | Min            | Max |           | Global valve reference | Valve reference no. | Housing | Coil | DC                    | AC      |                  |          |
| NPT       |              | Qn                   |                                      |     |    |                |     |           |                        |                     |         |      |                       |         |                  |          |

Pilot operated



### 316L Stainless Steel body/Pipe mounting

|           |   |      |   |    |    |     |    |     |              |           |   |    |           |     |   |   |    |      |
|-----------|---|------|---|----|----|-----|----|-----|--------------|-----------|---|----|-----------|-----|---|---|----|------|
| 3/8 - 1/4 | 8 | 1400 | 2 | 10 | 10 | -25 | 80 | NBR | 7341PRN3NN00 | U341P3250 | 1 | NL | 481865    | 9   | 8 | - | 2  | 7558 |
|           | 8 | 1400 | 2 | 10 | 10 | -25 | 80 | NBR |              | E0        |   | E0 | 481000    | 8   | 8 | - | 2  |      |
|           | 8 | 1400 | 2 | 10 | 10 | -25 | 80 | NBR | 7341PRN3NN92 | U341P3292 | 1 | NL | 483580.01 | 0.4 | - | - | 7  | 7560 |
|           | 8 | 1400 | 2 | 10 | 10 | -25 | 75 | NBR | 7341PRN3NN95 | U341P3295 | 1 | -  | 492965.01 | 0.8 | - | - | 10 | 7561 |
|           | 8 | 1400 | 2 | 10 | 10 | -25 | 75 | NBR |              | -         |   | -  | 492310    | 6   | 6 | - | 10 |      |

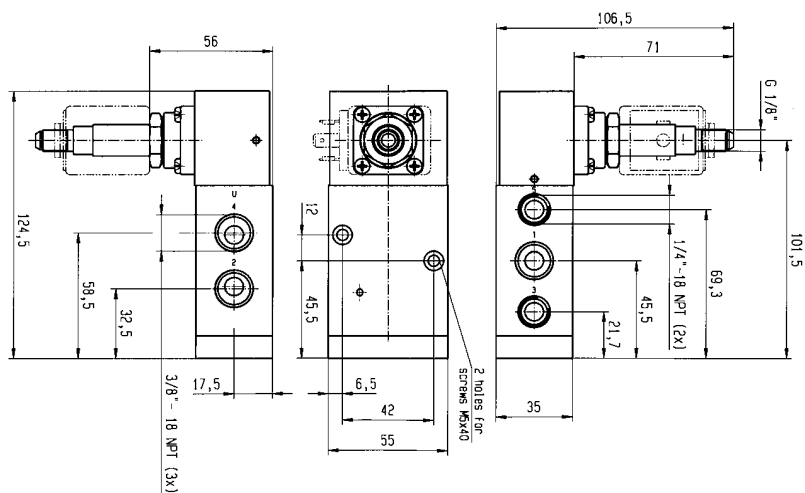
Table continued on page 302

#### Notes:

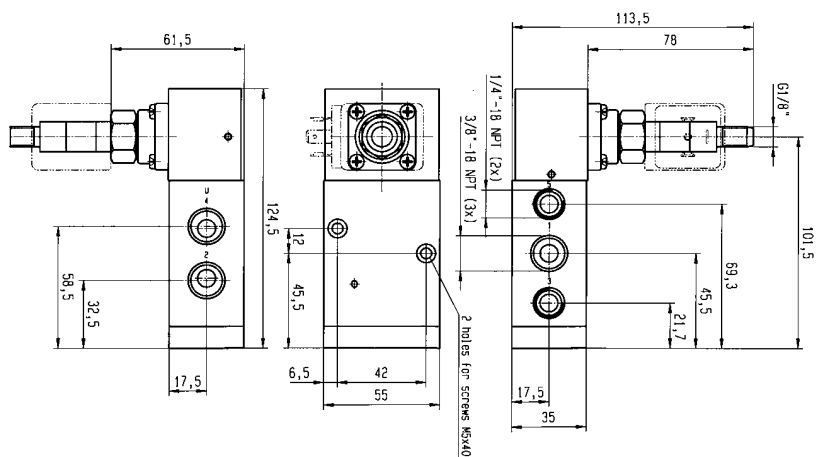
\* See Electrical Parts Group table at end of section

1. Valve with NPT ports

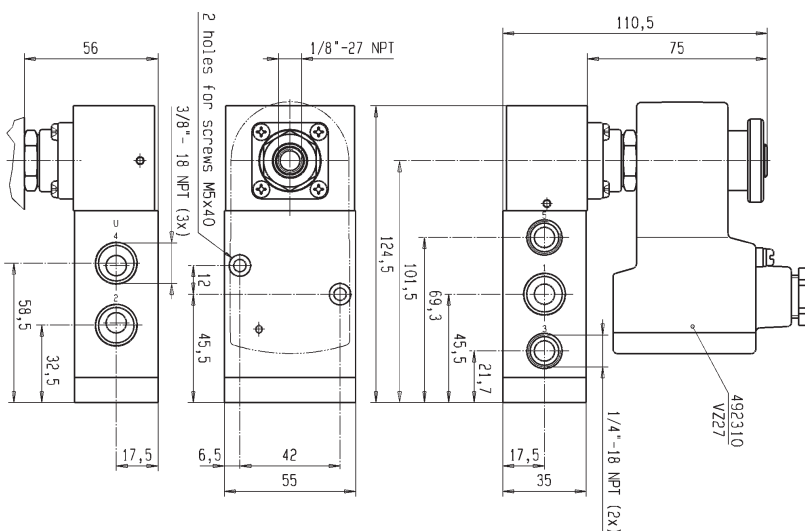
### 316L Stainless Steel valves for actuator control - 5/2 valves - Pipe connection



**Dimension reference 7558**



**Dimension reference 7560**

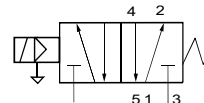


**Dimension reference 7561**

## 316L Stainless Steel valves for actuator control - 5/2 valves - Pipe connection

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure bar |     |    | Fluid temp. °C |     | Seat disc | Reference numbers      |                     |         |      | OR | Power consumption (W) |    | Wt. (g) | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----|----------------|-----|-----------|------------------------|---------------------|---------|------|----|-----------------------|----|---------|------------------|----------|
|           |              |                      | Min                                  | Max | AC | Min            | Max |           | Global valve reference | Valve reference no. | Housing | Coil |    | DC                    | AC |         |                  |          |
| NPT       |              | Qn                   |                                      |     |    |                |     |           |                        |                     |         |      |    |                       |    |         |                  |          |

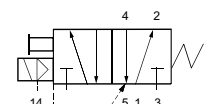
Pilot operated



### 316L Stainless Steel body/Pipe mounting

|           |   |      |   |    |    |     |    |     |              |             |   |           |   |   |   |    |      |
|-----------|---|------|---|----|----|-----|----|-----|--------------|-------------|---|-----------|---|---|---|----|------|
| 3/8 - 1/4 | 8 | 1400 | 2 | 10 | 10 | -10 | 80 | NBR | 7341PRN3NN9D | U341P32951D | - | 483270    | 8 | 8 | - | 11 | 7562 |
|           | 8 | 1400 | 2 | 10 | 10 | -10 | 80 | NBR |              |             | - | 483270.02 | 8 | 8 | - | 11 |      |

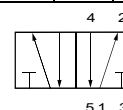
Pilot operated with external pressure supply



### 316L Stainless Steel body/Pipe mounting

|           |   |      |   |    |    |     |    |     |              |             |    |        |   |   |   |   |      |
|-----------|---|------|---|----|----|-----|----|-----|--------------|-------------|----|--------|---|---|---|---|------|
| 3/8 - 1/4 | 8 | 1400 | 2 | 10 | 10 | -25 | 80 | NBR | 7441PRN3NN00 | U441P3250 1 | NL | 481865 | 9 | 8 | - | 2 | 7565 |
|           | 8 | 1400 | 2 | 10 | 10 | -25 | 80 | NBR |              |             | E0 | 481000 | 8 | 8 | - | 2 |      |

External pressure supply



### 316L Stainless Steel body/Pipe mounting

|           |   |      |   |    |    |     |    |     |              |             |   |   |   |   |   |   |      |
|-----------|---|------|---|----|----|-----|----|-----|--------------|-------------|---|---|---|---|---|---|------|
| 3/8 - 1/4 | 8 | 1400 | 2 | 10 | 10 | -25 | 80 | NBR | 7541PRN3NNM1 | U541P0250 1 | - | - | - | - | - | - | 7566 |
|-----------|---|------|---|----|----|-----|----|-----|--------------|-------------|---|---|---|---|---|---|------|

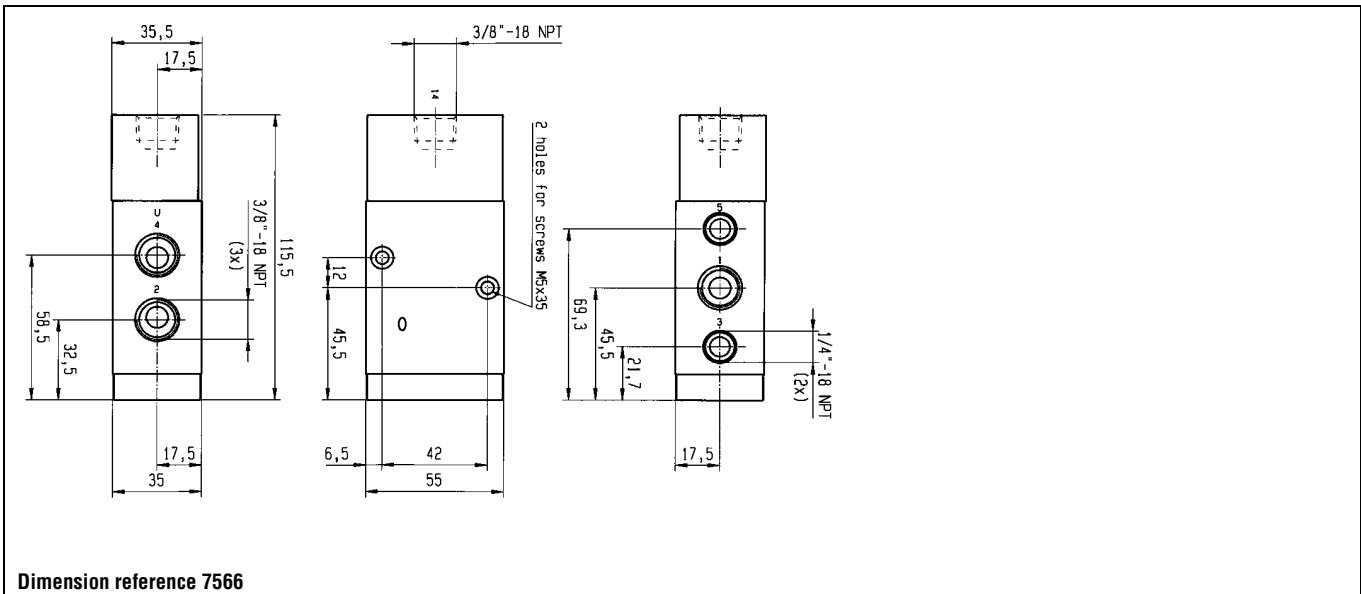
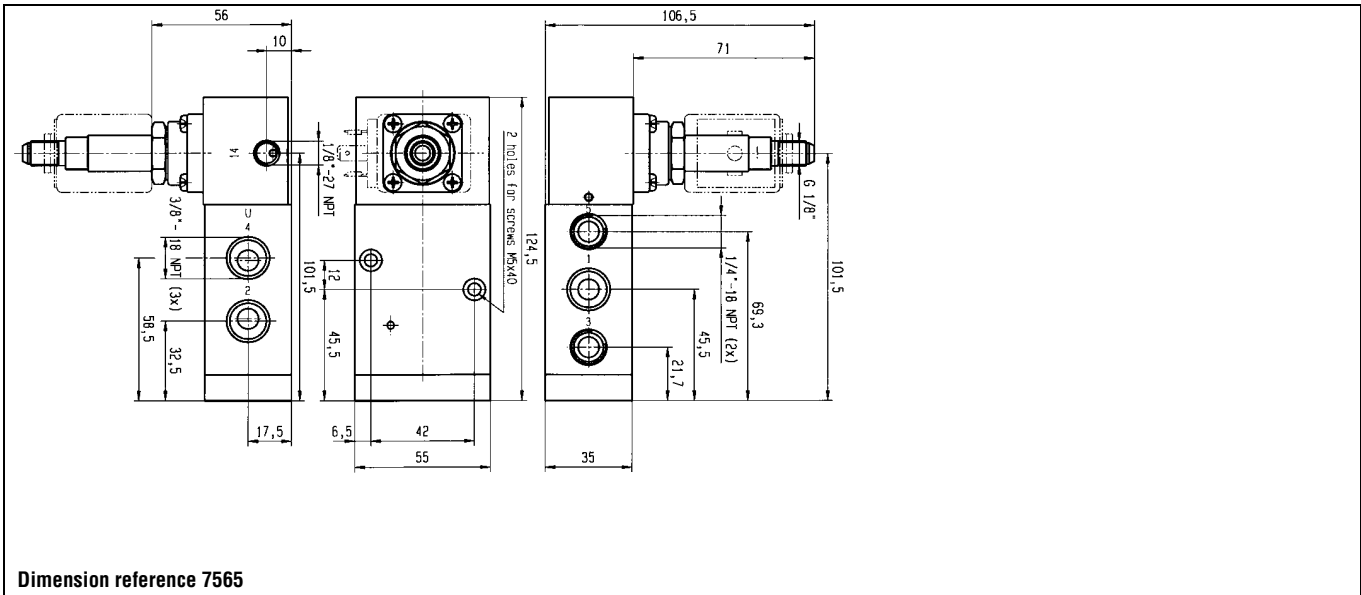
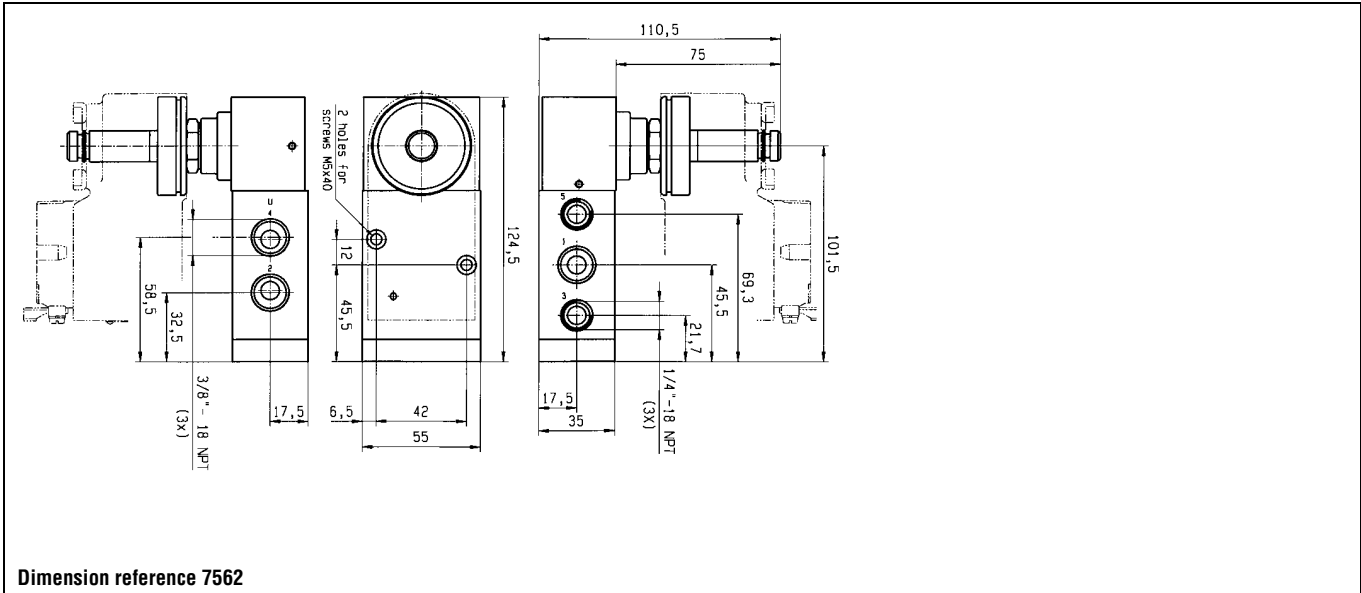
Table continued on page 304

#### Notes:

\* See Electrical Parts Group table at end of section

1. Valve with NPT ports

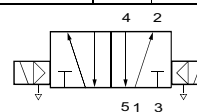
# 316L Stainless Steel valves for actuator control - 5/2 valves - Pipe connection



## 316L Stainless Steel valves for actuator control - 5/2 valves - Pipe connection

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure bar |     |    | Fluid temp. °C |     | Seat disc | Reference numbers      |                     |         |      | Power consumption (W) | Wt. (g) | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----|----------------|-----|-----------|------------------------|---------------------|---------|------|-----------------------|---------|------------------|----------|
|           |              |                      | Min                                  | Max | AC | Min            | Max |           | Global valve reference | Valve reference no. | Housing | Coil | DC                    | AC      |                  |          |
| NPT       |              | Qn                   |                                      |     |    |                |     |           |                        |                     |         |      |                       |         |                  |          |

Two solenoids and main pressure supply



### 316L Stainless Steel body/Pipe mounting

|           |   |      |   |    |    |     |    |     |              |           |   |    |           |     |   |   |    |      |
|-----------|---|------|---|----|----|-----|----|-----|--------------|-----------|---|----|-----------|-----|---|---|----|------|
| 1/4 - 1/8 | 4 | 600  | 2 | 10 | 10 | -25 | 80 | NBR | 7347PRN2JN00 | U347P3150 | 1 | NL | 481865    | 9   | 8 | - | 2  | 7552 |
|           | 4 | 600  | 2 | 10 | 10 | -25 | 80 | NBR |              | E0        |   |    | 481000    | 8   | 8 | - | 2  |      |
|           | 4 | 600  | 2 | 10 | 10 | -25 | 65 | NBR | 7347PRN2JN95 | U347P3195 | 1 | -  | 492965.01 | 0.8 | - | - | 10 | 7553 |
|           | 4 | 600  | 2 | 10 | 10 | -25 | 75 | NBR |              | -         |   |    | 492310    | 6   | 6 | - | 10 |      |
| 3/8 - 1/4 | 8 | 1400 | 2 | 10 | 10 | -25 | 80 | NBR | 7347PRN3NN00 | U347P3250 | 1 | NL | 481865    | 9   | 8 | - | 2  | 7563 |
|           | 8 | 1400 | 2 | 10 | 10 | -25 | 80 | NBR |              | E0        |   |    | 481000    | 8   | 8 | - | 2  |      |

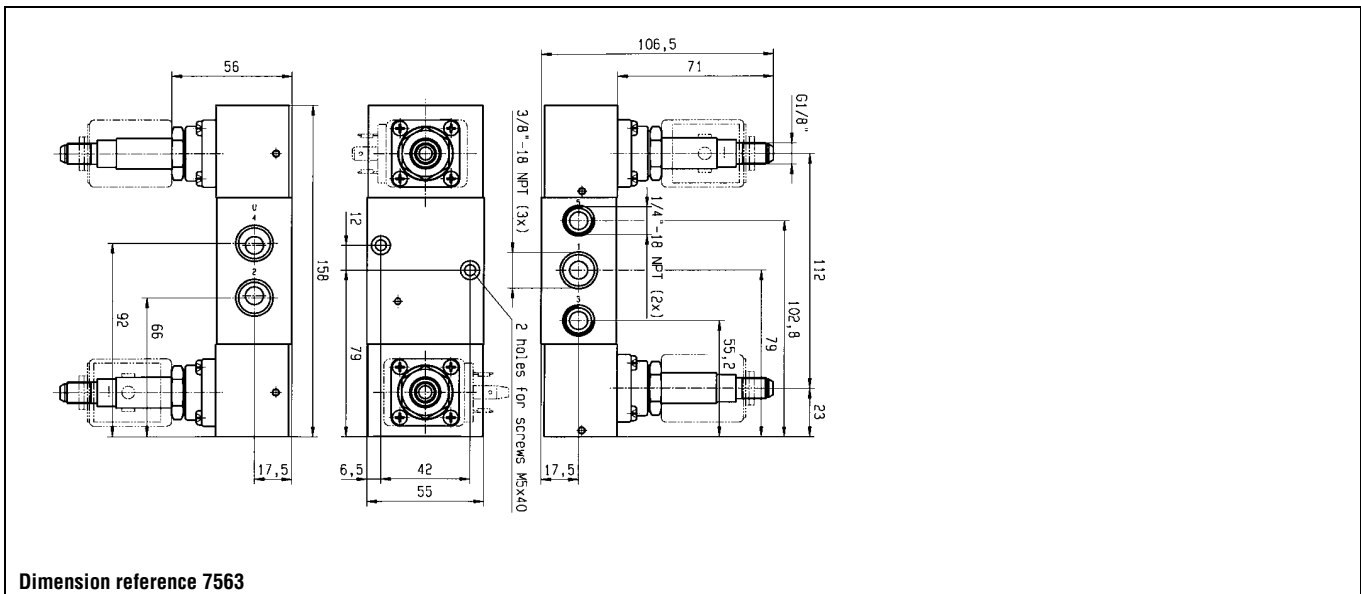
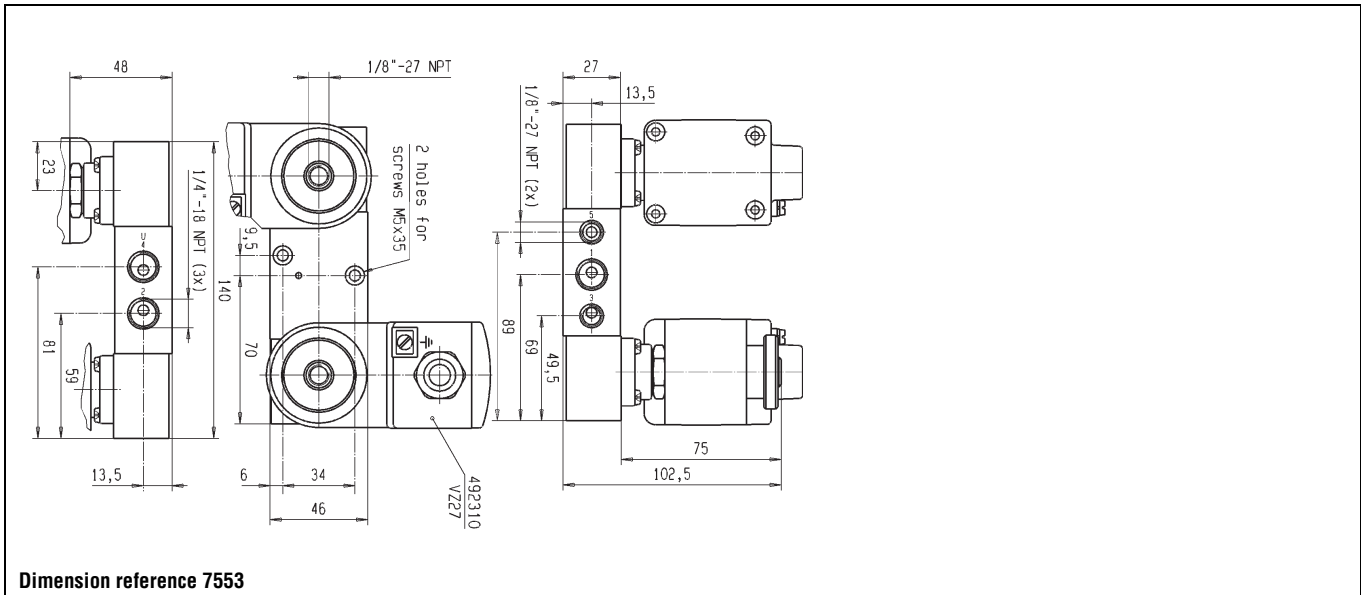
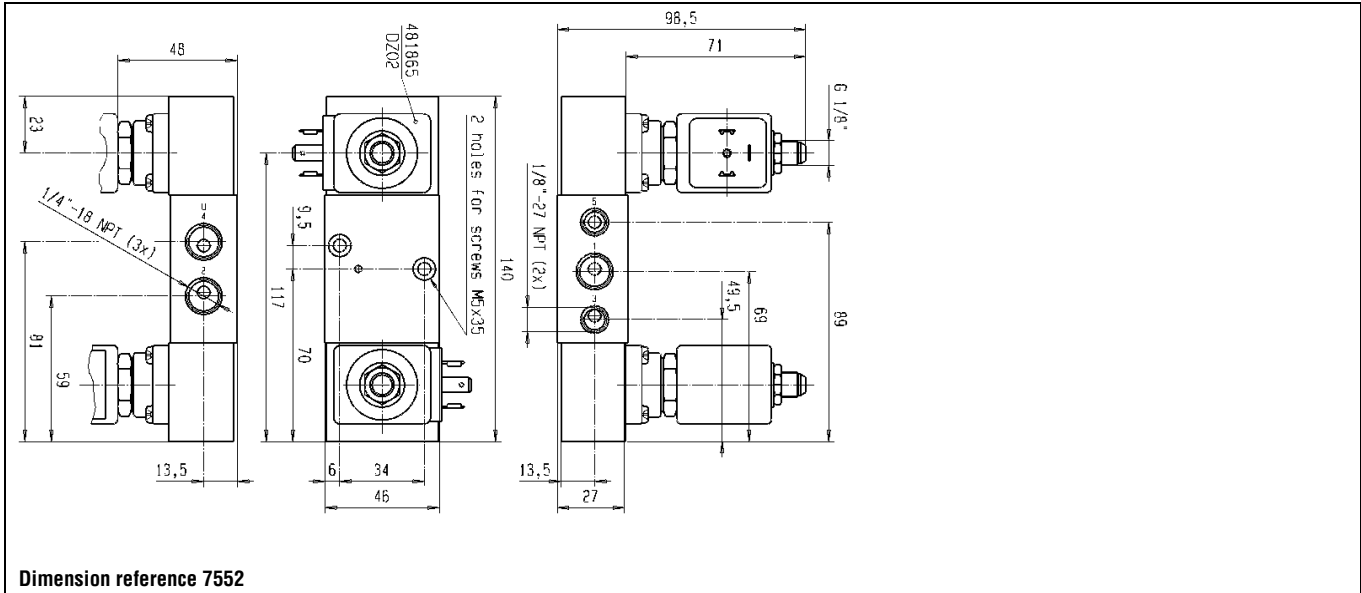
Table continued on page 306

#### Notes:

\* See Electrical Parts Group table at end of section

1. Valve with NPT ports

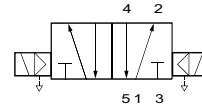
# 316L Stainless Steel valves for actuator control - 5/2 valves - Pipe connection



## 316L Stainless Steel valves for actuator control - 5/2 valves - Pipe connection

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure bar |     |    | Fluid temp. °C |     | Seat disc | Reference numbers      |                     |         |      | Power consumption (W) |    | Wt. (g) | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----|----------------|-----|-----------|------------------------|---------------------|---------|------|-----------------------|----|---------|------------------|----------|
|           |              |                      | Min                                  | Max |    | Min            | Max |           | Global valve reference | Valve reference no. | Housing | Coil | DC                    | AC |         |                  |          |
| NPT       |              | Qn                   |                                      | DC  | AC |                |     |           |                        |                     |         |      |                       |    |         |                  |          |

Two solenoids and main pressure supply



### 316L Stainless Steel body/Pipe mounting

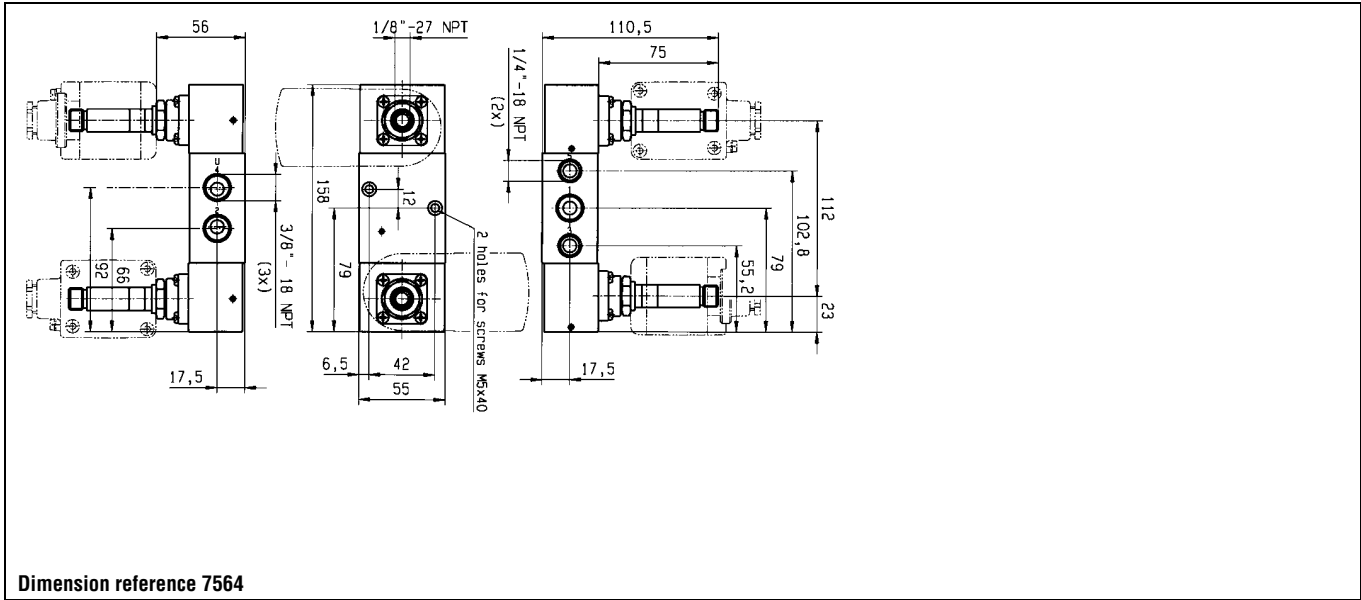
|           |   |      |   |    |    |     |    |     |              |           |   |   |           |     |   |   |    |      |
|-----------|---|------|---|----|----|-----|----|-----|--------------|-----------|---|---|-----------|-----|---|---|----|------|
| 3/8 - 1/4 | 8 | 1400 | 2 | 10 | 10 | -25 | 75 | NBR | 7347PRN3NN95 | U347P3295 | 1 | - | 492965.01 | 0.8 | - | - | 10 | 7564 |
|           | 8 | 1400 | 2 | 10 | 10 | -25 | 75 | NBR |              |           |   | - |           | 6   | 6 | - | 10 |      |

#### Notes:

\* See Electrical Parts Group table at end of section

1. Valve with NPT ports

# 316L Stainless Steel valves for actuator control - 5/2 valves - Pipe connection



# 316L St. Steel valves for actuator control

## Applications

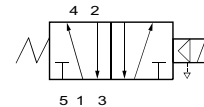
Directional control and fail/safe function in valve actuator circuits in corrosive and hazardous environment.

Solenoid pilots for main stage valves in corrosive and hazardous locations.

# 3/2 5/2

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure bar |     |    | Fluid temp. °C |     | Seat disc | Reference numbers      |                     |         |      | Power consumption (W) | Wt. (g) | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----|----------------|-----|-----------|------------------------|---------------------|---------|------|-----------------------|---------|------------------|----------|
|           |              |                      | Min                                  | Max | AC | Min            | Max |           | Global valve reference | Valve reference no. | Housing | Coil | DC                    | AC      |                  |          |
| NPT       |              | Qn                   |                                      |     |    |                |     |           |                        |                     |         |      |                       |         |                  |          |

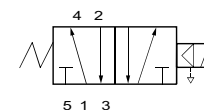
Pilot operated - Integrated pilot



## 316L Stainless Steel body/NAMUR interface

|           |   |     |   |    |    |     |    |     |              |           |   |    |        |   |     |   |   |   |      |
|-----------|---|-----|---|----|----|-----|----|-----|--------------|-----------|---|----|--------|---|-----|---|---|---|------|
| 1/4 - 1/8 | 4 | 600 | 2 | 10 | 10 | -25 | 80 | NBR | 2341NRKDJNM1 | U341N0150 | 1 | A2 | 488980 | 2 | 2.5 | 2 | - | 1 | 7575 |
|-----------|---|-----|---|----|----|-----|----|-----|--------------|-----------|---|----|--------|---|-----|---|---|---|------|

Pilot operated



## 316L Stainless Steel body/NAMUR interface

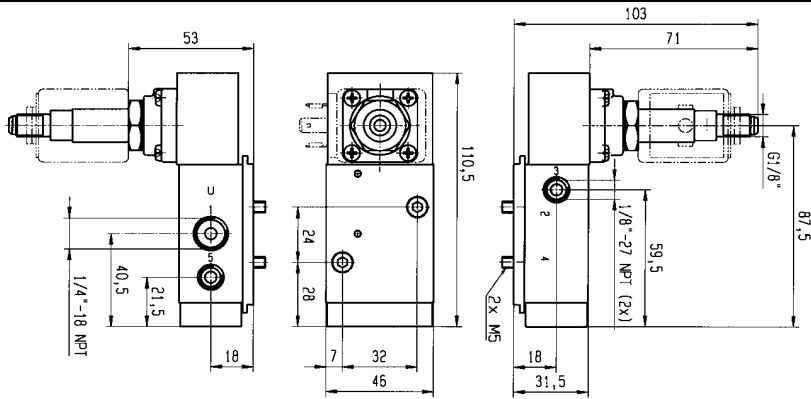
|           |   |     |   |    |    |     |    |     |              |             |   |    |        |   |   |   |   |      |
|-----------|---|-----|---|----|----|-----|----|-----|--------------|-------------|---|----|--------|---|---|---|---|------|
| 1/4 - 1/8 | 4 | 600 | 2 | 10 | 10 | -25 | 75 | NBR | 7341NRKDJN00 | U341N3150   | 2 | NL | 481865 | 9 | 8 | - | 2 | 7542 |
|           | 4 | 600 | 2 | 10 | 10 | -25 | 75 | NBR |              |             |   | E0 | 481000 | 8 | 8 | - | 2 |      |
|           | 4 | 600 | 2 | 10 | 10 | -25 | 80 | NBR | 7341NRKDJN1D | U341N31501D | 2 | -  | 483250 | 8 | 8 | - | 5 | 7543 |

Table continued on page 310

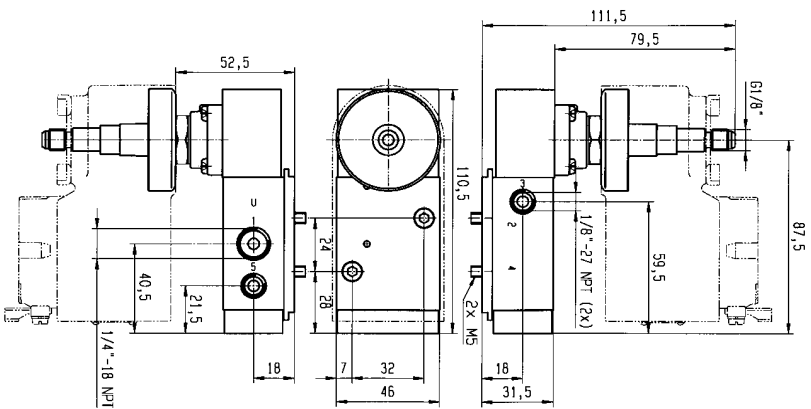
### Notes:

- \* See Electrical Parts Group table at end of section
- 1. Manual override standard
- 2. Valve with NPT ports

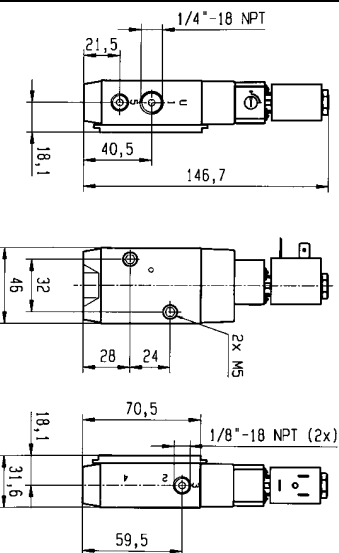
## 316L Stainless Steel valves for actuator control - 3/2 or 5/2 valves - NAMUR interface



Dimension reference 7542



Dimension reference 7543

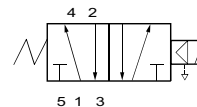


Dimension reference 7575

## 316L Stainless Steel valves for actuator control - 3/2 or 5/2 valves - NAMUR interface

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure bar |     |    | Fluid temp. °C |     | Seat disc | Reference numbers      |                     |         |      | Power consumption (W) |    | Wt. (g) | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----|----------------|-----|-----------|------------------------|---------------------|---------|------|-----------------------|----|---------|------------------|----------|
|           |              |                      | Min                                  | Max | DC | AC             | Min | Max       | Global valve reference | Valve reference no. | Housing | Coil | DC                    | AC |         |                  |          |
| NPT       |              | Qn                   |                                      |     |    |                |     |           |                        |                     |         |      |                       |    |         |                  |          |

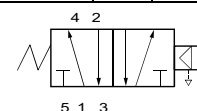
Pilot operated



### 316L Stainless Steel body/NAMUR interface

|           |   |     |   |    |    |     |    |     |              |           |   |    |           |     |   |   |    |      |
|-----------|---|-----|---|----|----|-----|----|-----|--------------|-----------|---|----|-----------|-----|---|---|----|------|
| 1/4 - 1/8 | 4 | 600 | 2 | 10 | 10 | -25 | 80 | NBR | 7341NRKDJN92 | U341N3192 | 1 | NL | 483580.01 | 0.4 | - | - | 7  | 7544 |
|           | 4 | 600 | 2 | 10 | 10 | -25 | 75 | NBR | 7341NRKDJN95 | U341N3195 | 1 | -  | 492965.01 | 0.8 | - | - | 10 | 7696 |
|           | 4 | 600 | 2 | 10 | 10 | -25 | 75 | NBR |              |           |   | -  | 492310    | 6   | 6 | - | 10 |      |

Pilot operated - Integrated pilot



### 316L Stainless Steel body/NAMUR interface

|           |   |      |   |    |    |     |    |     |             |           |  |    |        |     |   |   |   |      |
|-----------|---|------|---|----|----|-----|----|-----|-------------|-----------|--|----|--------|-----|---|---|---|------|
| 3/8 - 1/4 | 8 | 1400 | 2 | 10 | 10 | -25 | 80 | NBR | 2341NRKNNM1 | U341N0250 |  | A2 | 488980 | 2.5 | 2 | - | 1 | 7577 |
|-----------|---|------|---|----|----|-----|----|-----|-------------|-----------|--|----|--------|-----|---|---|---|------|

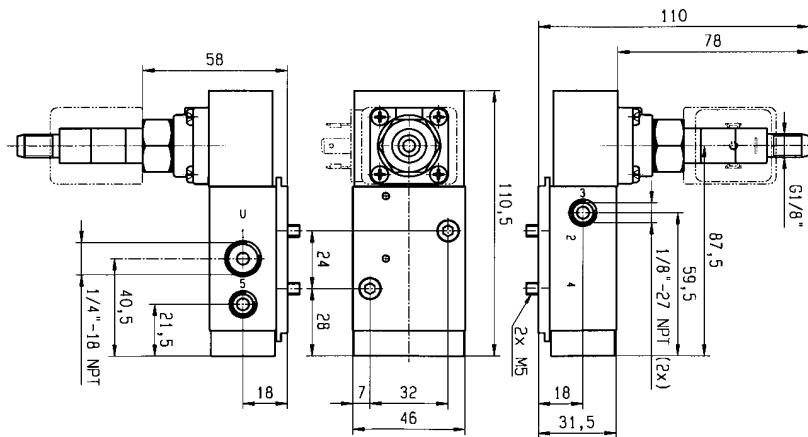
Table continued on page 312

#### Notes:

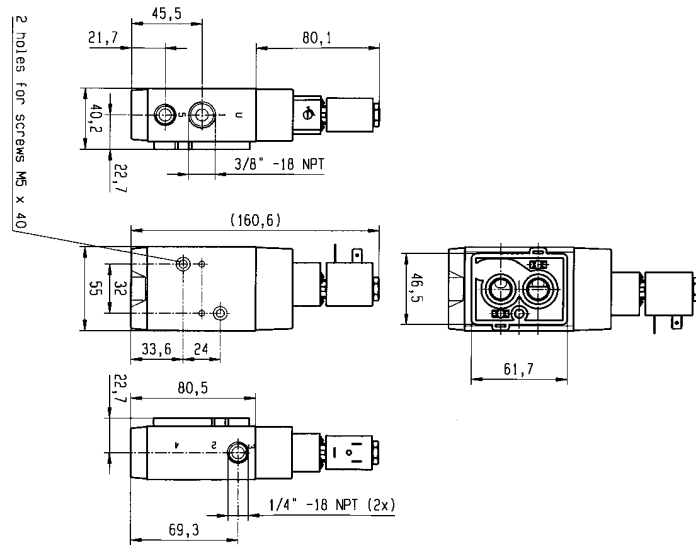
\* See Electrical Parts Group table at end of section

1. Valve with NPT ports

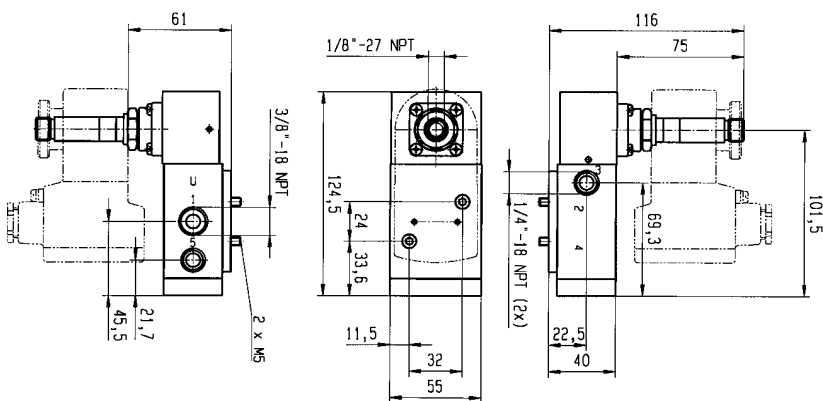
## 316L Stainless Steel valves for actuator control - 3/2 or 5/2 valves - NAMUR interface



Dimension reference 7544



Dimension reference 7577

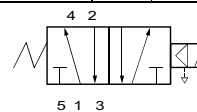


Dimension reference 7696

## 316L Stainless Steel valves for actuator control - 3/2 or 5/2 valves - NAMUR interface

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure bar |     |    | Fluid temp. °C |     | Seat disc | Reference numbers      |                     |         |      | Power consumption (W) | Wt. (g) | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----|----------------|-----|-----------|------------------------|---------------------|---------|------|-----------------------|---------|------------------|----------|
|           |              |                      | Min                                  | Max | AC | Min            | Max |           | Global valve reference | Valve reference no. | Housing | Coil | DC                    | AC      |                  |          |
| NPT       |              | Qn                   |                                      |     |    |                |     |           |                        |                     |         |      |                       |         |                  |          |

Pilot operated



### 316L Stainless Steel body/NAMUR interface

|           |   |      |   |    |    |     |    |     |              |           |   |    |           |     |   |   |    |      |
|-----------|---|------|---|----|----|-----|----|-----|--------------|-----------|---|----|-----------|-----|---|---|----|------|
| 3/8 - 1/4 | 8 | 1400 | 2 | 10 | 10 | -25 | 80 | NBR | 7341NRKNNN00 | U341N3250 | 1 | NL | 481865    | 9   | 8 | - | 2  | 7554 |
|           | 8 | 1400 | 2 | 10 | 10 | -25 | 80 | NBR |              | E0        |   |    | 481000    | 8   | 8 | - | 2  |      |
|           | 8 | 1400 | 2 | 10 | 10 | -25 | 55 | NBR | 7341NRKNNN92 | U341N3292 | 1 | NL | 483580.01 | 0.4 | - | - | 7  | 7556 |
|           | 8 | 1400 | 2 | 10 | 10 | -25 | 75 | NBR | 7341NRKNNN95 | U341N3295 | 1 | -  | 492965.01 | 0.8 | - | - | 10 | 7695 |
|           | 8 | 1400 | 2 | 10 | 10 | -25 | 75 | NBR |              | -         |   |    | 492310    | 6   | 6 | - | 10 |      |

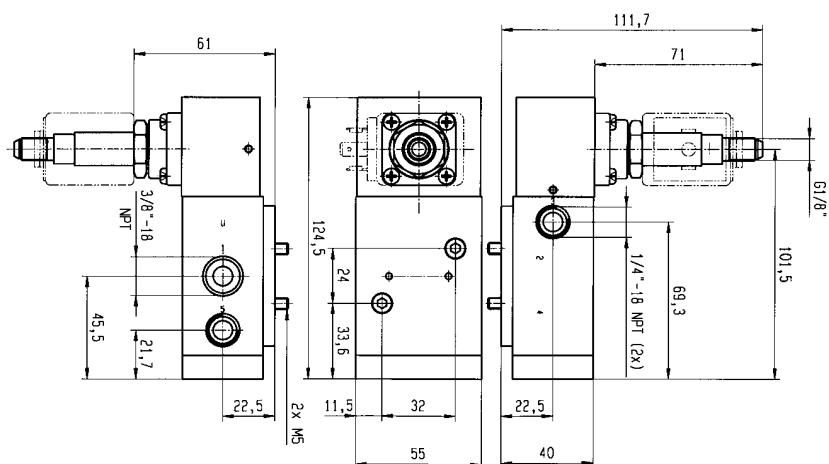
Table continued on page 314

#### Notes:

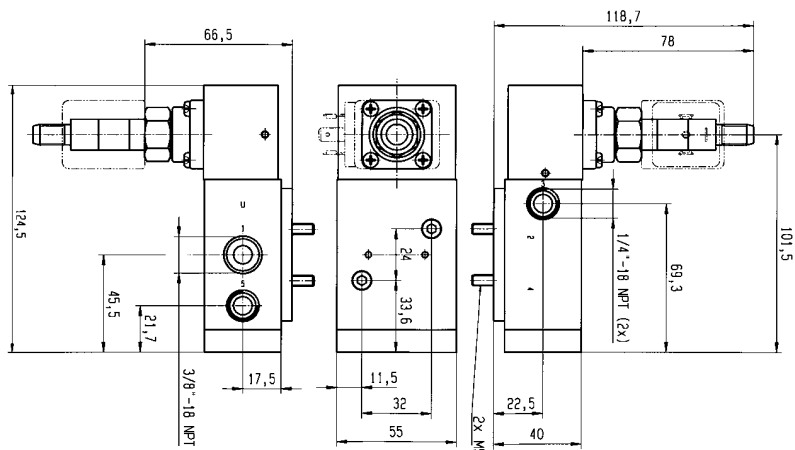
\* See Electrical Parts Group table at end of section

1. Valve with NPT ports

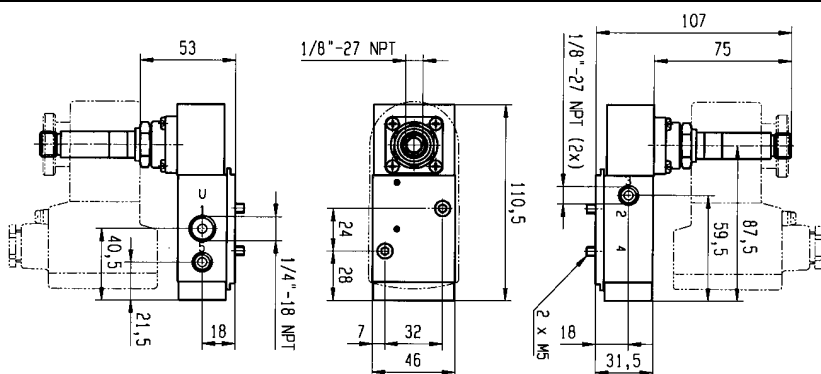
## 316L Stainless Steel valves for actuator control - 3/2 or 5/2 valves - NAMUR interface



Dimension reference 7554



Dimension reference 7556

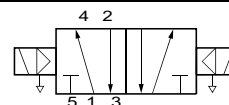


Dimension reference 7695

## 316L Stainless Steel valves for actuator control - 3/2 or 5/2 valves - NAMUR interface

| Port size | Orifice (mm) | Flow factors (L/min) | Admissible differential pressure bar |     |    | Fluid temp. °C |     | Seat disc | Reference numbers      |                     |         |      | Power consumption (W) | Wt. (g) | El. Part Group * | Dim ref. |
|-----------|--------------|----------------------|--------------------------------------|-----|----|----------------|-----|-----------|------------------------|---------------------|---------|------|-----------------------|---------|------------------|----------|
|           |              |                      | Min                                  | Max | AC | Min            | Max |           | Global valve reference | Valve reference no. | Housing | Coil | DC                    | AC      |                  |          |
| NPT       |              | Qn                   |                                      |     |    |                |     |           |                        |                     |         |      |                       |         |                  |          |

Two solenoids and main pressure supply



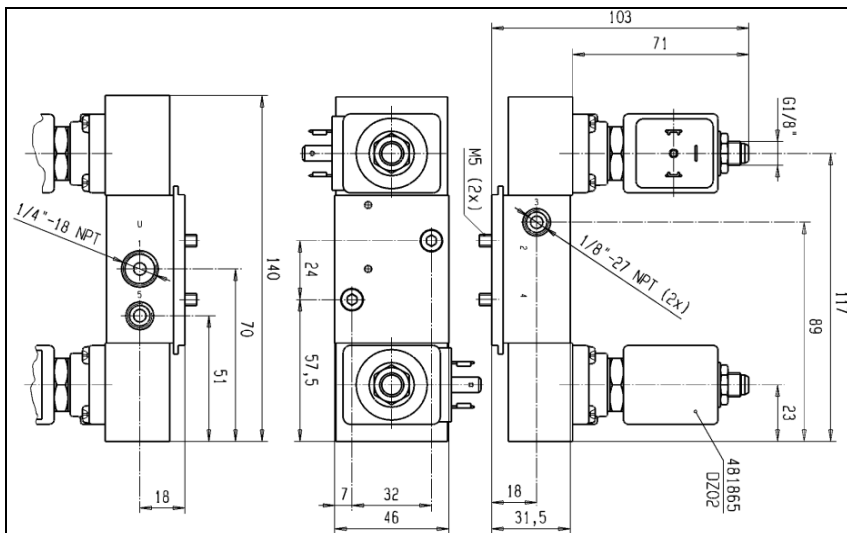
### 316L Stainless Steel body/NAMUR interface

|           |   |      |   |    |    |     |    |     |              |           |   |    |           |   |     |   |   |   |      |
|-----------|---|------|---|----|----|-----|----|-----|--------------|-----------|---|----|-----------|---|-----|---|---|---|------|
| 1/4 - 1/8 | 4 | 400  | 2 | 10 | 10 | -25 | 80 | NBR | 7347NRKDHNM0 | U347N3150 | 1 | NL | 481865    | 2 | 9   | 8 | - | 2 | 7545 |
|           | 4 | 400  | 2 | 10 | 10 | -25 | 80 | NBR |              | E0        |   |    | 481000    | 2 | 8   | 8 | - | 2 |      |
|           | 4 | 400  | 2 | 10 | 10 | -25 | 55 | NBR | 7347NRKDH92  | U347N3192 | 1 | NL | 483580.01 | 2 | 0.4 | - | - | 7 | 7546 |
| 3/8 - 1/4 | 8 | 1400 | 2 | 10 | 10 | -25 | 80 | NBR | 7347NRKNNN00 | U347N3250 | 1 | NL | 481865    |   | 9   | 8 | - | 2 | 7557 |
|           | 8 | 1400 | 2 | 10 | 10 | -25 | 80 | NBR |              | E0        |   |    | 481000    |   | 8   | 8 | - | 2 |      |

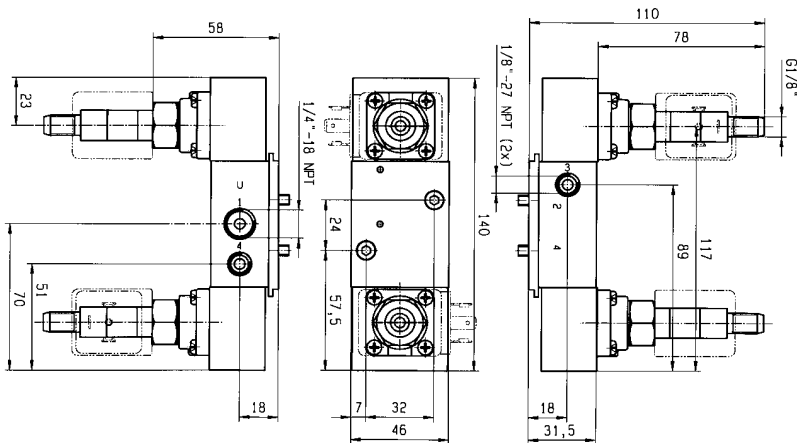
#### Notes:

- \* See Electrical Parts Group table at end of section
- 1. Valve with NPT ports
- 2. Please order two housings and coils for each valve

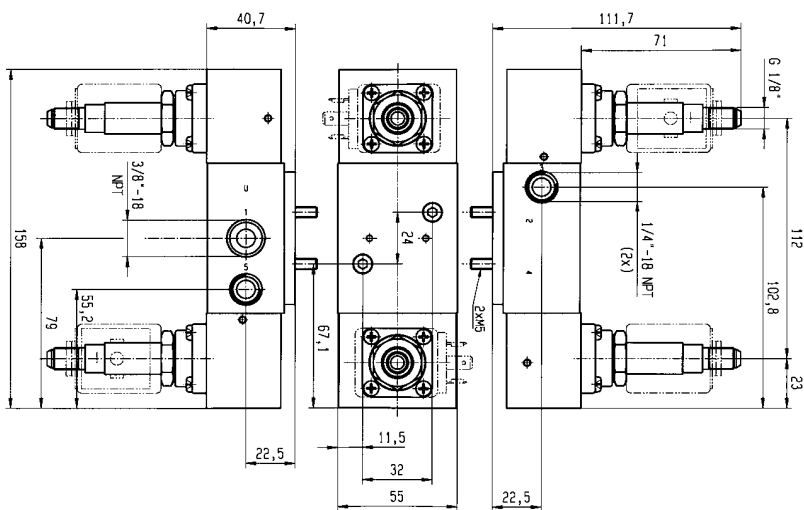
## 316L Stainless Steel valves for actuator control - 3/2 or 5/2 valves - NAMUR interface



Dimension reference 7545



Dimension reference 7546



Dimension reference 7557

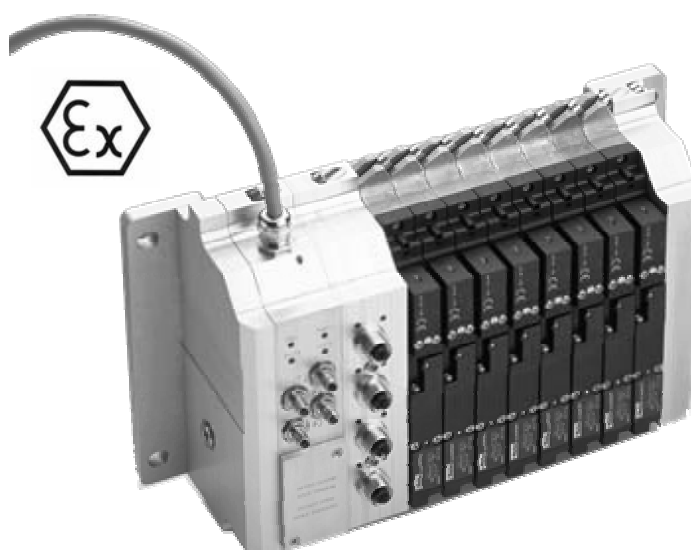
## Electrical parts options with 3/2-5/2 - 316L Stainless steel valves for pneumatic actuator control

| El.part Group | Coil        | Protection class | Protection class / Temperature class | Power DC | AC | Coil Order No. | Coil Ref. No. | Connection           | Housing Order No. | Housing Ref. No. | Ambient temp. min. | max.     |
|---------------|-------------|------------------|--------------------------------------|----------|----|----------------|---------------|----------------------|-------------------|------------------|--------------------|----------|
| 1             | 22 mm       | IP65             | Class F                              | 2.5      | 2  | DA01           | 488980        | for DIN B plug       | A2                | 8993             | -40                | 50       |
|               |             | IP65             | Class F                              | 2.5      | 2  | DA02           | 481045        | with DIN B plug      | A2                | 8993             | -40                | 50       |
|               |             | IP65             | EEx m II T5                          | 2.5      | 2  | VA12           | 482606.10     | with 1500mm cable    | 00                | -                | -40                | 50       |
| 2             | 32 mm (Std) | IP65             | Class F                              | 9        | 8  | DZ02           | 481865        | for DIN A plug       | NL                | 8132             | -40                | 50       |
|               |             | IP65             | Class F                              | 9        | 8  | DZ03           | 482725        | with DIN A plug      | NL                | 8132             | -40                | 50       |
|               |             | IP65             | Class H                              | 9        | 8  | DZ04           | 492453        | for DIN A plug       | NL                | 8132             | -40                | 50       |
|               | 50 mm (Std) | IP65             | Class H                              | 9        | 8  | DZ05           | 492726        | with DIN A plug      | NL                | 8132             | -40                | 50       |
|               |             | IP65             | Class F, 50/60 Hz                    | -        | 9  | DZ06           | 483510        | for DIN A plug       | NL                | 8132             | -40                | 50       |
|               |             | IP65             | Class F, 50/60 Hz                    | -        | 9  | DZ07           | 482635        | with DIN A plug      | NL                | 8132             | -40                | 50       |
|               |             | IP65             | EEx m II T4                          | 9        | 8  | HZ90           | 492670.10     | with 3000mm cable    | 00                | -                | -25                | 40       |
|               |             | IP10/IP44        | Class F                              | 8        | 8  | EZ01           | 481000        | screw-terminals      | E0                | 4270             | -40                | 50       |
|               |             | IP10/IP44        | Class H                              | 8        | 8  | EZ02           | 485100        | screw-terminals      | E0                | 4270             | -40                | 50       |
|               |             | IP67             | Class F, IP 67, M20x1.5              | 8        | 8  | EZ01           | 481000        | screw-terminals      | G1                | 4538             | -40                | 50       |
|               |             | IP65             | EEx m II T4/T5                       | 9        | 8  | VZ01           | 492070        | with 1500mm cable    | 00                | -                | -40                | 40/65    |
|               |             | IP67             | EEx me II T4                         | 8        | 8  | HZ06           | 483371        | for cable connection | 00                | -                | -40                | 65       |
|               |             | IP66             | EEx me II T3/T4                      | 11       | 9  | VZ90           | 492190.10     | for cable connection | 00                | -                | -40                | 75/40    |
|               |             | IP67             | EEx me II T3/T4                      | 8        | 8  | HZ23           | 494040        | for cable connection | 00                | -                | -40                | 90/65    |
|               |             | IP65             | EEx md IIC T4/T5                     | 8        | 8  | HZ09           | 493640        | with 1500mm cable    | 00                | -                | -40                | 75/40    |
| 5             | 50 mm       | IP54             | EEx d IIC T4/T5/T6                   | 8        | 8  | HZ08           | 483250        | for cable, 1/2 NPT   | 00                | -                | -40                | 80/75/60 |
| 7             | 32 mm I.S.  | IP65             | EEx ia II C T6                       | 0.4      | -  | DZ12           | 483580.01     | for DIN A plug       | NL                | 8132             | -40                | 55       |
|               |             | IP65             | EEx ia II C T6                       | 0.4      | -  | DZ13           | 483960.01     | with DIN A plug      | NL                | 8132             | -40                | 55       |
|               | 50 mm I.S.  | IP66             | EEx ia II C T6                       | 0.4      | -  | VZ93           | 494035.10     | for cable connection | 00                | -                | -40                | 65       |
|               |             | IP67             | EEx ia II C T6                       | 0.4      | -  | VZ08           | 488660.01     | with 2000mm cable    | 00                | -                | -40                | 65       |
|               |             | IP65             | EEx ia II C T6                       | 0.4      | -  | VZ09           | 488670.01     | with DIN A plug      | 00                | -                | -40                | 65       |
| 9             | 32 mm 50 mm | IP65             | Class F                              | 9        | 9  | DZ93           | 492387        | with DIN A plug      | N9                | 8886             | -40                | 50       |
|               |             | IP66             | EEx me II T5/T6                      | 1.5      | -  | VZ13           | 492200        | for cable connection | 00                | -                | -40                | 75/40    |
|               |             | IP67             | EEx me II T4                         | 8        | -  | VZ14           | 483371.01     | for cable connection | 00                | -                | -40                | 65       |
|               |             | IP66             | EEx me II T4/T5                      | 6        | 6  | VZ15           | 492300        | for cable connection | 00                | -                | -40                | 75/40    |
|               |             | IP67             | EEx m II T4/T5                       | 5        | 5  | VZ02           | 492270        | with 1500mm cable    | 00                | -                | -40                | 65/40    |
|               |             | IP65             | EEx ib IIB T6                        | 0.8      | -  | VZ11           | 482660        | for cable connection | 00                | -                | -40                | 75       |
|               |             | IP66             | EEx ib IIC T6                        | 0.8      | -  | VZ12           | 483330.01     | for cable connection | 00                | -                | -40                | 75       |
|               |             | IP66             | EEx ia IIC T6                        | 0.8      | -  | VZ92           | 492965.02     | for cable connection | 00                | -                | -40                | 65       |
| 10            | 50 mm       | IP66             | EEx me II T5/T6                      | 1.5      | -  | VZ26           | 492210        | for cable connection | 00                | -                | -40                | 75/40    |
|               |             | IP66             | EEx me II T4/T5                      | 6        | 6  | VZ27           | 492310        | for cable connection | 00                | -                | -40                | 75/40    |
|               |             | IP65             | EEx ib IIB T6                        | 0.8      | -  | VZ11           | 482660        | for cable connection | 00                | -                | -40                | 75       |
|               |             | IP66             | EEx ib IIC T6                        | 0.8      | -  | VZ12           | 483330.01     | for cable connection | 00                | -                | -40                | 75       |
|               |             | IP66             | EEx ia IIC T6                        | 0.8      | -  | VZ91           | 492965.01     | for cable connection | 00                | -                | -40                | 65       |
| 11            | 50 mm EEx d | IP65             | EEx d II C T4/T5/T6                  | 8        | 8  | HZ19           | 483270        | for cable , M20x1.5  | 00                | -                | -40                | 80/75/60 |
|               |             | IP65             | EEx d II C T4/T5/T6                  | 8        | 8  | HZ21           | 483270.02     | for cable , 1/2 NPT  | 00                | -                | -40                | 80/75/60 |
| 12            | 50 mm       | IP66             | EEx me II T4/T5                      | 6        | 6  | VZ27           | 492310        | for cable connection | 00                | -                | -40                | 75/40    |
|               |             | IP66             | EEx ia IIB T6                        | 0.8      | -  | VZ22           | 482160.01     | for cable connection | 00                | -                | -40                | 65       |
|               |             | IP66             | EEx ia IIC T6                        | 0.8      | -  | VZ23           | 482870.01     | for cable connection | 00                | -                | -40                | 65       |

Note: This table is indicative only. Please contact your distributor to confirm your selection.

# EExPress™

## EEx p [ia] m IIC T5 Bus Manifold for Pneumatic actuator control



Parker Lucifer has developed industry's first fully integrated fieldbus manifold system – the patented EExPress™ Bus Manifold – for the control of pneumatic actuators in hazardous (Zone 1 and Zone 2) process industry environments like chemical, petrochemical applications. The EExPress™ Bus Manifold is a stackable valve system that fully integrates 5/2 solenoid valves, control electronics and input sensors, a unique feature on the market today, and uses the Profibus DP fieldbus communications protocol – the preferred protocol of the process industries. One bus address can operate up to 32 individual 5/2 modular solenoid valves, or a combination of valves and actuator position sensors.

The concept consists in an "integrated solution" which permits to install the manifold close to the pneumatic actuators - without the need for expensive explosion-proof pressurised cabinets. The **EEx p [ia] m IIC T5** protection is reached by using a "safety pressure" - the complete block is put under 50 mb safety pressure. This permits a substantial reduction of installation and maintenance costs, a simplification of the electrical connections, the use of Profibus DP and offers increased safety due to separated wiring of communication and power supply.

**For more information see brochure 8752/GB**

## 1. PRODUCT INTRODUCTION

The EExPress™ bus Manifold is a patented stackable system composed of:

- 1 x End plates Kit
- X x Solenoid valve module
- X x Input sensor module
- 1 x Gateway

The EExPress™ Explosion-proof manifold 5/2 valve island design uses the **EEx [ia] pm protection**.



Up to 32 valves per island require one bus address only.

The system includes a bus part satisfying the intrinsic safety requirements and communicating directly with a master control unit by using the Profibus DP protocol.

The manifold assembly and the dedicated power supply are coping with the "p" protection. The galvanic separation between the EEx ia zone and the EEx p is assured by opto-coupler and by a transformer.

The valve coils are coping with the ìmî protection.

## 2. APPLICATIONS

This smart EExPress™ bus manifold package has been designed for the control of pneumatic actuators in Process Industries with **hazardous environments Zone 1 or Zone 2** such as:

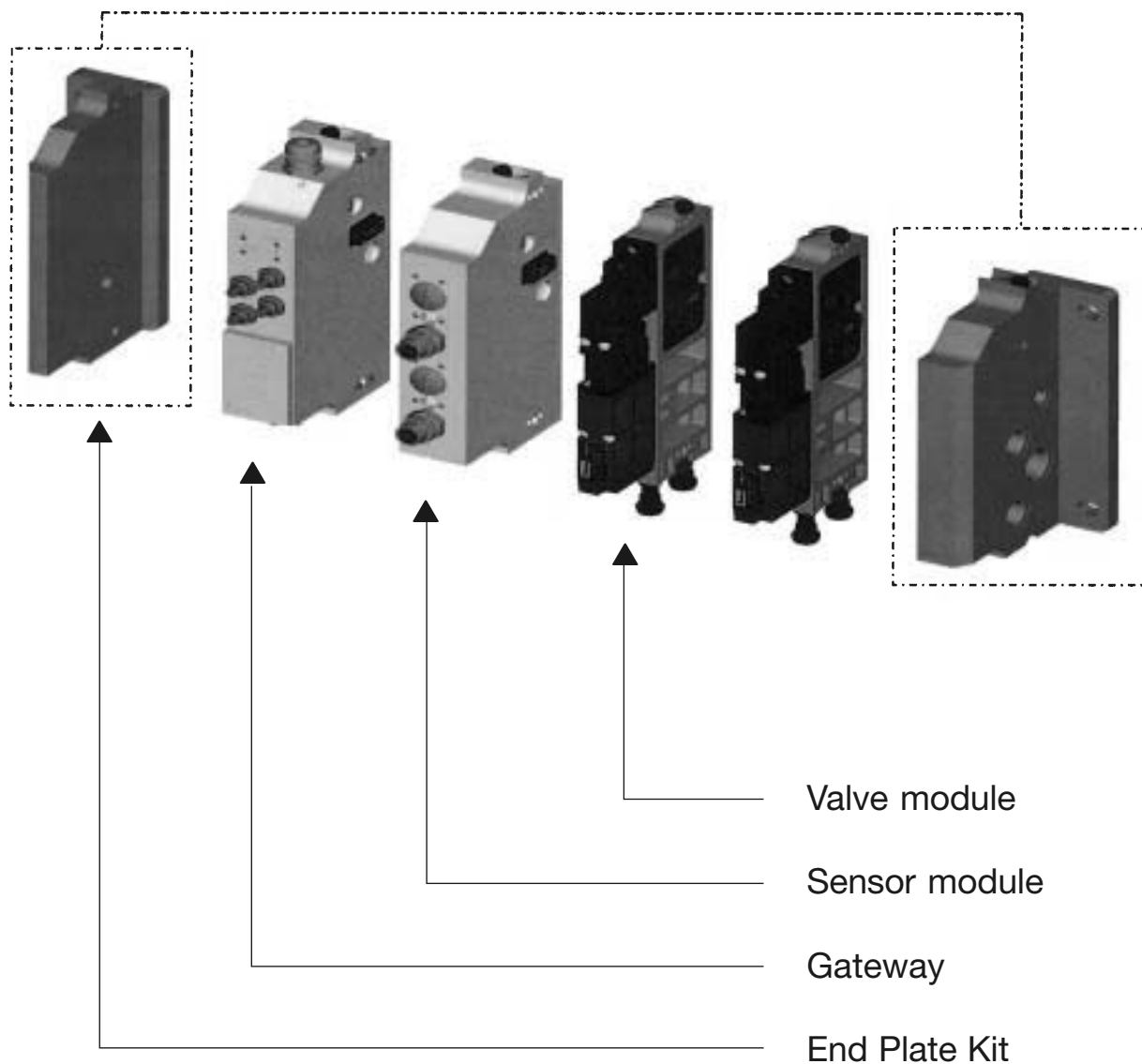
- Ghemical & Pharmaceutical.
- Gas and solvent handling
- Powder transportation.
- Refining.
- Etc.

These high demanding markets are concerned with:

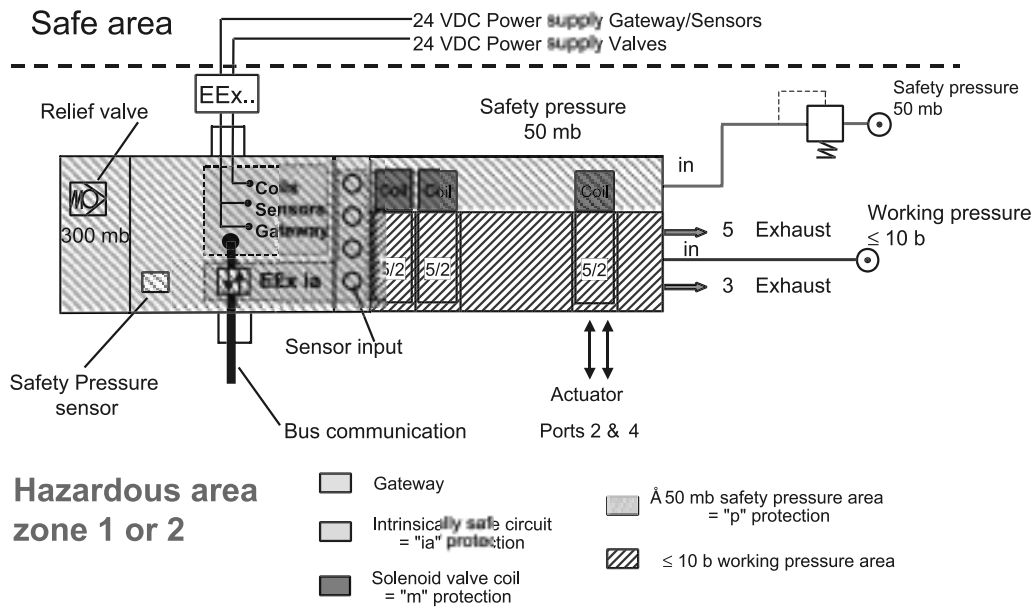
- Process & people safety
- Plant installation simplification
- Process productivity
- Friendly use product
- Partners support



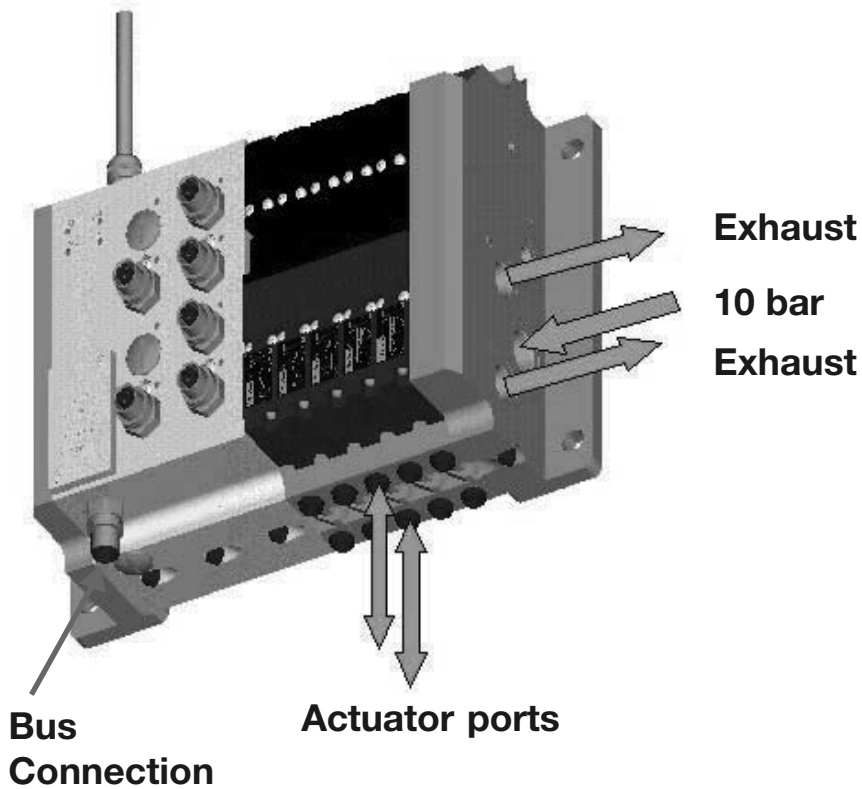
### 3. PRODUCT CONFIGURATION



## 5. PRODUCT OPERATING PRINCIPLE



### Power supply



## HOW TO ORDER **ASSEMBLED MANIFOLDS**

### 21.2 Choose the components for 1 manifold in the following order:

|                                                   |                                    |                  |                  |             |
|---------------------------------------------------|------------------------------------|------------------|------------------|-------------|
| <b>1 - Plate kit</b>                              |                                    |                  |                  |             |
| <b>N.B. One</b> plate kit only per manifold       |                                    |                  |                  |             |
| <i>End plate A</i>                                | <i>Pressure supply plate B</i>     | <i>Order No.</i> | <i>Qty</i>       |             |
| BSP                                               | BSP                                | 495190           | 1                |             |
| <b>2 - Gateway selection</b>                      |                                    |                  |                  |             |
| <b>N.B. One</b> gateway only per manifold         |                                    |                  |                  |             |
| <i>Protocol</i>                                   | <i>Communication link</i>          | <i>Order No.</i> | <i>Qty</i>       |             |
| Profibus DP                                       | Copper (1 connector)               | 495176           | 1                |             |
| Profibus DP                                       | Copper (1 connectors + 1 repeater) | 495275           | 1                |             |
| Profibus DP                                       | Optical fibre                      | 493972           | 1                |             |
| <b>3 - Sensor modules</b>                         |                                    |                  |                  |             |
| <b>N.B.</b> 0 up to 8 sensor modules per manifold |                                    |                  |                  |             |
| <i>Nb of connectors</i>                           | <i>Connection</i>                  | <i>ON/OFF</i>    | <i>Order No.</i> | <i>Qty*</i> |
| 2x IN connectors                                  | M 12                               | x                | 495141           | 0 to 8      |
| 4x IN connectors                                  | M 12                               | x                | 495142           | 0 to 8      |
| <b>4 - Valve modules</b>                          |                                    |                  | <i>Order No.</i> | <i>Qty</i>  |
| <b>N.B.</b> 0 up to 32 valve modules per manifold |                                    |                  |                  |             |
| Module with 5/2 valves                            |                                    |                  | 494237           | 0 to 32     |

**\* Warning:** For one bus address, the combination sensor module + valve module has to fit the following formula:  $4 \times (\text{Number of sensor modules with } 2 \times \text{IN connectors} + \text{Number of sensor modules with } 4 \times \text{IN connectors}) + \text{Number of valve modules} < 32$ .

### 21.3 Example of manifold configuration and order:

| Description                     | Order No. chosen | Qty per Manifold chosen |
|---------------------------------|------------------|-------------------------|
| Plate Kit                       | 495190           | 1                       |
| Gateway                         | 495176           | 1                       |
| Sensor module – 2 IN connectors | 495141           | 4                       |
| Sensor module – 4 IN connectors | –                | –                       |
| Valve module                    | 494237           | 8                       |

**Order:** 5 manifold with above mentioned components.

The selected components will be supplied as an assembled manifold.

A – The label on the manifold shows:

1. The LCIE conformity for the EEx ia pm protection.
2. The LCIE approval code: EM followed by a manufacturing code. I.e. **EM 12345**

B – Each manufacturing code defines a specific manifold configuration

C – The **EM XXXXX** is also mentioned on the shipping bulletin and on the invoice

D – To simplify, customers can re-order the same manifold by using the **EM XXXXX** code mentioned on these documents.

# Index by reference numbers

## Valve reference number - global reference number

| Valve reference | Global valve ref. | Page      | Valve reference | Global valve ref. | Page      | Valve reference | Global valve ref. | Page    |
|-----------------|-------------------|-----------|-----------------|-------------------|-----------|-----------------|-------------------|---------|
| U 033X5156      | 7033XRN2SN00      | 274/294   | 121V5206        | 7121VVG2QV00      | 116       | 131K65          | 7131KBG2BR00      | 176     |
| U 033X51561D    | 7033XRN2SN1D      | 274/292   | 121V5212        | 7121VVG2QT00      | 116       | 131M14          | -                 | 124/226 |
| U 033X5256      | 7033XRN3SN00      | 276/294   | 121V5263        | 7121VVG2QR00      | 74/116    | 131M15          | -                 | 124/226 |
| U 033X52561D    | 7033XRN3SN1D      | 274/294   | 121V5306        | 7121VVG2NV00      | 116       | 131M74          | -                 | 142     |
| E 121F43        | 7121FBF4NF00      | 14/88     | 121V53061D      | 7121VVG2NV1D      | 116       | 131M7450        | -                 | 142     |
| E 121F4302      | 7121FBF4NV00      | 14/50     | 121V5363        | 7121VVG2NR00      | 74/116    | 131M75          | -                 | 138     |
| E 121F44        | 7121FBF4GF00      | 14/88     | 121V5406        | 7121VVG2GV00      | 116       | 131M7550        | -                 | 138     |
| E 121F4406      | 7121FBF4GV00      | 14/50     | 121V5463        | 7121VVG2GR00      | 74/116    | 131T21          | 7131TBG2RV00      | 132     |
| 121F47          | 7121FBF4LF00      | 14        | 121V5706        | 7121VVG2LV00      | 116       | 131T2101        | 7131TBG2RVM0      | 132     |
| 121F4706        | 7121FBF4LV00      | 14/50     | 121V5763        | 7121VVG2LR00      | 74/116    | 131T22          | 7131TBG2NVA0      | 132     |
| 121F63          | 7121FBF4LR00      | 14/88     | 122K83          | 7122KBG2LF00      | 12        | 131T23          | 7131TBG2JV00      | 126     |
| 121F64          | 7121FBF4NR00      | 14/88     | 122K8306        | 7122KBG2LV00      | 12/48     | 131T2301        | 7131TBG2JVM0      | 126     |
| 121F67          | 7121FBF4GR00      | 14/88     | 122K8321        | 7122KBG2LRT0      | 106       | 131T29          | 7131TBG2LV00      | 128     |
| 121G2320        | 7121GBG34VT0      | 104       | 122K8363        | 7122KBG2LR00      | 12/88/106 | 131T2901        | 7131TBG2LVM0      | 128     |
| 121G2520        | 7121GBG45VT0      | 104       | 122K84          | 7122KBG2GF00      | 12/88     | 131V5306        | 7131VVG2LV00      | 182     |
| 121G2523        | 7121GBG45VT1      | 104       | 122K8406        | 7122KBG2GV00      | 12/48     | 131V5363        | 7131VVG2LR00      | 182     |
| 121K01          | 7121KBG2SV00      | 12/48     | 122K8408        | 7122KBG2GR00      | 12/88     | 131V5406        | 7131VVG2GV00      | 182     |
| 121K0103        | 7121KBG2SE00      | 72        | 122K9321        | 7122KBG1LRT0      | 106       | 131V5463        | 7131VVG2GR00      | 182     |
| 121K0150        | 7121KBG2SVM0      | 10/48     | 122K9363        | 7122KBG1LR00      | 12/88/106 | 131V5490        | -                 | 182     |
| 121K02          | 7121KBG2QV00      | 10/48     | 125K01          | 7125KBG2SV00      | 14/50     | 131V65          | 7131WVG2BR00      | 176     |
| 121K0250        | 7121KBG2QVM0      | 10/48     | 125K03          | 7125KBG2NF00      | 12        | 131X1101        | 7131XAKLVN00      | 230     |
| E 121K03        | 7121KBG2NF00      | 10/86     | E 131E03        | 7131EBG2LN00      | 130/228   | U 131X1201      | 7131XRKMVN00      | 276/292 |
| E 121K0302      | 7121KBG2NV00      | 10/46     | E 131F26        | 7131FDF2JV00      | 148       | 132F43          | 7132FBF4LV00      | 144     |
| 121K0323        | 7121KBG2NE00      | 72        | E 131F43        | 7131FBF4LV00      | 144       | 132F44          | 7132FBF4GV00      | 144     |
| E 121K0352      | 7121KBG2NVM0      | 10/46     | E 131F4350      | 7131FBF4LVM0      | 144       | 132F46          | 7132FBF4JV00      | 144     |
| E 121K04        | 7121KBG2GF00      | 10/86     | E 131F44        | 7131FBF4GV00      | 144       | 132K03          | 7132KBG2LV00      | 132     |
| E 121K0402      | 7121KBG2GV00      | 8/46      | E 131F4450      | 7131FBF4GVM0      | 144       | 132K04          | 7132KBG2GV00      | 132     |
| E 121K07        | 7121KBG2LF00      | 10        | 131F4480        | 7131FBF4GLV5      | 140       | 132K06          | 7132KBG2JV00      | 132     |
| 121K0706        | 7121KBG2LV00      | 10/46     | 131F4490        | -                 | 136       | 132T22          | 7132TBG2NVA0      | 134     |
| 121K0756        | 7121KBG2LVM0      | 10/46     | 131F46          | 7131FBF4JV00      | 144       | 132T23          | 7132TBG2JV00      | 132     |
| 121K1302        | 7121KBG1NV00      | 8         | 131F4650        | 7131FBF4JVM0      | 144       | 132T2301        | 7132TBG2JVM0      | 132     |
| 121K1352        | 7121KBG1NVM0      | 8/46      | U 131F5695      | 7131FRF2LV95      | 276/292   | 132T29          | 7132TBG2LV00      | 132     |
| E 121K14        | 7121KBG1GF00      | 8/86      | U 131F56951D    | 7131FRF2LV1D      | 278       | E 133F43        | 7133FBF4LV00      | 146     |
| E 121K23        | 7121KBG1LR00      | 8/86/102  | E 131K03        | 7131KBG2LV00      | 128       | E 133F4350      | 7133FBF4LVM0      | 144     |
| 121K2423        | 7121KBG1NRT0      | 104       | E 131K03001D    | 7131KBG2LV1D      | 228       | E 133F44        | 7133FBF4GV00      | 144     |
| 121K3106        | 7121KBG3SV00      | 12/48/104 | E 131K0308      | 7131KBG2LP00      | 130/228   | E 133F4450      | 7133FBF4GVM0      | 144     |
| 121K3206        | 7121KBG3QV00      | 12/48/104 | E 131K03081D    | 7131KBG2LP1D      | 130/228   | 133F46          | 7133FBF4JV00      | 144     |
| 121K3303        | 7121KBG3UE00      | 72        | E 131K0350      | 7131KBG2LVM0      | 128/228   | 133F4650        | 7133FBF4JVM0      | 144     |
| 121K3306        | 7121KBG3UV00      | 12/48/104 | E 131K0358      | 7131KBG2LPM0      | 130/228   | E 133K03        | 7133KBG2LV00      | 134     |
| E 121K45        | 7121KBG44V00      | 12/48     | E 131K04        | 7131KBG2GV00      | 126/226   | E 133K0350      | 7133KBG2LVM0      | 134     |
| E 121K4503      | 7121KBG44E00      | 72        | E 131K0450      | 7131KBG2GVM0      | 126/226   | E 133K04        | 7133KBG2GV00      | 134     |
| E 121K46        | 7121KBG42V00      | 12/48     | 131K0480        | 7131KBG2GLV5      | 126/226   | E 133K04001D    | 7133KBG2GV1D      | 134     |
| E 121K4603      | 7121KBG42E00      | 72        | 131K0490        | 7131KBG2CV90      | 126/226   | E 133K0450      | 7133KBG2GVM0      | 134     |
| 121K6220        | 7121KBG2QRT0      | 106       | 131K05          | 7131KBG2BF00      | 176       | E 133K05        | 7133KBG2BV00      | 176     |
| E 121K63        | 7121KBG2LR00      | 10/86/104 | E 131K06        | 7131KBG2JV00      | 126/226   | E 133K06        | 7133KBG2JV00      | 134     |
| E 121K64        | 7121KBG2NR00      | 10/86/104 | E 131K06081D    | 7131KBG2JP1D      | 128/228   | E 133K0650      | 7133KBG2JVM0      | 134     |
| 121K6423        | -                 | 104/104   | E 131K0650      | 7131KBG2JVM0      | 126/226   | E 133K13        | 7133KBG1LV00      | 134     |
| E 121K65        | 7121KBG2ER00      | 8/86/104  | E 131K13        | 7131KBG1LV00      | 124       | E 133K14        | 7133KBG1GV00      | 134     |
| E 121K67        | 7121KBG2GR00      | 10/86/104 | E 131K14        | 7131KBG1JV00      | 124       | E 133K16        | 7133KBG1JV00      | 134     |
| 121M13          | -                 | 8/46      | 131K16          | 7131KBG1GV00      | 124       | 133T21          | 7133TBG2NV00      | 134     |
| 121M14          | -                 | 8/46      | 131K1650        | 7131KBG1JVM0      | 124       | 133T2101        | 7133TBG2NVM0      | 134     |
| 121V5106        | 7121VVG2SV00      | 118       | E 131K63        | 7131KBG2LR00      | 130       | 133T23          | 7133TBG2JV00      | 134     |
| 121V51061D      | 7121VVG2SV1D      | 118       | E 131K6350      | 7131KBG2LRM0      | 130       | 133T2301        | 7133TBG2JVM0      | 134     |
| 121V5112        | 7121VVG2ST00      | 118       | E 131K64        | 7131KBG2ER00      | 126       | 133V5306        | 7133VVG2LV00      | 182     |
| 121V5163        | 7121VVG2SR00      | 74/118    | E 131K6450      | 7131KBG2ERM0      | 126       | 133V5363        | 7133VVG2LR00      | 182     |

## Valve reference number - global reference number

| Valve reference | Global valve ref. | Page     | Valve reference | Global valve ref. | Page      | Valve reference | Global valve ref. | Page      |
|-----------------|-------------------|----------|-----------------|-------------------|-----------|-----------------|-------------------|-----------|
| 133V5406        | 7133VVG2GV00      | 182      | 222G3603        | 72228BG5VES0      | 78        | 321K4303        | 7321KBG3TEW0      | 80        |
| 133V5463        | 7133VVG2GR00      | 182      | 222G3606        | 72228BG5VV00      | 20/54     | 321K4306        | 7321KBG3TVW0      | 66        |
| U 133V5695      | 7133VRN2LV95      | 278/288  | 222G5303        | 72228RG3TE00      | 78        | 321K4356        | 7321KBG3TVMW      | 66        |
| U 133V56951D    | 7133VRN2LV9D      | 278/288  | 222G5306        | 72228RG3TV00      | 20/54     | 321K4503        | 7321KBG4TEW0      | 80        |
| 133X01          | -                 | 230      | 222G5503        | 72228RG4UE00      | 78        | 321K4506        | 7321KBG4TVW0      | 66        |
| U 133X5156      | 7133XRN2SV00      | 280/290  | 222G5506        | 72228RG4UV00      | 20/54     | 321K4556        | 7321KBG4TVMW      | 66        |
| U 133X51561D    | 7133XRN2SV1D      | 280/288  | 222G5603        | 72228RG5VE00      | 78        | 321K4603        | 7321KBG51EW0      | 80        |
| U 133X5196      | 7133XRN2VN96      | 280      | E 321F32        | 7321FBF3TN00      | 34/60/92  | 321K4606        | 7321KBG51VW0      | 66        |
| U 133X51961D    | 7133XRN2VN9H      | 280      | E 321F3202      | 7321FBF3TV00      | 34/92/110 | 321K4656        | 7321KBG51VMW      | 66        |
| U 133X5296      | 7133XRN3SN96      | 282/290  | E 321G36        | 7321GBG53N00      | 24/56     | 321K4703        | 7321KBG62EW0      | 80        |
| U 133X52961D    | 7133XRN3SN9H      | 282/290  | E 321G3606      | 7321GBG53V00      | 24        | 321K4706        | 7321KBG62VW0      | 66        |
| 135K03          | 7135KBG2LV00      | 136/228  | E 321G3610      | 7321GBG53NMC      | 66        | 321K4756        | 7321KBG62VMW      | 66        |
| 135K04          | 7135KBG2GV00      | 136/228  | E 321G37        | 7321GBG64N00      | 26/58     | 322F72          | 7322FBF3TN00      | 34/60/92  |
| 221G13          | 7221GBG3VN00      | 16/52/64 | E 321G3706      | 7321GBG64V00      | 24        | 322F7206        | 7322FBF3TV00      | 34/92/110 |
| 221G1303        | 7221GBG3VE00      | 76       | E 321G3710      | 7321GBG64NMC      | 66        | 322G36          | 7322GBG53N00      | 32/58     |
| 221G1330        | 7221GBG3VNH0      | 16/52/64 | E 321G37101D    | 7321GBG64N1D      | 26        | 322G3606        | 7322GBG53V00      | 32        |
| 221G15          | 7221GBG4VN00      | 16/52/64 | 321G3790        | -                 | 26        | 322G3610        | 7322GBG53NC0      | 68        |
| 221G1503        | 7221GBG4VE00      | 76       | E 321G38        | 7321GBG76N00      | 26/58     | 322G37          | 7322GBG64N00      | 32/60     |
| 221G1530        | 7221GBG4VNH0      | 16/52/64 | E 321G3806      | 7321GBG76V00      | 26        | 322G3706        | 7322GBG64V00      | 32        |
| 221G16          | 7221GBG51N00      | 18/52    | E 321G3810      | 7321GBG76NMC      | 68        | 322G3710        | 7322GBG64NC0      | 68        |
| 221G1603        | 7221GBG51E00      | 76       | E 321G39        | 7321GBG88N00      | 28/58     | 322G38          | 7322GBG76N00      | 32/60     |
| 221G1610        | 7221GBG51NC0      | 64       | E 321G3906      | 7321GBG88V00      | 26        | 322G3806        | 7322GBG76V00      | 32        |
| 221G1630        | 7221GBG51NH0      | 18/52    | E 321G3910      | 7321GBG88NMC      | 68        | 322G3810        | 7322GBG76NC0      | 68        |
| 221G1631        | 7221GBG51NCH      | 64       | E 321G39101D    | 7321GBG88N3D      | 28        | 322G39          | 7322GBG88N00      | 32/60     |
| 221G17          | 7221GBG61N00      | 18/52    | 321G3990        | -                 | 26        | 322G3906        | 7322GBG88V00      | 32        |
| 221G1703        | 7221GBG61E00      | 76       | E 321G40        | 7321GBG99N00      | 30/58     | 322G3910        | 7322GBG88NC0      | 68        |
| 221G1710        | 7221GBG61NC0      | 64       | E 321G4006      | 7321GBG99V00      | 28        | 322G40          | 7322GBG99N00      | 32/60     |
| 221G1730        | 7221GBG61NH0      | 18/52    | E 321G4010      | 7321GBG99NMC      | 68        | 322G4006        | 7322GBG99V00      | 32        |
| 221G1731        | 7221GBG61NCH      | 64       | E 321G40101D    | 7321GBG99N3D      | 30        | 322G4010        | 7322GBG99NC0      | 68        |
| 221G21          | 7221GBG64N00      | 18/54    | 321G4090        | -                 | 28        | 322G7506        | 7322GBG4UV00      | 110       |
| 221G2103        | 7221GBG64E00      | 76       | 321G8312        | 73218BG3TTS0      | 80        | 322G8312        | 73228BG3TTS0      | 82        |
| 221G2106        | 7221GBG64V00      | 18       | 321G8512        | 73218BG4UTS0      | 80        | 322G8512        | 73228BG4UTS0      | 82        |
| 221G2110        | 7221GBG64NC0      | 64       | 321G8612        | 73218BG5VTS0      | 80        | 322G8612        | 73228BG52TS0      | 82        |
| 221G2130        | 7221GBG64NH0      | 18/52    | 321G8712        | 73218BG64TS0      | 82        | 322G8712        | 73228BG64TS0      | 82        |
| 221G2131        | 7221GBG64NCH      | 64       | 321G8812        | 73218BG75TS0      | 82        | 322G8812        | 73228BG75TS0      | 82        |
| 221G2136        | 7221GBG64VH0      | 18       | 321G8912        | 73218BG87TS0      | 82        | 322G8912        | 73228BG87TS0      | 82        |
| 221G23          | 7221GBG3VV00      | 16       | E 321H11        | 7321HBG2SN00      | 22/90     | 322H71          | 7322HBG2SN00      | 30/92     |
| 221G2330        | 7221GBG3VVH0      | 16       | E 321H13        | 7321HBG3TN00      | 22/90     | 322H7106        | 7322HBG2SV00      | 30/90/108 |
| 221G25          | 7221GBG4VV00      | 16       | E 321H15        | 7321HBG4UN00      | 24/90     | 322H73          | 7322HBG3TN00      | 32/92     |
| 221G25001D      | 7221GBG4VV1D      | 16       | 321H1590        | -                 | 22        | 322H7306        | 7322HBG3TV00      | 32/92/108 |
| 221G2530        | 7221GBG4VVH0      | 16       | E 321H21        | 7321HBG2SV00      | 22/90/108 | 322H75          | 7322HBG4UN00      | 32/92     |
| 221G26          | 7221GBG51V00      | 18       | E 321H23        | 7321HBG3TV00      | 22/90/108 | 322H7506        | 7322HBG4UV00      | 32/92/110 |
| 221G26001D      | 7221GBG51V1D      | 16       | 321H2322        | 7321HBG3TVT0      | 108       | 322K4106        | 7322KBG2SVW0      | 32        |
| 221G2630        | 7221GBG51VH0      | 18       | E 321H25        | 7321HBG4UV00      | 22/90/108 | 322K4306        | 7322KBG3TVW0      | 32        |
| 221G27          | 7221GBG61V00      | 18       | 321H2522        | 7321HBG4UVT0      | 108       | 322K4506        | 7322KBG4TVW0      | 32        |
| 221G27001D      | 7221GBG61V1D      | 18       | 321K31          | -                 | 22/56     | 322K4606        | 7322KBG51VW0      | 32        |
| 221G2730        | 7221GBG61VH0      | 18       | 321K3106        | -                 | 22        | 322K4706        | 7322KBG62VW0      | 32        |
| 221G5303        | 72218RG3TE00      | 78       | 321K33          | -                 | 22/56     | 325K4106        | 7325KBG2SVW0      | 34        |
| 221G5306        | 72218RG3TV00      | 20/54    | 321K3306        | -                 | 22        | 325K4306        | 7325KBG3TVW0      | 34        |
| 221G5503        | 72218RG4UE00      | 78       | 321K35          | -                 | 22/56     | 325K4506        | 7325KBG4TVW0      | 34        |
| 221G5506        | 72218RG4UV00      | 20/54    | 321K3506        | -                 | 22        | 325K4606        | 7325KBG51VW0      | 34        |
| 221G5603        | 72218RG5VE00      | 78       | 321K36          | -                 | 24/56     | 325K4706        | 7325KBG62VW0      | 34        |
| 221G5606        | 72218RG5VV00      | 20/54    | 321K3606        | -                 | 24        | E 331B01        | 7331BAG2QN00      | 152       |
| 221J3301E       | -                 | 118      | 321K37          | -                 | 24/56     | 331B02          | 7331BAG2KN00      | 150/178   |
| 222G3303        | 72228BG3TES0      | 78       | 321K3706        | -                 | 24        | E 331B21        | 7331BAG4QN00      | 152       |
| 222G3306        | 72228BG3TV00      | 20/54    | 321K4103        | 7321KBG2SEW0      | 80        | E 331B74        | 7331BAG2KNMO      | 150       |
| 222G3503        | 72228BG4UES0      | 78       | 321K4106        | 7321KBG2SVW0      | 66        | 331B7480        | 7331BAG2KNL2      | 150       |
| 222G3506        | 72228BG4UV00      | 20/54    | 321K4156        | 7321KBG2SVMW      | 66        | 331B7490        | -                 | 150       |

## Valve reference number - global reference number

| Valve reference | Global valve ref. | Page    | Valve reference | Global valve ref. | Page    | Valve reference | Global valve ref. | Page |
|-----------------|-------------------|---------|-----------------|-------------------|---------|-----------------|-------------------|------|
| E 331L21        | 7331LAV4TNM0      | 158     | U 341N3295      | 7341NRKNNN95      | 312     | -               | 3121BBN1AV00      | 38   |
| E 331L21001D    | 7331LAV4TN1D      | 156     | 341P01          | 2341PAG1JNM0      | 238     | -               | 3121BBN1EV00      | 38   |
| E 332B01        | 7332BAG2QN00      | 154     | U 341P0150      | 2341PRN2JNM1      | 296     | -               | 3121BBN1GV00      | 38   |
| 332B02          | 7332BAG2KN00      | 152/178 | 341P02          | 2341PAG2HNM0      | 242     | -               | 3121BBN1JV00      | 38   |
| E 332B21        | 7332BAG4QN00      | 154     | U 341P0250      | 2341PRN3NNM1      | 298     | -               | 3121BBN1LV00      | 38   |
| E 341B01        | 7341BAG2PN00      | 198     | 341P21          | 7341PAG1JNM0      | 238     | -               | 3121BBN1NV00      | 38   |
| 341B02          | 7341BAG2KN00      | 198     | 341P21001D      | 7341PAG1JN1D      | 240     | -               | 3121BBN1QV00      | 38   |
| E 341B11        | 7341BAG3PN00      | 200     | 341P2108        | 7341PAG1JPM0      | 238     | -               | 3121BJA7EVC#      | 42   |
| E 341B21        | 7341BAG4TN00      | 212     | 341P2180        | 7341PAG1JNL2      | 238     | -               | 3121BJA7GVC#      | 42   |
| 341B34          | 7341BAG2JNMR      | 188     | 341P2190        | 7341PAG1JN90      | 238     | -               | 3121BSN1AV00      | 40   |
| 341B3403        | 7341BAG2JNM0      | 188     | 341P22          | 7341PAG2PNM0      | 244     | -               | 3121BSN1EV00      | 40   |
| 341B3480        | 7341BAG2JNL8      | 188     | 341P22001D      | 7341PAG2PN1D      | 246     | -               | 3121BSN1GV00      | 40   |
| 341B3490        | -                 | 188     | 341P2280        | 7341PAG2PNL2      | 244     | -               | 3121BSN1JV00      | 40   |
| 341F34          | 7341FAS3JNMR      | 190     | 341P2290        | 7341PAG2PN90      | 244     | -               | 3121BSN1LV00      | 40   |
| 341F3403        | 7341FAS3JNM0      | 190     | U 341P3150      | 7341PRN2JN00      | 296     | -               | 3121BSN1NV00      | 40   |
| E 341L01        | 7341LDC1LNM8      | 218     | U 341P3192      | 7341PRN2JN92      | 296     | -               | 3121BSN1QV00      | 40   |
| 341L0180        | 7341LDC1LNL8      | 218     | U 341P3195      | 7341PRN2JN95      | 298     | -               | 3129BBN1AV00      | 40   |
| E 341L02        | 7341LDC1LNM1      | 218     | U 341P31951D    | 7341PRN2JN9D      | 298     | -               | 3129BBN1EV00      | 40   |
| 341L04          | -                 | 218     | U 341P3250      | 7341PRN3NN00      | 300     | -               | 3129BBN1GV00      | 40   |
| 341L05          | -                 | 218     | U 341P3292      | 7341PRN3NN92      | 300     | -               | 3129BBN1JV00      | 40   |
| 341L11          | -                 | 202/256 | U 341P3295      | 7341PRN3NN95      | 300     | -               | 3129BBN1LV00      | 40   |
| E 341L1130      | 7341LMG2NNM0      | 204/260 | U 341P32951D    | 7341PRN3NN9D      | 302     | -               | 3129BJA7EVC#      | 42   |
| 341L1190        | -                 | 204/260 | 345B04          | 7345BAG2PN00      | 200     | -               | 3129BJA7GVC#      | 42   |
| E 341L21        | 7341LAV4TNM0      | 218     | 345B24          | 7345BAG4TN00      | 212     | -               | 3129BJA7LVC#      | 42   |
| 341L2190        | 7341LAV4TN90      | 216     | 345B34          | 7345BAG2JNMR      | 192     | -               | 3129BSN1AV00      | 42   |
| 341L9101        | -                 | 196/254 | 345F34          | 7345FAS3JNMR      | 194     | -               | 3129BSN1EV00      | 42   |
| 341L9201        | -                 | 214     | 345L01          | 7345LDC1LNM8      | 220     | -               | 3129BSN1GV00      | 42   |
| 341L9504        | -                 | 270     | 345L21          | 7345LAV4TNM0      | 218     | -               | 3129BSN1JV00      | 42   |
| 341L9534        | 7341LAKBGNM0      | 270     | 345P21          | 7345PAG1JNM0      | 242     | -               | 3129BSN1LV00      | 42   |
| 341L95341D      | 7341LAKBGN1D      | 270     | 347L11          | -                 | 206/258 | -               | 3131BBN1AV00      | 162  |
| 341L9584        | 7341LAKBGNL2      | 270     | E 347L1130      | 7347LMG2NNM0      | 208     | -               | 3131BBN1EV00      | 162  |
| 341L9588        | 7341LAPBGPL2      | 270     | 347L9101        | -                 | 198/260 | -               | 3131BBN1GV00      | 162  |
| 341L9594        | 7341LAKBGN90      | 270     | 347L9201        | -                 | 214     | -               | 3131BBN1JV00      | 162  |
| 341L9598        | -                 | 270     | 347N11          | 2347NAKBHNM0      | 262     | -               | 3131BBN1LV00      | 162  |
| 341N01          | 2341NAKBJNM1      | 258     | 347N12          | 2347NAKBPNM0      | 268     | -               | 3131BBN1NV00      | 162  |
| U 341N0150      | 2341NRKDJNM1      | 308     | 347N31          | 7347NAKBHNM0      | 262     | -               | 3131BBN1QV00      | 162  |
| 341N02          | 2341NAKBPNM1      | 264     | U 347N3150      | 7347NRKDHNM0      | 314     | -               | 3131BJA7EVC#      | 170  |
| U 341N0250      | 2341NRKNNNM1      | 310     | U 347N3192      | 7347NRKDHN92      | 314     | -               | 3131BJA7GVC#      | 170  |
| 341N11          | 2341NAKBJNM0      | 258     | 347N32          | 7347NAKBPNM0      | 268     | -               | 3131BSN1AV00      | 166  |
| 341N12          | 2341NAKBNNM0      | 264     | U 347N3250      | 7347NRKNNN00      | 314     | -               | 3131BSN1EV00      | 166  |
| 341N21          | 7341NAKBJNM1      | 258     | 347P01          | 2347PAG1HNM0      | 240     | -               | 3131BSN1GV00      | 166  |
| 341N22          | 7341NAKBPNM1      | 264     | 347P02          | 2347PAG2PNM0      | 246     | -               | 3131BSN1JV00      | 166  |
| 341N31          | 7341NAKBJNM0      | 260     | 347P21          | 7347PAG1HNM0      | 240     | -               | 3131BSN1LV00      | 166  |
| 341N31001D      | 7341NAKBJN1D      | 260     | 347P2190        | 7347PAG1HN90      | 240     | -               | 3131BSN1NV00      | 166  |
| 341N3108        | 7341NAKBJPM0      | 260     | 347P22          | 7347PAG2PNM0      | 244     | -               | 3131BSN1QV00      | 166  |
| 341N31081D      | 7341NAKBJP1D      | 260     | U 347P3150      | 7347PRN2JN00      | 304     | -               | 3133BBN1AV00      | 164  |
| U 341N3150      | 7341NRKDJN00      | 308     | U 347P3195      | 7347PRN2JN95      | 304     | -               | 3133BBN1EV00      | 164  |
| U 341N31501D    | 7341NRKDJN1D      | 308     | U 347P3250      | 7347PRN3NN00      | 304     | -               | 3133BBN1GV00      | 164  |
| 341N3180        | 7341NAKBJNL2      | 260     | U 347P3295      | 7347PRN3NN95      | 306     | -               | 3133BBN1JV00      | 164  |
| 341N3190        | 7341NAKBHN90      | 260     | 441N3108        | 7441NAKBJPM0      | 266     | -               | 3133BBN1LV00      | 164  |
| U 341N3192      | 7341NRKDJN92      | 310     | 441P2108        | 7441PAG1JPM0      | 242     | -               | 3133BBN1NV00      | 164  |
| U 341N3195      | 7341NRKDJN95      | 310     | U 441P3250      | 7441PRN3NN00      | 302     | -               | 3133BBN1QV00      | 164  |
| 341N32          | 7341NAKBPNM0      | 266     | 541L01          | 7541LDC1LNR0      | 220     | -               | 3133BJA7EVC#      | 170  |
| 341N32001D      | 7341NAKBPN1D      | 266     | 541N01          | 7541NAKBJN00      | 262     | -               | 3133BJA7GVC#      | 170  |
| U 341N3250      | 7341NRKNNN00      | 312     | 541N0108        | 7541NAKBJN00      | 268     | -               | 3133BSN1AV00      | 168  |
| 341N3280        | 7341NAKBPNL2      | 266     | 541P0108        | 7541PAG1JPM0      | 244     | -               | 3133BSN1EV00      | 168  |
| 341N3290        | 7341NAKBPN90      | 266     | U 541P0250      | 7541PRN3NNM1      | 302     | -               | 3133BSN1GV00      | 168  |
| U 341N3292      | 7341NRKNNN92      | 312     | 547L11          | 7547LMG2NN00      | 210     | -               | 3133BSN1JV00      | 168  |

## Valve reference number - global reference number

| Valve reference | Global valve ref. | Page | Valve reference | Global valve ref. | Page |
|-----------------|-------------------|------|-----------------|-------------------|------|
| -               | 3133BSN1LV00      | 168  | -               | 3933BBN1EV00      | 164  |
| -               | 3133BSN1NV00      | 168  | -               | 3933BBN1GV00      | 164  |
| -               | 3133BSN1QV00      | 168  | -               | 3933BBN1JV00      | 164  |
| -               | 3138BBN1AV00      | 166  | -               | 3933BJA7EVC#      | 170  |
| -               | 3138BBN1EV00      | 166  | -               | 3933BJA7GVC#      | 172  |
| -               | 3138BBN1GV00      | 166  | -               | 3933BSN1AV00      | 168  |
| -               | 3138BBN1JV00      | 166  | -               | 3933BSN1EV00      | 168  |
| -               | 3138BBN1LV00      | 166  | -               | 3933BSN1GV00      | 168  |
| -               | 3138BBN1NV00      | 166  | -               | 3933BSN1JV00      | 168  |
| -               | 3138BBN1QV00      | 166  | -               | 71214TN2KT00      | 114  |
| -               | 3138BJA7EVC#      | 172  | -               | 71214TN2MT00      | 114  |
| -               | 3138BJA7GVC#      | 172  | -               | 71214TN2QT00      | 114  |
| -               | 3138BSN1AV00      | 170  | -               | 71214TN2ST00      | 114  |
| -               | 3138BSN1EV00      | 170  | -               | 71214VN2KN00      | 114  |
| -               | 3138BSN1GV00      | 170  | -               | 71214VN2KT00      | 114  |
| -               | 3138BSN1JV00      | 170  | -               | 71214VN2MN00      | 114  |
| -               | 3138BSN1LV00      | 170  | -               | 71214VN2MT00      | 114  |
| -               | 3138BSN1NV00      | 170  | -               | 71214VN2QN00      | 114  |
| -               | 3138BSN1QV00      | 170  | -               | 71214VN2QT00      | 114  |
| -               | 3139BBN1AV00      | 162  | -               | 71214VN2SN00      | 114  |
| -               | 3139BBN1EV00      | 164  | -               | 71214VN2ST00      | 114  |
| -               | 3139BBN1GV00      | 164  | -               | 7121ZBG1GV00      | 8/46 |
| -               | 3139BBN1JV00      | 164  | -               | 7121ZBG1LR00      | 102  |
| -               | 3139BBN1LV00      | 164  | -               | 7121ZBG1LRT0      | 102  |
| -               | 3139BBN1NV00      | 164  | -               | 7121ZBG1LV00      | 8/46 |
| -               | 3139BBN1QV00      | 164  | -               | 7121ZCBG1LR00     | 102  |
| -               | 3139BJA7EVC#      | 170  | -               | 7131ZBG1JV00      | 124  |
| -               | 3139BJA7GVC#      | 170  | -               | 7321BBG3TE00      | 80   |
| -               | 3139BSN1AV00      | 168  | -               | 7321BBG3TN00      | 56   |
| -               | 3139BSN1EV00      | 168  | -               | 7321BBG3TNM0      | 56   |
| -               | 3139BSN1GV00      | 168  | -               | 7321BBG4TE00      | 80   |
| -               | 3139BSN1JV00      | 168  | -               | 7321BBG4TN00      | 56   |
| -               | 3139BSN1LV00      | 168  | -               | 7321BBG4TNM0      | 56   |
| -               | 3139BSN1NV00      | 168  | -               | 7321BBG53E00      | 80   |
| -               | 3139BSN1QV00      | 168  | -               | 7321BBG53N00      | 56   |
| -               | 3921BBN1AV00      | 38   | -               | 7321BBG53NM0      | 56   |
| -               | 3921BBN1EV00      | 38   | -               | 7321BBG64E00      | 80   |
| -               | 3921BBN1GV00      | 38   | -               | 7321BBG64N00      | 56   |
| -               | 3921BBN1JV00      | 38   | -               | 7321BBG64NM0      | 58   |
| -               | 3921BBN1LV00      | 38   | -               | 7321BBG78E00      | 82   |
| -               | 3921BBN1NV00      | 38   | -               | 7321BBG78N00      | 58   |
| -               | 3921BJA7EVC#      | 42   | -               | 7321BBG78NM0      | 58   |
| -               | 3921BJA7GVC#      | 42   | -               | 7321BBG88E00      | 82   |
| -               | 3921BSN1AV00      | 40   | -               | 7321BBG88N00      | 58   |
| -               | 3921BSN1EV00      | 40   | -               | 7321BBG88NM0      | 58   |
| -               | 3921BSN1GV00      | 40   | -               | 7321BBG99E00      | 82   |
| -               | 3921BSN1JV00      | 40   | -               | 7321BBG99N00      | 58   |
| -               | 3921BSN1LV00      | 40   | -               | 7321BBG99NM0      | 58   |
| -               | 3921BSN1NV00      | 40   | -               | 7321BBGCBNM1      | 58   |
| -               | 3931BBN1JV00      | 162  | -               | 7321BBGDCNM1      | 58   |
| -               | 3931BBN1LV00      | 162  | -               | 7322BBG3TN00      | 58   |
| -               | 3931BBN1NV00      | 162  | -               | 7322BBG4TN00      | 58   |
| -               | 3931BBN1QV00      | 162  | -               | 7322BBG53N00      | 58   |
| -               | 3931BSN1JV00      | 166  | -               | 7322BBG64N00      | 60   |
| -               | 3931BSN1LV00      | 166  | -               | 7322BBG78N00      | 60   |
| -               | 3931BSN1NV00      | 166  | -               | 7322BBG88N00      | 60   |
| -               | 3931BSN1QV00      | 166  | -               | 7322BBG99N00      | 60   |
| -               | 3933BBN1AV00      | 164  |                 |                   |      |

# Index by reference numbers

global reference number - Valve reference number

| Global valve ref. | Valve reference | Page | Global valve ref. | Valve reference | Page | Global valve ref. | Valve reference | Page    |
|-------------------|-----------------|------|-------------------|-----------------|------|-------------------|-----------------|---------|
| 2341NAKBJNM0      | 341N11          | 258  | 3131BSN1JV00      | -               | 166  | 3921BBN1JV00      | -               | 38      |
| 2341NAKBJNM1      | 341N01          | 258  | 3131BSN1LV00      | -               | 166  | 3921BBN1LV00      | -               | 38      |
| 2341NAKBNNM0      | 341N12          | 264  | 3131BSN1NV00      | -               | 166  | 3921BBN1NV00      | -               | 38      |
| 2341NAKBPNM1      | 341N02          | 264  | 3131BSN1QV00      | -               | 166  | 3921BJA7EVC#      | -               | 42      |
| 2341NRKDJNM1      | U 341N0150      | 308  | 3133BBN1AV00      | -               | 164  | 3921BJA7GVC#      | -               | 42      |
| 2341NRKNNNM1      | U 341N0250      | 310  | 3133BBN1EV00      | -               | 164  | 3921BSN1AV00      | -               | 40      |
| 2341PAG1JNM0      | 341P01          | 238  | 3133BBN1GV00      | -               | 164  | 3921BSN1EV00      | -               | 40      |
| 2341PAG2HNM0      | 341P02          | 242  | 3133BBN1JV00      | -               | 164  | 3921BSN1GV00      | -               | 40      |
| 2341PRN2JNM1      | U 341P0150      | 296  | 3133BBN1LV00      | -               | 164  | 3921BSN1JV00      | -               | 40      |
| 2341PRN3NNM1      | U 341P0250      | 298  | 3133BBN1NV00      | -               | 164  | 3921BSN1LV00      | -               | 40      |
| 2347NAKBHNM0      | 347N11          | 262  | 3133BBN1QV00      | -               | 164  | 3921BSN1NV00      | -               | 40      |
| 2347NAKBPNM0      | 347N12          | 268  | 3133BJA7EVC#      | -               | 170  | 3931BBN1JV00      | -               | 162     |
| 2347PAG1HNM0      | 347P01          | 240  | 3133BJA7GVC#      | -               | 170  | 3931BBN1LV00      | -               | 162     |
| 2347PAG2PNM0      | 347P02          | 246  | 3133BSN1AV00      | -               | 168  | 3931BBN1NV00      | -               | 162     |
| 3121BBN1AV00      | -               | 38   | 3133BSN1EV00      | -               | 168  | 3931BBN1QV00      | -               | 162     |
| 3121BBN1EV00      | -               | 38   | 3133BSN1GV00      | -               | 168  | 3931BSN1JV00      | -               | 166     |
| 3121BBN1GV00      | -               | 38   | 3133BSN1JV00      | -               | 168  | 3931BSN1LV00      | -               | 166     |
| 3121BBN1JV00      | -               | 38   | 3133BSN1LV00      | -               | 168  | 3931BSN1NV00      | -               | 166     |
| 3121BBN1LV00      | -               | 38   | 3133BSN1NV00      | -               | 168  | 3931BSN1QV00      | -               | 166     |
| 3121BBN1NV00      | -               | 38   | 3133BSN1QV00      | -               | 168  | 3933BBN1AV00      | -               | 164     |
| 3121BBN1QV00      | -               | 38   | 3138BBN1AV00      | -               | 166  | 3933BBN1EV00      | -               | 164     |
| 3121BJA7EVC#      | -               | 42   | 3138BBN1EV00      | -               | 166  | 3933BBN1GV00      | -               | 164     |
| 3121BJA7GVC#      | -               | 42   | 3138BBN1GV00      | -               | 166  | 3933BBN1JV00      | -               | 164     |
| 3121BSN1AV00      | -               | 40   | 3138BBN1JV00      | -               | 166  | 3933BJA7EVC#      | -               | 170     |
| 3121BSN1EV00      | -               | 40   | 3138BBN1LV00      | -               | 166  | 3933BJA7GVC#      | -               | 172     |
| 3121BSN1GV00      | -               | 40   | 3138BBN1NV00      | -               | 166  | 3933BSN1AV00      | -               | 168     |
| 3121BSN1JV00      | -               | 40   | 3138BBN1QV00      | -               | 166  | 3933BSN1EV00      | -               | 168     |
| 3121BSN1LV00      | -               | 40   | 3138BJA7EVC#      | -               | 172  | 3933BSN1GV00      | -               | 168     |
| 3121BSN1NV00      | -               | 40   | 3138BJA7GVC#      | -               | 172  | 3933BSN1JV00      | -               | 168     |
| 3121BSN1QV00      | -               | 40   | 3138BSN1AV00      | -               | 170  | 7033XRN2SN00      | U 033X5156      | 274/294 |
| 3129BBN1AV00      | -               | 40   | 3138BSN1EV00      | -               | 170  | 7033XRN2SN1D      | U 033X51561D    | 274/292 |
| 3129BBN1EV00      | -               | 40   | 3138BSN1GV00      | -               | 170  | 7033XRN3SN00      | U 033X5256      | 276/294 |
| 3129BBN1GV00      | -               | 40   | 3138BSN1JV00      | -               | 170  | 7033XRN3SN1D      | U 033X52561D    | 274/294 |
| 3129BBN1JV00      | -               | 40   | 3138BSN1LV00      | -               | 170  | 71214TN2KT00      | -               | 114     |
| 3129BBN1LV00      | -               | 40   | 3138BSN1NV00      | -               | 170  | 71214TN2MT00      | -               | 114     |
| 3129BJA7EVC#      | -               | 42   | 3138BSN1QV00      | -               | 170  | 71214TN2QT00      | -               | 114     |
| 3129BJA7GVC#      | -               | 42   | 3139BBN1AV00      | -               | 162  | 71214TN2ST00      | -               | 114     |
| 3129BJA7LVC#      | -               | 42   | 3139BBN1EV00      | -               | 164  | 71214VN2KN00      | -               | 114     |
| 3129BSN1AV00      | -               | 42   | 3139BBN1GV00      | -               | 164  | 71214VN2KT00      | -               | 114     |
| 3129BSN1EV00      | -               | 42   | 3139BBN1JV00      | -               | 164  | 71214VN2MN00      | -               | 114     |
| 3129BSN1GV00      | -               | 42   | 3139BBN1LV00      | -               | 164  | 71214VN2MT00      | -               | 114     |
| 3129BSN1JV00      | -               | 42   | 3139BBN1NV00      | -               | 164  | 71214VN2QN00      | -               | 114     |
| 3129BSN1LV00      | -               | 42   | 3139BBN1QV00      | -               | 164  | 71214VN2QT00      | -               | 114     |
| 3131BBN1AV00      | -               | 162  | 3139BJA7EVC#      | -               | 170  | 71214VN2SN00      | -               | 114     |
| 3131BBN1EV00      | -               | 162  | 3139BJA7GVC#      | -               | 170  | 71214VN2ST00      | -               | 114     |
| 3131BBN1GV00      | -               | 162  | 3139BSN1AV00      | -               | 168  | 7121F4F4GF00      | E 121F44        | 14/88   |
| 3131BBN1JV00      | -               | 162  | 3139BSN1EV00      | -               | 168  | 7121F4F4GR00      | 121F67          | 14/88   |
| 3131BBN1LV00      | -               | 162  | 3139BSN1GV00      | -               | 168  | 7121F4F4GV00      | E 121F4406      | 14/50   |
| 3131BBN1NV00      | -               | 162  | 3139BSN1JV00      | -               | 168  | 7121F4F4LF00      | 121F47          | 14      |
| 3131BBN1QV00      | -               | 162  | 3139BSN1LV00      | -               | 168  | 7121F4F4LR00      | 121F63          | 14/88   |
| 3131BJA7EVC#      | -               | 170  | 3139BSN1NV00      | -               | 168  | 7121F4F4LV00      | 121F4706        | 14/50   |
| 3131BJA7GVC#      | -               | 170  | 3139BSN1QV00      | -               | 168  | 7121F4F4NF00      | E 121F43        | 14/88   |
| 3131BSN1AV00      | -               | 166  | 3921BBN1AV00      | -               | 38   | 7121F4F4NR00      | 121F64          | 14/88   |
| 3131BSN1EV00      | -               | 166  | 3921BBN1EV00      | -               | 38   | 7121F4F4NV00      | E 121F4302      | 14/50   |
| 3131BSN1GV00      | -               | 166  | 3921BBN1GV00      | -               | 38   | 7121GBG34VT0      | 121G2320        | 104     |

## global reference number - Valve reference number

| Global valve ref. | Valve reference | Page      | Global valve ref. | Valve reference | Page      | Global valve ref. | Valve reference | Page     |
|-------------------|-----------------|-----------|-------------------|-----------------|-----------|-------------------|-----------------|----------|
| 7121GBG45VT0      | 121G2520        | 104       | 7122KBG2GV00      | 122K8406        | 12/48     | 7132FBF4LV00      | 132F43          | 144      |
| 7121GBG45VT1      | 121G2523        | 104       | 7122KBG2LF00      | 122K83          | 12        | 7132KBG2GV00      | 132K04          | 132      |
| 7121KBG1GF00      | E 121K14        | 8/86      | 7122KBG2LR00      | 122K8363        | 12/88/106 | 7132KBG2JV00      | 132K06          | 132      |
| 7121KBG1LR00      | E 121K23        | 8/86/102  | 7122KBG2LRT0      | 122K8321        | 106       | 7132KBG2LV00      | 132K03          | 132      |
| 7121KBG1NRT0      | 121K2423        | 104       | 7122KBG2LV00      | 122K8306        | 12/48     | 7132TBG2JV00      | 132T23          | 132      |
| 7121KBG1NV00      | 121K1302        | 8         | 7125KBG2NF00      | 125K03          | 12        | 7132TBG2JVM0      | 132T2301        | 132      |
| 7121KBG1NVM0      | 121K1352        | 8/46      | 7125KBG2SV00      | 125K01          | 14/50     | 7132TBG2LV00      | 132T29          | 132      |
| 7121KBG2ER00      | E 121K65        | 8/86/104  | 7131EBG2LN00      | E 131E03        | 130/228   | 7132TBG2NVA0      | 132T22          | 134      |
| 7121KBG2GF00      | E 121K04        | 10/86     | 7131FBF4GLV5      | 131F4480        | 140       | 7133FBF4GV00      | E 133F44        | 144      |
| 7121KBG2GR00      | E 121K67        | 10/86/104 | 7131FBF4GV00      | E 131F44        | 144       | 7133FBF4GVM0      | E 133F4450      | 144      |
| 7121KBG2GV00      | E 121K0402      | 8/46      | 7131FBF4GVM0      | E 131F4450      | 144       | 7133FBF4JV00      | 133F46          | 144      |
| 7121KBG2LF00      | E 121K07        | 10        | 7131FBF4JV00      | 131F46          | 144       | 7133FBF4JVM0      | 133F4650        | 144      |
| 7121KBG2LR00      | E 121K63        | 10/86/104 | 7131FBF4JVM0      | 131F4650        | 144       | 7133FBF4LV00      | E 133F43        | 146      |
| 7121KBG2LV00      | 121K0706        | 10/46     | 7131FBF4LV00      | E 131F43        | 144       | 7133FBF4LVM0      | E 133F4350      | 144      |
| 7121KBG2LVM0      | 121K0756        | 10/46     | 7131FBF4LVM0      | E 131F4350      | 144       | 7133KBG1GV00      | E 133K14        | 134      |
| 7121KBG2NE00      | 121K0323        | 72        | 7131FDF2JV00      | E 131F26        | 148       | 7133KBG1JV00      | E 133K16        | 134      |
| 7121KBG2NF00      | E 121K03        | 10/86     | 7131FRF2LV1D      | U 131F56951D    | 278       | 7133KBG1LV00      | E 133K13        | 134      |
| 7121KBG2NR00      | E 121K64        | 10/86/104 | 7131FRF2LV95      | U 131F5695      | 276/292   | 7133KBG2BV00      | E 133K05        | 176      |
| 7121KBG2NRT0      | 121K6423        | 104       | 7131KBG1GV00      | E 131K14        | 124       | 7133KBG2GV00      | E 133K04        | 134      |
| 7121KBG2NV00      | E 121K0302      | 10/46     | 7131KBG1JV00      | 131K16          | 124       | 7133KBG2GV1D      | E 133K04001D    | 134      |
| 7121KBG2NVM0      | E 121K0352      | 10/46     | 7131KBG1JVM0      | 131K1650        | 124       | 7133KBG2GVM0      | E 133K0450      | 134      |
| 7121KBG2QRT0      | 121K6220        | 106       | 7131KBG1LV00      | E 131K13        | 124       | 7133KBG2JV00      | E 133K06        | 134      |
| 7121KBG2QV00      | 121K02          | 10/48     | 7131KBG2BF00      | 131K05          | 176       | 7133KBG2JVM0      | E 133K0650      | 134      |
| 7121KBG2QVM0      | 121K0250        | 10/48     | 7131KBG2BR00      | 131K65          | 176       | 7133KBG2LV00      | E 133K03        | 134      |
| 7121KBG2SE00      | 121K0103        | 72        | 7131KBG2CV90      | 131K0490        | 126/226   | 7133KBG2LVM0      | E 133K0350      | 134      |
| 7121KBG2SV00      | 121K01          | 12/48     | 7131KBG2ER00      | E 131K64        | 126       | 7133TBG2JV00      | 133T23          | 134      |
| 7121KBG2SVM0      | 121K0150        | 10/48     | 7131KBG2ERM0      | E 131K6450      | 126       | 7133TBG2JVM0      | 133T2301        | 134      |
| 7121KBG3QV00      | 121K3206        | 12/48/104 | 7131KBG2GV00      | E 131K04        | 126/226   | 7133TBG2NV00      | 133T21          | 134      |
| 7121KBG3SV00      | 121K3106        | 12/48/104 | 7131KBG2GVL5      | 131K0480        | 126/226   | 7133TBG2NVM0      | 133T2101        | 134      |
| 7121KBG3UE00      | 121K3303        | 72        | 7131KBG2GVM0      | E 131K0450      | 126/226   | 7133VRN2LV95      | U 133V5695      | 278/288  |
| 7121KBG3UV00      | 121K3306        | 12/48/104 | 7131KBG2JP1D      | E 131K06081D    | 128/228   | 7133VRN2LV9D      | U 133V56951D    | 278/288  |
| 7121KBG42E00      | E 121K4603      | 72        | 7131KBG2JV00      | E 131K06        | 126/226   | 7133VVG2GR00      | 133V5463        | 182      |
| 7121KBG42V00      | E 121K46        | 12/48     | 7131KBG2JVM0      | E 131K0650      | 126/226   | 7133VVG2GV00      | 133V5406        | 182      |
| 7121KBG44E00      | E 121K4503      | 72        | 7131KBG2LPO0      | E 131K0308      | 130/228   | 7133VVG2LR00      | 133V5363        | 182      |
| 7121KBG44V00      | E 121K45        | 12/48     | 7131KBG2LP1D      | E 131K03081D    | 130/228   | 7133VVG2LV00      | 133V5306        | 182      |
| 7121VVG2GR00      | 121V5463        | 74/116    | 7131KBG2LPM0      | E 131K0358      | 130/228   | 7133XRN2SV00      | U 133X5156      | 280/290  |
| 7121VVG2GV00      | 121V5406        | 116       | 7131KBG2LR00      | E 131K63        | 130       | 7133XRN2SV1D      | U 133X51561D    | 280/288  |
| 7121VVG2LR00      | 121V5763        | 74/116    | 7131KBG2LRM0      | E 131K6350      | 130       | 7133XRN2VN96      | U 133X5196      | 280      |
| 7121VVG2LV00      | 121V5706        | 116       | 7131KBG2LV00      | E 131K03        | 128       | 7133XRN2VN9H      | U 133X51961D    | 280      |
| 7121VVG2NR00      | 121V5363        | 74/116    | 7131KBG2LV1D      | E 131K03001D    | 228       | 7133XRN3SN96      | U 133X5296      | 282/290  |
| 7121VVG2NV00      | 121V5306        | 116       | 7131KBG2LVM0      | E 131K0350      | 128/228   | 7133XRN3SN9H      | U 133X52961D    | 282/290  |
| 7121VVG2NV1D      | 121V53061D      | 116       | 7131TBG2JV00      | 131T23          | 126       | 7135KBG2GV00      | 135K04          | 136/228  |
| 7121VVG2QR00      | 121V5263        | 74/116    | 7131TBG2JVM0      | 131T2301        | 126       | 7135KBG2LV00      | 135K03          | 136/228  |
| 7121VVG2QT00      | 121V5212        | 116       | 7131TBG2LV00      | 131T29          | 128       | 72218RG3TE00      | 221G5303        | 78       |
| 7121VVG2QV00      | 121V5206        | 116       | 7131TBG2LVM0      | 131T2901        | 128       | 72218RG3TV00      | 221G5306        | 20/54    |
| 7121VVG2SR00      | 121V5163        | 74/118    | 7131TBG2NVA0      | 131T22          | 132       | 72218RG4UE00      | 221G5503        | 78       |
| 7121VVG2ST00      | 121V5112        | 118       | 7131TBG2RV00      | 131T21          | 132       | 72218RG4UV00      | 221G5506        | 20/54    |
| 7121VVG2SV00      | 121V5106        | 118       | 7131TBG2RVM0      | 131T2101        | 132       | 72218RG5VE00      | 221G5603        | 78       |
| 7121VVG2SV1D      | 121V51061D      | 118       | 7131VVG2GR00      | 131V5463        | 182       | 72218RG5VV00      | 221G5606        | 20/54    |
| 7121ZBG1GV00      | -               | 8/46      | 7131VVG2GV00      | 131V5406        | 182       | 7221GBG3VE00      | 221G1303        | 76       |
| 7121ZBG1LR00      | -               | 102       | 7131VVG2LR00      | 131V5363        | 182       | 7221GBG3VNO0      | 221G13          | 16/52/64 |
| 7121ZBG1LRT0      | -               | 102       | 7131VVG2LV00      | 131V5306        | 182       | 7221GBG3VNH0      | 221G1330        | 16/52/64 |
| 7121ZBG1LV00      | -               | 8/46      | 7131VVG2BR00      | 131V65          | 176       | 7221GBG3VV00      | 221G23          | 16       |
| 7121ZCBG1LR00     | -               | 102       | 7131XAKLVN00      | 131X1101        | 230       | 7221GBG3VVH0      | 221G2330        | 16       |
| 7122KBG1LR00      | 122K9363        | 12/88/106 | 7131XRKMVN00      | U 131X1201      | 276/292   | 7221GBG4VE00      | 221G1503        | 76       |
| 7122KBG1LRT0      | 122K9321        | 106       | 7131ZBG1JV00      | -               | 124       | 7221GBG4VN00      | 221G15          | 16/52/64 |
| 7122KBG2GF00      | 122K84          | 12/88     | 7132FBF4GV00      | 132F44          | 144       | 7221GBG4VNH0      | 221G1530        | 16/52/64 |
| 7122KBG2GR00      | 122K8408        | 12/88     | 7132FBF4JV00      | 132F46          | 144       | 7221GBG4VV00      | 221G25          | 16       |

## global reference number - Valve reference number

| Global valve ref. | Valve reference | Page  | Global valve ref. | Valve reference | Page      | Global valve ref. | Valve reference | Page      |
|-------------------|-----------------|-------|-------------------|-----------------|-----------|-------------------|-----------------|-----------|
| 7221GBG4VV1D      | 221G25001D      | 16    | 7321BBG88N00      | -               | 58        | 7322BBG53N00      | -               | 58        |
| 7221GBG4VVH0      | 221G2530        | 16    | 7321BBG88NM0      | -               | 58        | 7322BBG64N00      | -               | 60        |
| 7221GBG51E00      | 221G1603        | 76    | 7321BBG99E00      | -               | 82        | 7322BBG78N00      | -               | 60        |
| 7221GBG51N00      | 221G16          | 18/52 | 7321BBG99N00      | -               | 58        | 7322BBG88N00      | -               | 60        |
| 7221GBG51NC0      | 221G1610        | 64    | 7321BBG99NM0      | -               | 58        | 7322BBG99N00      | -               | 60        |
| 7221GBG51NCH      | 221G1631        | 64    | 7321BBGCBNM1      | -               | 58        | 7322FBF3TN00      | 322F72          | 34/60/92  |
| 7221GBG51NH0      | 221G1630        | 18/52 | 7321BBGDCNM1      | -               | 58        | 7322FBF3TV00      | 322F7206        | 34/92/110 |
| 7221GBG51V00      | 221G26          | 18    | 7321FBF3TN00      | E 321F32        | 34/60/92  | 7322GBG4UV00      | 322G7506        | 110       |
| 7221GBG51V1D      | 221G26001D      | 16    | 7321FBF3TV00      | E 321F3202      | 34/92/110 | 7322GBG53N00      | 322G36          | 32/58     |
| 7221GBG51VH0      | 221G2630        | 18    | 7321GBG53N00      | E 321G36        | 24/56     | 7322GBG53NC0      | 322G3610        | 68        |
| 7221GBG61E00      | 221G1703        | 76    | 7321GBG53NMC      | E 321G3610      | 66        | 7322GBG53V00      | 322G3606        | 32        |
| 7221GBG61N00      | 221G17          | 18/52 | 7321GBG53V00      | E 321G3606      | 24        | 7322GBG64N00      | 322G37          | 32/60     |
| 7221GBG61NC0      | 221G1710        | 64    | 7321GBG64N00      | E 321G37        | 26/58     | 7322GBG64NC0      | 322G3710        | 68        |
| 7221GBG61NCH      | 221G1731        | 64    | 7321GBG64N1D      | E 321G37101D    | 26        | 7322GBG64V00      | 322G3706        | 32        |
| 7221GBG61NH0      | 221G1730        | 18/52 | 7321GBG64NMC      | E 321G3710      | 66        | 7322GBG76N00      | 322G38          | 32/60     |
| 7221GBG61V00      | 221G27          | 18    | 7321GBG64V00      | E 321G3706      | 24        | 7322GBG76NC0      | 322G3810        | 68        |
| 7221GBG61V1D      | 221G27001D      | 18    | 7321GBG76N00      | E 321G38        | 26/58     | 7322GBG76V00      | 322G3806        | 32        |
| 7221GBG61VH0      | 221G2730        | 18    | 7321GBG76NMC      | E 321G3810      | 68        | 7322GBG88N00      | 322G39          | 32/60     |
| 7221GBG64E00      | 221G2103        | 76    | 7321GBG76V00      | E 321G3806      | 26        | 7322GBG88NC0      | 322G3910        | 68        |
| 7221GBG64N00      | 221G21          | 18/54 | 7321GBG88N00      | E 321G39        | 28/58     | 7322GBG88V00      | 322G3906        | 32        |
| 7221GBG64NC0      | 221G2110        | 64    | 7321GBG88N3D      | E 321G39101D    | 28        | 7322GBG99N00      | 322G40          | 32/60     |
| 7221GBG64NCH      | 221G2131        | 64    | 7321GBG88NMC      | E 321G3910      | 68        | 7322GBG99NC0      | 322G4010        | 68        |
| 7221GBG64NH0      | 221G2130        | 18/52 | 7321GBG88V00      | E 321G3906      | 26        | 7322GBG99V00      | 322G4006        | 32        |
| 7221GBG64V00      | 221G2106        | 18    | 7321GBG99N00      | E 321G40        | 30/58     | 7322HBG2SN00      | 322H71          | 30/92     |
| 7221GBG64VH0      | 221G2136        | 18    | 7321GBG99N3D      | E 321G40101D    | 30        | 7322HBG2SV00      | 322H7106        | 30/90/108 |
| 72228BG3TES0      | 222G3303        | 78    | 7321GBG99NMC      | E 321G4010      | 68        | 7322HBG3TN00      | 322H73          | 32/92     |
| 72228BG3TV00      | 222G3306        | 20/54 | 7321GBG99V00      | E 321G4006      | 28        | 7322HBG3TV00      | 322H7306        | 32/92/108 |
| 72228BG4UES0      | 222G3503        | 78    | 7321HBG2SN00      | E 321H11        | 22/90     | 7322HBG4UN00      | 322H75          | 32/92     |
| 72228BG4UV00      | 222G3506        | 20/54 | 7321HBG2SV00      | E 321H21        | 22/90/108 | 7322HBG4UV00      | 322H7506        | 32/92/110 |
| 72228BG5VES0      | 222G3603        | 78    | 7321HBG3TN00      | E 321H13        | 22/90     | 7322KBG2SVW0      | 322K4106        | 32        |
| 72228BG5VV00      | 222G3606        | 20/54 | 7321HBG3TV00      | E 321H23        | 22/90/108 | 7322KBG3TVW0      | 322K4306        | 32        |
| 72228RG3TE00      | 222G5303        | 78    | 7321HBG3TVT0      | 321H2322        | 108       | 7322KBG4TVW0      | 322K4506        | 32        |
| 72228RG3TV00      | 222G5306        | 20/54 | 7321HBG4UN00      | E 321H15        | 24/90     | 7322KBG51VW0      | 322K4606        | 32        |
| 72228RG4UE00      | 222G5503        | 78    | 7321HBG4UV00      | E 321H25        | 22/90/108 | 7322KBG62VW0      | 322K4706        | 32        |
| 72228RG4UV00      | 222G5506        | 20/54 | 7321HBG4UVT0      | 321H2522        | 108       | 7325KBG2SVW0      | 325K4106        | 34        |
| 72228RG5VE00      | 222G5603        | 78    | 7321KBG2SEW0      | 321K4103        | 80        | 7325KBG3TVW0      | 325K4306        | 34        |
| 73218BG3TTS0      | 321G8312        | 80    | 7321KBG2SVMW      | 321K4156        | 66        | 7325KBG4TVW0      | 325K4506        | 34        |
| 73218BG4UTS0      | 321G8512        | 80    | 7321KBG2SVW0      | 321K4106        | 66        | 7325KBG51VW0      | 325K4606        | 34        |
| 73218BG5VTS0      | 321G8612        | 80    | 7321KBG3TEW0      | 321K4303        | 80        | 7325KBG62VW0      | 325K4706        | 34        |
| 73218BG64TS0      | 321G8712        | 82    | 7321KBG3TVMW      | 321K4356        | 66        | 7331BAG2KN00      | 331B02          | 150/178   |
| 73218BG75TS0      | 321G8812        | 82    | 7321KBG3TVW0      | 321K4306        | 66        | 7331BAG2KNL2      | 331B7480        | 150       |
| 73218BG87TS0      | 321G8912        | 82    | 7321KBG4TEW0      | 321K4503        | 80        | 7331BAG2KNM0      | E 331B74        | 150       |
| 7321BBG3TE00      | -               | 80    | 7321KBG4TVMW      | 321K4556        | 66        | 7331BAG2QN00      | E 331B01        | 152       |
| 7321BBG3TN00      | -               | 56    | 7321KBG4TVW0      | 321K4506        | 66        | 7331BAG4QN00      | E 331B21        | 152       |
| 7321BBG3TNM0      | -               | 56    | 7321KBG51EW0      | 321K4603        | 80        | 7331LAV4TN1D      | E 331L21001D    | 156       |
| 7321BBG4TE00      | -               | 80    | 7321KBG51VMW      | 321K4656        | 66        | 7331LAV4TNM0      | E 331L21        | 158       |
| 7321BBG4TN00      | -               | 56    | 7321KBG51VW0      | 321K4606        | 66        | 7332BAG2KN00      | 332B02          | 152/178   |
| 7321BBG4TNM0      | -               | 56    | 7321KBG62EW0      | 321K4703        | 80        | 7332BAG2QN00      | E 332B01        | 154       |
| 7321BBG53E00      | -               | 80    | 7321KBG62VMW      | 321K4756        | 66        | 7332BAG4QN00      | E 332B21        | 154       |
| 7321BBG53N00      | -               | 56    | 7321KBG62VW0      | 321K4706        | 66        | 7341BAG2JNL8      | 341B3480        | 188       |
| 7321BBG53NM0      | -               | 56    | 73228BG3TTS0      | 322G8312        | 82        | 7341BAG2JNM0      | 341B3403        | 188       |
| 7321BBG64E00      | -               | 80    | 73228BG4UTS0      | 322G8512        | 82        | 7341BAG2JNMR      | 341B34          | 188       |
| 7321BBG64N00      | -               | 56    | 73228BG52TS0      | 322G8612        | 82        | 7341BAG2KN00      | 341B02          | 198       |
| 7321BBG64NM0      | -               | 58    | 73228BG64TS0      | 322G8712        | 82        | 7341BAG2PN00      | E 341B01        | 198       |
| 7321BBG78E00      | -               | 82    | 73228BG75TS0      | 322G8812        | 82        | 7341BAG3PN00      | E 341B11        | 200       |
| 7321BBG78N00      | -               | 58    | 73228BG87TS0      | 322G8912        | 82        | 7341BAG4TN00      | E 341B21        | 212       |
| 7321BBG78NM0      | -               | 58    | 7322BBG3TN00      | -               | 58        | 7341FAS3JNM0      | 341F3403        | 190       |
| 7321BBG88E00      | -               | 82    | 7322BBG4TN00      | -               | 58        | 7341FAS3JNMR      | 341F34          | 190       |

## global reference number - Valve reference number

| Global valve ref. | Valve reference | Page    | Global valve ref. | Valve reference | Page    |
|-------------------|-----------------|---------|-------------------|-----------------|---------|
| 7341LAKBGN1D      | 341L95341D      | 270     | 7347NRKDHNM0      | U 347N3150      | 314     |
| 7341LAKBGN90      | 341L9594        | 270     | 7347NRKNNN00      | U 347N3250      | 314     |
| 7341LAKBGNL2      | 341L9584        | 270     | 7347PAG1HN90      | 347P2190        | 240     |
| 7341LAKBGNM0      | 341L9534        | 270     | 7347PAG1HNM0      | 347P21          | 240     |
| 7341LAPBGPL2      | 341L9588        | 270     | 7347PAG2PNM0      | 347P22          | 244     |
| 7341LAV4TN90      | 341L2190        | 216     | 7347PRN2JN00      | U 347P3150      | 304     |
| 7341LAV4TNM0      | E 341L21        | 218     | 7347PRN2JN95      | U 347P3195      | 304     |
| 7341LDC1LNL8      | 341L0180        | 218     | 7347PRN3NN00      | U 347P3250      | 304     |
| 7341LDC1LNM8      | E 341L01        | 218     | 7347PRN3NN95      | U 347P3295      | 306     |
| 7341LDC1LNMI      | E 341L02        | 218     | 7441NAKBJPM0      | 441N3108        | 266     |
| 7341LMG2NNM0      | E 341L1130      | 204/254 | 7441PAG1JPM0      | 441P2108        | 242     |
| 7341NAKBHN90      | 341N3190        | 260     | 7441PRN3NN00      | U 441P3250      | 302     |
| 7341NAKBJN1D      | 341N31001D      | 260     | 7541LDC1LNR0      | 541L01          | 220     |
| 7341NAKBJNL2      | 341N3180        | 260     | 7541NAKBJN00      | 541N01          | 262     |
| 7341NAKBJNM0      | 341N31          | 260     | 7541PAG1JP00      | 541P0108        | 244     |
| 7341NAKBJNM1      | 341N21          | 258     | 7541PRN3NNM1      | U 541P0250      | 302     |
| 7341NAKBJP1D      | 341N31081D      | 260     | 7547LMG2NN00      | 547L11          | 210     |
| 7341NAKBJPM0      | 341N3108        | 260     | -                 | 121K6423        | 104     |
| 7341NAKBPN1D      | 341N32001D      | 266     | -                 | 121M13          | 8/46    |
| 7341NAKBPN90      | 341N3290        | 266     | -                 | 121M14          | 8/46    |
| 7341NAKBPNL2      | 341N3280        | 266     | -                 | 131F4490        | 136     |
| 7341NAKBPNM0      | 341N32          | 266     | -                 | 131M14          | 124/226 |
| 7341NAKBPNM1      | 341N22          | 264     | -                 | 131M15          | 124/226 |
| 7341NRKDJN00      | U 341N3150      | 308     | -                 | 131M74          | 142     |
| 7341NRKDJN1D      | U 341N31501D    | 308     | -                 | 131M7450        | 142     |
| 7341NRKDJN92      | U 341N3192      | 310     | -                 | 131M75          | 138     |
| 7341NRKDJN95      | U 341N3195      | 310     | -                 | 131M7550        | 138     |
| 7341NRKNNN00      | U 341N3250      | 312     | -                 | 131V5490        | 182     |
| 7341NRKNNN92      | U 341N3292      | 312     | -                 | 133X01          | 230     |
| 7341NRKNNN95      | U 341N3295      | 312     | -                 | 221J3301E       | 118     |
| 7341PAG1JN1D      | 341P21001D      | 240     | -                 | 321G3790        | 26      |
| 7341PAG1JN90      | 341P2190        | 238     | -                 | 321G3990        | 26      |
| 7341PAG1JNL2      | 341P2180        | 238     | -                 | 321G4090        | 28      |
| 7341PAG1JNM0      | 341P21          | 238     | -                 | 321H1590        | 22      |
| 7341PAG1JPM0      | 341P2108        | 238     | -                 | 321K31          | 22/56   |
| 7341PAG2PN1D      | 341P22001D      | 246     | -                 | 321K3106        | 22      |
| 7341PAG2PN90      | 341P2290        | 244     | -                 | 321K33          | 22/56   |
| 7341PAG2PNL2      | 341P2280        | 244     | -                 | 321K3306        | 22      |
| 7341PAG2PNM0      | 341P22          | 244     | -                 | 321K35          | 22/56   |
| 7341PRN2JN00      | U 341P3150      | 296     | -                 | 321K3506        | 22      |
| 7341PRN2JN92      | U 341P3192      | 296     | -                 | 321K36          | 24/56   |
| 7341PRN2JN95      | U 341P3195      | 298     | -                 | 321K3606        | 24      |
| 7341PRN2JN9D      | U 341P31951D    | 298     | -                 | 321K37          | 24/56   |
| 7341PRN3NN00      | U 341P3250      | 300     | -                 | 321K3706        | 24      |
| 7341PRN3NN92      | U 341P3292      | 300     | -                 | 331B7490        | 150     |
| 7341PRN3NN95      | U 341P3295      | 300     | -                 | 341B3490        | 188     |
| 7341PRN3NN9D      | U 341P32951D    | 302     | -                 | 341L04          | 218     |
| 7345BAG2JNMR      | 345B34          | 192     | -                 | 341L05          | 218     |
| 7345BAG2PN00      | 345B04          | 200     | -                 | 341L11          | 202/250 |
| 7345BAG4TN00      | 345B24          | 212     | -                 | 341L1190        | 204/254 |
| 7345FAS3JNMR      | 345F34          | 194     | -                 | 341L9101        | 196/248 |
| 7345LAV4TNM0      | 345L21          | 218     | -                 | 341L9201        | 214     |
| 7345LDC1LNM8      | 345L01          | 220     | -                 | 341L9504        | 270     |
| 7345PAG1JNM0      | 345P21          | 242     | -                 | 341L9598        | 270     |
| 7347LMG2NNM0      | E 347L1130      | 208     | -                 | 347L11          | 206/252 |
| 7347NAKBHNM0      | 347N31          | 262     | -                 | 347L9101        | 198/254 |
| 7347NAKBPNM0      | 347N32          | 268     | -                 | 347L9201        | 214     |
| 7347NRKDHN92      | U 347N3192      | 314     |                   |                 |         |

# Worldwide distribution

## Europe

---

### AUSTRIA

Interapp GmbH  
Kolpingstrasse 19  
A - 1232 WIEN  
Tel (43) 1 616 23 71 Tx 111 235  
Fax (43) 1 616 23 71 99

### BELGIUM

Parker Hannifin SA-NV  
Parc Industriel Sud, Zone II  
Rue du Bosquet, 23  
BE-1400 Nivelles, Belgique  
Tel: 0032 67 280 900  
Fax: 0032 67 280 999

### C.G.E.S. S.A.

Quai des Usines/Werkhuizenkaai 155B.19  
BE - 1000 BRUXELLES/BRUSSEL  
Tel (32) 2 242 39 79 - 242 37 20  
Fax (32) 2 216 30 22

### BULGARIA

Honeywell EOOD  
14 Iskarsko Chaussee  
BG - 1592 SOFIA  
Tel (359) 2 79 40 27  
Tx (865) 24 315  
Fax (359) 2 79 40 90

### CROATIA

PROTAL d.o.o.  
Novotnrijeva14  
HR-10000 Zagreb  
Tel: +38513092584  
Fax: +38513092584

### CZECHIA & SLOVAKIA

Parker Hannifin s.r.o.  
Dopravaku 723  
184 00 Praha 8 – D. Chabry  
Tel (420) 2 830 85 221  
Fax (420) 2 830 85 360

### DENMARK

Granzow A/S  
Kobenhavns Trykluft Selskab  
Ejby industrivej 26  
DK - 2600 GLOSTRUP  
Tel (45) 43 20 26 00 Tx 33 450  
Fax (45) 43 20 26 99  
www.granzow.dk

### FINLAND

Parker Hannifin Oy  
Ylästöntie 16  
FIN-01510 Vantaa  
Tel. (358) 947 67 31  
Fax.(358) 947 67 32 00

### FRANCE

Parker Hannifin SA  
Fluid Control Division Europe  
Distribution France  
Tel : (33) 0 825 07 63 22  
Fax : (33) 0 825 07 11 08

### GERMANY

Parker Hannifin GmbH  
Fluid Control Division Europe  
Vertrieb Deutschland  
Tel.: +49 (0)6181 – 9543 186  
Fax.: +49 (0)6181 – 9543 187

### GREECE

Mantanovitch – Catsaros SA  
80, Agiou Dimitriou Street.  
GR-18545 Piraeus  
Tel + 003010 322 61 09  
Fax + 0003010 322 38 66

### HUNGARY

Parker Hannifin Corporation  
Hungarian Trade Representative Office  
Vezér u. 156-158  
H-1148 Budapest  
Tel. (36-1) 252 8137, (36-1) 252 8147  
Fax (36-1) 252 8129

### ITALY

Parker Hannifin S.p.A.  
Fluid Control Division Europe  
Via E.Fermi, 5  
IT-20060 Gessate (MI) - Italy  
Tel. 003902-951251  
Fax 003902-95382051

### NETHERLAND

Parker Hannifin b.v.  
Edisonstraat 1  
NL-7575 AT Oldenzaal  
Tel (31) (541) 585000  
Fax (31) (541) 585459

Getronics Industrial Automation  
Donauweg 10  
Postbus 652  
NL - 1000 AR-AMSTERDAM  
Tel (31) 20 586 1534  
Fax (31) 20 586 1927

Eriks n.v.  
P.O. Box 280  
NL - 1800 BK Alkmaar  
Tel (31) 72 514 1911  
Fax (31) 72 515 5645

### NORWAY

Haakon Ellingsen A/S  
Rudssletta 54  
P.O. Box 184  
N - 1351 RUD  
Tel (47) 6715 1200  
Fax (47) 6715 1201

### POLAND

Parker Hannifin Sp.zo.o.  
Parowcowa 8B  
PL - 02-445 WARSAW  
Tel (48) 22 8634942  
Fax (48) 22 86344944

### PORTUGAL

Contimetra Instrumentos Ind.  
Rua Braamcamp 88-4° Dt°  
P - 1297 LISBOA Codex  
Tel (351) 21 386 05 00  
Fax (351) 21 386 16 86

### ROMANIA

Hidro Consulting Impex srl  
Parker Hannifin Corp – Reprezentanta  
Bld Ferdinand nr.27, Sector 2  
Bucuresti 0001  
Tel. ++(401) 252 13 82  
Fax ++(401) 252 33 81

### RUSSIA

Parker Hannifin Corporation  
Representation Office  
Trekhpudniy per. 9/1B/106  
103001 Moscow  
Tel. (095) 234 0054  
Fax (095) 234 0528

### SLOVENIA

Parker Hannifin Corporation  
Vel. Bucna vas 7  
8000 Novo mesto, Slovenia  
Tel 00386 68 376650  
Fax 00386 68 376651

### SPAIN

Elion S.A.  
Div. Control de Fluidos  
Farell 5  
ES - 0814 BARCELONA  
Tel (34) 93 298 20 10  
Fax (34) 93 431 41 33

### SWEDEN

Axel Larsson Maskinaffär AB  
Karlsbodavägen 14  
P.O.Box 11052  
SE - 161 11 BROMMA  
Tel (46) 8 555 24 700  
Fax (46) 8 555 24 790  
www.axel-larsson.se

### SWITZERLAND

Bachofen AG  
Ackerstrasse 42  
Postfach  
CH - 8610 USTER  
Tel (01) 944 11 11  
Fax (01) 944.12.33  
E-Mail: info@bachofen.ch  
www.bachofen.ch

### UNITED KINGDOM

Parker Hannifin Corporation  
Climate & Industrial Controls -  
Fluid Control Division Europe  
Tel: + 44 (0) 1543 574200  
Fax: + 44 (0) 1543 456171

### UKRAINE

Parker Hannifin Corporation  
Vul. Velyka.Vasylykivska 9/2, office 59  
01004 Kiev, Ukraine  
Tel 380 44 220 74 32  
Fax 380 44 220 65 34

### TURKEY

Hidroser Hidrolik – Pnömatik  
Ekipmanlari San. Ve Tic. A.S.  
5. Bölge SB: Bulvari No. 111  
34900 Büyükçekmece / Istanbul  
Tel. (0212)886 72 70  
Fax (0212) 886 69 35

# Worldwide distribution

## Africa, Middle East Far East and Overseas

### ARGENTINA

Parker Hannifin Argentina SAIC  
Stephenson 2711  
1667 – Tortuguitas  
Malvinas Argentinas  
Buenos Aires  
Tel: (54) (3327) 44-4129  
Fax: (54) (3327) 44-4199

### AUSTRALIA

Parker Hannifin Australia Pty Ltd  
9, Carrington Road  
CASTLE HILL, N.S.W. 2154  
Australia  
Tel: 0061 2 9634 7777  
Fax: 0061 2 9842 5111

### BRAZIL

Parker Hannifin Industria e Comercio Ltda  
Av. Lucas Nogueira Garcez 2181  
123300-000 Jacarei, SP  
Brazil  
Phone: (55) 12 354 5216  
Fax: (55) 12 354 5262

### CANADA

Parker Hannifin Canada  
530, Kipling Avenue  
Toronto, M8Z 5E6  
Canada  
Tel (1) 416 255 1585  
Fax (1) 416 255 2107

### CHINA REGION

Parker Hannifin Hong Kong Ltd.  
8/F, Kin Yip Plaza  
9 Cheung Yee Street  
Cheung Sha Wan, Kowloon  
Hong Kong  
Tel: 852 2428 8008  
Fax: 852 2480 4256

Parker Hannifin Beijing Office  
Suite B2109, 21st. Floor, Hanwei Plaza  
No. 7 Guanghai Road, Chaoyang District  
Beijing 100004, P.R. China  
Tel.: 86 - 10 - 6561 0520  
Fax: 86 - 10 - 6561 0527

Parker Hannifin Shanghai Office  
Rm 1101, Peregrine Plaza  
1325 Huai Hai Road (M)  
Shanghai 200031, China  
Tel: 86 21 6445 9339  
Fax: 86 21 6445 9717

### INDIA

Parker Hannifin Corporation  
701, Gateway Plaza  
Hiranandani Gardens,  
Powai, Mumbai - 400 076, India  
Tel (91) 22 570 1671  
Fax (91) 22 570 5880

### JAPAN

Parker Hannifin Japan, Ltd.  
Shirokanedai Building 2nd Floor  
3-2-10, Shirokanedai,  
Minato-ku, Tokyo 108-0071  
Tel: +81 3 6408 3901  
Fax: +81 3 5449 7202

### KOREA

Parker Hannifin Korea Ltd.  
902 Dae Heung Building  
Kangnam-Ku  
Seoul  
Korea 135-080  
Tel.: 82 – 31-280-3013  
Fax: 82 – 31-281-9018

LG-Honeywell Co Ltd.  
191 Hangangro-1 Ga, Hongsan-Gu  
SEOUL 140 702 KOREA  
Tel (82.2) 799 6010  
Fax (82.2) 792 9014

### MEDITERRANEAN AREA, MIDDLE EAST AND AFRICA

Parker Hannifin S.p.A.  
Fluid Control Division Europe  
Via E.Fermi, 5  
20060 Gessate (MI) - Italy  
Tel. 003902-951251  
Fax 003902-95382051

### MEXICO

#### Central - South

Parker Hannifin de Mexico SA DE CV  
CIC Group Mexico  
Antiguo Camino a San Lorenzo 338  
Zona Industrial  
Toluca, México CP 50010  
Tel. Comm. 52 (722)2-722222 ext. 213  
Fax. 52 (722)2-722168

#### North

Parker Hannifin de Mexico SA DE CV  
CIC Group Mexico  
Boulevard Stiva No. 350  
Parque Industrial Stiva Aeropuerto  
Apodaca, Nuevo León  
Tel. Dir. 52 (81) 83 86 53 14  
Tel. Comm. 52 (81) 83 86 41 97 al 99 ext.229  
Fax. 52 (81) 83 86 42 02

### NEW ZEALAND

Parker Hannifin New Zealand Ltd  
103, Harris Road  
East Tamaki  
Private Bag 94420  
Greenmount  
Auckland, New Zealand  
Tel: 0064 9 273 8944  
Fax: 0064 9 373 8943

### SINGAPORE & SOUTH EAST ASIA

#### (Thailand, Malaysia, Philippines, Indonesia)

Parker Hannifin Singapore Pte Ltd  
No. 11, 4th. Chin Bee Road  
Jurong Town  
Singapore 619702  
Republic of Singapore  
Tel. 0065 261 5233  
Fax 0065 265 5125

### SOUTH AFRICA

Parker Hannifin (Africa) (Pty) Ltd.  
Parker Place  
10 Berne Avenue  
Aeroporto, Kempton Park  
P.O. Box 1153  
Kempton Park 1620  
Republic of South Africa.  
Tel: +27 (0)11-961 0700  
Fax: +27 (0)11- 3927213

Parker Hannifin Taiwan Co. Ltd  
No. 40, Wu Chiuan 3<sup>rd</sup> Rd  
Wuku Industrial Park  
Taipei County 248, Taiwan  
Republic of China  
Tel: 00886 2 2298 8987  
Fax: 00886 2 2298 8982

### USA

Parker Hannifin Corporation  
Fluid Control Division  
Skinner Valve  
95 Edgewood Avenue. P.O. Box 1450  
New Britain, Connecticut 06051  
Tel (1) 860 827 2300 Tx 9-9203  
Fax (1) 860 827 2384

### VENEZUELA

Parker Hannifin Venezuela S.A.  
Edif. Draza, PB 1, Esq. Calle  
Miraiama Con Av. Principal  
Boleíta Norte  
Account No. 687716  
Caracas, Venezuela  
Tel (58) 2 238 5422  
Fax (58) 2 238 2272

## NOTES



**Parker Hannifin Corporation**  
6035 Parkland Blvd.  
Cleveland, Ohio 44124-4141  
Telephone: (216) 896-3000  
Fax: (216) 896-4000  
Web site: [www.parker.com](http://www.parker.com)

## Parker Hannifin Corporation

### About Parker Hannifin Corporation

Parker Hannifin is a leading global motion-control company dedicated to delivering premier customer service. A Fortune 500 corporation listed on the New York Stock Exchange (PH), our components and systems comprise over 1,400 product lines that control motion in some 1,000 industrial and aerospace markets. Parker is the only manufacturer to offer its customers a choice of hydraulic, pneumatic, and electromechanical motion-control solutions. Our Company has the largest distribution network in its field, with over 7,500 distributors serving more than 400,000 customers worldwide.

### Parker's Charter

To be a leading worldwide manufacturer of components and systems for the builders and users of durable goods. More specifically, we will design, market and manufacture products controlling motion, flow and pressure. We will achieve profitable growth through premier customer service.

### Product Information

North American customers seeking product information, the location of a nearby distributor, or repair services will receive prompt attention by calling the Parker Product Information Center at our toll-free number: 1-800-C-PARKER (1-800-272-7537). In the UK, a similar service is available by calling 0500-103-203.

**The Aerospace Group** is a leader in the development, design, manufacture and servicing of control systems and components for aerospace and related high-technology markets, while achieving growth through premier customer service.



**The Climate & Industrial Controls Group** designs, manufactures and sells system controls and protectors to refrigeration and air-conditioning customers worldwide. The Group also provides solenoid valves, process control valves, and gerotors for a multitude of industrial applications.



**The Fluid Connectors Group** designs, manufactures and markets rigid and flexible connectors, and associated products used in pneumatic and fluid systems.



**The Seal Group** designs, manufactures and distributes industrial and commercial sealing devices and related products by providing superior quality and total customer satisfaction.



**The Hydraulics Group** designs, produces and markets a full spectrum of hydraulic components and systems to builders and users of industrial and mobile machinery and equipment.



**The Filtration Group** designs, manufactures and markets quality filtration and clarification products, providing customers with the best value, quality, technical support, and global availability.



**The Automation Group** is a leading supplier of pneumatic and electro-mechanical components and systems to automation customers worldwide.



**The Instrumentation Group** is a global leader in the design, manufacture and distribution of high-quality critical flow components for worldwide process instrumentation, ultra-high-purity, medical and analytical applications.





Note: this publication constitutes no contract between us and our customers and may be changed without notice.



**Parker Lucifer SA**  
Fluid Control Division Europe  
16, Ch. du Faubourg de Cruseille  
CH-1227 Carouge - Geneva  
Tel. +41 22 30 77 111 Fax +41 22 30 77 110  
[www.parker.com/lucifer](http://www.parker.com/lucifer)

Catalogue 8930/GB  
October 2003