

# 1121-1125 BUTTERFLY VALVES WITH AP RE PNEUMATIC ACTUATOR

## FEATURES

1121 to 1125 butterfly valves are intended for the automatic opening /closing of different usual fluid pipes. The valve body is made of grey cast iron. The different configurations of the butterfly materials and of the liner make it suitable for different applications. Wafer mounting with centring ears between PN10/16 or ANSI 150 flanges. The long neck makes the mounting on heat-insulated pipe installations possible. The ISO 5211 mounting pad allows the actuator to be directly assembled. The AP RE (adjustable stops) pneumatic motorisation is available in double and spring-return with numerous options.

## LIMITS OF USE

|                              |                              |
|------------------------------|------------------------------|
| <b>Fluid pressure: PS</b>    | 16 bar up to DN 300          |
| <b>Fluid temperature: WT</b> | According to the table below |
| <b>Prohibited uses</b>       | Steam, natural gas           |
| <b>Ambient temperature</b>   | -10°C / +80°C                |
| <b>Motor compressed air</b>  | mini 6 bar / maxi 10 bar     |

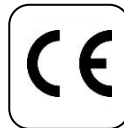


## AVAILABLE MODELS

DN 40 to DN 300.

Connection between flanges PN10/16 and ANSI 150 RF

Double and spring-return actuator.



| Ref. | Butterfly       | Liner | Example of applications              | WT° min | WT° max |
|------|-----------------|-------|--------------------------------------|---------|---------|
| 1121 | stainless steel | NBR   | Liquid hydrocarbons - compressed air | -10°C   | +90°C   |
| 1123 | Stainless steel | EPDM  | Demineralised water - alkalis        | -10°C   | +110°C  |
| 1125 | cast iron       | EPDM  | Hot water - cold water               | -10°C   | +110°C  |

## DIRECTIVES AND MANUFACTURING STANDARDS

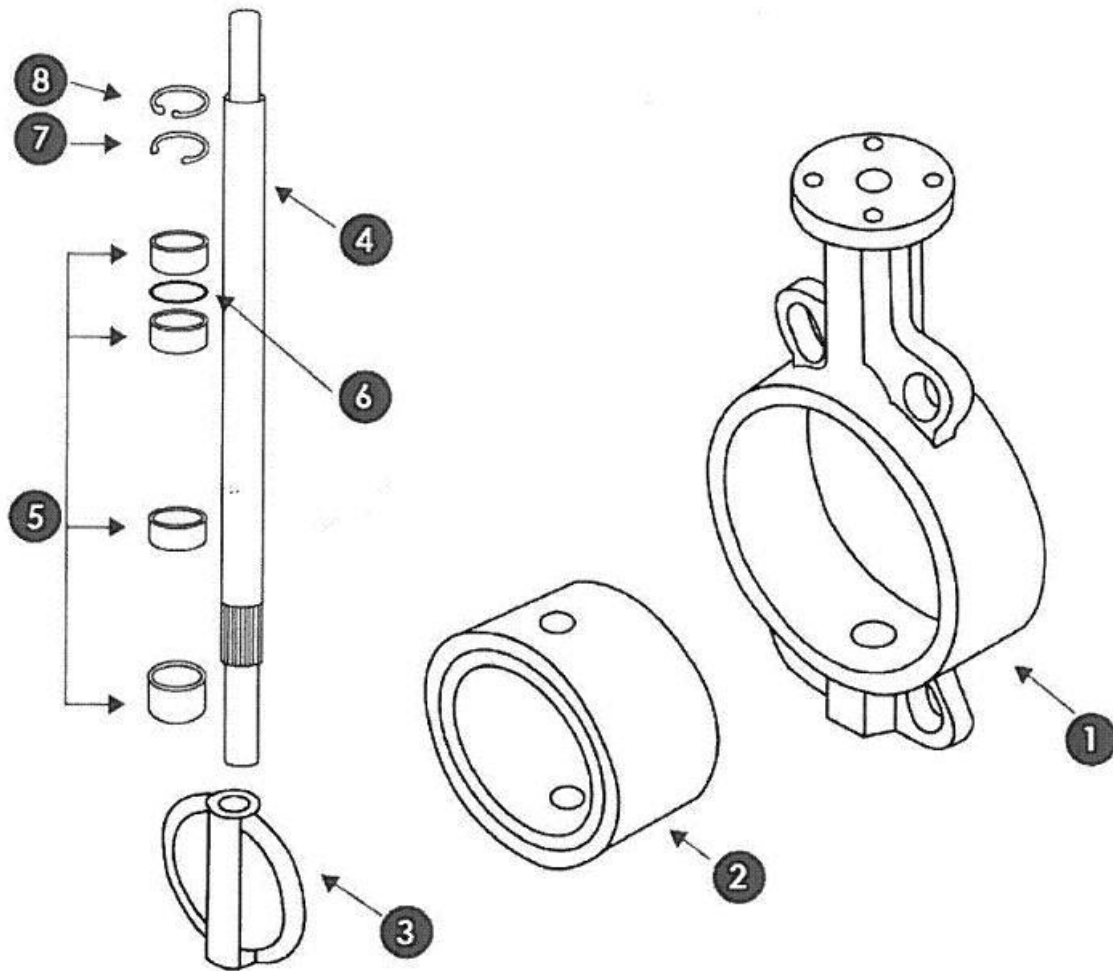
| OBJECT                                  | Standard           | ON   | OBJECT                           | Standard     |
|---|--------------------|------|----------------------------------|--------------|
| Pressure Equipment Directive 2014/68/EC | Cat. III module H  | 0035 | Final test                       | API 598      |
| Face-to-face dimension                  | ISO 5752 series 20 |      | Actuator pilot connection        | NAMUR        |
| Flange dimension                        | EN 1092-1          |      | Switch box connection            | VDI/VDE 3845 |
| Connection Motorisation                 | ISO 5211           |      | SIL 3 level (the actuator alone) | EN 61508     |

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## CONSTRUCTION



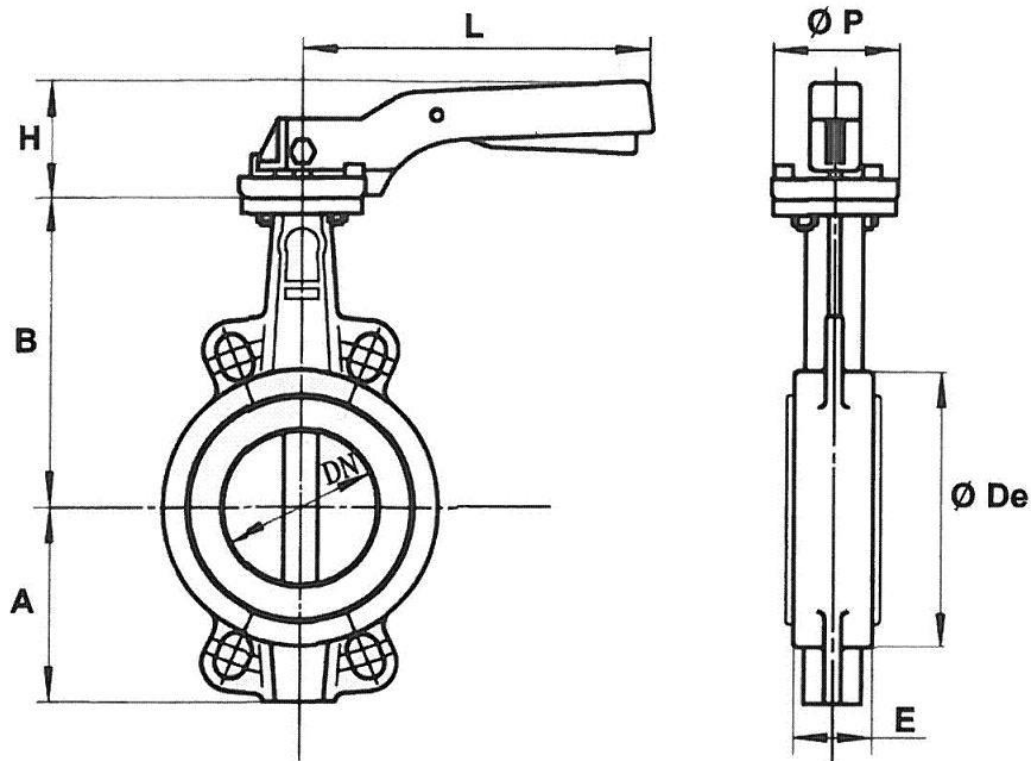
| No. | Name          | 1121                      | 1123      | 1125                                  |
|-----|---------------|---------------------------|-----------|---------------------------------------|
| 1   | Body          | EN GJL-250 grey cast iron |           |                                       |
| 2   | Liner         | NBR                       | EPDM      | EPDM                                  |
| 3   | Butterfly     | 1.4408 SS                 | 1.4408 SS | EN GJS-400-15 nickel-plated cast iron |
| 4   | Crossing stem | 416 SS                    |           |                                       |
| 5   | Bearings      | PTFE                      |           |                                       |
| 6   | O-ring        | NBR                       | NBR       | NBR                                   |
| 7   | Circlips      | Steel                     |           |                                       |
| 8   | Circlips      | Steel                     |           |                                       |

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## DIMENSIONS (mm)



| DN          | 40  | 50    | 65   | 80  | 100 | 125 | 150 | 200  | 250  | 300  |
|-------------|-----|-------|------|-----|-----|-----|-----|------|------|------|
| A           | 61  | 77    | 87.5 | 95  | 107 | 121 | 144 | 171  | 205  | 235  |
| B           | 130 | 136.5 | 142  | 158 | 180 | 192 | 215 | 242  | 280  | 310  |
| Ø De        | 82  | 95    | 109  | 127 | 152 | 180 | 207 | 260  | 315  | 370  |
| E           | 33  | 43    | 46   | 46  | 52  | 56  | 56  | 60   | 68   | 78   |
| H           | 74  | 74    | 74   | 74  | 74  | 79  | 79  | 37   | 37   | 37   |
| L           | 200 | 200   | 200  | 200 | 200 | 278 | 278 | 355  | 507  | 507  |
| Ø P         | 65  | 65    | 65   | 65  | 65  | 90  | 90  | 125  | 150  | 150  |
| Weight (kg) | 1.8 | 2.5   | 2.9  | 3.2 | 4.2 | 6.7 | 7.7 | 14.7 | 23.4 | 33.8 |

## FLOW-RATE COEFFICIENT Kv (m<sup>3</sup>/h)

| DN | 40 | 50 | 65  | 80  | 100 | 125 | 150  | 200  | 250  | 300  |
|----|----|----|-----|-----|-----|-----|------|------|------|------|
| Kv | 78 | 98 | 167 | 258 | 512 | 872 | 1347 | 2675 | 4555 | 7037 |

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## AP RE PNEUMATIC MOTORISATION

The ALPHAIR RE motorisation proposed as standard comprises:

- rack and pinion actuator of anodised aluminium.
- a safety coefficient of 1.3 minimum compared to the nominal torque of the valve.
- air non-lubricated dry motor, minimum 6 bar pressure.
- an upstream / downstream pressure difference  $\Delta P=10$  bar max.

The actuator assembly is of the following types:

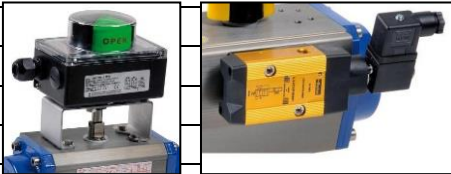
- direct assembly with DN 32 to DN 200 aluminium motorisation mounting pad.
- yoke + stainless steel drive according to the EN 15081 standard for DN 250 to 300.

| DN  | Double-effect | V (litres) | Time (s)* | Spring-return | V (litres) | Time (s)* |
|-----|---------------|------------|-----------|---------------|------------|-----------|
| 40  | RE 51         | 0.23       | 1         | RES 64/6      | 0.45       | 1         |
| 50  | RE 51         | 0.23       | 1         | RES 64/6      | 0.45       | 1         |
| 65  | RE 64         | 0.45       | 1         | RES 76/6      | 0.61       | 1         |
| 80  | RE 64         | 0.45       | 1         | RES 76/6      | 0.61       | 1         |
| 100 | RE 76         | 0.61       | 1         | RES 101/6     | 1.80       | 2         |
| 125 | RE 76         | 0.61       | 1         | RES 101/6     | 1.80       | 2         |
| 150 | RE 86         | 0.98       | 2         | RES 116/6     | 2.80       | 2         |
| 200 | RE 101        | 1.80       | 2         | RES 126/6     | 3.70       | 3         |
| 250 | RE 116        | 2.80       | 2         | RES 146/6     | 4.90       | 3         |
| 300 | RE 126        | 3.70       | 3         | RES 181/6     | 11.1       | 5         |

For any other operating conditions, please contact us.

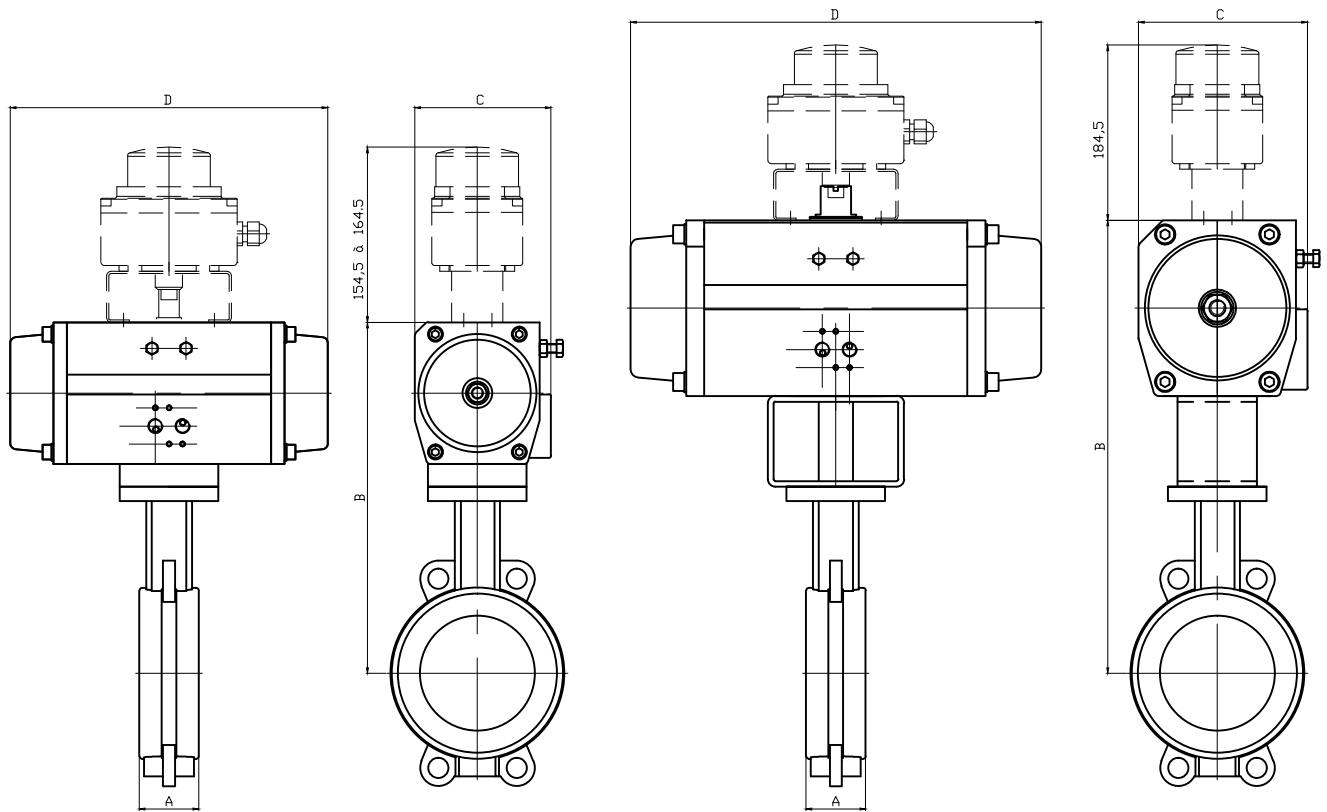
\*indicative time of the no-load actuator for opening or closing.

## MOTORISATION OPTIONS

|    |  |  |
|----|--|--|
| 1  | actuators dimensioned for a compressed air pressure of 3, 4 or 5 bar                                 |  |
| 2  | actuator dimensioned for an upstream / downstream pressure difference $\Delta P$ greater than 10 bar |  |
| 3  | actuator with special coatings, stainless steel actuator   |  |
| 4  | Actuator for very low (-60°C) or very high (+150°C) ambient temperatures.                            |  |
| 5  | manual override with declutchable gear box   |  |
| 6  | compressed air filter regulator  |  |
| 7  | All types of piloting solenoid valves  |  |
| 8  | all types of switch boxes  |  |
| 9  | all types of positioner  |  |
| 10 | rapid exhaust, flow-rate limiters - exhaust brakes   |  |

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\* : montage avec platine H=80mm

| DN      | 40    |        | 50    |        | 65    |        | 80    |        | 100   |        |
|---------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|
| ALPHAIR | 51 RE | 64 RES | 51 RE | 64 RES | 64 RE | 76 RES | 64 RE | 76 RES | 76 RE | 101RES |
| A       | 33    |        | 43    |        | 46    |        | 46    |        | 52    |        |
| B       | 219   | 236    | 226   | 243    | 248   | 264    | 264   | 280    | 302   | 327    |
| C       | 75    | 86     | 75    | 86     | 86    | 94     | 86    | 94     | 94    | 120    |
| D       | 138   | 155    | 138   | 155    | 155   | 203    | 155   | 203    | 203   | 261    |
| KG      | 3.4   | 4.1    | 3.9   | 4.6    | 5     | 6.6    | 5.7   | 7.4    | 7.8   | 11.8   |