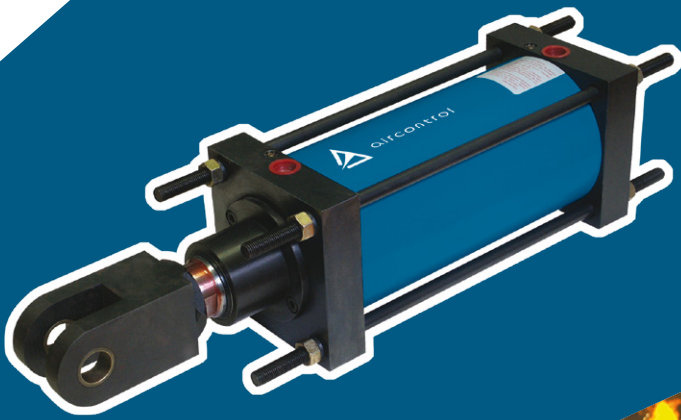


# Heavy Duty Cylinders



aircontrol  
[www.aircontrol-metals.com](http://www.aircontrol-metals.com)

# Lifelong

**1962...** We have already been manufacturing pneumatic cylinders for half a century now. We can say that this is a lifetime's work. Time flies, as does innovation, and we never tire of manufacturing pneumatic cylinders and continuously improving our products; it's part of us, of our identity, impossible to erase. It's in our history, in our present and our future. We are "the cylinder company".

We could give a boring speech to introduce our "lifelong" product, but we don't want to, nor need to. We all know that pneumatic cylinders exist and we know their basic functions; like all pneumatic cylinder manufacturers, we know how to make them. Some do it better than others, but we all know how to do it. It's like learning to ride a bike... or to swim. You learn it and never forget. Some go to the pool on occasions and dare to take a dip in the sea on their holidays. Others go further, driven by their passion for water... They swim deeper, they last longer under water, swim faster, in different styles and catch the waves that take them further... We are this last type of swimmer.

As we have explained before, the difference between one swimmer and the other lies particularly in their passion. That passion that we also have for the will to supply products of the best quality, for promoting what a "good service" really is... For achieving the recognition of our clients that makes us continue innovating and working with even more passion and motivation. Because it feels good when you are acknowledged for your good work. At the end of the day, it's yours... "lifelong".

**AirControl, passion for cylinders...**

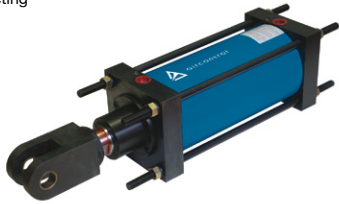


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## Heavy Duty cylinders

### 30-35 Series

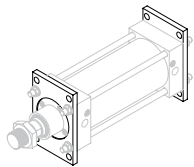
Ø 50 ... 300 mm  
Double Acting



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**6**

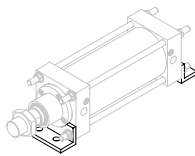
## Fixing elements

Flange

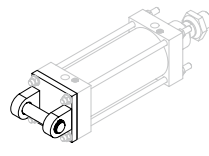


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Bracket

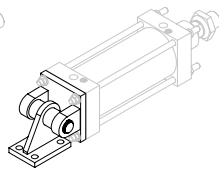


Female Hinge

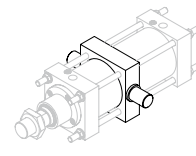


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Rear 90° Hinge

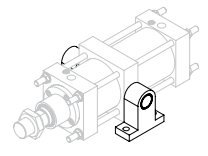


Intermediate Hinge

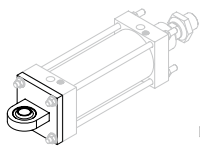


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Intermediate Hinge  
Bearing

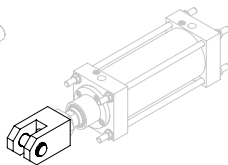


Rear Hinge with Ball  
Joint

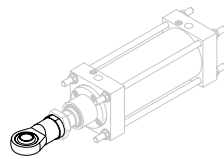


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**12**

Yoke with Pivot



Ball Joint



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**13**

## Technical information

### Fluid

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AirControl cylinders are designed to work with non-lubricated air, which means that the cylinder components are lubricated in order to guarantee a correct operation. If you decide to use lubricated air, it's important that the use is continuous, since this lubrication removes the one applied in the assembly phase.

### Strokes

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All strokes available upon request.

### Parameters

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Bore: inside diameter of the cylinder liner (mm)  
Stroke: working travel (mm)  
Working pressure: (bar)  
Working temperature: (°C)  
Travel speed: (m/s)  
Damping force: (Nm)  
Air consumption: (nl/min)  
Theoretical force: (N)

### Installation recommendations

---

All of our cylinders are tested before delivering them to our customers. We recommend not to take off the plastic plugs that protect the air inlet until the tubing is connected.

In all delivered cylinders, the level of cushioning is adjusted to an intermediate position. However, and depending on the working load, it could be necessary to make an additional readjustment. If a higher level of cushioning is required, turn the bolt clockwise. If less cushioning is needed, turn it the other way around.

Compressed air must be clean. Therefore, it is necessary to install an air filter that eliminates both dust particles of a size of more than 5 microns and water condensation. Although our cylinders are perfectly capable of oil-less working, we recommend lubricating the compressed air, because it increases the seals' life. The lubricator must be connected to the supply line, as close as possible to the valve. Use a petroleum-based mineral oil with a compressed viscosity between 2 and 2,5 Engler at 50°C with an aniline point above 85°C.

In order to avoid cylinder working pressure variations and save in air consumption, it is recommended to place a pressure regulator between the filter and lubricator.

## Air consumption calculation

| Bore (mm) | Air pressure (bar) |       |       |       |       |       |       |       |       |
|-----------|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|
|           | 2                  | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    |
| 50        | 0,060              | 0,079 | 0,099 | 0,118 | 0,138 | 0,158 | 0,177 | 0,197 | 0,217 |
| 63        | 0,095              | 0,126 | 0,157 | 0,188 | 0,219 | 0,250 | 0,282 | 0,313 | 0,344 |
| 80        | 0,152              | 0,203 | 0,253 | 0,303 | 0,354 | 0,404 | 0,454 | 0,504 | 0,555 |
| 100       | 0,238              | 0,317 | 0,395 | 0,474 | 0,552 | 0,631 | 0,709 | 0,788 | 0,867 |
| 125       | 0,372              | 0,495 | 0,618 | 0,740 | 0,863 | 0,986 | 1,109 | 1,231 | 1,354 |
| 160       | 0,610              | 0,811 | 1,012 | 1,213 | 1,414 | 1,615 | 1,816 | 2,017 | 2,218 |
| 200       | 0,953              | 1,267 | 1,581 | 1,895 | 2,209 | 2,524 | 2,838 | 3,152 | 3,466 |
| 250       | 1,489              | 1,980 | 2,471 | 2,961 | 3,452 | 3,943 | 4,434 | 4,925 | 5,416 |
| 300       | 2,144              | 2,851 | 3,558 | 4,264 | 4,971 | 5,678 | 6,385 | 7,092 | 7,799 |

Air consumption in thrust/traction in NI/min by cms. of stroke, according to the pressure (bar) at 20°C.

## Force calculation

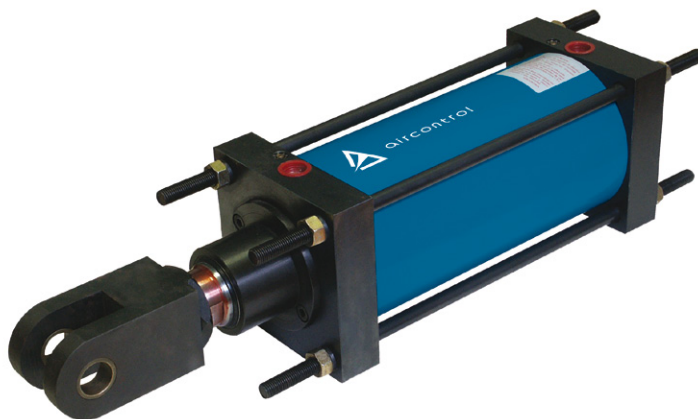
| Bore | Available area | Force (kg) at pressure (bar) |      |      |      |      |      |      |      |      |      |
|------|----------------|------------------------------|------|------|------|------|------|------|------|------|------|
|      |                | cm <sup>2</sup>              | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   |
| 50   | Thrust         | 20                           | 39   | 58   | 77   | 96   | 116  | 135  | 154  | 173  | 193  |
|      | Traction       | 16                           | 32   | 48   | 63   | 79   | 95   | 111  | 127  | 143  | 158  |
| 63   | Thrust         | 31                           | 61   | 92   | 122  | 153  | 184  | 214  | 245  | 275  | 306  |
|      | Traction       | 25                           | 50   | 75   | 100  | 125  | 150  | 175  | 200  | 225  | 250  |
| 80   | Thrust         | 50                           | 99   | 148  | 197  | 247  | 296  | 345  | 395  | 444  | 493  |
|      | Traction       | 42                           | 84   | 127  | 169  | 211  | 253  | 296  | 338  | 380  | 422  |
| 100  | Thrust         | 79                           | 154  | 231  | 308  | 385  | 462  | 539  | 616  | 693  | 771  |
|      | Traction       | 66                           | 132  | 198  | 264  | 330  | 396  | 462  | 528  | 594  | 660  |
| 125  | Thrust         | 123                          | 241  | 361  | 482  | 602  | 722  | 843  | 963  | 1084 | 1204 |
|      | Traction       | 103                          | 206  | 309  | 412  | 515  | 619  | 722  | 825  | 928  | 1031 |
| 160  | Thrust         | 201                          | 395  | 592  | 789  | 986  | 1184 | 1381 | 1578 | 1775 | 1972 |
|      | Traction       | 173                          | 346  | 518  | 691  | 964  | 1037 | 1210 | 1382 | 1555 | 1728 |
| 200  | Thrust         | 314                          | 616  | 925  | 1233 | 1541 | 1849 | 2157 | 2466 | 2774 | 3082 |
|      | Traction       | 286                          | 572  | 858  | 1144 | 1429 | 1715 | 2001 | 2287 | 2573 | 2859 |
| 250  | Thrust         | 491                          | 963  | 1445 | 1926 | 2408 | 2889 | 3571 | 3852 | 4334 | 4816 |
|      | Traction       | 447                          | 893  | 1340 | 1787 | 2234 | 2680 | 3127 | 3574 | 4020 | 4467 |
| 300  | Thrust         | 707                          | 1357 | 2080 | 2774 | 3467 | 4161 | 4854 | 5547 | 6241 | 6934 |
|      | Traction       | 663                          | 1325 | 1988 | 2651 | 3313 | 3976 | 4639 | 5301 | 5964 | 6627 |

Dynamic forces of thrust/traction in kg.

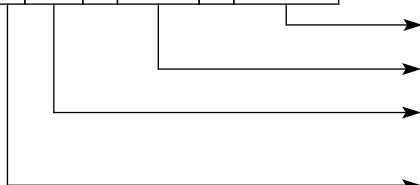
# 30 and 35 Series

## Heavy Duty cylinders

The pneumatic cylinders of the 30 and 35 series are designed to work in extreme conditions and hostile environments for a long time. They are available with or without tie rods and in bores from 50 to 300 mm. All these cylinders are suitable for installations that need a high number of cycles. Their main application areas can be found in the iron and steel industry, glass industry, paper industry, mining, machinery for public works and automotive industry.



A \* \* \* A \* \* \* A \* \* \* \*



### Codification

|                    |                                       |
|--------------------|---------------------------------------|
| Stroke (mm)        |                                       |
| Internal bore (mm) |                                       |
| 30                 | With tie rods                         |
| 35                 | Without tie rods                      |
| 0                  | Standard cylinder                     |
| A                  | High temperature (HT)                 |
| F                  | Bellows                               |
| K                  | Stainless steel piston rod            |
| L                  | Stainless steel piston rod + HT seals |

### Strokes

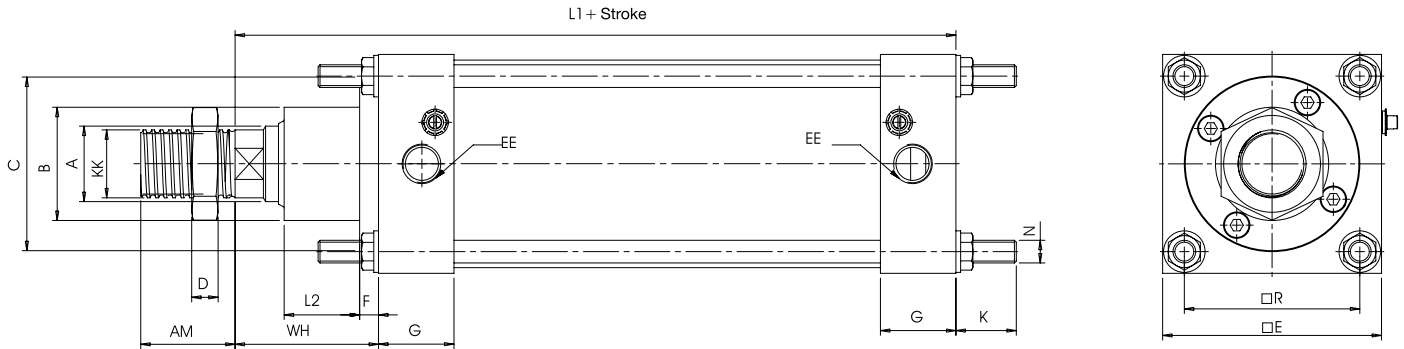
All strokes available according to the customer's needs.

### Technical specifications

|                                 |  |
|---------------------------------|--|
| Cylinder heads                  | Rolled steel   |
| Piston rod                      | Chrome-plated and rolled ground steel (stainless steel on request) |
| Piston                          | Rolled steel   |
| Tie rods                        | Rolled steel   |
| Liner                           | Chrome-plated and honed ST-52 rolled steel                         |
| Seals                           | NBR (Viton on request)   |
| Cushioning                      | Adjustable at both ends  |
| Environmental temperature range | -30°C → +80°C  |
| Fluid temperature range         | 0°C → +40°C<br>(-30°C → +200°C with Viton seals)                   |
| Lubrication                     | Not required   |
| Fluid                           | Filtered air   |
| Maximum operating pressure      | 10 bar   |
| Forces                          | Technical information page   |
| Air consumption                 | Technical information page   |

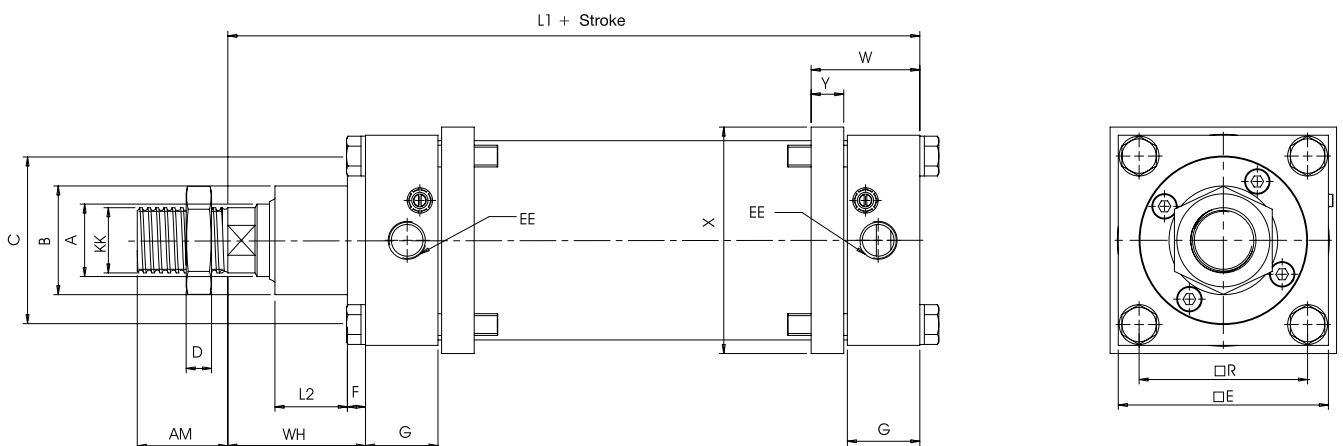
## 30 and 35 Series Heavy Duty cylinders

### 30 Series



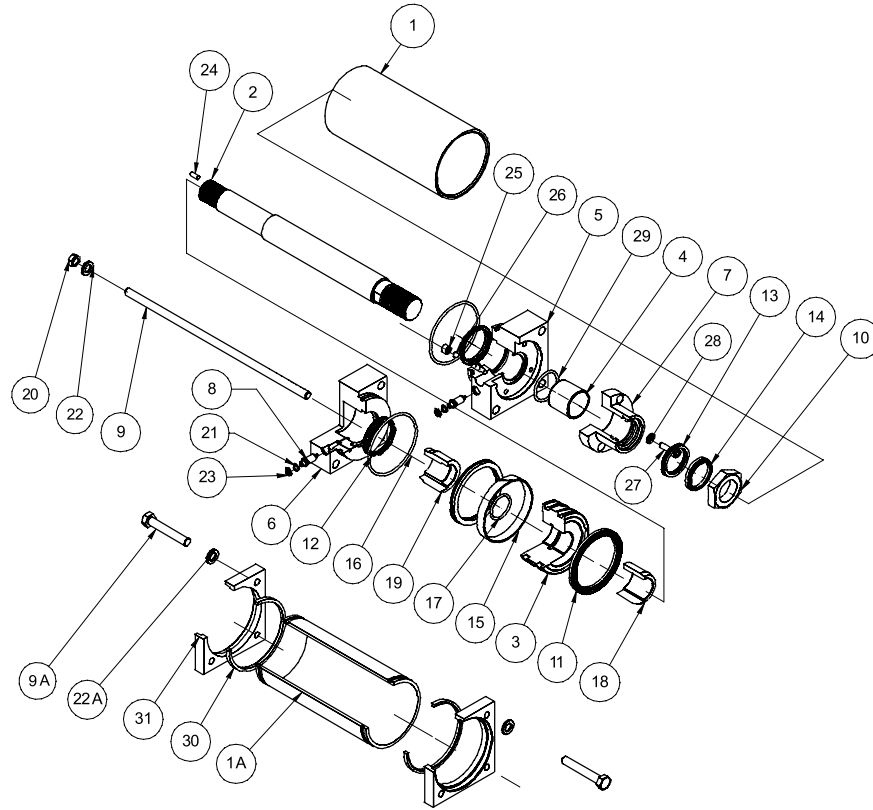
| Ø   | A  | B   | C   | D  | E   | EE   | F  | G  | K  | L1                  | L2 | N    | R   | W    | WH  | X   | Y  | AM  | KK       |
|-----|----|-----|-----|----|-----|------|----|----|----|---------------------|----|------|-----|------|-----|-----|----|-----|----------|
| 50  | 22 | 45  | 0   | 9  | 70  | 1/4" | 0  | 33 | 23 | 179 <sup>±1</sup>   | 35 | M.8  | 53  | 46,5 | 55  | 70  | 12 | 35  | M.20X2,5 |
| 63  | 28 | 52  | 0   | 10 | 80  | 3/8" | 0  | 33 | 23 | 187 <sup>±1,2</sup> | 41 | M.10 | 62  | 46,5 | 63  | 80  | 12 | 45  | M.24X3   |
| 80  | 32 | 52  | 0   | 12 | 95  | 3/8" | 0  | 33 | 24 | 199 <sup>±1,2</sup> | 45 | M.10 | 76  | 49   | 67  | 102 | 15 | 45  | M.27X3   |
| 100 | 40 | 60  | 92  | 14 | 116 | 1/2" | 10 | 40 | 32 | 232 <sup>±1,2</sup> | 40 | M.12 | 93  | 60   | 76  | 125 | 18 | 50  | M.36X4   |
| 125 | 50 | 75  | 110 | 16 | 145 | 1/2" | 8  | 45 | 35 | 243 <sup>±1,2</sup> | 42 | M.14 | 115 | 67   | 75  | 155 | 20 | 55  | M.42X4,5 |
| 160 | 60 | 85  | 125 | 20 | 182 | 3/4" | 8  | 45 | 37 | 264 <sup>±1,7</sup> | 60 | M.16 | 145 | 72   | 93  | 198 | 25 | 75  | M.52X3   |
| 200 | 60 | 85  | 125 | 20 | 225 | 3/4" | 10 | 56 | 46 | 320 <sup>±1,7</sup> | 60 | M.20 | 180 | 88   | 114 | 245 | 30 | 75  | M.52X3   |
| 250 | 75 | 105 | 150 | 28 | 275 | 1"   | 10 | 60 | 48 | 359 <sup>±2</sup>   | 63 | M.24 | 220 | 97   | 125 | 300 | 35 | 100 | M.68X4   |
| 300 | 75 | 105 | 150 | 28 | 325 | 1"   | 10 | 60 | 48 | 359 <sup>±2</sup>   | 63 | M.27 | 260 | 97   | 125 | 355 | 35 | 100 | M.68X4   |

### 35 Series





## 30 and 35 Series Heavy Duty cylinders



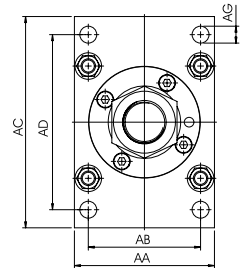
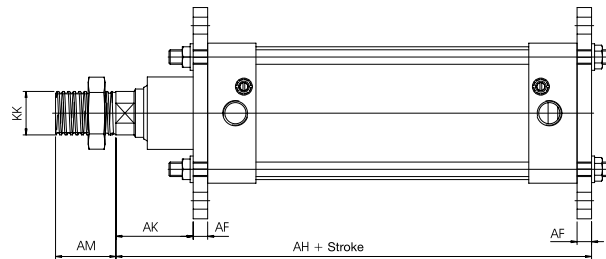
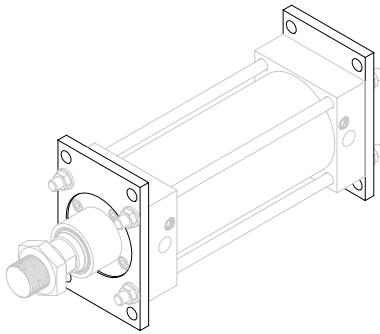
| Num.                  | Description           | Units | Bore        |             |             |             |             |             |              |              |              |  |
|-----------------------|-----------------------|-------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--|
|                       |                       |       | 50          | 63          | 80          | 100         | 125         | 160         | 200          | 250          | 300          |  |
| 1                     | Liner                 | 1     | 30BA05AXXXX | 30BA06AXXXX | 30BA08AXXXX | 30BA10AXXXX | 30BA12AXXXX | 30BA16AXXXX | 30BA20AXXXX  | 30BA25AXXXX  | 30BA30AXXXX  |  |
| 2                     | Piston rod            | 1     | 30CA05AXXXX | 30CA06AXXXX | 30CA08AXXXX | 30CA10AXXXX | 30CA12AXXXX | 30CA16AXXXX | 30CA20AXXXX  | 30CA25AXXXX  | 30CA30AXXXX  |  |
| 3                     | Piston                | 1     | 30 FE 05 A  | 30 FE 06 A  | 30 FE 08 A  | 30 FE 10 A  | 30 FE 12 A  | 30 FE 16 A  | 30 FE 20 A   | 30 FE 25 A   | 30 FE 30 A   |  |
| 4                     | Guide bush            | 1     | 30 05 04    | 30 06 04    | 30 08 04    | 70 16 04    | 30 12 04    | 30 16 04    | 30 16 04     | 30 25 04     | 30 25 04     |  |
| 5                     | Front cylinder head   | 1     | 30 FA 05 A  | 30 FA 06 A  | 30 FA 08 A  | 30 FA 10 A  | 30 FA 12 A  | 30 FA 16 A  | 30 FA 20 A   | 30 FA 25 A   | 30 FA 30 A   |  |
| 6                     | Rear cylinder head    | 1     | 30 FB 05 A  | 30 FB 06 A  | 30 FB 08 A  | 30 FB 10 A  | 30 FB 12 A  | 30 FB 16 A  | 30 FB 20 A   | 30 FB 25 A   | 30 FB 30 A   |  |
| 7                     | Guide bracket         | 1     |             |             |             | 30 FH 10 A  | 30 FH 12 A  | 30 FH 16 A  | 30 FH 20 A   | 30 FH 25 A   | 30 FH 30 A   |  |
| 8                     | Regulator             | 2     | 30 FL 05 A  | 30 FL 06 A  | 30 FL 06 A  | 30 FL 10 A  | 30 FL 10 A  | 30 FL 10 A  | 30 FL 20 A   | 30 FL 20 A   | 30 FL 20 A   |  |
| 9                     | Tie rod               | 4     | 30DA05AXXXX | 30DA06AXXXX | 30DA08AXXXX | 30DA10AXXXX | 30DA12AXXXX | 30DA16AXXXX | 30DA20AXXXX  | 30DA25AXXXX  | 30DA30AXXXX  |  |
| 10                    | Locknut               | 1     | 30 05 10    | 30 06 10    | 30 08 10    | 30 10 10    | 30 12 10    | 30 16 10    | 30 16 10     | 30 25 10     | 30 25 10     |  |
| *11                   | Collar                | 2     | -           | -           | -           | -           | -           | -           | -            | -            | -            |  |
| *12                   | Cushioning seal       | 2     | -           | -           | -           | -           | -           | -           | -            | -            | -            |  |
| *13                   | Collar                | 1     | -           | -           | -           | -           | -           | -           | -            | -            | -            |  |
| *14                   | Piston rod scraper    | 1     | -           | -           | -           | -           | -           | -           | -            | -            | -            |  |
| *15                   | Slipping segment      | 1     | -           | -           | -           | -           | -           | -           | -            | -            | -            |  |
| *16                   | O-Ring                | 2     | -           | -           | -           | -           | -           | -           | -            | -            | -            |  |
| *17                   | O-Ring                | 1     | -           | -           | -           | -           | -           | -           | -            | -            | -            |  |
| 18                    | Front cushioning bush | 1     | 30 FJ 05 A  | 30 FJ 06 A  | 30 FJ 08 A  | 30 FJ 10 A  | 30 FJ 12 A  | 30 FJ 16 A  | 30 FJ 20 A   | 30 FJ 25 A   | 30 FJ 25 A   |  |
| 19                    | Rear cushioning bush  | 1     | 30 FK 05 A  | 30 FK 06 A  | 30 FK 08* A | 30 FK 10 A  | 30 FK 12 A  | 30 FK 16 A  | 30 FK 20 A   | 30 FK 25 A   | 30 FK 25 A   |  |
| 20                    | Bichromated nut       | 8     | 26 05 20    | 26 08 20    | 26 08 20    | 26 12 20    | 30 12 20    | 26 16 20    | 26 25 20     | 26 30 20     | 30 30 20     |  |
| *21                   | O-Ring                | 2     | -           | -           | -           | -           | -           | -           | -            | -            | -            |  |
| 22                    | Washer                | 8     |             | 26 08 22    | 26 08 22    | 26 12 22    | 30 12 22    | 26 16 22    | 26 25 22     | 30 25 22     | 30 30 22     |  |
| 23                    | Lock washer           | 2     | 70 08 23    | 70 08 23    | 70 06 23    | 70 06 23    | 70 06 23    | 70 06 23    | 70 10 19     | 70 10 19     | 70 10 19     |  |
| 24                    | Setscrew              | 1     | 30 05 24    | 30 05 24    | 30 05 24    | 30 10 24    | 30 10 24    | 30 10 24    | 30 10 24     | 30 10 24     | 30 10 24     |  |
| 25                    | Locknut               | 2     | -           | 30 06 25    | 30 FM 08 A  | 30 FM 10 A  | 30 FM 10 A  | 30 FM 16 A  | 30 FM 16 A   | 30 FM 25 A   | 30 FM 25 A   |  |
| 26                    | Latch ball            | 2     | -           | 30 06 26    | 30 08 26    | 30 10 26    | 30 10 26    | 30 16 26    | 30 16 26     | 30 25 26     | 30 25 26     |  |
| 27                    | Allen screw           | 4     | -           | -           | -           | 30 10 27    | 30 10 27    | 30 16 27    | 30 16 27     | 30 25 27     | 30 25 27     |  |
| 28                    | Washer                | 4     | -           | -           | -           | 26 05 22    | 26 05 22    | AR160D010D  | AR160D010D   | AR160D012D   | AR160D012D   |  |
| *29                   | O-Ring                | 1     | -           | -           | -           | -           | -           | -           | -            | -            | -            |  |
| <b>35 Series</b>      |                       |       |             |             |             |             |             |             |              |              |              |  |
| 1A                    | Liner                 | 1     | 35BA05AXXXX | 35BA06AXXXX | 35BA08AXXXX | 35BA10AXXXX | 35BA12AXXXX | 35BA16AXXXX | 35BA20AXXXX  | 35BA25AXXXX  | 35BA30AXXXX  |  |
| 9A                    | Screw                 | 8     | TR103D08D55 | TR103D10D60 | TR103D10D60 | TR103D12D75 | TR103D14D90 | TR103D16D90 | TR103D20D120 | TR103D24D120 | TR103D24D120 |  |
| 22A                   | Washer                | 8     | AR160D008F  | 26 08 22    | 26 08 22    | 26 12 22    | 30 12 22    | 26 16 22    | 26 25 22     | 30 25 22     | 30 30 22     |  |
| 30                    | Locking ring          | 2     | 35 FT 05 A  | 35 FT 06 A  | 35 FT 08 A  | 35 FT 10 A  | 35 FT 12 A  | 35 FT 16 A  | 35 FT 20 A   | 35 FT 25 A   | 35 FT 30 A   |  |
| 31                    | Clamping bracket      | 2     | 35 FU 05 A  | 35 FU 06 A  | 35 FU 08 A  | 35 FU 10 A  | 35 FU 12 A  | 35 FU 16 A  | 35 FU 20 A   | 35 FU 25 A   | 35 FU 30 A   |  |
| <b>Spare kit</b>      |                       |       | <b>50</b>   | <b>63</b>   | <b>80</b>   | <b>100</b>  | <b>125</b>  | <b>160</b>  | <b>200</b>   | <b>250</b>   | <b>300</b>   |  |
| Standard              |                       |       | 30KR05      | 30KR06      | 30KR08      | 30KR10      | 30KR12      | 30KR16      | 30KR20       | 30KR25       | 30KR30       |  |
| High temperature (HT) |                       |       | A 30KR05    | A 30KR06    | A 30KR08    | A 30KR10    | A 30KR12    | A 30KR16    | A 30KR20     | A 30KR25     | A 30KR30     |  |

\* Spare kit components



## 30 and 35 Series Heavy Duty cylinders Fixing elements

### Flange



#### Front flange

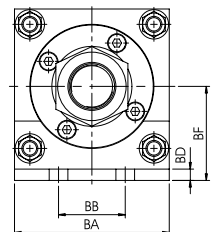
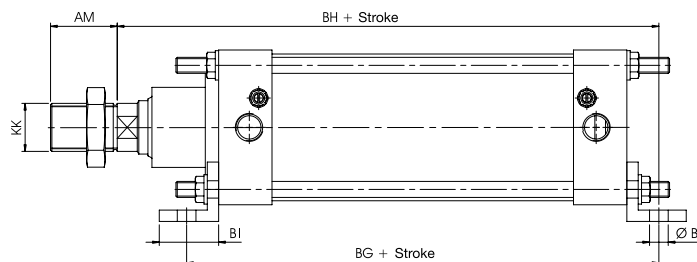
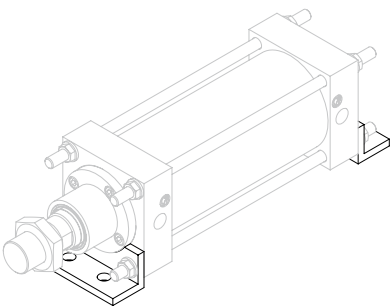
#### Rear flange

| Ø   | AA  | AB       | AC  | AD       | AF | AG | AH       | AK      | AM  | KK       |
|-----|-----|----------|-----|----------|----|----|----------|---------|-----|----------|
| 50  | 70  | 53 ±0,3  | 105 | 85 ±0,3  | 8  | 10 | 187 ±1,3 | 47 ±1,8 | 35  | M.20X2,5 |
| 63  | 80  | 56 ±0,3  | 115 | 95 ±0,3  | 10 | 10 | 197 ±1,5 | 53 ±1,8 | 45  | M.24X3   |
| 80  | 95  | 68 ±0,3  | 135 | 112 ±0,3 | 10 | 12 | 209 ±1,5 | 57 ±1,8 | 45  | M.27X3   |
| 100 | 116 | 93 ±0,3  | 175 | 145 ±0,3 | 12 | 14 | 244 ±1,5 | 64 ±1,8 | 50  | M.36X4   |
| 125 | 145 | 115 ±0,4 | 205 | 170 ±0,4 | 15 | 16 | 256 ±1,5 | 60 ±1,8 | 55  | M.42X4,5 |
| 160 | 182 | 130 ±0,4 | 240 | 205 ±0,4 | 18 | 18 | 280 ±1,8 | 75 ±2,2 | 75  | M.52X3   |
| 200 | 225 | 170 ±0,5 | 310 | 265 ±0,5 | 22 | 22 | 338 ±1,8 | 92 ±2,2 | 75  | M.52X3   |
| 250 | 275 | 210 ±1   | 390 | 330 ±1   | 28 | 26 | 385 ±2   | 97 ±2,5 | 100 | M.68X4   |
| 300 | 325 | 245 ±1   | 440 | 385 ±1   | 33 | 28 | 390 ±2   | 92 ±2,5 | 100 | M.68X4   |

| COD.       | Ø   |
|------------|-----|
| B30.AAD.05 | 50  |
| B30.AAD.06 | 63  |
| B30.AAD.08 | 80  |
| B30.AAD.10 | 100 |
| B30.AAD.12 | 125 |
| B30.AAD.16 | 160 |
| B30.AAD.20 | 200 |
| B30.AAD.25 | 250 |
| B30.AAD.30 | 300 |

| COD.      | Ø   |
|-----------|-----|
| B30.AB.05 | 50  |
| B30.AB.06 | 63  |
| B30.AB.08 | 80  |
| B30.AB.10 | 100 |
| B30.AB.12 | 125 |
| B30.AB.16 | 160 |
| B30.AB.20 | 200 |
| B30.AB.25 | 250 |
| B30.AB.30 | 300 |

### Bracket

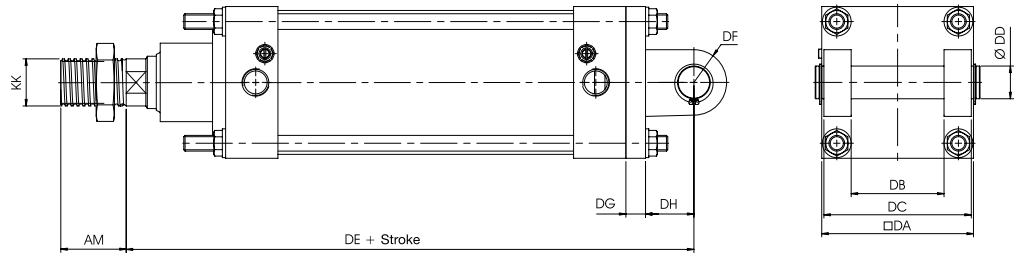
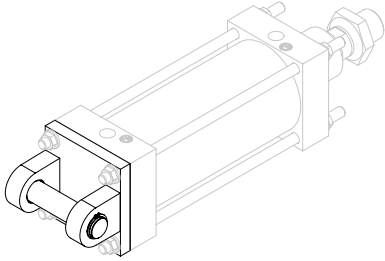


| Ø   | BA  | BB      | BD   | BE | BF         | BG       | BH       | BI    | AM  | KK       |
|-----|-----|---------|------|----|------------|----------|----------|-------|-----|----------|
| 50  | 70  | 30 ±0,3 | 5,5  | 9  | 42,5 ±0,5  | 160 ±1   | 197 ±1   | 34,5  | 35  | M.20X2,5 |
| 63  | 80  | 30 ±0,3 | 5,5  | 11 | 50 ±0,5    | 166 ±1   | 208 ±1   | 34,5  | 45  | M.24X3   |
| 80  | 95  | 30 ±0,3 | 5,5  | 11 | 54,5 ±0,6  | 166 ±2   | 216 ±2   | 34,5  | 45  | M.27X3   |
| 100 | 116 | 50 ±0,3 | 8,5  | 14 | 70,5 ±0,6  | 204 ±2   | 256 ±2   | 44,5  | 50  | M.36X4   |
| 125 | 145 | 57 ±0,4 | 8,5  | 17 | 85,5 ±0,6  | 226 ±2   | 270 ±2   | 49,5  | 55  | M.42X4,5 |
| 160 | 182 | 70 ±0,4 | 10,5 | 17 | 102,5 ±0,6 | 235 ±2   | 294 ±2   | 64    | 75  | M.52X3   |
| 200 | 225 | 80 ±0,5 | 10,5 | 22 | 125 ±0,6   | 286 ±2   | 356 ±2   | 64    | 75  | M.52X3   |
| 250 | 275 | 115 ±1  | 14,5 | 26 | 160 ±1     | 394 ±2   | 437 ±2   | 119,5 | 100 | M.68X4   |
| 300 | 325 | 140 ±1  | 14,5 | 28 | 185 ±1     | 394 ±2,5 | 437 ±2,5 | 119,5 | 100 | M.68X4   |

| COD.      | Ø   |
|-----------|-----|
| B30.AB.05 | 50  |
| B30.AB.06 | 63  |
| B30.AB.08 | 80  |
| B30.AB.10 | 100 |
| B30.AB.12 | 125 |
| B30.AB.16 | 160 |
| B30.AB.20 | 200 |
| B30.AB.25 | 250 |
| B30.AB.30 | 300 |

## 30 and 35 Series Heavy Duty cylinders Fixing elements

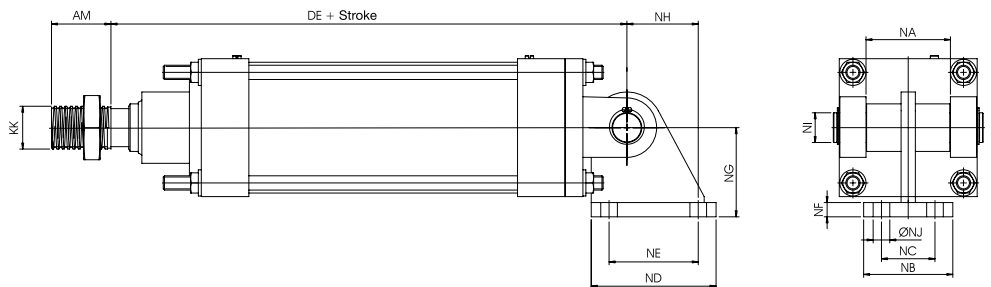
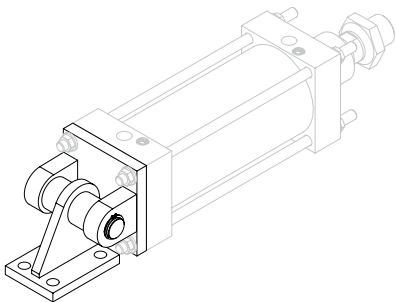
### Female Hinge



| Ø   | DA  | DB                                | DC                                | DD H9 | DE       | DF | DG | DH | AM  | KK       |
|-----|-----|-----------------------------------|-----------------------------------|-------|----------|----|----|----|-----|----------|
| 50  | 70  | 35 <sup>+0,6</sup> <sub>-0</sub>  | 65 <sup>+0,6</sup> <sub>-0</sub>  | 15    | 212 ±1,3 | 15 | 8  | 25 | 35  | M.20X2,5 |
| 63  | 80  | 45 <sup>+0,6</sup> <sub>-0</sub>  | 75 <sup>+0,6</sup> <sub>-0</sub>  | 16    | 220 ±1,5 | 18 | 8  | 25 | 45  | M.24X3   |
| 80  | 95  | 45 <sup>+0,6</sup> <sub>-0</sub>  | 85 <sup>+0,6</sup> <sub>-0</sub>  | 20    | 237 ±1,5 | 22 | 10 | 28 | 45  | M.27X3   |
| 100 | 116 | 71 <sup>+0,7</sup> <sub>-0</sub>  | 115 <sup>+0,7</sup> <sub>-0</sub> | 25    | 284 ±1,5 | 25 | 15 | 37 | 50  | M.36X4   |
| 125 | 145 | 90 <sup>+0,7</sup> <sub>-0</sub>  | 140 <sup>+0,7</sup> <sub>-0</sub> | 25    | 306 ±1,5 | 25 | 15 | 50 | 55  | M.42X4,5 |
| 160 | 182 | 100 <sup>+0,8</sup> <sub>-0</sub> | 160 <sup>+0,8</sup> <sub>-0</sub> | 30    | 334 ±1,8 | 35 | 18 | 54 | 75  | M.52X3   |
| 200 | 225 | 110 <sup>+0,8</sup> <sub>-0</sub> | 180 <sup>+0,8</sup> <sub>-0</sub> | 35    | 401 ±1,8 | 42 | 22 | 63 | 75  | M.52X3   |
| 250 | 275 | 110 <sup>+1,2</sup> <sub>-0</sub> | 190 <sup>+1,2</sup> <sub>-0</sub> | 40    | 457 ±2,5 | 48 | 28 | 72 | 100 | M.68X4   |
| 300 | 325 | 120 <sup>+1,2</sup> <sub>-0</sub> | 210 <sup>+1,2</sup> <sub>-0</sub> | 50    | 467 ±2,5 | 56 | 28 | 82 | 100 | M.68X4   |

| COD.      | Ø   |
|-----------|-----|
| G30.AD.05 | 50  |
| G30.AD.06 | 63  |
| G30.AD.08 | 80  |
| G30.AD.10 | 100 |
| G30.AD.12 | 125 |
| G30.AD.16 | 160 |
| G30.AD.20 | 200 |
| G30.AD.25 | 250 |
| G30.AD.30 | 300 |

### Rear 90° Hinge

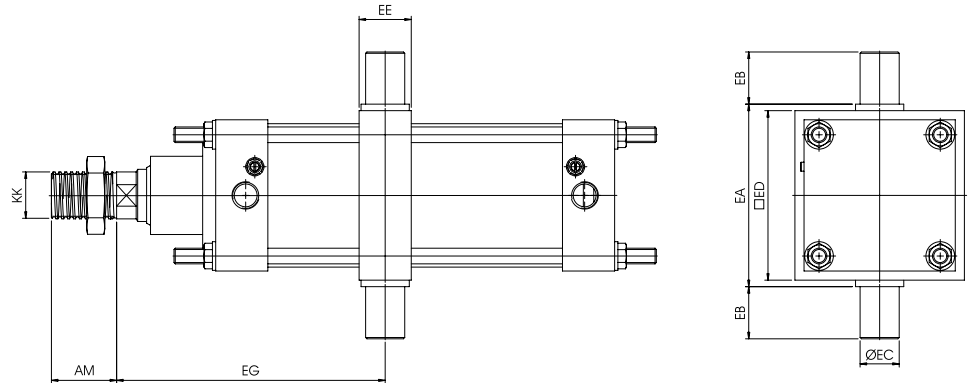
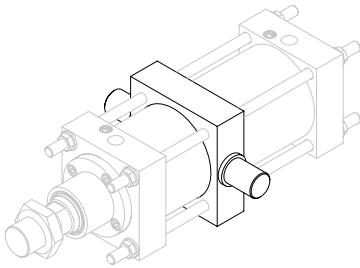


| Ø   | DE       | NA  | NB  | NC | ND  | NE  | NF | NG  | NH | NI | NJ | AM  | KK       |
|-----|----------|-----|-----|----|-----|-----|----|-----|----|----|----|-----|----------|
| 50  | 212 ±1,3 | 34  | 46  | 32 | 60  | 40  | 8  | 40  | 30 | 15 | 9  | 35  | M.20X2,5 |
| 63  | 220 ±1,5 | 43  | 55  | 37 | 70  | 50  | 8  | 50  | 40 | 17 | 11 | 45  | M.24X3   |
| 80  | 237 ±1,5 | 43  | 55  | 37 | 75  | 55  | 10 | 60  | 43 | 20 | 11 | 45  | M.27X3   |
| 100 | 284 ±1,5 | 70  | 75  | 45 | 105 | 75  | 12 | 75  | 60 | 25 | 14 | 50  | M.36X4   |
| 125 | 306 ±1,5 | 70  | 75  | 45 | 105 | 75  | 12 | 75  | 60 | 25 | 14 | 55  | M.42X4,5 |
| 160 | 334 ±1,8 | 98  | 95  | 65 | 115 | 85  | 14 | 100 | 65 | 30 | 17 | 75  | M.52X3   |
| 200 | 401 ±1,8 | 108 | 110 | 70 | 130 | 90  | 20 | 125 | 68 | 35 | 22 | 75  | M.52X3   |
| 250 | 457 ±2,5 | 108 | 120 | 76 | 140 | 90  | 20 | 150 | 65 | 40 | 25 | 100 | M.68X4   |
| 300 | 467 ±2,5 | 118 | 140 | 90 | 160 | 100 | 25 | 180 | 70 | 50 | 28 | 100 | M.68X4   |

| COD.      | Ø   |
|-----------|-----|
| B30.AN.05 | 50  |
| B30.AN.06 | 63  |
| B30.AN.08 | 80  |
| B30.AN.10 | 100 |
| B30.AN.10 | 125 |
| B30.AN.16 | 160 |
| B30.AN.20 | 200 |
| B30.AN.25 | 250 |
| B30.AN.30 | 300 |

## 30 and 35 Series Heavy Duty cylinders Fixing elements

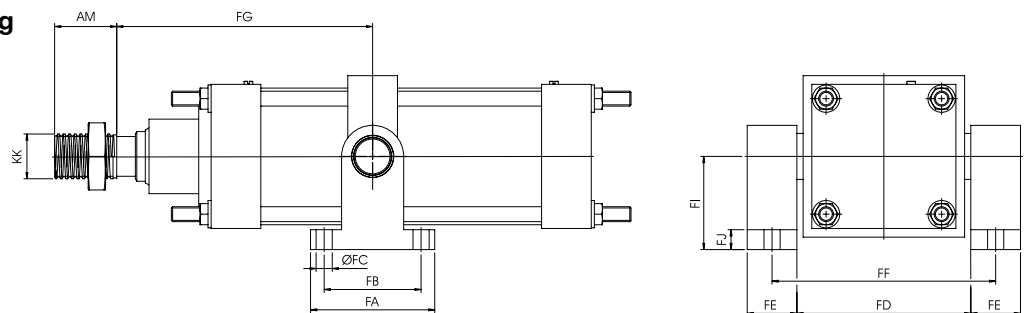
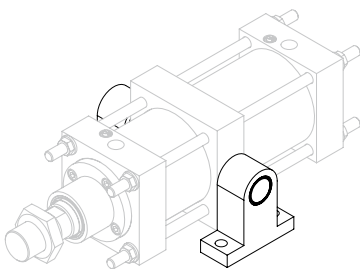
### Intermediate Hinge



| Ø   | EA                                | EB | EC               | ED  | EE | EG* | AM  | KK       | COD.      | Ø   |
|-----|-----------------------------------|----|------------------|-----|----|-----|-----|----------|-----------|-----|
| 50  | 80 <sup>+0</sup> <sub>-0.4</sub>  | 22 | 18 <sup>FB</sup> | 72  | 30 | 35  | 35  | M.20X2,5 | B30.AE.05 | 50  |
| 63  | 90 <sup>+0</sup> <sub>-0.4</sub>  | 30 | 22 <sup>FB</sup> | 82  | 30 | 45  | 45  | M.24X3   | B30.AE.06 | 63  |
| 80  | 110 <sup>+0</sup> <sub>-0.4</sub> | 35 | 25 <sup>FB</sup> | 106 | 35 | 45  | 45  | M.27X3   | B30.AE.08 | 80  |
| 100 | 140 <sup>+0</sup> <sub>-0.4</sub> | 40 | 30 <sup>FB</sup> | 130 | 40 | 50  | 50  | M.36X4   | B30.AE.10 | 100 |
| 125 | 164 <sup>+0</sup> <sub>-0.5</sub> | 50 | 35 <sup>FB</sup> | 152 | 45 | 55  | 55  | M.42X4,5 | B30.AE.12 | 125 |
| 160 | 194 <sup>+0</sup> <sub>-0.5</sub> | 50 | 40 <sup>FB</sup> | 186 | 55 | 75  | 75  | M.52X3   | B30.AE.16 | 160 |
| 200 | 250 <sup>+0</sup> <sub>-0.5</sub> | 55 | 45 <sup>FB</sup> | 242 | 55 | 75  | 75  | M.52X3   | B30.AE.20 | 200 |
| 250 | 325 <sup>+0</sup> <sub>-1.2</sub> | 70 | 50 <sup>FB</sup> | 305 | 65 | 100 | 100 | M.68X4   | B30.AE.25 | 250 |
| 300 | 375 <sup>+0</sup> <sub>-1.2</sub> | 75 | 60 <sup>FB</sup> | 360 | 75 | 100 | 100 | M.68X4   | B30.AE.30 | 300 |

\* The position of the intermediate hinge, represented by the dimension figure EG, will be given when placing the order.

### Intermediate Hinge Bearing

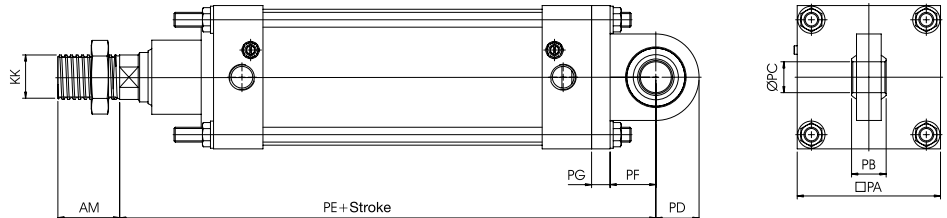
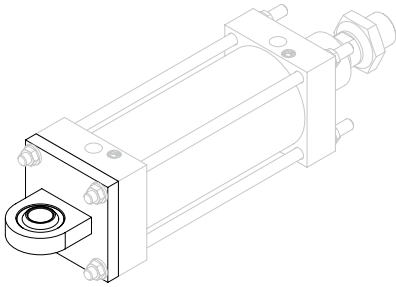


| Ø   | FA  | FB  | FC | FD                                | FE | FF  | FG* | FI | FJ  | AM  | KK       | COD.      | Ø   |
|-----|-----|-----|----|-----------------------------------|----|-----|-----|----|-----|-----|----------|-----------|-----|
| 50  | 65  | 50  | 9  | 80 <sup>+0</sup> <sub>-0.4</sub>  | 22 | 102 | 40  | 10 | 35  | 35  | M.20X2,5 | G30.AF.05 | 50  |
| 63  | 75  | 58  | 11 | 90 <sup>+0</sup> <sub>-0.4</sub>  | 30 | 120 | 50  | 10 | 45  | 45  | M.24X3   | G30.AF.06 | 63  |
| 80  | 85  | 66  | 11 | 110 <sup>+0</sup> <sub>-0.4</sub> | 35 | 145 | 60  | 12 | 45  | 45  | M.27X3   | G30.AF.08 | 80  |
| 100 | 100 | 78  | 13 | 140 <sup>+0</sup> <sub>-0.4</sub> | 40 | 180 | 75  | 16 | 50  | 50  | M.36X4   | G30.AF.10 | 100 |
| 125 | 115 | 90  | 15 | 164 <sup>+0</sup> <sub>-0.5</sub> | 50 | 214 | 84  | 18 | 55  | 55  | M.42X4,5 | G30.AF.12 | 125 |
| 160 | 135 | 105 | 17 | 194 <sup>+0</sup> <sub>-0.5</sub> | 50 | 244 | 100 | 20 | 75  | 75  | M.52X3   | G30.AF.16 | 160 |
| 200 | 160 | 120 | 21 | 250 <sup>+0</sup> <sub>-0.5</sub> | 55 | 305 | 125 | 25 | 75  | 75  | M.52X3   | G30.AF.20 | 200 |
| 250 | 175 | 130 | 25 | 325 <sup>+0</sup> <sub>-1.2</sub> | 70 | 395 | 150 | 30 | 100 | 100 | M.68X4   | G30.AF.25 | 250 |
| 300 | 200 | 155 | 28 | 375 <sup>+0</sup> <sub>-1.2</sub> | 75 | 450 | 180 | 35 | 100 | 100 | M.68X4   | G30.AF.30 | 300 |

\* The position of the bearing, represented by the dimension figure FG, will be given when placing the order.

## 30 and 35 Series Heavy Duty cylinders Fixing elements

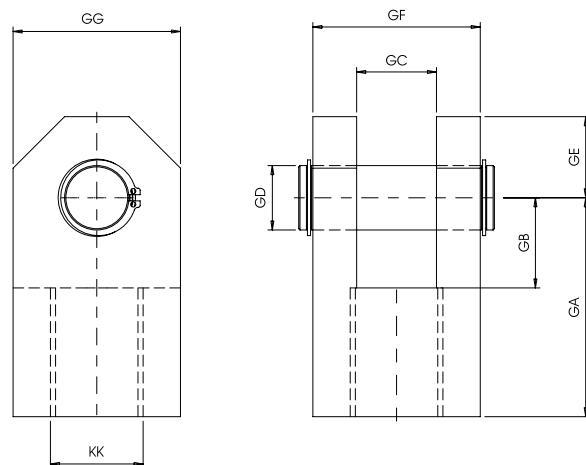
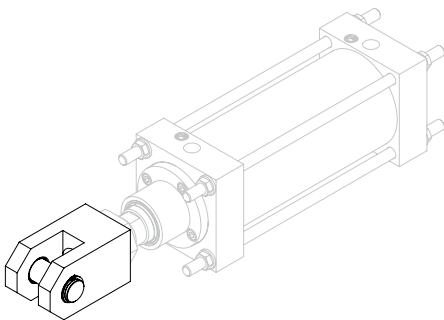
### Rear Hinge with Ball Joint



| Ø   | PA  | PB | PC | PD | PE  | PF | PG | AM  | KK       |
|-----|-----|----|----|----|-----|----|----|-----|----------|
| 50  | 70  | 16 | 15 | 20 | 212 | 25 | 8  | 35  | M.20X2,5 |
| 63  | 80  | 20 | 17 | 24 | 220 | 25 | 8  | 45  | M.24X3   |
| 80  | 95  | 25 | 20 | 28 | 237 | 28 | 10 | 45  | M.27X3   |
| 100 | 116 | 28 | 25 | 35 | 284 | 37 | 15 | 50  | M.36X4   |
| 125 | 145 | 28 | 25 | 35 | 308 | 50 | 15 | 55  | M.42X4,5 |
| 160 | 182 | 32 | 30 | 40 | 336 | 54 | 18 | 75  | M.52X3   |
| 200 | 225 | 35 | 35 | 45 | 405 | 63 | 22 | 75  | M.52X3   |
| 250 | 275 | 40 | 40 | 50 | 459 | 72 | 28 | 100 | M.68X4   |
| 300 | 325 | 56 | 50 | 65 | 469 | 82 | 28 | 100 | M.68X4   |

| COD.      | Ø   |
|-----------|-----|
| G30.AP.05 | 50  |
| G30.AP.06 | 63  |
| G30.AP.08 | 80  |
| G30.AP.10 | 100 |
| G30.AP.12 | 125 |
| G30.AP.16 | 160 |
| G30.AP.20 | 200 |
| G30.AP.25 | 250 |
| G30.AP.30 | 300 |

### Yoke with Pivot

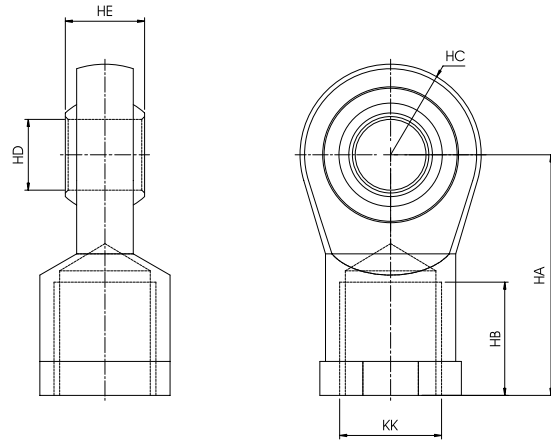
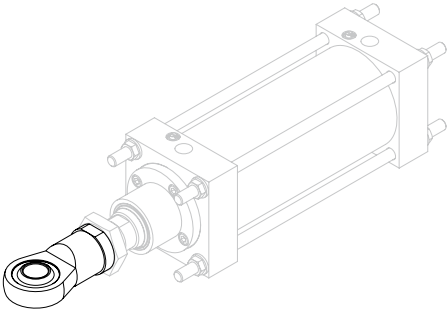


| Ø   | GA  | GB | GC | GD H9 | GE   | GF  | GG  | KK       |
|-----|-----|----|----|-------|------|-----|-----|----------|
| 50  | 55  | 20 | 16 | 15    | 19   | 35  | 35  | M.20X2,5 |
| 63  | 67  | 22 | 18 | 16    | 20   | 40  | 40  | M.24X3   |
| 80  | 70  | 25 | 20 | 20    | 25   | 50  | 50  | M.27X3   |
| 100 | 85  | 35 | 31 | 25    | 31,5 | 65  | 65  | M.36X4   |
| 125 | 90  | 40 | 33 | 25    | 36,5 | 75  | 75  | M.42X4,5 |
| 160 | 105 | 45 | 34 | 30    | 39   | 80  | 80  | M.52X3   |
| 200 | 110 | 50 | 34 | 35    | 41   | 80  | 80  | M.52X3   |
| 250 | 135 | 47 | 42 | 40    | 48   | 100 | 100 | M.68X4   |
| 300 | 145 | 57 | 46 | 50    | 53   | 110 | 110 | M.68X4   |

| COD.      | Ø   |
|-----------|-----|
| G30.AG.05 | 50  |
| G30.AG.06 | 63  |
| G30.AG.08 | 80  |
| G30.AG.10 | 100 |
| G30.AG.12 | 125 |
| G30.AG.16 | 160 |
| G30.AG.20 | 200 |
| G30.AG.25 | 250 |
| G30.AG.30 | 300 |

## 30 and 35 Series Heavy Duty cylinders Fixing elements

### Ball Joint



| Ø   | HA  | HB | HC | HD | H9 | HE       | KK |
|-----|-----|----|----|----|----|----------|----|
| 50  | 55  | 28 | 20 | 15 | 16 | M.20X2,5 |    |
| 63  | 67  | 36 | 24 | 17 | 20 | M.24X3   |    |
| 80  | 70  | 36 | 28 | 20 | 25 | M.27X3   |    |
| 100 | 85  | 40 | 32 | 25 | 28 | M.36X4   |    |
| 125 | 90  | 45 | 35 | 25 | 28 | M.42X4,5 |    |
| 160 | 105 | 56 | 40 | 30 | 32 | M.52X3   |    |
| 200 | 110 | 56 | 43 | 35 | 35 | M.52X3   |    |
| 250 | 135 | 72 | 53 | 40 | 40 | M.68X4   |    |
| 300 | 145 | 72 | 59 | 50 | 56 | M.68X4   |    |

| COD.      | Ø   |
|-----------|-----|
| G30.AH.05 | 50  |
| G30.AH.06 | 63  |
| G30.AH.08 | 80  |
| G30.AH.10 | 100 |
| G30.AH.12 | 125 |
| G30.AH.16 | 160 |
| G30.AH.20 | 200 |
| G30.AH.25 | 250 |
| G30.AH.30 | 300 |

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