



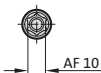
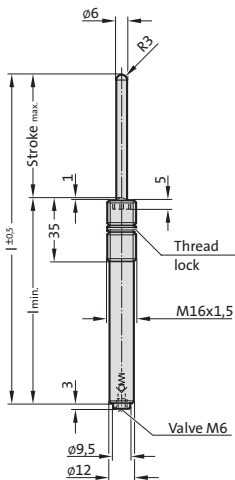
## GAS SPRINGS and SPRING PLUNGERS

- Temperature upto 120° c

# Gas spring (Spring plunger) MOULD LINE, with hexagon socket



3479.030.



## Description:

Spring plungers are used as ejectors, damper pins, fixing and retaining pins in many sectors of the tool-, jig- and fixture-making industries. Assembly requires the use of special FIBRO insertion tool (2470.12.010.017).

## Note:

Worn gas springs cannot be repaired, they have to be replaced completely.

Pressure medium: Nitrogen - N<sub>2</sub>

Max. filling pressure depends on working temperature:

150 bar (20°C) at 0°C-80°C

125 bar (20°C) at 80°C-100°C

115 bar (20°C) at 100°C-120°C

Min. filling pressure: 25 bar (20°C)

Working temperature: 0°C to +120°C

Temperature related force increase: ± 0.3%/°C

Max. recommended extensions per minute:

20 (at 0°C-80°C)

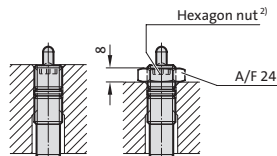
15 (at 80°C-100°C)

10 (at 100°C-120°C)

Max. piston speed: 1.0 m/s

2) Hexagon nut order supplementary:

2480.004.00040.1 (M16 x 1,5)

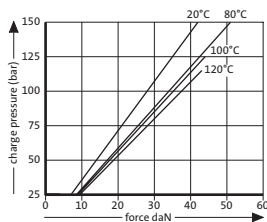


3479.030.

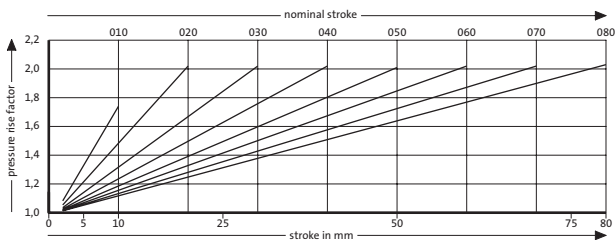
## Gas spring (Spring plunger) MOULD LINE, with hexagon socket

| Order No           | Stroke <sub>max.</sub> | l <sub>min.</sub> | l   |
|--------------------|------------------------|-------------------|-----|
| 3479.030.00040.010 | 10                     | 55                | 65  |
| 3479.030.00040.020 | 20                     | 65                | 85  |
| 3479.030.00040.030 | 30                     | 75                | 105 |
| 3479.030.00040.040 | 40                     | 85                | 125 |
| 3479.030.00040.050 | 50                     | 95                | 145 |
| 3479.030.00040.060 | 60                     | 105               | 165 |
| 3479.030.00040.070 | 70                     | 115               | 185 |
| 3479.030.00040.080 | 80                     | 125               | 205 |

Initial spring force versus charge pressure



Spring force Diagram displacement versus stroke rise



Pressure rise factor accounts for displacement but not external influences!

# Gas spring (Spring plunger) MOULD LINE, with hexagon socket

## Description:

Spring plungers are used as ejectors, damper pins, fixing and retaining pins in many sectors of the tool-, jig- and fixture-making industries. Assembly requires the use of special FIBRO insertion tool (2470.12.010.017).

## Note:

Worn gas springs cannot be repaired, they have to be replaced completely.

Pressure medium: Nitrogen - N<sub>2</sub>

Max. filling pressure depends on working temperature:

150 bar (20°C) at 0°C-80°C

125 bar (20°C) at 80°C-100°C

115 bar (20°C) at 100°C-120°C

Min. filling pressure: 25 bar (20°C)

Working temperature: 0°C to +120°C

Temperature related force increase: ± 0.3%/°C

Max. recommended extensions per minute:

20 (at 0°C-80°C)

15 (at 80°C-100°C)

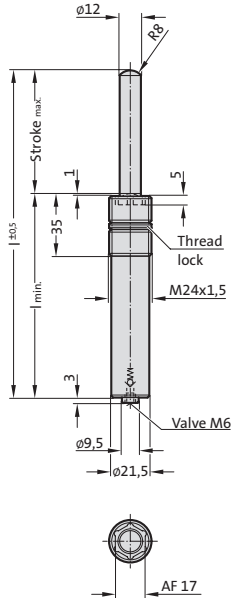
10 (at 100°C-120°C)

Max. piston speed: 1.0 m/s

2) Hexagon nut order supplementary:

2480.004.00170

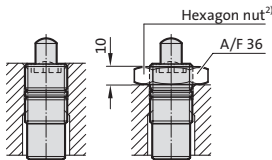
3479.032.



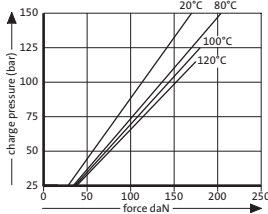
3479.032.

Gas spring (Spring plunger) MOULD LINE, with hexagon socket

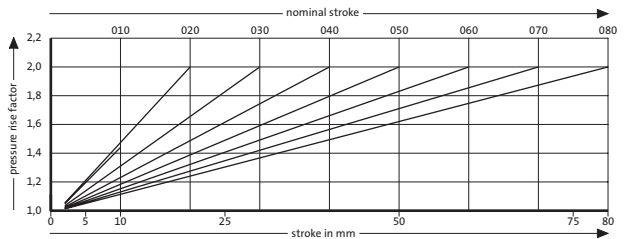
| Order No           | Stroke <sub>max.</sub> | l <sub>min.</sub> | l   |
|--------------------|------------------------|-------------------|-----|
| 3479.032.00170.010 | 10                     | 55                | 65  |
| 3479.032.00170.020 | 20                     | 65                | 85  |
| 3479.032.00170.030 | 30                     | 75                | 105 |
| 3479.032.00170.040 | 40                     | 85                | 125 |
| 3479.032.00170.050 | 50                     | 95                | 145 |
| 3479.032.00170.060 | 60                     | 105               | 165 |
| 3479.032.00170.070 | 70                     | 115               | 185 |
| 3479.032.00170.080 | 80                     | 125               | 205 |



Initial spring force versus charge pressure



Spring force Diagram displacement versus stroke rise

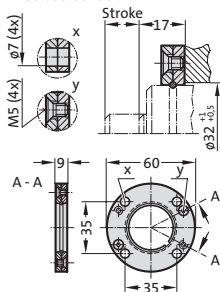


Pressure rise factor accounts for displacement but not external influences!

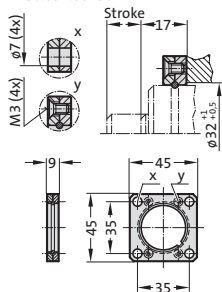
# Gas spring MOULD LINE

## Mounting variations

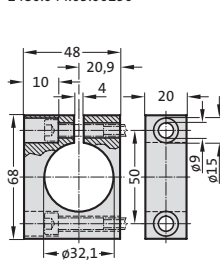
2480.055.00150



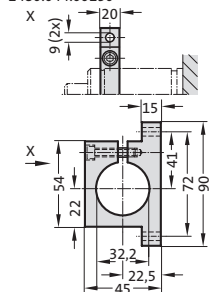
2480.057.00150



2480.044.03.00150<sup>2)</sup>



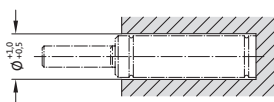
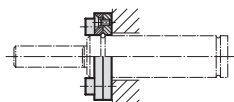
2480.044.00150<sup>2)</sup>



**Note:**

<sup>2)</sup> Caution:  
Spring force must be absorbed  
by stop surface!

**Mounting example:**



# Gas spring MOULD LINE

## Note:

Initial spring force at 150 bar/20°C is 300 daN

Order No. for spare parts kit: 3487.12.00300

Pressure medium: Nitrogen - N<sub>2</sub>

Max. filling pressure depends on working temperature:

150 bar (20°C) at 0°C-80°C

125 bar (20°C) at 80°C-100°C

115 bar (20°C) at 100°C-120°C

Min. filling pressure: 25 bar (20°C)

Working temperature: 0°C to +120°C

Temperature related force increase: ± 0.3%/°C

Max. recommended extensions per minute:

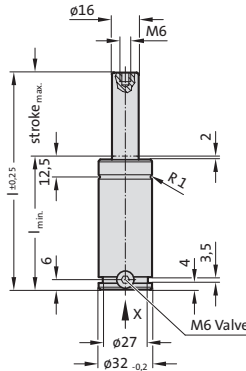
20 (at 0°C-80°C)

15 (at 80°C-100°C)

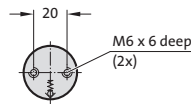
10 (at 100°C-120°C)

Max. piston speed: 1.0 m/s

3487.12.00300.



„ X ”

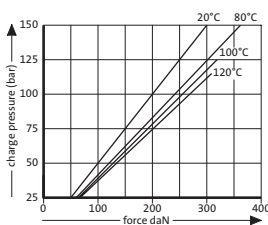


## 3487.12.00300. Gas spring MOULD LINE

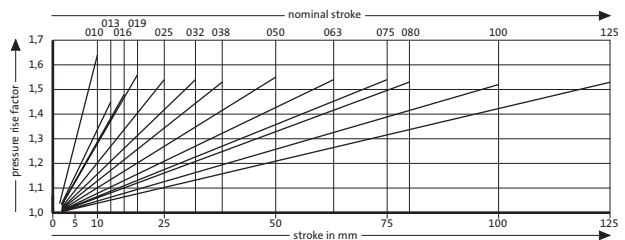
| Order No*         | Stroke <sub>max</sub> | l <sub>min</sub> | l   |
|-------------------|-----------------------|------------------|-----|
| 3487.12.00300.010 | 10                    | 40               | 50  |
| 3487.12.00300.013 | 13                    | 43               | 56  |
| 3487.12.00300.016 | 16                    | 46               | 62  |
| 3487.12.00300.019 | 19                    | 49               | 68  |
| 3487.12.00300.025 | 25                    | 55               | 80  |
| 3487.12.00300.032 | 32                    | 62               | 94  |
| 3487.12.00300.038 | 38                    | 68               | 106 |
| 3487.12.00300.050 | 50                    | 80               | 130 |
| 3487.12.00300.063 | 63                    | 93               | 156 |
| 3487.12.00300.075 | 75                    | 105              | 180 |
| 3487.12.00300.080 | 80                    | 110              | 190 |
| 3487.12.00300.100 | 100                   | 130              | 230 |
| 3487.12.00300.125 | 125                   | 155              | 280 |

\*Stroke lengths 100 and 125 only by request!

Initial spring force versus charge pressure



Spring force Diagram displacement versus stroke rise

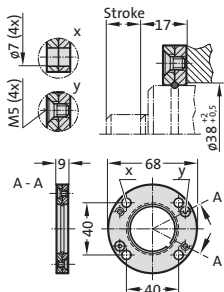


Pressure rise factor accounts for displacement but not external influences!

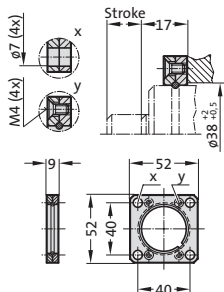
# Gas spring MOULD LINE

## Mounting variations

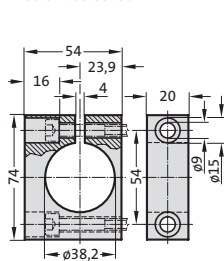
2480.055.00250



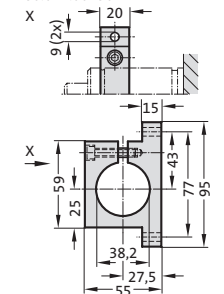
2480.057.00250



2480.044.03.00250<sup>2)</sup>



2480.044.00250<sup>2)</sup>



### Note:

<sup>2)</sup> Caution:  
Spring force must be absorbed  
by stop surface!

# Gas spring MOULD LINE

## Note:

Initial spring force at 150 bar/20°C is 500 daN

Order No. for spare parts kit: 3487.12.00500

Pressure medium: Nitrogen - N<sub>2</sub>

Max. filling pressure depends on working temperature:

150 bar (20°C) at 0°C-80°C

125 bar (20°C) at 80°C-100°C

115 bar (20°C) at 100°C-120°C

Min. filling pressure: 25 bar (20°C)

Working temperature: 0°C to +120°C

Temperature related force increase: ± 0.3%/°C

Max. recommended extensions per minute:

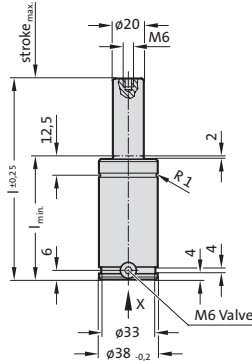
20 (at 0°C-80°C)

15 (at 80°C-100°C)

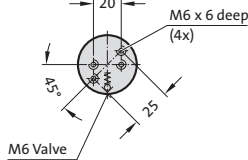
10 (at 100°C-120°C)

Max. piston speed: 1.0 m/s

3487.12.00500.



„X”

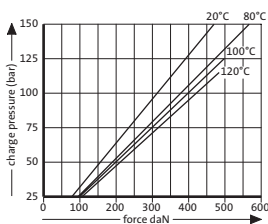


## 3487.12.00500. Gas spring MOULD LINE

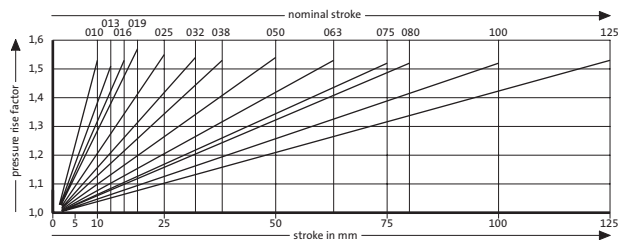
| Order No*         | Stroke <sub>max</sub> | l <sub>min</sub> | l   |
|-------------------|-----------------------|------------------|-----|
| 3487.12.00500.010 | 10                    | 40               | 50  |
| 3487.12.00500.013 | 13                    | 43               | 56  |
| 3487.12.00500.016 | 16                    | 46               | 62  |
| 3487.12.00500.019 | 19                    | 49               | 68  |
| 3487.12.00500.025 | 25                    | 55               | 80  |
| 3487.12.00500.032 | 32                    | 62               | 94  |
| 3487.12.00500.038 | 38                    | 68               | 106 |
| 3487.12.00500.050 | 50                    | 80               | 130 |
| 3487.12.00500.063 | 63                    | 93               | 156 |
| 3487.12.00500.075 | 75                    | 105              | 180 |
| 3487.12.00500.080 | 80                    | 110              | 190 |
| 3487.12.00500.100 | 100                   | 130              | 230 |
| 3487.12.00500.125 | 125                   | 155              | 280 |

\*Stroke lengths 100 and 125 only by request!

Initial spring force  
versus charge pressure



Spring force Diagram displacement versus stroke rise

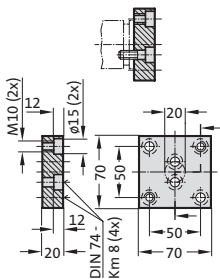


Pressure rise factor accounts for displacement but not external influences!

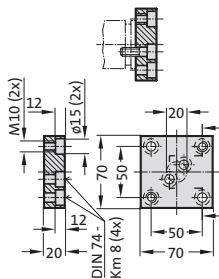
# Gas spring Mould Line

## Mounting variations

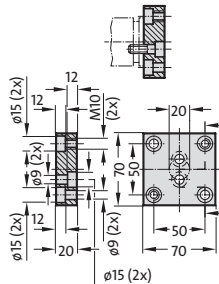
2480.011.00500



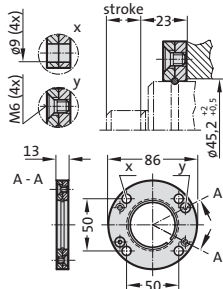
2480.011.00500.1



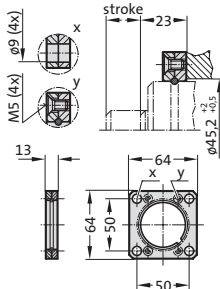
2480.011.00500.2



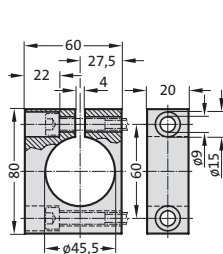
2480.055.00500



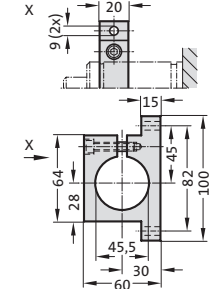
2480.057.00500



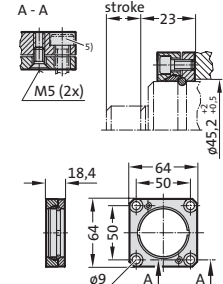
2480.044.03.00500<sup>2)</sup>



2480.044.00500<sup>2)</sup>



2480.064.00500<sup>4)</sup>



### Note:

- <sup>2)</sup> Attention:  
The spring force must be absorbed by the stop surface!
- <sup>4)</sup> Square collar flange, non-rotating, fixing for composite connection.
- <sup>5)</sup> Machine screws with hexagonal socket (compact head recommended)



# Gas spring MOULD LINE

## Note:

Initial spring force at 150 bar/20°C is 750 daN

Order No. for spare parts kit: 3487.12.00750

Pressure medium: Nitrogen - N<sub>2</sub>

Max. filling pressure depends on working temperature:

150 bar (20°C) at 0°C-80°C

125 bar (20°C) at 80°C-100°C

115 bar (20°C) at 100°C-120°C

Min. filling pressure: 25 bar (20°C)

Working temperature: 0°C to +120°C

Temperature related force increase: ± 0.3%/°C

Max. recommended extensions per minute:

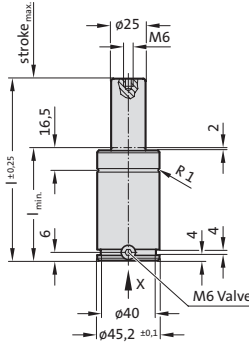
20 (at 0°C-80°C)

15 (at 80°C-100°C)

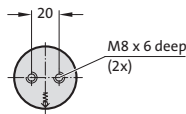
10 (at 100°C-120°C)

Max. piston speed: 1.0 m/s

3487.12.00750.



„ X ”

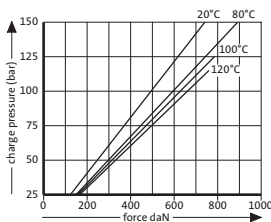


## 3487.12.00750. Gas spring MOULD LINE

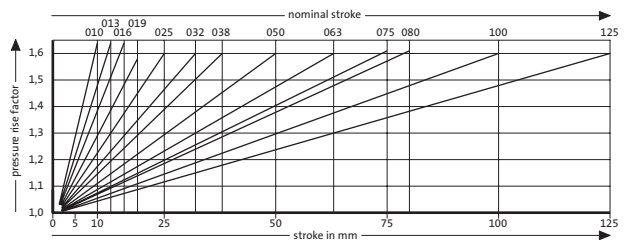
| Order No*         | Stroke <sub>max</sub> | l <sub>min</sub> | l   |
|-------------------|-----------------------|------------------|-----|
| 3487.12.00750.010 | 10                    | 42               | 52  |
| 3487.12.00750.013 | 13                    | 45               | 58  |
| 3487.12.00750.016 | 16                    | 48               | 64  |
| 3487.12.00750.019 | 19                    | 51               | 70  |
| 3487.12.00750.025 | 25                    | 57               | 82  |
| 3487.12.00750.032 | 32                    | 64               | 96  |
| 3487.12.00750.038 | 38                    | 70               | 108 |
| 3487.12.00750.050 | 50                    | 82               | 132 |
| 3487.12.00750.063 | 63                    | 95               | 158 |
| 3487.12.00750.075 | 75                    | 107              | 182 |
| 3487.12.00750.080 | 80                    | 112              | 192 |
| 3487.12.00750.100 | 100                   | 132              | 232 |
| 3487.12.00750.125 | 125                   | 157              | 282 |

\*Stroke lengths 100 and 125 only by request!

Initial spring force  
versus charge pressure



Spring force Diagram displacement versus stroke rise

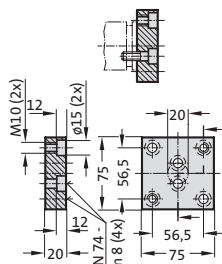


Pressure rise factor accounts for displacement but not external influences!

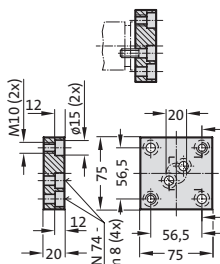
# Gas spring Mould Line

## Mounting variations

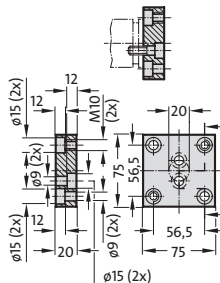
2480.011.00750



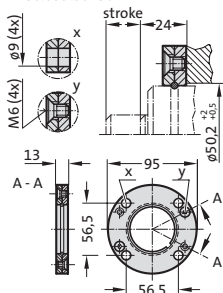
2480.011.00750.1



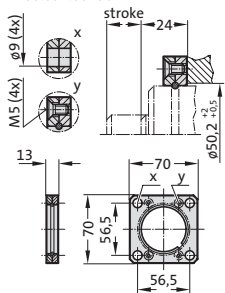
2480.011.00750.3



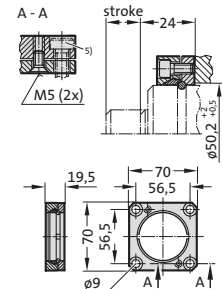
2480.055.00750



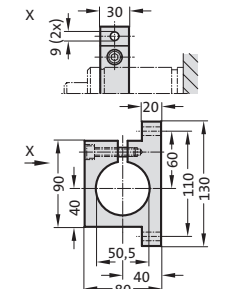
2480.057.00750



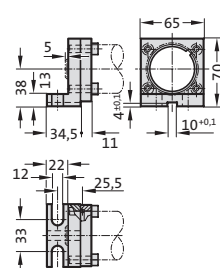
2480.064.00750<sup>4)</sup>



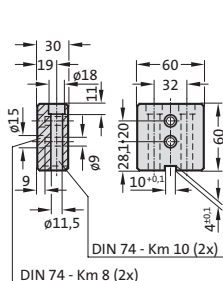
2480.044.00750<sup>2)</sup>



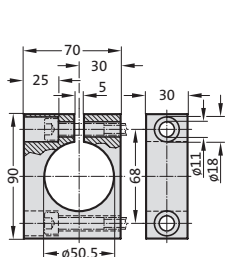
2480.045.00750<sup>2)</sup>



2480.047.00750<sup>2)</sup>



2480.044.03.00750<sup>2)</sup>



### Note:

- <sup>2)</sup> Attention:  
The spring force must be absorbed by the stop surface!
- <sup>4)</sup> Square collar flange, non-rotating, fixing for composite connection.
- <sup>5)</sup> Machine screws with hexagonal socket (compact head recommended)

# Gas spring MOULD LINE

## Note:

Initial spring force at 150 bar/20°C is 1000 daN

Order No. for spare parts kit: 3487.12.01000

Pressure medium: Nitrogen - N<sub>2</sub>

Max. filling pressure depends on working temperature:

150 bar (20°C) at 0°C-80°C  
 125 bar (20°C) at 80°C-100°C  
 115 bar (20°C) at 100°C-120°C

Min. filling pressure: 25 bar (20°C)

Working temperature: 0°C to +120°C

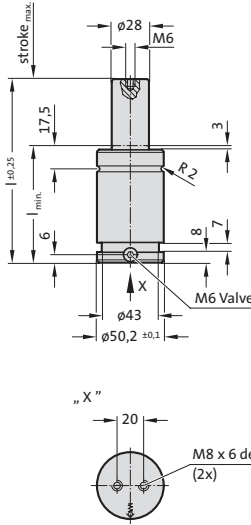
Temperature related force increase: ± 0.3%/°C

Max. recommended extensions per minute:

20 (at 0°C-80°C)  
 15 (at 80°C-100°C)  
 10 (at 100°C-120°C)

Max. piston speed: 1.0 m/s

3487.12.01000.

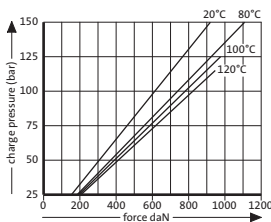


## 3487.12.01000. Gas spring MOULD LINE

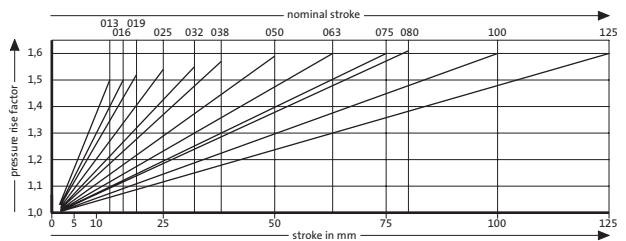
| Order No*         | Stroke <sub>max</sub> | l <sub>min</sub> | l   |
|-------------------|-----------------------|------------------|-----|
| 3487.12.01000.013 | 13                    | 51               | 64  |
| 3487.12.01000.016 | 16                    | 54               | 70  |
| 3487.12.01000.019 | 19                    | 57               | 76  |
| 3487.12.01000.025 | 25                    | 63               | 88  |
| 3487.12.01000.032 | 32                    | 70               | 102 |
| 3487.12.01000.038 | 38                    | 76               | 114 |
| 3487.12.01000.050 | 50                    | 88               | 138 |
| 3487.12.01000.063 | 63                    | 101              | 164 |
| 3487.12.01000.075 | 75                    | 113              | 188 |
| 3487.12.01000.080 | 80                    | 118              | 198 |
| 3487.12.01000.100 | 100                   | 138              | 238 |
| 3487.12.01000.125 | 125                   | 163              | 288 |

\*Stroke lengths 100 and 125 only by request!

Initial spring force versus charge pressure



Spring force Diagram displacement versus stroke rise



Pressure rise factor accounts for displacement but not external influences!