

# NUMATICS®

## 50 Series

High Flow FRL Series



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**50 Series**

|                            |     |
|----------------------------|-----|
| Features and Benefits      | 3   |
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| Regulator                  | 5   |
| Pilot Operated Regulator   | 6-7 |
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### 50 Series

#### High Flow FRL Series

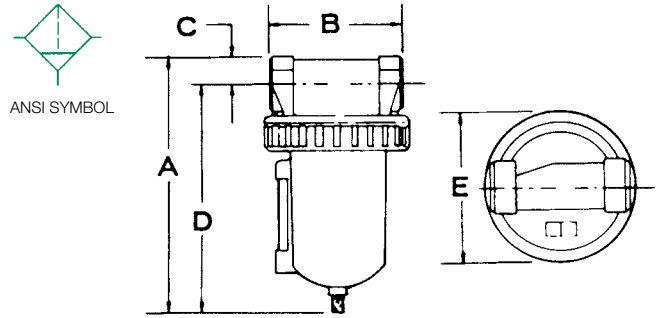
- High Flow
- High Pressure
- 1/4 to 1 1/2 NPTF & G Port Sizes - Regulators
- 1/4 to 2 1/2 NPTF & G Port Sizes - Pilot Regulators
- 3/4 to 1 1/2 NPTF & G Port Sizes - Filters and Lubricators
- T-Handle Adjustment Regulator
- Rugged Design
- Metal Bowls with Sight Glass
- FRL Assemblies Available

**F50B Series**

- Metal bowl with sight glass standard
- Manual or automatic drain

**Specifications**

|                              |               |
|------------------------------|---------------|
| Temperature Range °F (°C)    | 40-150 (4-65) |
| Max. Pressure PSIG (BAR)     | 250 (17.2)    |
| 3/4 & 1 Weight, lbs. (kg.)   | 6.3 (2.9)     |
| 1 & 1 1/2 Weight, lbs. (kg.) | 7.0 (3.2)     |



**Dimensions: Inches (mm)**

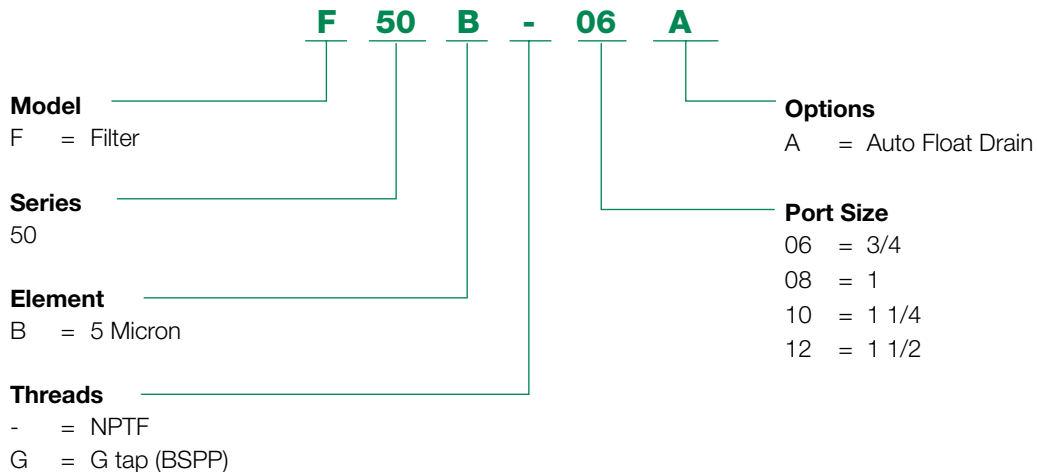
| Size    | A               | B               | C              | D               | E               |
|---------|-----------------|-----------------|----------------|-----------------|-----------------|
| 3/4 & 1 | 8.81<br>(224.0) | 4.56<br>(116.0) | 1.94<br>(24.0) | 7.88<br>(200.0) | 4.97<br>(126.0) |
| 1 1/4   | 9.53<br>(242.0) | 5.19<br>(132.0) | 1.28<br>(33.0) | 8.25<br>(210.0) | 4.97<br>(126.0) |
| 1 1/2   | 9.53<br>(242.0) | 5.19<br>(132.0) | 1.28<br>(33.0) | 8.25<br>(210.0) | 4.97<br>(126.0) |

**Flow Ratings**

| Model   | Micron Rating | Pipe Size | Bowl Size | SCFM |
|---------|---------------|-----------|-----------|------|
| F50B-06 | 5             | 3/4       | 16 oz.    | 186  |
| F50B-08 | 5             | 1         | 16 oz.    | 260  |
| F50B-10 | 5             | 1 1/4     | 16 oz.    | 275  |
| F50B-12 | 5             | 1 1/2     | 16 oz.    | 275  |

\* Flow rates based on 100 PSIG inlet and a 5 PSID.

**How To Order**



NEED MORE PARTS AND INFORMATION?

- See page 10 for information on ordering replacement parts.

## R50 Series

- Diaphragm-operated regulator
- T-handle standard
- Standard output pressure 0-125 PSIG

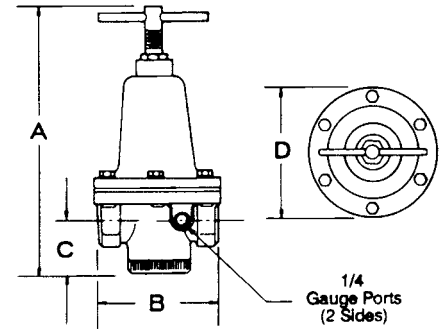
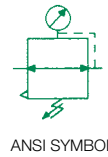
## Specifications

|                              |                 |
|------------------------------|-----------------|
| Temperature Range °F (°C)    | 40-120 (4-46.9) |
| Max. Pressure PSIG (BAR)     | 300 (20.7)      |
| 1/4 & 3/8 Weight, lbs. (kg.) | 1.8 (0.81)      |
| 1/2 Weight, lbs. (kg.)       | 2.8 (1.27)      |
| 3/4 & 1 Weight, lbs. (kg.)   | 6.2 (2.8)       |
| 1 & 1 1/2 Weight, lbs. (kg.) | 7.2 (3.3)       |

## Flow Ratings

| Model   | Pipe Size | SCFM* @ Reduced Pressure of |         |         |
|---------|-----------|-----------------------------|---------|---------|
|         |           | 25 PSIG                     | 60 PSIG | 80 PSIG |
| R50R-02 | 1/4       | 60                          | 80      | 90      |
| R50R-03 | 3/8       | 70                          | 90      | 100     |
| R50R-04 | 1/2       | 160                         | 180     | 200     |
| R50R-06 | 3/4       | 370                         | 385     | 395     |
| R50R-08 | 1         | 370                         | 385     | 395     |
| R50R-10 | 1 1/4     | 370                         | 385     | 395     |
| R50R-12 | 1 1/2     | 370                         | 385     | 395     |

\* Flow rates based on 100 PSIG inlet and 25% PSID.



## Dimensions: Inches (mm)

| Size      | A               | B               | C              | D               |
|-----------|-----------------|-----------------|----------------|-----------------|
| 1/4 & 3/8 | 6.19<br>(157.0) | 2.75<br>(70.0)  | 1.38<br>(35.0) | 3.0<br>(76.0)   |
| 1/2       | 6.75<br>(171.0) | 3.75<br>(83.0)  | 1.47<br>(37.0) | 3.56<br>(90.0)  |
| 3/4 & 1   | 8.81<br>(224.0) | 4.56<br>(116.0) | 1.94<br>(24.0) | 7.88<br>(200.0) |
| 1 1/4     | 9.53<br>(242.0) | 5.19<br>(132.0) | 1.28<br>(33.0) | 8.25<br>(210.0) |
| 1 1/2     | 9.53<br>(242.0) | 5.19<br>(132.0) | 1.28<br>(33.0) | 8.25<br>(210.0) |

## How To Order

**R 50 R - 04 G**

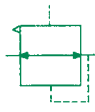
|  |  |
|--|--|
| <p><b>Model</b></p> <p>R = Regulator</p> <p><b>Series</b></p> <p>50</p> <p><b>Style</b></p> <p>R = Relieving (standard)</p> <p>N = Non-Relieving</p> <p><b>Threads</b></p> <p>- = NPTF</p> <p>G = G tap (BSPP)</p> | <p><b>Options</b></p> <p>G = Gauge</p> <p>H = 0-250 Regulator Output</p> <p><b>Port Size</b></p> <p>02 = 1/4</p> <p>03 = 3/8</p> <p>04 = 1/2</p> <p>06 = 3/4</p> <p>08 = 1</p> <p>10 = 1 1/4</p> <p>12 = 1 1/2</p> |
|--|--|

NEED MORE PARTS AND INFORMATION?

- See page 10 for information on ordering replacement parts.

## R50W Series

- High flow
- Reduced pressure within 5-7 PSIG of pilot pressure
- Relieving or non-relieving models



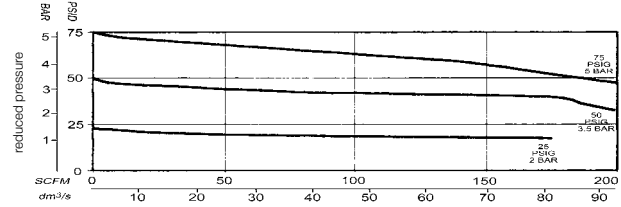
ANSI SYMBOL

## Specifications

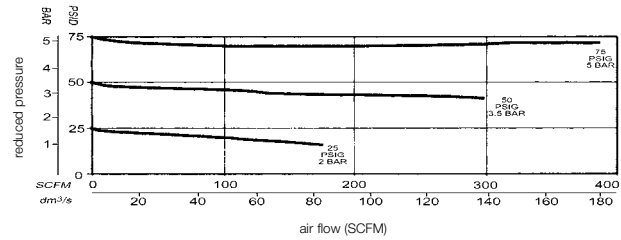
|                                 |               |
|---------------------------------|---------------|
| Temperature Range °F (°C)       | 40-120 (4-50) |
| Min. Pilot Pressure PSIG (BAR)  | 7 (0.5)       |
| Max. Pilot Pressure PSIG (BAR)  | 300 (20)      |
| Max. Supply Pressure PSIG (BAR) | 300 (20)      |
| 1/4 & 3/8 Weight, lbs. (kg.)    | 1.6 (0.72)    |
| 1/2 Weight, lbs. (kg.)          | 2.6 (1.1)     |
| 3/4 & 1 Weight, lbs. (kg.)      | 5.2 (2.4)     |
| 1 & 1 1/2 Weight, lbs. (kg.)    | 5.6 (2.5)     |
| 2 & 2 1/2 Weight, lbs. (kg.)    | 15 (6.8)      |

## Flow Rates (all flows based on 100 PSI inlet)

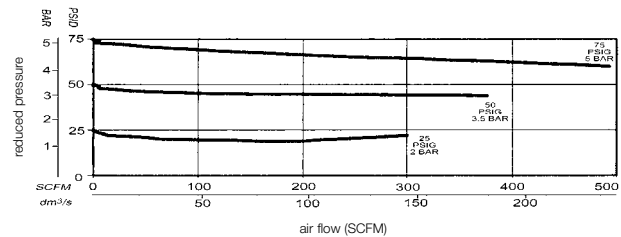
50 Series Pilot Operated Regulator (02, 03, 04)



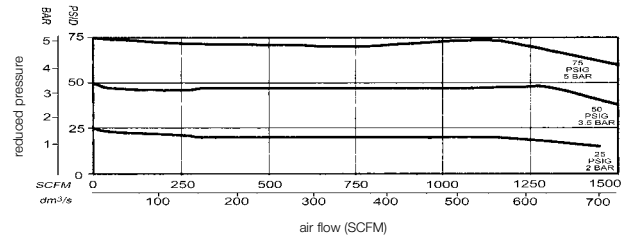
50 Series Pilot Operated Regulator (06, 08)



50 Series Pilot Operated Regulator (10, 12)



50 Series Pilot Operated Regulator (16, 20)



## How To Order

**R 50 W - 04 G**

**Model** \_\_\_\_\_  
R = Regulator

**Series** \_\_\_\_\_  
50

**Style** \_\_\_\_\_  
W = All Pilot Operated Regulators

**Threads** \_\_\_\_\_  
- = NPTF  
G = G tap (BSPP)

**Options**  
G = Gauge (0-160 PSIG)  
N = Non-Relieving (not available in 2 or 2 1/2 models)

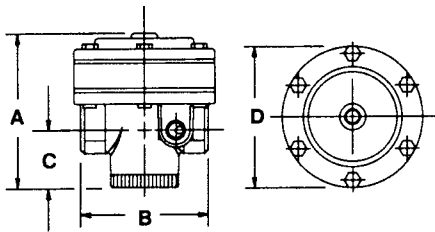
**Port Size**  
02 = 1/4  
03 = 3/8  
04 = 1/2  
06 = 3/4  
08 = 1  
10 = 1 1/4  
12 = 1 1/2  
16 = 2  
20 = 2 1/2

NEED MORE PARTS AND INFORMATION?

- See page 10 for information on ordering replacement parts.

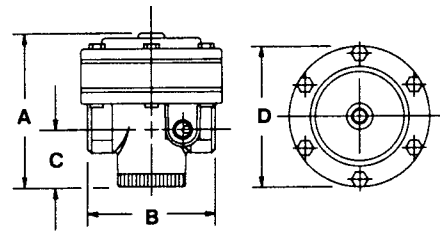
### Dimensions: Inches (mm)

50 Series Pilot Operated Regulator (02, 03, 04)



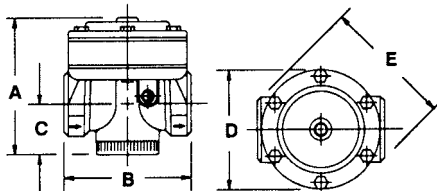
| Size      | A              | B              | C              | D              |
|-----------|----------------|----------------|----------------|----------------|
| 1/4 & 3/8 | 3.38<br>(86.0) | 2.75<br>(70.0) | 1.38<br>(35.0) | 3.0<br>(76.0)  |
| 1/2       | 3.88<br>(98.0) | 3.25<br>(83.0) | 1.47<br>(37.0) | 3.56<br>(90.0) |

50 Series Pilot Operated Regulator (06, 08)



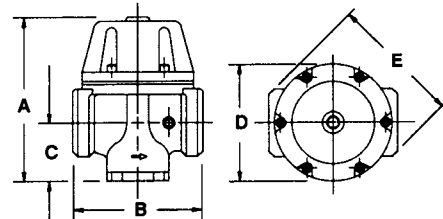
| Size    | A               | B               | C              | D               |
|---------|-----------------|-----------------|----------------|-----------------|
| 3/4 & 1 | 4.84<br>(123.0) | 4.44<br>(113.0) | 1.93<br>(49.0) | 4.68<br>(119.0) |

50 Series Pilot Operated Regulator (10, 12)



| Size          | A               | B               | C              | D               | E               |
|---------------|-----------------|-----------------|----------------|-----------------|-----------------|
| 1 1/4 & 1 1/2 | 5.20<br>(132.0) | 4.93<br>(125.0) | 1.88<br>(48.0) | 4.68<br>(119.0) | 5.55<br>(141.0) |

50 Series Pilot Operated Regulator (16, 20)



| Size      | A               | B               | C              | D               | E              |
|-----------|-----------------|-----------------|----------------|-----------------|----------------|
| 2 & 2 1/2 | 8.88<br>(225.0) | 7.31<br>(186.0) | 3.09<br>(78.0) | 6.63<br>(168.0) | 8.0<br>(203.0) |

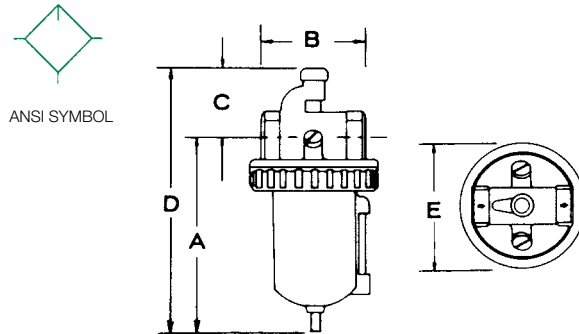
\*Pilot ports for all models are 1/4.

**L50 Series**

- High flow
- Numerical adjustment

**Specifications**

|                              | <b>Std. (Lub.)</b> | <b>with "J" Option</b> |
|------------------------------|--------------------|------------------------|
| Temperature Range °F (°C)    | 40-150 (4-65)      | 40-120 (4-50)          |
| Max. Pressure PSIG (BAR)     | 250 (17.2)         | 150 (10.3)             |
| 3/4 & 1 Weight, lbs. (kg.)   | 4.2 (1.9)          | 7.2 (3.3)              |
| 1 & 1 1/2 Weight, lbs. (kg.) | 7.5 (3.4)          | 10 (4.5)               |



**Dimensions: Inches (mm)**

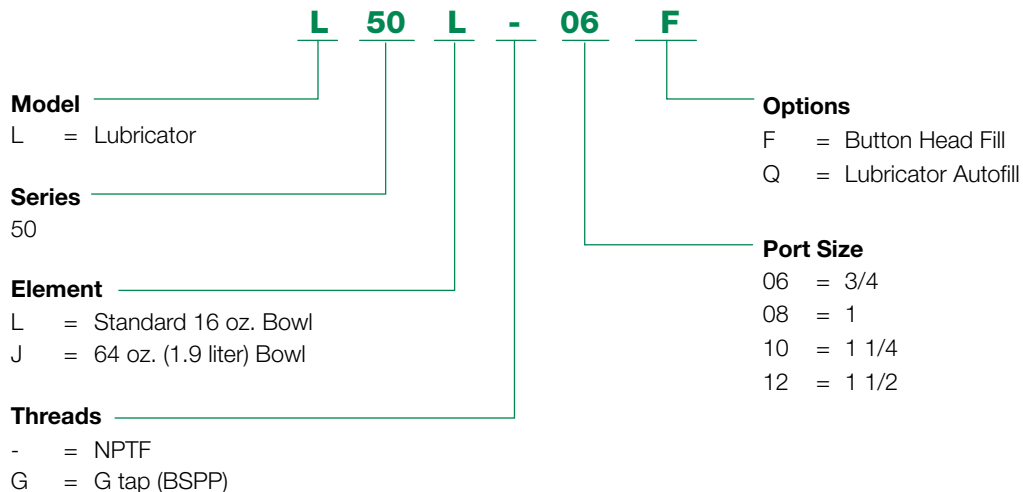
| Size    | A              | B             | C            | D             | E             |
|---------|----------------|---------------|--------------|---------------|---------------|
| 3/4 & 1 | 9.88<br>(251)  | 4.06<br>(103) | 2.63<br>(67) | 7.25<br>(184) | 4.97<br>(126) |
| 1 1/4   | 10.47<br>(266) | 4.81<br>(122) | 2.84<br>(72) | 7.63<br>(194) | 4.97<br>(126) |
| 1 1/2   | 10.47<br>(266) | 4.81<br>(122) | 2.84<br>(72) | 7.63<br>(194) | 4.97<br>(126) |

**Flow Ratings**

| Model   | Pipe Size | Bowl Size | SCFM |
|---------|-----------|-----------|------|
| L50L-06 | 3/4       | 16 oz.    | 300  |
| L50L-08 | 1         | 16 oz.    | 325  |
| L50L-10 | 1 1/4     | 16 oz.    | 500  |
| L50L-12 | 1 1/2     | 16 oz.    | 570  |

\* Flow rates based on 100 PSIG inlet and a 5 PSID.

**How To Order**



NEED MORE PARTS AND INFORMATION?

- See page 10 for information on ordering replacement parts.



### 50 Series Combinations – N50 Series

Filter/Regulator/Lubricator



| Model Number | Pipe Size NPTF | SCFM | Filter  | Regulator | Lubricator |
|--------------|----------------|------|---------|-----------|------------|
| N50-06FRL    | 3/4            | 186  | F50B-06 | R50R-06   | L50L-06    |
| N50-08FRL    | 1              | 260  | F50B-08 | R50R-08   | L50L-08    |
| N50-10FRL    | 1 1/4          | 275  | F50B-10 | R50R-10   | L50L-10    |
| N50-12FRL    | 1 1/2          | 275  | F50B-12 | R50R-12   | L50L-12    |

Filter/Lubricator



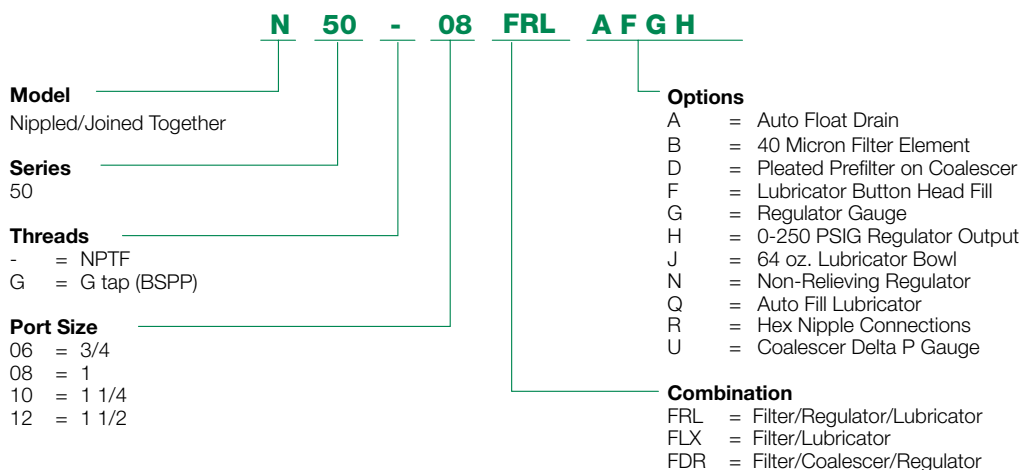
| Model Number | Pipe Size NPTF | SCFM | Filter  | Lubricator |
|--------------|----------------|------|---------|------------|
| N50-06FLX    | 3/4            | 185  | F50B-06 | L50L-06    |
| N50-08FLX    | 1              | 260  | F50B-08 | L50L-08    |
| N50-10FLX    | 1 1/4          | 275  | F50B-10 | L50L-10    |
| N50-12FLX    | 1 1/2          | 275  | F50B-12 | L50L-12    |

Filter/Coalescer/Regulator



| Model Number | Pipe Size NPTF | SCFM | Filter  | Coalescer | Regulator |
|--------------|----------------|------|---------|-----------|-----------|
| N50-06FDR    | 3/4            | 80   | F50B-06 | F901D-06  | R50R-06   |
| N50-08FDR    | 1              | 100  | F50B-08 | F901D-08  | R50R-08   |
| N50-10FDR    | 1 1/4          | 220  | F50B-10 | F901D-10  | R50R-10   |
| N50-12FDR    | 1 1/2          | 250  | F50B-12 | F901D-12  | R50R-12   |

### How To Order



NEED MORE PARTS AND INFORMATION?

- See page 10 for information on ordering replacement parts.

**50 Series High Flow Filter**

| <b>Element Replacement Kits</b>     |   |
|-------------------------------------|---|
| <b>includes filter element only</b> |   |
| <b>Kit #</b>                        | <b>Description</b>                        |
| <b>12 Series</b>                    |   |
| EKF50A-02                           | 50 Series, 40 micron element, 1/4"-3/8"   |
| EKF50B-03                           | 50 Series, 5 micron element, 1/4"-3/8"    |
| EKF48A                              | 50 Series, 40 micron element, 1/2"        |
| EKF48B                              | 50 Series, 5 micron element, 1/2"         |
| EKF50A                              | 50 Series, 40 micron element, 3/4"-1-1/2" |
| EKF50B                              | 50 Series, 5 micron element, 3/4"-1-1/2"  |

| <b>Filter Repair Kits</b>  |                              |
|--|------------------------------|
| <b>includes Turbo-Flo, element retainer, quiet zone baffle, deflector retainer</b> |                              |
| <b>Kit #</b>   | <b>Description</b>           |
| RKF50  | 50 Series, filter repair kit |

| <b>Bowl Replacement Kits</b>               |                                    |
|--|------------------------------------|
| <b>includes bowl, o-ring, locking ring</b> |                                    |
| <b>Kit #</b>                               | <b>Description</b>                 |
| BKF50A                                     | 50 Series, 02,03,04 Series bowl    |
| BKF50B                                     | 50 Series, 06,08,10,12 Series bowl |

| <b>Sight Glass Repair Kit</b>      |                                   |
|------------------------------------|-----------------------------------|
| <b>includes tube and 2 o-rings</b> |                                   |
| <b>Kit #</b>                       | <b>Description</b>                |
| SKFL50                             | 50 Series, sight glass repair kit |

**50 Series High Flow Regulator**

| <b>Regulator Repair Kits</b>              |  |
|---|--|
| <b>Includes diaphragm and inner valve</b> |  |
| <b>Kit #</b>                              | <b>Description</b>   |
| RKR48RA                                   | for R50R-02, (relieving) or for R50R-03, (relieving)         |
| RKR48RB                                   | for R50R-04, (relieving)                                     |
| RKR50RA                                   | for R50R-06, (relieving) or for R50R-08, (relieving)         |
| RKR50RB                                   | for R50R-10, (relieving) or for R50R-12, (relieving)         |
| RKR48NA                                   | for R50N-02, (non-relieving) or for R50N-03, (non-relieving) |
| RKR48NB                                   | for R50N-04, (non-relieving)                                 |
| RKR50NA                                   | for R50N-06, (non-relieving) or for R50N-08, (non-relieving) |
| RKR50NB                                   | for R50N-10, (non-relieving) or for R50N-12, (non-relieving) |

**50 Series High Flow Pilot Operated Regulator**

| <b>Diaphragm Repair Kits</b>                                  |  |
|---|--|
| <b>includes upper diaphragm, lower diaphragm, inner valve</b> |  |
| <b>Kit #</b>  | <b>Description</b>   |
| RKW50RA   | for R50W-02, (relieving) or for R50W-03, (relieving)           |
| RKW50RB   | for R50W-04, (relieving)                                       |
| RKW50RC   | for R50W-06, (relieving) or for R50W-08, (relieving)           |
| RKW50RD   | for R50W-10, (relieving) or for R50W-12, (relieving)           |
| RKW50RE   | for R50W-16, (relieving) or for R50W-20, (relieving)           |
| RKW50NA   | for R50W-02N, (non-relieving) or for R50W-03N, (non-relieving) |
| RKW50NB   | for R50W-04N, (non-relieving)                                  |
| RKW50NC   | for R50W-06N, (non-relieving) or for R50W-08N, (non-relieving) |
| RKW50ND   | for R50W-10N, (non-relieving) or for R50W-12N, (non-relieving) |
| RKW50NE   | for R50W-16N, (non-relieving) or for R50W-20N, (non-relieving) |

**50 Series High Flow Lubricator**

| <b>Lubricator Repair Kits</b>                                   |                                  |
|---|----------------------------------|
| <b>includes needle adjustment ass'y, o-ring, adjustment cap</b> |                                  |
| <b>Kit #</b>  | <b>Description</b>               |
| RKL50   | 50 Series, lubricator repair kit |

| <b>Bowl Replacement Kits</b>               |                                    |
|--|------------------------------------|
| <b>includes bowl, o-ring, locking ring</b> |                                    |
| <b>Kit #</b>                               | <b>Description</b>                 |
| BKL50A                                     | 50 Series, 02,03,04 Series bowl    |
| BKL50B                                     | 50 Series, 06,08,10,12 Series bowl |

| <b>Sight Glass Repair Kit</b>      |                                   |
|------------------------------------|-----------------------------------|
| <b>includes tube and 2 o-rings</b> |                                   |
| <b>Kit #</b>                       | <b>Description</b>                |
| SKFL50                             | 50 Series, sight glass repair kit |

| <b>Replacement Adjustment Knob Kits</b> |                            |
|---|----------------------------|
| <b>includes adjustment knob only</b>    |                            |
| <b>Kit #</b>                            | <b>Description</b>         |
| LP50                                    | 50 Series, adjustment knob |



World Class Supplier of Pneumatic Components



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