



## Valve Actuators

**MAXIMATOR** air operated valve actuators are piston type design, and are mounted on a manual valve to provide remote control capability. There are two styles of air actuators available, and selection is based on the valve size, system pressure, and air pressure available.

### Valve Actuator features:

- ▶ Piston style valve actuator design offers dependable operation and longer actuator cycle life.
- ▶ Yoke style design offers separation from process fluids and actuator air pressure. This design also indicates stem position and allows for easy stem replacement.
- ▶ Actuators are mounted on manual valve bodies to provide remote control capabilities in process applications.
- ▶ Two different size actuators are available to cover varying plant air supplies.
- ▶ Actuators are made of anodized aluminum, which provides good corrosion resistance.
- ▶ Actuators are available in normally open or normally closed configuration.

**MAXPRO** offers a complete line of high pressure valves, fittings and tubing to compliment the valve actuator line.

**Note:** When selecting multiple items, the pressure rating would be that of the lowest rated component.

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**MAXIMATOR® US**  
MAXPRO Technologies

# Air Valve Actuators

## Air to Open, Normally Closed

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### Order Information

Select the basic manual valve from the appropriate pressure section, then add the actuator suffix number to the end of the manual valve catalog number.

Example: 21V4M071-**YMNC**, medium duty actuator, normally closed. This valve can be operated at 22,500 psi with an air supply of 100 psi to the valve actuator.

### Technical Information

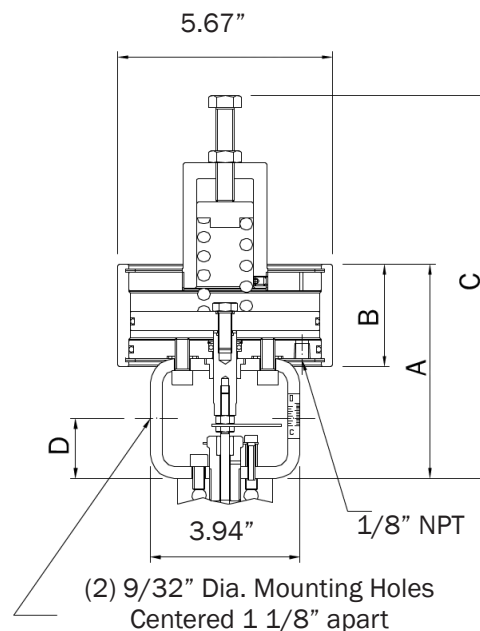
Max working pressure for actuator See table below for specific valve type

Max operating temperature for actuator -20°F to +200°F

Actuator material Anodized Aluminum

Air connection size: 1/8" NPT

| Actuator Type | Valve Size          | Ordering Suffix | Piston Area           | A     | B     | C      | D     |
|---------------|---------------------|-----------------|-----------------------|-------|-------|--------|-------|
| Medium Duty   | 1/4" - 3/8" - 9/16" | -YMNC           | 19.6 in. <sup>3</sup> | 5.64" | 2.69" | 10.09" | 1.57" |
| Heavy Duty    | 1/4" - 3/8" - 9/16" | -YHNC           | 39.2 in. <sup>3</sup> | 7.62" | 4.72" | 12.59" | 1.57" |
| Heavy Duty    | 3/4" - 1"           | -YHNC           | 39.2 in. <sup>3</sup> | 8.41" | 4.72" | 13.27" | 2.47" |

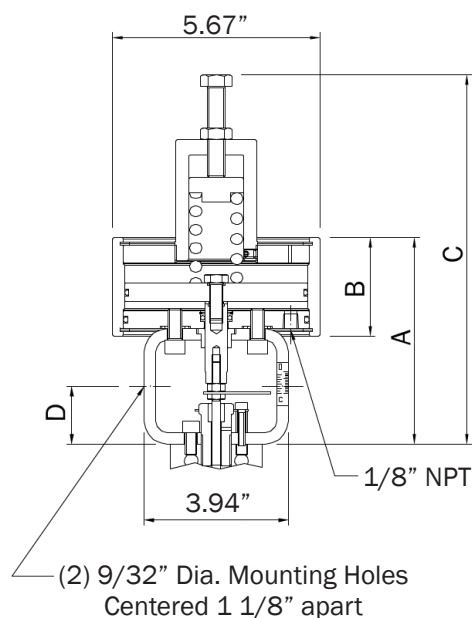


| Valve Series         | Air Actuator |                 |                        | Air Pressure Required to Open Valve At: System Pressure (ksi) |      |      |      |      |      |      |      |      |      | Max. Pressure (psi) | Flow Value Cv* |
|----------------------|--------------|-----------------|------------------------|---------------------------------------------------------------|------|------|------|------|------|------|------|------|------|---------------------|----------------|
|                      | Type         | Ordering Suffix | Data                   | 1-4                                                           | 6    | 8    | 10   | 12   | 14   | 16   | 18   | 20   | 22   |                     |                |
|                      |              |                 |                        |                                                               |      |      |      |      |      |      |      |      |      |                     |                |
| 21V4                 | Medium Duty  | -YMNC           | Air Pressure (psi)     | 65                                                            | 65   | 65   | 75   | 85   | 95   | 95   | 95   | 95   | 100  | 22,500              | 0.31-0.22      |
|                      |              |                 | Spring Pre-comp. (in.) | 0.19                                                          | 0.19 | 0.19 | 0.25 | 0.31 | 0.38 | 0.44 | 0.50 | 0.56 | 0.59 |                     |                |
|                      |              |                 | Stem Travel (in.)      | 0.25                                                          |      |      |      |      |      |      | 0.19 | 0.12 | 0.06 |                     |                |
|                      | Heavy Duty   | -YHNC           | Air Pressure (psi)     | 35                                                            | 35   | 35   | 40   | 45   | 50   | 50   | 50   | 50   | 55   | 22,500              |                |
|                      |              |                 | Spring Pre-comp. (in.) | 0.19                                                          | 0.19 | 0.19 | 0.25 | 0.31 | 0.38 | 0.44 | 0.50 | 0.56 | 0.59 |                     |                |
|                      |              |                 | Stem Travel (in.)      | 0.25                                                          |      |      |      |      |      |      | 0.19 | 0.12 | 0.06 |                     |                |
| 21V6, 15V4, **       | Medium Duty  | -YMNC           | Air Pressure (psi)     | 65                                                            | 65   | 75   | 85   | 95   | 95   | 95   | 95   |      |      | 18,250              | 0.75-0.57      |
|                      |              |                 | Spring Pre-comp. (in.) | 0.19                                                          | 0.19 | 0.25 | 0.31 | 0.38 | 0.44 | 0.50 | 0.56 |      |      |                     |                |
|                      |              |                 | Stem Travel (in.)      | 0.25                                                          |      |      |      |      |      |      | 0.19 | 0.12 | 0.06 |                     |                |
|                      | Heavy Duty   | -YHNC           | Air Pressure (psi)     | 35                                                            | 35   | 40   | 45   | 50   | 50   | 50   | 50   |      |      | 18,250              |                |
|                      |              |                 | Spring Pre-comp. (in.) | 0.19                                                          | 0.19 | 0.25 | 0.31 | 0.38 | 0.44 | 0.50 | 0.56 |      |      |                     |                |
|                      |              |                 | Stem Travel (in.)      | 0.25                                                          |      |      |      |      |      |      | .019 | 0.12 | 0.06 |                     |                |
| 21V9, 15V6, 15V8, ** | Medium Duty  | -YMNC           | Air Pressure (psi)     | 85                                                            | 90   | 95   | 95   |      |      |      |      |      |      | 9,800               | 1.29-0.53      |
|                      |              |                 | Spring Pre-comp. (in.) | 0.31                                                          | 0.34 | 0.47 | 0.56 |      |      |      |      |      |      |                     |                |
|                      |              |                 | Stem Travel (in.)      | 0.25                                                          |      |      | 0.15 | 0.06 |      |      |      |      |      |                     |                |
|                      | Heavy Duty   | -YHNC           | Air Pressure (psi)     | 50                                                            | 55   | 65   | 70   | 75   | 75   | 75   |      |      |      | 15,700              |                |
|                      |              |                 | Spring Pre-comp. (in.) | 0.19                                                          | 0.22 | 0.28 | 0.34 | 0.44 | 0.50 | 0.56 |      |      |      |                     |                |
|                      |              |                 | Stem Travel (in.)      | 0.25                                                          |      |      |      |      | 0.19 | 0.12 | 0.06 |      |      |                     |                |
| 21V12                | Heavy Duty   | -YHNC           | Air Pressure (psi)     | 65                                                            | 75   | 75   |      |      |      |      |      |      |      | 9,200               | 0.80-0.78      |
|                      |              |                 | Spring Pre-comp. (in.) | 0.28                                                          | 0.38 | 0.56 |      |      |      |      |      |      |      |                     |                |
|                      |              |                 | Stem Travel (in.)      | 0.25                                                          |      |      | 0.06 |      |      |      |      |      |      |                     |                |
| 21V16                | Heavy Duty   | -YHNC           | Air Pressure (psi)     | 75                                                            | 75   |      |      |      |      |      |      |      |      | 6,100               | 2.73-0.15      |
|                      |              |                 | Spring Pre-comp. (in.) | 0.38                                                          | 0.56 |      |      |      |      |      |      |      |      |                     |                |
|                      |              |                 | Stem Travel (in.)      | 0.25                                                          | 0.06 |      |      |      |      |      |      |      |      |                     |                |

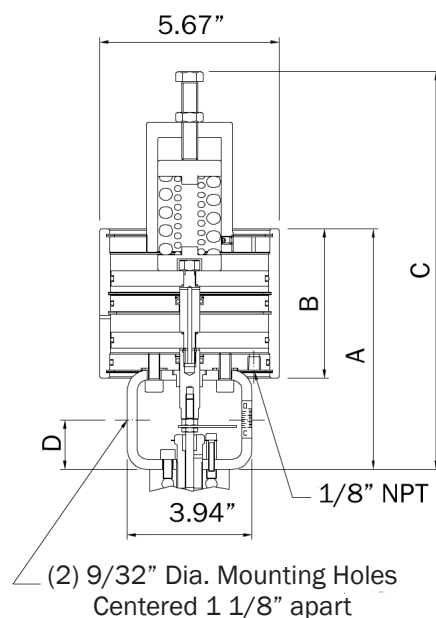
\* Cv value is for straight pattern vee stem valves. Increase this value by 50% for angle pattern valves. Cv Values vary due to compression of actuator spring, and are adjusted based on system pressure. Values shown are for maximum to minimum stem travel position.

\*\* All pipe valves are rated 15,200 psig maximum working pressure, unless air operator is the limiting factor.

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**Medium Duty  
Actuator**



**Heavy Duty  
Actuator**

| Valve Series | Air Actuator |                        |                        | Air Pressure Required to Open Valve At: System Pressure (ksi) |      |      |      |      |      |      |      |      |      |        | Max. Pressure (psi) | Flow Value Cv* |           |      |
|--------------|--------------|------------------------|------------------------|---------------------------------------------------------------|------|------|------|------|------|------|------|------|------|--------|---------------------|----------------|-----------|------|
|              | Type         | Order Suffix           | Data                   | 1-12                                                          | 14   | 16   | 18   | 20   | 22   | 24   | 26   | 28   | 30   | 36     |                     |                |           |      |
| 36V4         | Medium Duty  | -YMNC                  | Air Pressure (psi)     | 45                                                            | 55   | 55   | 55   | 55   | 65   | 65   | 65   | 65   | 75   | 85     | 36,000              | 0.12           |           |      |
|              |              |                        | Spring Pre-comp. (in.) | 0.12                                                          | 0.19 | 0.19 | 0.19 | 0.19 | 0.25 | 0.25 | 0.25 | 0.25 | 0.31 | 0.37   |                     |                |           |      |
|              |              |                        | Stem Travel (in.)      | 0.19                                                          |      |      |      |      |      |      |      |      |      |        |                     |                |           |      |
|              | Heavy Duty   | -YHNC                  | Air Pressure (psi)     | 25                                                            | 30   | 30   | 30   | 30   | 35   | 35   | 35   | 35   | 40   | 45     | 36,000              |                |           |      |
|              |              |                        | Spring Pre-comp. (in.) | 0.12                                                          | 0.19 | 0.19 | 0.19 | 0.19 | 0.25 | 0.25 | 0.25 | 0.25 | 0.31 | 0.37   |                     |                |           |      |
|              |              |                        | Stem Travel (in.)      | 0.19                                                          |      |      |      |      |      |      |      |      |      |        |                     |                |           |      |
| 36V6, 36V9   | Medium Duty  | -YMNC                  | Air Pressure (psi)     | 55                                                            | 55   | 65   | 65   | 75   | 75   | 75   | 85   | 85   | 95   | 100    | 36,000              | 0.33           |           |      |
|              |              |                        | Spring Pre-comp. (in.) | .019                                                          | .019 | 0.25 | 0.25 | .031 | 0.31 | 0.31 | .038 | 0.38 | 0.44 | 0.5    |                     |                |           |      |
|              |              |                        | Stem Travel (in.)      | 0.19                                                          |      |      |      |      |      |      |      |      |      |        |                     |                |           |      |
| Heavy Duty   | -YHNC        | Air Pressure (psi)     | 30                     | 30                                                            | 35   | 35   | 40   | 40   | 40   | 45   | 45   | 50   | 55   | 36,000 |                     |                |           |      |
|              |              | Spring Pre-comp. (in.) | 0.19                   | 0.19                                                          | 0.25 | 0.25 | 0.31 | 0.31 | 0.31 | 0.38 | 0.38 | 0.44 | 0.5  |        |                     |                |           |      |
|              |              | Stem Travel (in.)      | 0.19                   |                                                               |      |      |      |      |      |      |      |      |      |        |                     |                |           |      |
|              |              |                        |                        | 1-15                                                          | 20   | 25   | 30   | 35   | 40   | 45   | 50   | 55   | 60   | 65     |                     |                |           |      |
| 65V4, 65V6   | Medium Duty  | -YMNC                  | Air Pressure (psi)     | 55                                                            | 65   | 65   | 65   | 75   | 75   | 85   | 85   | 85   | 95   | 100    | 65,000              | 0.08           |           |      |
|              |              |                        | Spring Pre-comp. (in.) | 0.12                                                          | 0.19 | 0.19 | 0.19 | 0.25 | 0.25 | 0.31 | 0.31 | 0.31 | 0.38 | 0.38   |                     |                |           |      |
|              |              |                        | Stem Travel (in.)      | 0.25                                                          |      |      |      |      |      |      |      |      |      |        |                     |                |           |      |
|              | Heavy Duty   | -YHNC                  | Air Pressure (psi)     | 30                                                            | 35   | 35   | 35   | 40   | 40   | 45   | 45   | 45   | 50   | 55     | 65,000              |                | 0.09      |      |
|              |              |                        | Spring Pre-comp. (in.) | 0.12                                                          | 0.19 | 0.19 | 0.19 | 0.25 | 0.25 | 0.31 | 0.31 | 0.31 | 0.38 | 0.44   |                     |                |           |      |
|              |              |                        | Stem Travel (in.)      | 0.25                                                          |      |      |      |      |      |      |      |      |      |        |                     |                |           |      |
| 65V9         | Medium Duty  | -YMNC                  | Air Pressure (psi)     | 55                                                            | 65   | 65   | 75   | 75   | 85   | 95   | 95   | 95   | 95   | 100    | 65,000              | 0.14           |           |      |
|              |              |                        | Spring Pre-comp. (in.) | 0.12                                                          | 0.19 | 0.19 | 0.25 | 0.25 | 0.31 | 0.38 | 0.38 | 0.44 | 0.50 | 0.56   |                     |                |           |      |
|              |              |                        | Stem Travel (in.)      | 0.25                                                          |      |      |      |      |      |      |      |      |      |        |                     |                |           |      |
|              | Heavy Duty   | -YHNC                  | Air Pressure (psi)     | 30                                                            | 35   | 35   | 40   | 40   | 45   | 50   | 50   | 50   | 55   | 90,000 |                     |                | 0.09-0.07 |      |
|              |              |                        | Spring Pre-comp. (in.) | 0.12                                                          | 0.19 | 0.19 | 0.25 | 0.25 | 0.31 | 0.38 | 0.38 | 0.44 | 0.50 |        |                     |                |           | 0.56 |
|              |              |                        | Stem Travel (in.)      | 0.25                                                          |      |      |      |      |      |      |      |      |      |        |                     |                |           |      |
|              |              |                        |                        | 1-10                                                          | 20   | 30   | 40   | 50   | 60   | 70   | 80   | 90   | 101  |        |                     |                |           |      |
| 101V5        | Heavy Duty   | -YHNC                  | Air Pressure (psi)     | 35                                                            | 35   | 40   | 40   | 45   | 50   | 55   | 60   | 70   |      |        | 90,000              | 0.09-0.07      |           |      |
|              |              |                        | Spring Pre-comp. (in.) | 0.12                                                          | 0.12 | 0.19 | 0.19 | 0.22 | 0.25 | 0.28 | 0.31 | 0.38 |      |        |                     |                |           |      |
|              |              |                        | Stem Travel (in.)      | 0.12                                                          |      |      |      |      |      |      |      |      |      |        |                     |                |           |      |

\* Cv value is for straight pattern vee stem valves. Increase this value by 50% for angle pattern valves. Cv Values vary due to compression of actuator spring, and are adjusted based on system pressure. Values shown are for maximum to minimum stem travel position.

# Air Valve Actuators

## Air to Close, Normally Open

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### Order Information

Select the basic manual valve from the appropriate pressure section, then add the actuator suffix number to the end of the manual valve catalog number.

Example: 21V4M071-**YMNO**, medium duty actuator, normally open. This valve can be operated at 22,500 psi with an air supply of 100 psi to the valve actuator.

### Technical Information

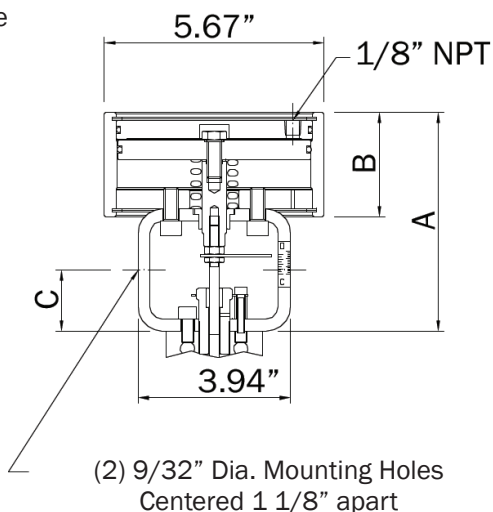
Max working pressure for actuator See table below for specific valve type

Max operating temperature for actuator -20°F to +200°F

Actuator material Anodized Aluminum

Air connection size: 1/8" NPT

| Actuator Type | Valve Size          | Ordering Suffix | Piston Area           | A     | B     | C     |
|---------------|---------------------|-----------------|-----------------------|-------|-------|-------|
| Medium Duty   | 1/4" - 3/8" - 9/16" | -YMNO           | 19.6 in. <sup>3</sup> | 5.64" | 2.69" | 1.57" |
| Heavy Duty    | 1/4" - 3/8" - 9/16" | -YHNO           | 39.2 in. <sup>3</sup> | 7.63" | 4.72" | 1.57" |
| Medium Duty   | 3/4" - 1"           | -YMNO           | 19.6 in. <sup>3</sup> | 6.43" | 2.69" | 2.47" |
| Heavy Duty    | 3/4" - 1"           | -YHNO           | 39.2 in. <sup>3</sup> | 8.42" | 4.72" | 2.47" |



| Valve Series            | Air Actuator |                 | Air Pressure Regulated to Close Valve At: System Pressure (ksi) |    |     |     |     |    |     |    |    |     |     | Max. Pressure (psi) | Stem Travel (in.) | Flow Value Cv* |
|-------------------------|--------------|-----------------|-----------------------------------------------------------------|----|-----|-----|-----|----|-----|----|----|-----|-----|---------------------|-------------------|----------------|
|                         | Type         | Ordering Suffix | 1-3                                                             | 4  | 6   | 8   | 10  | 12 | 14  | 16 | 18 | 20  | 22  |                     |                   |                |
| 21V4                    | Medium Duty  | -YMNO           | 40                                                              | 40 | 40  | 40  | 50  | 60 | 70  | 70 | 85 | 95  | 100 | 22,500              | 0.25              | 0.31           |
|                         | Heavy Duty   | -YHNO           | 20                                                              | 20 | 20  | 20  | 25  | 30 | 35  | 40 | 45 | 50  | 55  | 22,500              |                   |                |
| 21V6, 15V4, **          | Medium Duty  | -YMNO           | 45                                                              | 45 | 45  | 45  | 55  | 65 | 75  | 85 | 95 | 100 |     | 22,500              | 0.25              | 0.75           |
|                         | Heavy Duty   | -YHNO           | 25                                                              | 25 | 25  | 25  | 30  | 35 | 40  | 45 | 50 | 55  | 60  | 22,500              |                   |                |
| 21V9, 15V6, ** 15V8, ** | Medium Duty  | -YMNO           | 60                                                              | 60 | 65  | 80  | 100 |    |     |    |    |     |     | 10,700              | 0.38              | 1.30           |
|                         | Heavy Duty   | -YHNO           | 30                                                              | 30 | 30  | 40  | 50  | 55 | 60  | 70 | 80 | 85  | 90  | 22,500              |                   |                |
| 21V12                   | Medium Duty  | -YMNO           | 80                                                              | 80 | 100 |     |     |    |     |    |    |     |     | 6,100               | 0.44              | 2.50           |
|                         | Heavy Duty   | -YHNO           | 40                                                              | 40 | 50  | 60  | 75  | 90 | 100 |    |    |     |     | 13,600              |                   |                |
| 21V16                   | Heavy Duty   | -YHNO           | 50                                                              | 50 | 70  | 100 |     |    |     |    |    |     |     | 8,800               | 0.56              | 3.40           |

|                  |             |       | 1-12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 36 |        |      |      |
|------------------|-------------|-------|------|----|----|----|----|----|----|----|----|----|----|--------|------|------|
| <b>36V4</b>      | Medium Duty | -YMNO | 25   | 25 | 30 | 35 | 35 | 40 | 45 | 50 | 50 | 55 | 65 | 36,000 | 0.19 | 0.12 |
|                  | Heavy Duty  | -YHNO | 15   | 15 | 15 | 20 | 20 | 20 | 25 | 25 | 25 | 30 | 35 | 36,000 |      |      |
| <b>36V6 36V9</b> | Medium Duty | -YMNO | 30   | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 72 | 85 | 36,000 | 0.19 | 0.23 |
|                  | Heavy Duty  | -YHNO | 15   | 20 | 20 | 25 | 25 | 30 | 30 | 35 | 35 | 40 | 50 | 36,000 |      |      |

|                  |             |       | 1-15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 |        |      |      |
|------------------|-------------|-------|------|----|----|----|----|----|----|----|----|----|----|--------|------|------|
| <b>65V4 65V6</b> | Medium Duty | -YMNO | 30   | 30 | 30 | 35 | 45 | 50 | 55 | 60 | 70 | 75 | 80 | 65,000 | 0.25 | 0.08 |
|                  | Heavy Duty  | -YHNO | 15   | 15 | 15 | 20 | 25 | 25 | 30 | 30 | 35 | 40 | 45 | 65,000 |      |      |
| <b>65V9</b>      | Medium Duty | -YMNO | 35   | 35 | 40 | 50 | 55 | 65 | 70 | 75 | 85 | 90 | 95 | 65,000 | 0.25 | 0.14 |
|                  | Heavy Duty  | -YHNO | 20   | 20 | 20 | 25 | 30 | 35 | 35 | 40 | 45 | 45 | 50 | 65,000 |      |      |

|                                |             |       | 1-10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 101 |         |      |      |
|--------------------------------|-------------|-------|------|----|----|----|----|----|----|----|----|-----|---------|------|------|
| <b>101V4 101V5 101V6 101V9</b> | Medium Duty | -YMNO | 50   | 50 | 50 | 50 | 55 | 65 | 75 | 85 | 95 | 100 | 101,000 | 0.12 | 0.09 |
|                                | Heavy Duty  | -YHNO | 30   | 30 | 30 | 30 | 30 | 35 | 40 | 40 | 45 | 50  | 101,000 |      |      |

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