

2/2-Way, Stainless Steel, 1/2" - 2"

Advantages / Benefits



- ▶ **Body material: forged stainless steel in various surface finishes**
- ▶ **Steam sterilization**
- ▶ **Fluid is hermetically isolated from the actuator by the diaphragm**
- ▶ **Automatic self-adjustment of basic parameters**
- ▶ **Integrated PID Controller**
- ▶ **User friendly Operation**
  - LCD display
  - Keypad interface
  - Easy-to-understand menu-guided programming
- ▶ **Code protection against unauthorized access**
- ▶ **CE and A<sub>3</sub> certified**

## Design

This proportional control system is a combination of a piston operated diaphragm valve with a forged 316L stainless steel body, and an electro-pneumatically operated Type 1067 positioner. The positioner consists of three main parts: the valve stem position pickup, the electropneumatic control system and the microprocessor electronics. The valve stem position pickup, a linear potentiometer connected to the valve stem, feeds back the actual stem position to the positioner electronics.

The microprocessor electronics compares the actual stem position to the set point given by a standard signal (4-20mA, 0-10V). In the case of a position difference, the electropneumatic control system

corrects the stem position until the setpoint is reached.

The Type 1067 positioner also features a built-in process controller for the control of flow, temperature, pressure, etc.

- Programmable flow curves:
  - linear
  - equal percentage
  - freely programmable
- No air consumption at steady-state conditions
- Excellent flow characteristic combined with high flow rates
- Integrated PID Controller
- Captured exhaust air
- Direct mounting, no tubing between positioner and valve

**Burkert Contromatic USA**  
2602 McGaw Avenue  
Irvine, CA 92614  
Tel. 949.223.3100  
Fax 949.223.3198  
www.burkert-usa.com

**Burkert Contromatic Inc.**  
760 Pacific Road, Unit 3  
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Fax 905.847.9006  
www.burkert.ca

## Applications

### Fluids

Ultra-pure, sterile, aggressive, abrasive or high viscosity fluids up to 285°F.

### Applications

- Pharmaceutical
- Process technology
- Biotechnology
- Costmetic
- Bottling systems
- Food and beverage
- Dairy

**burkert**  
Fluid Control Systems

## Technical Data Positioner Type 1067

### Electrical Data

|                              |  |
|------------------------------|--|
| Voltage supply:              | 24 V DC  |
| Power consumption:           | < 10 W   |
| Signal input for positioner: | Unit signal:<br>4 - 20 mA<br>0 - 20 mA<br>0 - 10 V |
| Binary input:                | Configurable as normally open or closed contact    |
| Connection:                  | Terminal Strip<br>Cable gland 2 x PG 9             |

### Pneumatic Data

|  |   |
|--|---|
| Instrument air:                                      | Filtered compressed air, lubricated or non-lubricated |
| Air Performance                                      |   |
| Air inlet valve:                                     | $C_v = .035$  |
| Exhaust valve:                                       | $C_v = .040$  |
| Internal air consumption at steady-state conditions: | Zero  |
| Connection:  | Female pipe thread G 1/8"                             |

### Positioner Data

|                        |                     |
|------------------------|---------------------|
| Overall dimensions:    | 5" x 3.2" x 3"      |
| Body material:         | Aluminium, laquered |
| Fluid plate material:  | Aluminium, anodized |
| Weight of positioner:  | Approx. 2.2 lb.     |
| Rating:                | NEMA 4 (IP 65)      |
| Operating temperature: | 32°F to 140°F       |

## Technical Data Control Valve 2031

### Valve

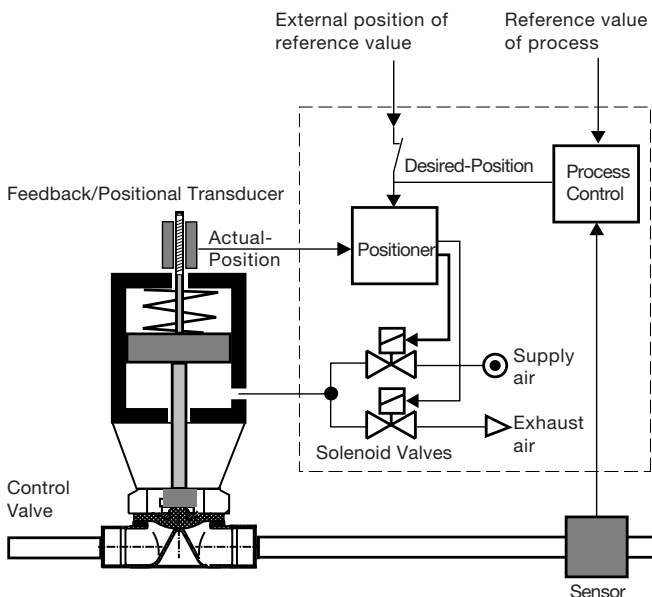
|                          |                                  |
|--------------------------|----------------------------------|
| Size:                    | 1/2", 3/4", 1", 1-1/2", 2"       |
| Control Range:           | Greater than 50:1                |
| Flow features:           | Modified equal percentage        |
| Flow capacity:           | See table page 4                 |
| Fluid temperature:       | +7°F to 289°F                    |
| Max. Operating pressure: | 145 PSI (at ambient temperature) |

### Actuator

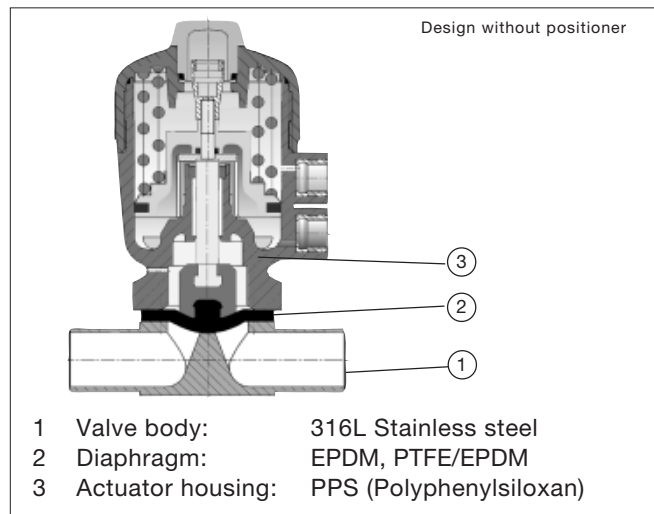
|                       |                              |
|-----------------------|------------------------------|
| Actuator piston dia.: | See table page 3             |
| Supply Pressure:      | 65 PSI, min.<br>85 PSI, max. |
| Function:             | Normally closed              |

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## Functional Diagram



## Material



**Ordering Chart**

| Weld End Connection   |                       |  |   |  | TriClamp® Connection |                |          |  |          |  |                |  |  |  |   |  |   |  |   |  |  |  |                |                |                |                |                |                |                |                |                |                |                |                |  |  |                |                |  |  |                |                |  |  |                |                |  |  |                |                |
|---|-----------------------|--|---|--|----------------------|----------------|----------|--|----------|--|----------------|--|--|--|---|--|---|--|---|--|--|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--|--|----------------|----------------|--|--|----------------|----------------|--|--|----------------|----------------|--|--|----------------|----------------|
| Orifice<br>DN   | Act.<br>Pist.<br>Dia. | Oper.<br>Press.                              | Item-No.                                    |  | Seal<br>Material     | Weight<br>[lb] |          |  |          |  |                |  |  |  |   |  |   |  |   |  |  |  |                |                |                |                |                |                |                |                |                |                |                |                |  |  |                |                |  |  |                |                |  |  |                |                |  |  |                |                |
|   |                       |  | Surface Finish                              |  |                      |                |          |  |          |  |                |  |  |  |   |  |   |  |   |  |  |  |                |                |                |                |                |                |                |                |                |                |                |                |  |  |                |                |  |  |                |                |  |  |                |                |  |  |                |                |
|   |                       |  | Ext. Glass Beaded<br>Ra=63µ in (120 grit)   | Ext. Electropolish<br>Ra=30µ in (180 grit)   |                      |                |          |  |          |  |                |  |  |  |   |  |   |  |   |  |  |  |                |                |                |                |                |                |                |                |                |                |                |                |  |  |                |                |  |  |                |                |  |  |                |                |  |  |                |                |
|   |                       |  | (Int.) Satin Finish<br>Ra=24µ in (180 grit) | (Int.) Electropolish<br>Ra=15µ in (240 grit) |                      |                |          |  |          |  |                |  |  |  |   |  |   |  |   |  |  |  |                |                |                |                |                |                |                |                |                |                |                |                |  |  |                |                |  |  |                |                |  |  |                |                |  |  |                |                |
| [in.]   | [in.]                 | [PSI]  |   |  |                      |                |          |  |          |  |                |  |  |  |   |  |   |  |   |  |  |  |                |                |                |                |                |                |                |                |                |                |                |                |  |  |                |                |  |  |                |                |  |  |                |                |  |  |                |                |
| 1/2   | 2.48                  | 145  | <b>US05060</b>                              | <b>US05061</b>                               | EPDM                 | 4.4            |          |  |          |  |                |  |  |  |   |  |   |  |   |  |  |  |                |                |                |                |                |                |                |                |                |                |                |                |  |  |                |                |  |  |                |                |  |  |                |                |  |  |                |                |
|   | 2.48                  | 128  | <b>US05062</b>                              | <b>US05063</b>                               | PTFE/EPDM            | 4.4            |          |  |          |  |                |  |  |  |   |  |   |  |   |  |  |  |                |                |                |                |                |                |                |                |                |                |                |                |  |  |                |                |  |  |                |                |  |  |                |                |  |  |                |                |
| 3/4   | 3.15                  | 145  | <b>US05064</b>                              | <b>US05065</b>                               | EPDM                 | 6.6            |          |  |          |  |                |  |  |  |   |  |   |  |   |  |  |  |                |                |                |                |                |                |                |                |                |                |                |                |  |  |                |                |  |  |                |                |  |  |                |                |  |  |                |                |
|   | 3.15                  | 145  | <b>US05066</b>                              | <b>US05067</b>                               | PTFE/EPDM            | 6.6            |          |  |          |  |                |  |  |  |   |  |   |  |   |  |  |  |                |                |                |                |                |                |                |                |                |                |                |                |  |  |                |                |  |  |                |                |  |  |                |                |  |  |                |                |
| 1   | 3.15                  | 145  | <b>US05068</b>                              | <b>US05069</b>                               | EPDM                 | 7.0            |          |  |          |  |                |  |  |  |   |  |   |  |   |  |  |  |                |                |                |                |                |                |                |                |                |                |                |                |  |  |                |                |  |  |                |                |  |  |                |                |  |  |                |                |
|   | 3.15                  | 100  | <b>US05070</b>                              | <b>US05071</b>                               | PTFE/EPDM            | 7.0            |          |  |          |  |                |  |  |  |   |  |   |  |   |  |  |  |                |                |                |                |                |                |                |                |                |                |                |                |  |  |                |                |  |  |                |                |  |  |                |                |  |  |                |                |
| 1-1/2   | 4.92                  | 145  | <b>US05072</b>                              | <b>US05073</b>                               | EPDM                 | 15             |          |  |          |  |                |  |  |  |   |  |   |  |   |  |  |  |                |                |                |                |                |                |                |                |                |                |                |                |  |  |                |                |  |  |                |                |  |  |                |                |  |  |                |                |
|   | 4.92                  | 145  | <b>US05074</b>                              | <b>US05075</b>                               | PTFE/EPDM            | 15             |          |  |          |  |                |  |  |  |   |  |   |  |   |  |  |  |                |                |                |                |                |                |                |                |                |                |                |                |  |  |                |                |  |  |                |                |  |  |                |                |  |  |                |                |
| 2   | 4.92                  | 128  | <b>US05076</b>                              | <b>US05077</b>                               | EPDM                 | 19             |          |  |          |  |                |  |  |  |   |  |   |  |   |  |  |  |                |                |                |                |                |                |                |                |                |                |                |                |  |  |                |                |  |  |                |                |  |  |                |                |  |  |                |                |
|   | 4.92                  | 100  | <b>US05078</b>                              | <b>US05079</b>                               | PTFE/EPDM            | 19             |          |  |          |  |                |  |  |  |   |  |   |  |   |  |  |  |                |                |                |                |                |                |                |                |                |                |                |                |  |  |                |                |  |  |                |                |  |  |                |                |  |  |                |                |
| <table border="1"> <thead> <tr> <th colspan="2">Item-No.</th> <th colspan="2">Item-No.</th> </tr> <tr> <th colspan="4">Surface Finish</th> </tr> </thead> <tbody> <tr> <td colspan="2">Ext. Glass Beaded<br/>Ra=63µ in (120 grit)</td> <td colspan="2">Ext. Electropolish<br/>30µ in (180 grit)</td> </tr> <tr> <td colspan="2">(Ext.) Satin Finish<br/>Ra=24µ in (180 grit)</td> <td colspan="2">(Ext.) Electropolish<br/>Ra=15µ in (240 grit)</td> </tr> <tr> <td><b>US05080</b></td> <td><b>US05082</b></td> <td><b>US05084</b></td> <td><b>US05086</b></td> </tr> <tr> <td><b>US05088</b></td> <td><b>US05089</b></td> <td><b>US05091</b></td> <td><b>US05093</b></td> </tr> <tr> <td><b>US05095</b></td> <td><b>US05097</b></td> <td><b>US05081</b></td> <td><b>US05083</b></td> </tr> <tr> <td></td> <td></td> <td><b>US05085</b></td> <td><b>US05087</b></td> </tr> <tr> <td></td> <td></td> <td><b>US05090</b></td> <td><b>US05092</b></td> </tr> <tr> <td></td> <td></td> <td><b>US05094</b></td> <td><b>US05096</b></td> </tr> <tr> <td></td> <td></td> <td><b>US05098</b></td> <td><b>US05099</b></td> </tr> </tbody> </table> |                       |  |   |  |                      |                | Item-No. |  | Item-No. |  | Surface Finish |  |  |  | Ext. Glass Beaded<br>Ra=63µ in (120 grit) |  | Ext. Electropolish<br>30µ in (180 grit) |  | (Ext.) Satin Finish<br>Ra=24µ in (180 grit) |  | (Ext.) Electropolish<br>Ra=15µ in (240 grit) |  | <b>US05080</b> | <b>US05082</b> | <b>US05084</b> | <b>US05086</b> | <b>US05088</b> | <b>US05089</b> | <b>US05091</b> | <b>US05093</b> | <b>US05095</b> | <b>US05097</b> | <b>US05081</b> | <b>US05083</b> |  |  | <b>US05085</b> | <b>US05087</b> |  |  | <b>US05090</b> | <b>US05092</b> |  |  | <b>US05094</b> | <b>US05096</b> |  |  | <b>US05098</b> | <b>US05099</b> |
| Item-No.  |                       | Item-No.                                     |   |  |                      |                |          |  |          |  |                |  |  |  |   |  |   |  |   |  |  |  |                |                |                |                |                |                |                |                |                |                |                |                |  |  |                |                |  |  |                |                |  |  |                |                |  |  |                |                |
| Surface Finish  |                       |  |   |  |                      |                |          |  |          |  |                |  |  |  |   |  |   |  |   |  |  |  |                |                |                |                |                |                |                |                |                |                |                |                |  |  |                |                |  |  |                |                |  |  |                |                |  |  |                |                |
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| (Ext.) Satin Finish<br>Ra=24µ in (180 grit)   |                       | (Ext.) Electropolish<br>Ra=15µ in (240 grit) |   |  |                      |                |          |  |          |  |                |  |  |  |   |  |   |  |   |  |  |  |                |                |                |                |                |                |                |                |                |                |                |                |  |  |                |                |  |  |                |                |  |  |                |                |  |  |                |                |
| <b>US05080</b>  | <b>US05082</b>        | <b>US05084</b>                               | <b>US05086</b>                              |  |                      |                |          |  |          |  |                |  |  |  |   |  |   |  |   |  |  |  |                |                |                |                |                |                |                |                |                |                |                |                |  |  |                |                |  |  |                |                |  |  |                |                |  |  |                |                |
| <b>US05088</b>  | <b>US05089</b>        | <b>US05091</b>                               | <b>US05093</b>                              |  |                      |                |          |  |          |  |                |  |  |  |   |  |   |  |   |  |  |  |                |                |                |                |                |                |                |                |                |                |                |                |  |  |                |                |  |  |                |                |  |  |                |                |  |  |                |                |
| <b>US05095</b>  | <b>US05097</b>        | <b>US05081</b>                               | <b>US05083</b>                              |  |                      |                |          |  |          |  |                |  |  |  |   |  |   |  |   |  |  |  |                |                |                |                |                |                |                |                |                |                |                |                |  |  |                |                |  |  |                |                |  |  |                |                |  |  |                |                |
|   |                       | <b>US05085</b>                               | <b>US05087</b>                              |  |                      |                |          |  |          |  |                |  |  |  |   |  |   |  |   |  |  |  |                |                |                |                |                |                |                |                |                |                |                |                |  |  |                |                |  |  |                |                |  |  |                |                |  |  |                |                |
|   |                       | <b>US05090</b>                               | <b>US05092</b>                              |  |                      |                |          |  |          |  |                |  |  |  |   |  |   |  |   |  |  |  |                |                |                |                |                |                |                |                |                |                |                |                |  |  |                |                |  |  |                |                |  |  |                |                |  |  |                |                |
|   |                       | <b>US05094</b>                               | <b>US05096</b>                              |  |                      |                |          |  |          |  |                |  |  |  |   |  |   |  |   |  |  |  |                |                |                |                |                |                |                |                |                |                |                |                |  |  |                |                |  |  |                |                |  |  |                |                |  |  |                |                |
|   |                       | <b>US05098</b>                               | <b>US05099</b>                              |  |                      |                |          |  |          |  |                |  |  |  |   |  |   |  |   |  |  |  |                |                |                |                |                |                |                |                |                |                |                |                |  |  |                |                |  |  |                |                |  |  |                |                |  |  |                |                |

**Easy** Pressure Control  
Flow Control  
Temperature Control

**Easy to Calibrate**  
Automatic self-adjustment of basic parameters by finger tip control

**Easy to Install**  
Compact design  
• Delivered pre-mounted, tested and ready to install  
• Requires less space than conventional control valves

**Easy to Operate**  
User-friendly operation  
• LCD and key pad interface  
• Menu-guided access  
• Programmable characteristic curves

**Easy to Operate**  
Burkert control valve with Burkert digital flow transmitter for proportional process control



Burkert Link

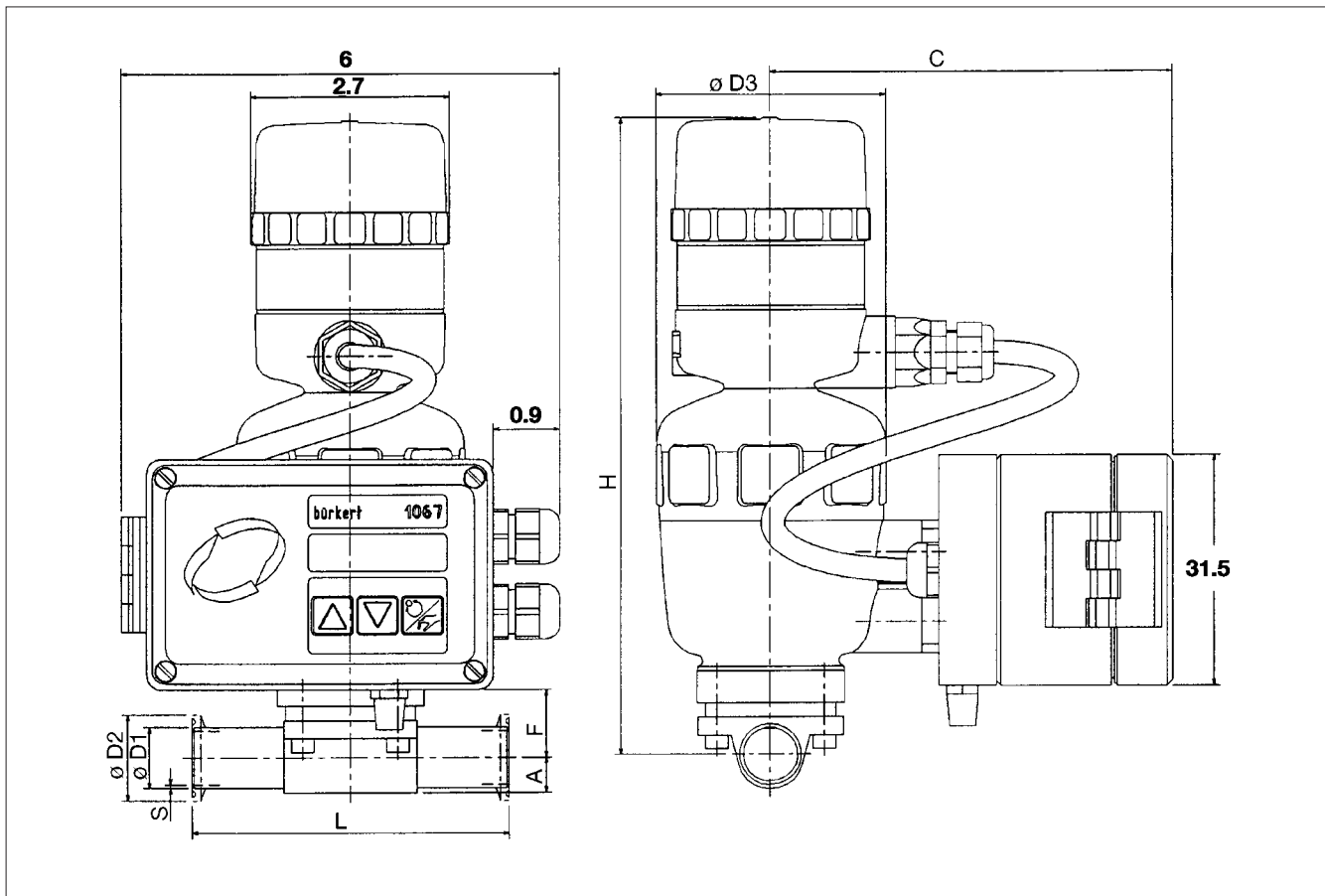


DTS 100094895 EN Version: - Status: RL (released | freigegeben | valide) printed: 16.07.2008

**Specifications - Flow Capacity**

| Plug Travel [%] | C <sub>v</sub> - Value |      |       |        |       |
|-----------------|------------------------|------|-------|--------|-------|
|                 | 1/2"                   | 3/4" | 1"    | 1-1/2" | 2"    |
| 0               | 0.00                   | 0.00 | 0.00  | 0.00   | 0.00  |
| 10              | 0.05                   | 0.10 | 0.35  | 0.70   | 3.30  |
| 20              | 0.25                   | 0.45 | 1.40  | 3.65   | 6.20  |
| 30              | 0.60                   | 1.40 | 2.95  | 8.30   | 11.10 |
| 40              | 1.30                   | 2.70 | 6.30  | 16.60  | 21.40 |
| 50              | 2.10                   | 3.75 | 10.05 | 23.50  | 35.20 |
| 60              | 3.30                   | 5.40 | 12.40 | 31.35  | 45.15 |
| 70              | 4.45                   | 6.90 | 13.90 | 37.55  | 52.05 |
| 80              | 5.40                   | 7.85 | 14.85 | 40.35  | 56.85 |
| 90              | 5.75                   | 8.05 | 15.10 | 40.60  | 60.60 |
| 100             | 5.85                   | 8.20 | 15.25 | 40.70  | 60.85 |

**Dimensions [inches]**



**Variable Dimensions [in.]**

| Size  | Actuator Piston Dial | A    | C    | øD1  | øD2  | øD3  | F    | H     | L    | S    |
|-------|----------------------|------|------|------|------|------|------|-------|------|------|
| 1/2   | 2.48                 | 0.44 | 5.47 | 0.50 | 1.00 | 3.15 | 0.98 | 8.78  | 4.33 | .065 |
| 3/4   | 3.15                 | 0.63 | 5.79 | 0.75 | 1.00 | 3.98 | 1.65 | 10.12 | 4.69 | .065 |
| 1     | 3.15                 | 0.71 | 5.79 | 1.00 | 2.00 | 3.98 | 1.77 | 10.23 | 5.08 | .065 |
| 1-1/2 | 4.92                 | 1.06 | 6.81 | 1.50 | 2.00 | 6.02 | 2.91 | 13.93 | 6.34 | .065 |
| 2     | 4.92                 | 1.30 | 6.81 | 2.00 | 2.50 | 6.02 | 3.07 | 14.09 | 7.56 | .065 |

In case of special requirements please consult for advice.

We reserve the right to make technical changes without notice.

US\_2031\_PHARM\_06/04