

# ProMinent® Technical Data: mikro g/5 Metering Pumps

| Pump version | Maximum pressure*<br>psig (bar) | Capacity at maximum pressure         |                 | $\mu\text{L}/\text{stroke}$<br>min-max | Suction lift |     |
|--------------|---------------------------------|--------------------------------------|-----------------|----------------------------------------|--------------|-----|
|              |                                 | $\mu\text{L}/\text{min.}$<br>min-max | mL/h<br>min-max |                                        | ft.          | (m) |
| 400150       | 580 (40)                        | 1 - 2,500                            | 0.06 - 150      | 1 - 50                                 | 20           | (6) |
| 180600       | 261 (18)                        | 4 - 10,000                           | 0.24 - 600      | 4 - 200                                | 20           | (6) |
| 061500       | 87 (6)                          | 10 - 25,000                          | 0.60 - 1,500    | 10 - 500                               | 13           | (4) |

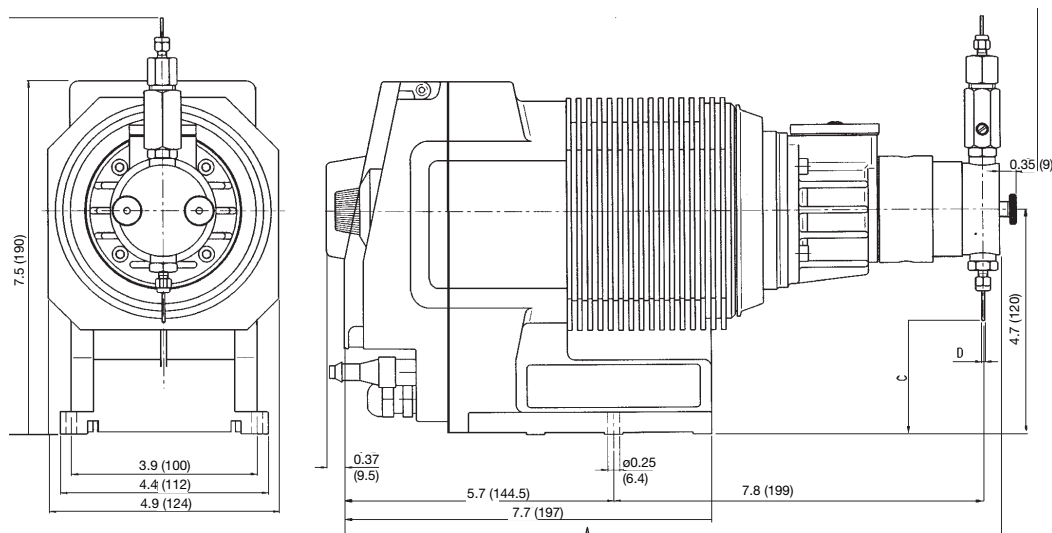
\*With TT (Teflon) liquid end, maximum pressure on any pump is 145 psig (10 bar).

| Pump version | SS Swagelok tubing connections |        | TT tubing connections |        | SS version shipping weight |       | TT version shipping weight |       |
|--------------|--------------------------------|--------|-----------------------|--------|----------------------------|-------|----------------------------|-------|
|              | inch                           | (mm)   | inch                  | (mm)   | lbs.                       | (kg)  | lbs.                       | (kg)  |
| 400150       | 1/16                           | (1.58) | 1/16                  | (1.75) | 2.7                        | (5.9) | 2.7                        | (5.9) |
| 180600       | 1/16                           | (1.58) | 1/16                  | (1.75) | 2.7                        | (5.9) | 2.7                        | (5.9) |
| 061500       | 1/8                            | (3.2)  | 1/8                   | (3.2)  | 2.7                        | (5.9) | 2.7                        | (5.9) |

Scope of supply: pump with power cable and plug, 1.6 ft. (0.5 m) PTFE suction and discharge lines.

## Dimensions - inch (mm)

| mikro g/5 |    | A           | B          | C         | D             |
|-----------|----|-------------|------------|-----------|---------------|
| 400150    | SS | 13.86 (352) | 8.82 (224) | 2.36 (60) | 0.062 (1.58)  |
|           | TT | 13.86 (352) | 8.94 (227) | 2.64 (67) | 0.069 (1.75)  |
| 180600    | SS | 13.86 (352) | 8.82 (224) | 2.36 (60) | 0.062 (1.58)  |
|           | TT | 13.86 (352) | 8.94 (227) | 2.64 (67) | 0.069 (1.75)  |
| 061500    | SS | 13.94 (354) | 9.92 (252) | 1.73 (44) | 0.125 (3.175) |
|           | TT | 13.94 (354) | 9.25 (235) | 2.24 (57) | 0.126 (3.2)   |



# Identity code ordering system for ProMinent® mikro g/5 metering pumps

ProMinent®

Series:  
MG5a mikro g/5a

|                                 |  |                                                                                                                                                                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |
|---------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|
| 400150<br>180600<br>061500      |  | Pump version:                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |  |  |
|                                 |  | <b>Liquid end materials:</b><br>SS1 316 SS with virgin white PTFE packing<br>SS2 316 SS with graphite-loaded PTFE packing<br>SS3 316 SS with bal seal packing<br>TT1 PTFE + 25% carbon with pure white PTFE packing<br>TT2 PTFE + 25% carbon with graphite-loaded PTFE packing<br>TT3 PTFE + 25% carbon with bal seal packing |  |  |  |  |  |  |  |  |  |
|                                 |  | <b>Valve springs:</b><br>0 without springs<br>1 with 2 springs, 316 SS (1.45 psig)                                                                                                                                                                                                                                            |  |  |  |  |  |  |  |  |  |
|                                 |  | <b>Transparent, hinged dust cover version:</b><br>0 standard, without lock, with logo<br>1 with lock, with logo                                                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |
|                                 |  | <b>Electrical connection: (with 6 ft. (2 m) power cord)</b><br>A 230 V ± 15% 50/60 Hz Euro plug<br>D 115 V ± 15% 50/60 Hz N. American plug<br>U 230 V ± 15% 50/60 Hz N. American plug (6-15 P NEMA configuration)                                                                                                             |  |  |  |  |  |  |  |  |  |
|                                 |  | <b>Control type:</b> (Note: May be ordered without illumination upon request.)<br>2 Option type with LCD illumination                                                                                                                                                                                                         |  |  |  |  |  |  |  |  |  |
|                                 |  | <b>Control version:**</b><br>0 manual + pulse (1:1) + remote pause<br>1 Same as "0" + analog, 0-20 mA and 4-20 mA<br>2 Same as "0" + analog 0-60 mV, 0 - 1 V, 0-10 V                                                                                                                                                          |  |  |  |  |  |  |  |  |  |
|                                 |  | <b>Pulse multiplier/divider:</b><br>0 without pulse control<br>1 with pulse control                                                                                                                                                                                                                                           |  |  |  |  |  |  |  |  |  |
|                                 |  | <b>7 Day, 31 event timer/RS interface:</b><br>0 without timer<br>1 with timer                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |  |  |
|                                 |  | <b>Switching mode relay:</b><br>0 without relay<br>1 fault annunciating relay, drops out<br>2 pacing relay, pulls in<br>3 fault annunciating relay, pulls in<br>4 timer relay, pulls in                                                                                                                                       |  |  |  |  |  |  |  |  |  |
| MG5a 400150 SS3 0 0 D 2 0 1 1 0 |  |                                                                                                                                                                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |

# Specifications: mikro g/5

|                                             |                                                                                                                                                                                                                                                                         |                 |                   |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------------|
| <i>Maximum stroke length:</i>               | 0.394" (10.0 mm)                                                                                                                                                                                                                                                        |                 |                   |
| <i>Plunger diameter:</i>                    | 300120 = 0.098" (2.5 mm); 120480 = 0.197" (5 mm);<br>014200 = 0.315" (8 mm)                                                                                                                                                                                             |                 |                   |
| <i>Materials of construction</i>            |                                                                                                                                                                                                                                                                         |                 |                   |
| <i>Housing:</i>                             | Glass-filled Luranyl™ (PPE)                                                                                                                                                                                                                                             |                 |                   |
| <i>Liquid end options:</i>                  | PTFE, 316 SS                                                                                                                                                                                                                                                            |                 |                   |
| <i>Enclosure rating:</i>                    | NEMA 4 (IP 65), transparent front cover standard                                                                                                                                                                                                                        |                 |                   |
| <i>Insulation class:</i>                    | F                                                                                                                                                                                                                                                                       |                 |                   |
| <i>Check valves:</i>                        | Double ball (ruby/ball/ceramic seat)                                                                                                                                                                                                                                    |                 |                   |
| <i>Repeatability of the metering:</i>       | When used according to the operating instructions $\leq \pm 0.5\%$                                                                                                                                                                                                      |                 |                   |
| <i>Standard production test:</i>            | <b>100% tested for capacity at maximum pressure</b>                                                                                                                                                                                                                     |                 |                   |
| <i>Capacity test criteria:</i>              | -5% to +15%                                                                                                                                                                                                                                                             |                 |                   |
| <i>Power cord:</i>                          | 6 foot (2 m)                                                                                                                                                                                                                                                            |                 |                   |
| <i>Relay cable (optional):</i>              | 6 foot (2 m), SPDT relay                                                                                                                                                                                                                                                |                 |                   |
| <i>Ambient temperature range:</i>           | 14°F (-10°C) to 113°F (45°C)                                                                                                                                                                                                                                            |                 |                   |
| <i>Max. fluid operating temperatures:</i>   | <u>Material</u>                                                                                                                                                                                                                                                         | <u>Constant</u> | <u>Short Term</u> |
|                                             | PTFE                                                                                                                                                                                                                                                                    | 122°F (50°C)    | 248°F (120°C)     |
|                                             | 316 SS                                                                                                                                                                                                                                                                  | 122°F (50°C)    | 248°F (120°C)     |
| <i>Power supply:</i>                        | 115 V version $\pm 10\%$ , 50/60 Hz; 230 V version $\pm 10\%$ , 50/60 Hz                                                                                                                                                                                                |                 |                   |
| <i>Average power consumption:</i>           | 115 VAC, 50/60 Hz: 23 W<br>230 VAC, 50/60 Hz: 31 W                                                                                                                                                                                                                      |                 |                   |
| <i>Peak current draw:</i>                   | 115 VAC, 50/60 Hz: 0.54 A<br>230 VAC, 50/60 Hz: 0.28 A                                                                                                                                                                                                                  |                 |                   |
| <i>Remote pause, Contact input</i>          |                                                                                                                                                                                                                                                                         |                 |                   |
| <i>Voltage level with open contact:</i>     | Approximately +5 VDC supply voltage                                                                                                                                                                                                                                     |                 |                   |
| <i>Impedance:</i>                           | 10 kOhm                                                                                                                                                                                                                                                                 |                 |                   |
| <i>Controlling Contact:</i>                 | With voltage-free contact or semiconductor sink logic control (not source logic) with a residual voltage of <700 mV, the contact load is approximately 0.5 mA at +5VDC. (Note: Semiconductor contacts that require >700 mV across a closed contact should not be used.) |                 |                   |
| <i>Max. stroke rate:</i>                    | 50 strokes/min                                                                                                                                                                                                                                                          |                 |                   |
| <i>Max. pulse frequency:</i>                | 40 pulses/sec                                                                                                                                                                                                                                                           |                 |                   |
| <i>Necessary contact duration:</i>          | 20 ms                                                                                                                                                                                                                                                                   |                 |                   |
| <i>Analog - Current input burden:</i>       | Approximately 70 Ohm                                                                                                                                                                                                                                                    |                 |                   |
| <i>Max. allowable input current:</i>        | 50 mA                                                                                                                                                                                                                                                                   |                 |                   |
| <i>Service factor:</i>                      | 1.15<br>Note: capacities are the same on 50 or 60 Hz power.                                                                                                                                                                                                             |                 |                   |
| <i>Warranty:</i>                            | Two years on drive; one year on liquid end.                                                                                                                                                                                                                             |                 |                   |
| <i>Industry standards:</i>                  | CSA approval available at additional cost in U.S., standard in Canada. TUV-GS (Germany), DIN VDE 0700, and DIN VDE 0871 class B noise suppression standard. CE approved.                                                                                                |                 |                   |
| <i>Built-in backpressure valve setting:</i> | 36 psig (2.5 bar)                                                                                                                                                                                                                                                       |                 |                   |