

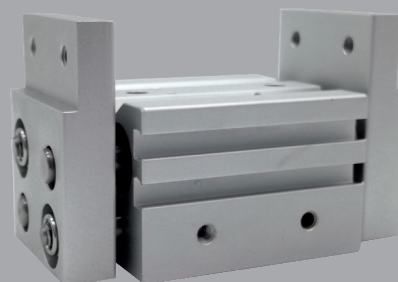
# Pneumatic Parallel Grippers

## VRG 2-Finger

VRG is a long stroke two-finger parallel gripper for lighter duty applications.

### Advantages

- Compact design and wide range of strokes available.
- Double piston design with finger synchronization by a rack and pinion mechanism.
- All shafts equipped with self-lubricating bearings.
- Long stroke, round guidance system protected from dirt and debris.
- Side finger mounting.
- Slots for mounting and positioning of magnetic-field sensors.
- Air supply via screw connections.



## SPECIFICATIONS

| Model        | Stroke Per Jaw | Air Consumption Per Cycle (Dual Stroke) | Closing Force Per Jaw @ 6 bar | Opening Force Per Jaw @ 6 bar | Total Closing Force @ 6 bar | Total Opening Force @ 6 bar | Recommended Workpiece Weight* | Weight   | Repeatability |
|--------------|----------------|-----------------------------------------|-------------------------------|-------------------------------|-----------------------------|-----------------------------|-------------------------------|----------|---------------|
| VRG 16 - 30  | 15 mm          | 9.1 cm <sup>3</sup>                     | 60 N                          | 60 N                          | 120 N                       | 120 N                       | 0.60 kg                       | 0.59 kg  | ± 0.01 mm     |
|              | 0.59 in        | 0.56 in <sup>3</sup>                    | 13.5 lb                       | 13.5 lb                       | 27.0 lb                     | 27.0 lb                     | 1.30 lb                       | 1.29 lb  | ± 0.004 in    |
| VRG 16 - 60  | 30 mm          | 18.2 cm <sup>3</sup>                    | 60 N                          | 60 N                          | 120 N                       | 120 N                       | 0.60 kg                       | 0.80 kg  | ± 0.01 mm     |
|              | 1.18 in        | 1.11 in <sup>3</sup>                    | 13.5 lb                       | 13.5 lb                       | 27.0 lb                     | 27.0 lb                     | 1.30 lb                       | 1.75 lb  | ± 0.004 in    |
| VRG 16 - 80  | 40 mm          | 24.2 cm <sup>3</sup>                    | 60 N                          | 60 N                          | 120 N                       | 120 N                       | 0.60 kg                       | 0.94 kg  | ± 0.01 mm     |
|              | 1.57 in        | 1.48 in <sup>3</sup>                    | 13.5 lb                       | 13.5 lb                       | 27.0 lb                     | 27.0 lb                     | 1.30 lb                       | 2.06 lb  | ± 0.004 in    |
| VRG 20 - 40  | 20 mm          | 17.6 cm <sup>3</sup>                    | 100 N                         | 100 N                         | 200 N                       | 200 N                       | 1.00 kg                       | 1.03 kg  | ± 0.01 mm     |
|              | 0.79 in        | 1.07 in <sup>3</sup>                    | 22.5 lb                       | 22.5 lb                       | 45.0 lb                     | 45.0 lb                     | 2.20 lb                       | 2.26 lb  | ± 0.004 in    |
| VRG 20 - 80  | 40 mm          | 35.2 cm <sup>3</sup>                    | 100 N                         | 100 N                         | 200 N                       | 200 N                       | 1.00 kg                       | 1.50 kg  | ± 0.01 mm     |
|              | 1.57 in        | 2.15 in <sup>3</sup>                    | 22.5 lb                       | 22.5 lb                       | 45.0 lb                     | 45.0 lb                     | 2.20 lb                       | 3.29 lb  | ± 0.004 in    |
| VRG 20 - 100 | 50 mm          | 44 cm <sup>3</sup>                      | 100 N                         | 100 N                         | 200 N                       | 200 N                       | 1.00 kg                       | 1.69 kg  | ± 0.01 mm     |
|              | 1.97 in        | 2.68 in <sup>3</sup>                    | 22.5 lb                       | 22.5 lb                       | 45.0 lb                     | 45.0 lb                     | 2.20 lb                       | 3.72 lb  | ± 0.004 in    |
| VRG 25 - 50  | 25 mm          | 38 cm <sup>3</sup>                      | 170 N                         | 170 N                         | 340 N                       | 340 N                       | 1.70 kg                       | 1.69 kg  | ± 0.01 mm     |
|              | 0.98 in        | 2.32 in <sup>3</sup>                    | 38.2 lb                       | 38.2 lb                       | 76.4 lb                     | 76.4 lb                     | 3.70 lb                       | 3.72 lb  | ± 0.004 in    |
| VRG 25 - 100 | 50 mm          | 76 cm <sup>3</sup>                      | 170 N                         | 170 N                         | 340 N                       | 340 N                       | 1.70 kg                       | 2.56 kg  | ± 0.01 mm     |
|              | 1.97 in        | 4.64 in <sup>3</sup>                    | 38.2 lb                       | 38.2 lb                       | 76.4 lb                     | 76.4 lb                     | 3.70 lb                       | 5.63 lb  | ± 0.004 in    |
| VRG 25 - 120 | 60 mm          | 91.2 cm <sup>3</sup>                    | 170 N                         | 170 N                         | 340 N                       | 340 N                       | 1.70 kg                       | 2.78 kg  | ± 0.01 mm     |
|              | 2.36 in        | 5.56 in <sup>3</sup>                    | 38.2 lb                       | 38.2 lb                       | 76.4 lb                     | 76.4 lb                     | 3.70 lb                       | 6.11 lb  | ± 0.004 in    |
| VRG 32 - 70  | 35 mm          | 84.5 cm <sup>3</sup>                    | 300 N                         | 300 N                         | 600 N                       | 600 N                       | 3.00 kg                       | 2.91 kg  | ± 0.01 mm     |
|              | 1.38 in        | 5.15 in <sup>3</sup>                    | 67.4 lb                       | 67.4 lb                       | 134.9 lb                    | 134.9 lb                    | 6.60 lb                       | 6.39 lb  | ± 0.004 in    |
| VRG 32 - 120 | 60 mm          | 145 cm <sup>3</sup>                     | 300 N                         | 300 N                         | 600 N                       | 600 N                       | 3.00 kg                       | 3.82 kg  | ± 0.01 mm     |
|              | 2.36 in        | 8.85 in <sup>3</sup>                    | 67.4 lb                       | 67.4 lb                       | 134.9 lb                    | 134.9 lb                    | 6.60 lb                       | 8.40 lb  | ± 0.004 in    |
| VRG 32 - 160 | 80 mm          | 193 cm <sup>3</sup>                     | 300 N                         | 300 N                         | 600 N                       | 600 N                       | 3.00 kg                       | 4.66 kg  | ± 0.01 mm     |
|              | 3.15 in        | 11.77 in <sup>3</sup>                   | 67.4 lb                       | 67.4 lb                       | 134.9 lb                    | 134.9 lb                    | 6.60 lb                       | 10.24 lb | ± 0.004 in    |

\* Recommended workpiece weight is calculated for force-fit gripping with a coefficient of static friction of 0.15 and a safety factor of 3 against workpiece slippage.

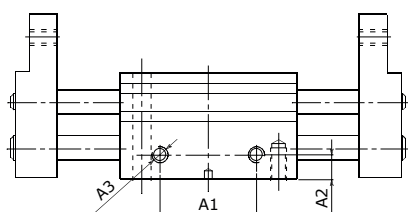
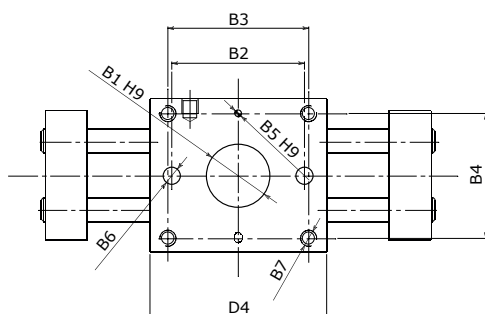
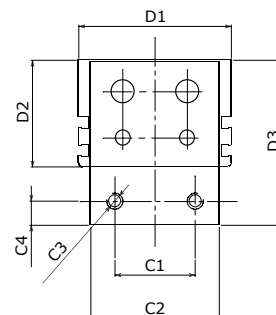
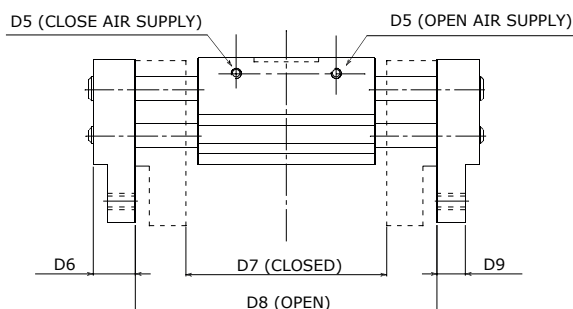
Opening Pressure **1 - 6 bar (14.5 - 87 psi)**

Working Temperature **10 - 60 °C (50 - 140 °F)**

Noise Emission (Sound Pressure) **≤ 70 dB(A) in any direction**

# PRODUCT INFORMATION

# VRG 2-Finger



## Options

- Magnetic switches

|            | Mounting - Option # 1 |                |     | Mounting - Option # 2 |               |               |              |             |               |     | Finger Application |                |     |              | Informational Dimensions |              |               |               |        |              |               |                |                |
|------------|-----------------------|----------------|-----|-----------------------|---------------|---------------|--------------|-------------|---------------|-----|--------------------|----------------|-----|--------------|--------------------------|--------------|---------------|---------------|--------|--------------|---------------|----------------|----------------|
|            | A1                    | A2             | A3  | B1                    | B2            | B3            | B4           | B5          | B6            | B7  | C1                 | C2             | C3  | C4           | D1                       | D2           | D3            | D4            | D5     | D6           | D7            | D8             | D9             |
| VRG 16-30  | 28.0<br>(1.10)        | 10<br>(0.39)   | M5  | 23.00<br>(0.91)       | 40<br>(1.57)  | 45<br>(1.77)  | 42<br>(1.65) | 3<br>(0.12) | 5.5<br>(0.22) | M5  | 25<br>(0.98)       | 44.5<br>(1.75) | M5  | 8<br>(0.31)  | 55<br>(2.17)             | 40<br>(1.57) | 59<br>(2.32)  | 60<br>(2.36)  | M5     | 13<br>(0.51) | 68<br>(2.68)  | 98<br>(3.86)   | 9<br>(0.35)    |
| VRG 16-60  | 58.0<br>(2.28)        | 10<br>(0.39)   | M5  | 23.00<br>(0.91)       | 70<br>(2.76)  | 75<br>(2.95)  | 42<br>(1.65) | 3<br>(0.12) | 5.5<br>(0.22) | M5  | 25<br>(0.98)       | 44.5<br>(1.75) | M5  | 8<br>(0.31)  | 55<br>(2.17)             | 40<br>(1.57) | 59<br>(2.32)  | 90<br>(3.54)  | M5     | 13<br>(0.51) | 110<br>(4.33) | 170<br>(6.69)  | 9<br>(0.35)    |
| VRG 16-80  | 78.0<br>(3.07)        | 10<br>(0.39)   | M5  | 23.00<br>(0.91)       | 90<br>(3.54)  | 95<br>(3.74)  | 42<br>(1.65) | 3<br>(0.12) | 5.5<br>(0.22) | M5  | 25<br>(0.98)       | 44.5<br>(1.75) | M5  | 8<br>(0.31)  | 55<br>(2.17)             | 40<br>(1.57) | 59<br>(2.32)  | 110<br>(4.33) | M5     | 13<br>(0.51) | 130<br>(5.12) | 210<br>(8.27)  | 9<br>(0.35)    |
| VRG 20-40  | 38.0<br>(1.50)        | 11<br>(0.43)   | M6  | 24.00<br>(0.94)       | 54<br>(2.13)  | 58<br>(2.28)  | 52<br>(2.05) | 4<br>(0.16) | 6.6<br>(0.26) | M6  | 30<br>(1.18)       | 54<br>(2.13)   | M6  | 10<br>(0.39) | 65<br>(2.56)             | 46<br>(1.81) | 70<br>(2.76)  | 71<br>(2.80)  | M5     | 17<br>(0.67) | 82<br>(3.23)  | 122<br>(4.80)  | 12.5<br>(0.49) |
| VRG 20-80  | 80.0<br>(3.15)        | 11<br>(0.43)   | M6  | 24.00<br>(0.94)       | 96<br>(3.78)  | 100<br>(3.94) | 52<br>(2.05) | 4<br>(0.16) | 6.6<br>(0.26) | M6  | 30<br>(1.18)       | 54<br>(2.13)   | M6  | 10<br>(0.39) | 65<br>(2.56)             | 46<br>(1.81) | 70<br>(2.76)  | 113<br>(4.45) | M5     | 17<br>(0.67) | 142<br>(5.59) | 222<br>(8.74)  | 12.5<br>(0.49) |
| VRG 20-100 | 100.0<br>(3.94)       | 11<br>(0.43)   | M6  | 24.00<br>(0.94)       | 116<br>(4.57) | 120<br>(4.72) | 52<br>(2.05) | 4<br>(0.16) | 6.6<br>(0.26) | M6  | 30<br>(1.18)       | 54<br>(2.13)   | M6  | 10<br>(0.39) | 65<br>(2.56)             | 46<br>(1.81) | 70<br>(2.76)  | 133<br>(5.24) | M5     | 17<br>(0.67) | 162<br>(6.38) | 262<br>(10.31) | 12.5<br>(0.49) |
| VRG 25-50  | 48.0<br>(1.89)        | 12.5<br>(0.49) | M8  | 32.00<br>(1.26)       | 66<br>(2.60)  | 70<br>(2.76)  | 62<br>(2.44) | 4<br>(0.16) | 9<br>(0.35)   | M8  | 40<br>(1.57)       | 64<br>(2.52)   | M8  | 12<br>(0.47) | 76<br>(2.99)             | 53<br>(2.09) | 82<br>(3.23)  | 88<br>(3.46)  | M5     | 21<br>(0.83) | 100<br>(3.94) | 150<br>(5.91)  | 14<br>(0.55)   |
| VRG 25-100 | 102.0<br>(4.02)       | 12.5<br>(0.49) | M8  | 32.00<br>(1.26)       | 120<br>(4.72) | 124<br>(4.88) | 62<br>(2.44) | 4<br>(0.16) | 9<br>(0.35)   | M8  | 40<br>(1.57)       | 64<br>(2.52)   | M8  | 12<br>(0.47) | 76<br>(2.99)             | 53<br>(2.09) | 82<br>(3.23)  | 142<br>(5.59) | M5     | 21<br>(0.83) | 182<br>(7.17) | 282<br>(11.10) | 14<br>(0.55)   |
| VRG 25-120 | 120.0<br>(4.72)       | 12.5<br>(0.49) | M8  | 32.00<br>(1.26)       | 138<br>(5.43) | 142<br>(5.59) | 62<br>(2.44) | 4<br>(0.16) | 9<br>(0.35)   | M8  | 40<br>(1.57)       | 64<br>(2.52)   | M8  | 12<br>(0.47) | 76<br>(2.99)             | 53<br>(2.09) | 82<br>(3.23)  | 160<br>(6.30) | M5     | 21<br>(0.83) | 200<br>(7.87) | 320<br>(12.60) | 14<br>(0.55)   |
| VRG 32-70  | 60.0<br>(2.36)        | 22<br>(0.87)   | M8  | 35.00<br>(1.38)       |               | 86<br>(3.39)  | 64<br>(2.52) | 6<br>(0.24) |               | M8  | 50<br>(1.97)       | 70<br>(2.76)   | M10 | 15<br>(0.59) | 82<br>(3.23)             | 68<br>(2.68) | 100<br>(3.94) | 110<br>(4.33) | RC 1/8 | 24<br>(0.94) | 150<br>(5.91) | 220<br>(8.66)  | 15<br>(0.59)   |
| VRG 32-120 | 108.0<br>(4.25)       | 22<br>(0.87)   | M8  | 35.00<br>(1.38)       |               | 134<br>(5.28) | 64<br>(2.52) | 6<br>(0.24) |               | M8  | 50<br>(1.97)       | 70<br>(2.76)   | M10 | 15<br>(0.59) | 82<br>(3.23)             | 68<br>(2.68) | 100<br>(3.94) | 158<br>(6.22) | RC 1/8 | 24<br>(0.94) | 198<br>(7.80) | 318<br>(12.52) | 15<br>(0.59)   |
| VRG 32-160 | 152.0<br>(5.98)       | 22<br>(0.87)   | M8  | 35.00<br>(1.38)       |               | 178<br>(7.01) | 64<br>(2.52) | 6<br>(0.24) |               | M8  | 50<br>(1.97)       | 70<br>(2.76)   | M10 | 15<br>(0.59) | 82<br>(3.23)             | 68<br>(2.68) | 100<br>(3.94) | 202<br>(7.95) | RC 1/8 | 24<br>(0.94) | 242<br>(9.53) | 402<br>(15.83) | 15<br>(0.59)   |
| VRG 40-100 | 80.0<br>(3.15)        | 28<br>(1.10)   | M10 | 40.00<br>(1.57)       |               | 116<br>(4.57) | 76<br>(2.99) | 6<br>(0.24) |               | M10 | 60<br>(2.36)       | 86<br>(3.39)   | M12 | 18<br>(0.71) | 98<br>(3.86)             | 80<br>(3.15) | 118<br>(4.65) | 148<br>(5.83) | RC 1/8 | 28<br>(1.10) | 188<br>(7.40) | 288<br>(11.34) | 18<br>(0.71)   |
| VRG 40-160 | 138.0<br>(5.43)       | 28<br>(1.10)   | M10 | 40.00<br>(1.57)       |               | 174<br>(6.85) | 76<br>(2.99) | 6<br>(0.24) |               | M10 | 60<br>(2.36)       | 86<br>(3.39)   | M12 | 18<br>(0.71) | 98<br>(3.86)             | 80<br>(3.15) | 118<br>(4.65) | 206<br>(8.11) | RC 1/8 | 28<br>(1.10) | 246<br>(9.69) | 406<br>(15.98) | 18<br>(0.71)   |

\* Dimensions are in millimeters (inches).

\*\* All dimensions are descriptive and subject to variation for technical upgrading. We reserve the right to make variations without prior notification



Applied Robotics  
648 Saratoga Road  
Glenville, NY 12302 USA  
Tel. +1 518 384 1000 Fax +1.5183841200  
info@appliedrobotics.com  
www.appliedrobotics.com



EFFECTO GROUP S.p.A.  
Via Roma, 141/143  
28017 San Maurizio d'Opaglio (NO) - Italy  
Tel. +39 0322 96142 Fax +39 0322 967453  
info@effectogroup.com  
www.effectogroup.com

