

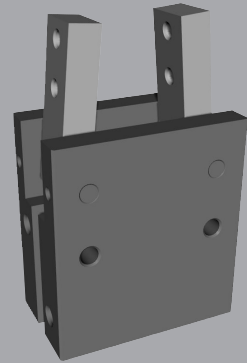
# Pneumatic Angular Grippers

## FRC 2-Finger

FRC is an angular gripper for universal use in clean or slightly dirty environments. Suitable for space sensitive applications.

### Advantages

- Cost-efficient gripping system for lighter duty applications.
- Slim design allowing the grippers to be arranged in a row.
- Available in a comprehensive range of piston plate diameters from 12 to 32mm.
- Light, compact design for space-saving handling without interference.
- Integrated permanent magnets for direct monitoring of piston movement.
- Slots for mounting and positioning of magnetic-field sensors.



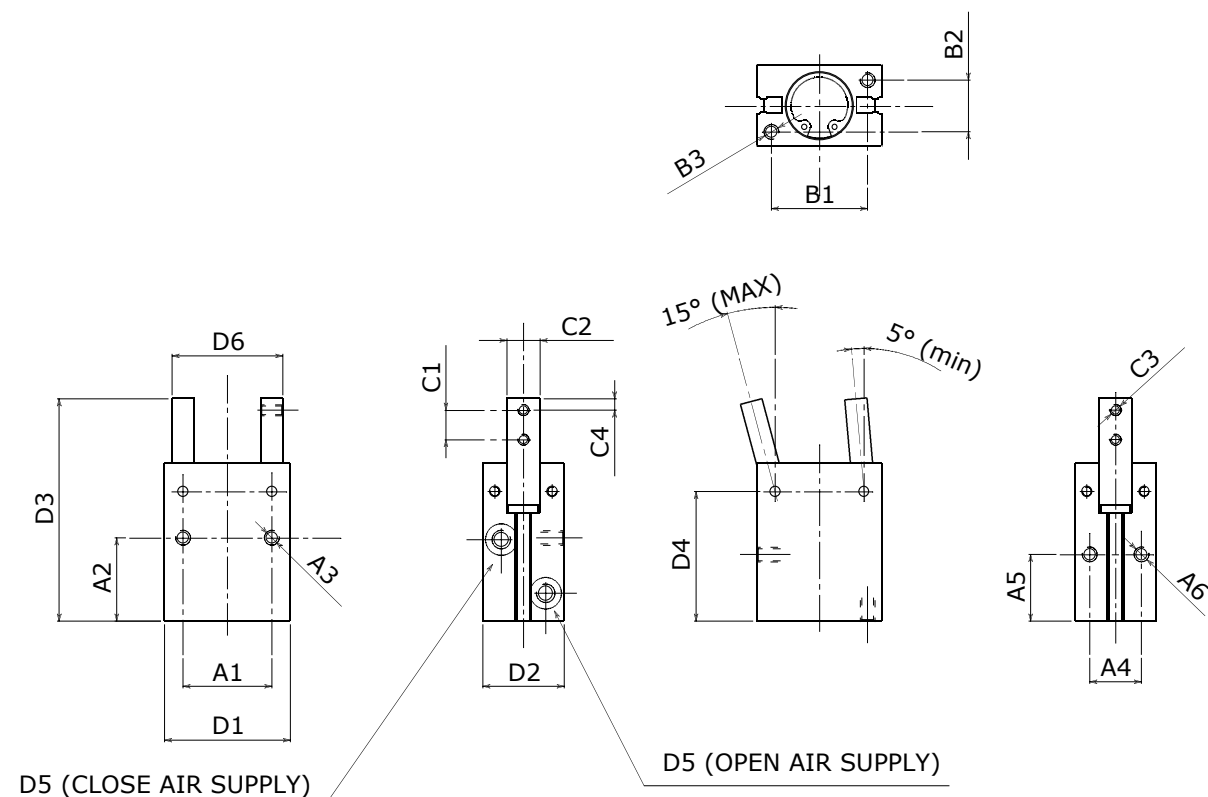
## SPECIFICATIONS

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
<b>FRC 12</b>	-5°/+15°	0.7 cm <sup>3</sup>	20 N	25 N	40 N	50 N	0.20 kg	0.10 kg	± 0.05 mm
		0.04 in <sup>3</sup>	4.5 lb	5.6 lb	9.0 lb	11.24 lb	0.40 lb	0.22 lb	± 0.002 in
<b>FRC 16</b>	-5°/+15°	1.5 cm <sup>3</sup>	45 N	59.5 N	90 N	119 N	0.45 kg	0.12 kg	± 0.05 mm
		0.09 in <sup>3</sup>	10.1 lb	13.4 lb	20.2 lb	26.7512 lb	1.00 lb	0.26 lb	± 0.002 in
<b>FRC 20</b>	-5°/+15°	2.9 cm <sup>3</sup>	42.5 N	58 N	85 N	116 N	0.43 kg	0.20 kg	± 0.05 mm
		0.18 in <sup>3</sup>	9.6 lb	13.0 lb	19.1 lb	26.0768 lb	0.90 lb	0.44 lb	± 0.002 in
<b>FRC 25</b>	-5°/+15°	5.5 cm <sup>3</sup>	85 N	110 N	170 N	220 N	0.85 kg	0.33 kg	± 0.05 mm
		0.34 in <sup>3</sup>	19.1 lb	24.7 lb	38.2 lb	49.456 lb	1.90 lb	0.73 lb	± 0.002 in
<b>FRC 32</b>	-5°/+15°	10.3 cm <sup>3</sup>	152 N	200 N	304 N	400 N	1.52 kg	0.56 kg	± 0.05 mm
		0.63 in <sup>3</sup>	34.2 lb	45.0 lb	68.3 lb	89.92 lb	3.30 lb	1.23 lb	± 0.002 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.  
 Operating Pressure **2 - 8 bar (29 - 116 psi)**  
 Working Temperature **5 - 60 °C (41 - 140 °F)**  
 Noise Emission (Sound Pressure) **≤ 70 dB(A) in any direction**

# PRODUCT INFORMATION

# FRC 2-Finger



### Options

- Magnetic switches

	Mounting - Option # 1						Mounting - Option # 2			Finger Application				Informational Dimensions					
	A1	A2	A3	A4	A5	A6	B1	B2	B3	C1	C2	C3	C4	D1	D2	D3	D4	D5	D6
<b>FRC 12</b>	20.0 (0.79)	20.0 (0.79)	M3	10.2 (0.40)	16 (0.63)	M3	22.00 (0.87)	10 (0.39)	M3	6 (0.24)	7 (0.28)	M3	3 (0.12)	28 (1.10)	16 (0.63)	54.4 (2.14)	32.9 (1.30)	M3	25 (0.98)
<b>FRC 16</b>	24.0 (0.94)	22.5 (0.89)	M4	16 (0.63)	18 (0.71)	M4	26.00 (1.02)	14 (0.55)	M4	8 (0.31)	9 (0.35)	M3	3 (0.12)	34 (1.34)	22 (0.87)	60 (2.36)	35 (1.38)	M5	30 (1.18)
<b>FRC 20</b>	30.0 (1.18)	25 (0.98)	M5	18 (0.71)	19 (0.75)	M5	35.00 (1.38)	16 (0.63)	M5	10 (0.39)	12 (0.47)	M4	4 (0.16)	45 (1.77)	26 (1.02)	72 (2.83)	39.5 (1.56)	M5	37 (1.46)
<b>FRC 25</b>	36.0 (1.42)	28.5 (1.12)	M6	19 (0.75)	21.5 (0.85)	M6	40.00 (1.57)	20 (0.79)	M6	12 (0.47)	14 (0.55)	M5	5 (0.20)	52 (2.05)	32 (1.26)	84 (3.31)	45.5 (1.79)	M5	46 (1.81)
<b>FRC 32</b>	44.0 (1.73)	37.5 (1.48)	M6	21.5 (0.85)	30 (1.18)	M6	46.00 (1.81)	26 (1.02)	M6	14 (0.55)	18 (0.71)	M6	6 (0.24)	60 (2.36)	40 (1.57)	98 (3.86)	54 (2.13)	M5	52 (2.05)

\* 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@effecto.com  
www.effecto.com

