

# GRIPPERS

## AIR OR HYDRAULIC

## ANGULAR OR PARALLEL MOTION

*A Wide Range of Sizes, Jaw Styles, Jaw Travels,  
and Gripping Forces for Most Any Gripping Requirement*

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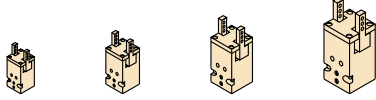
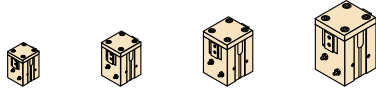
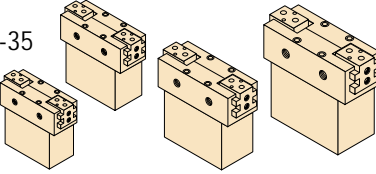
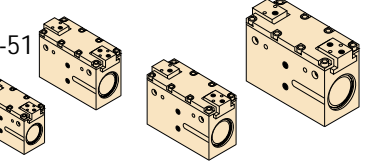
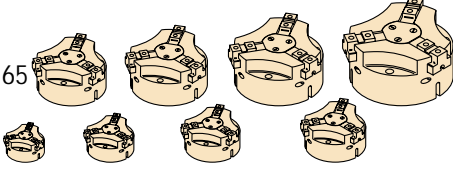
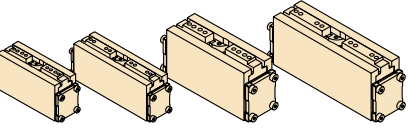
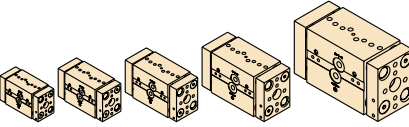
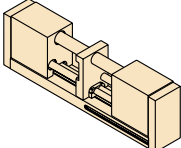
**SERIES 190/191**  
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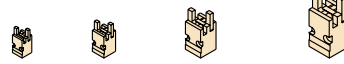
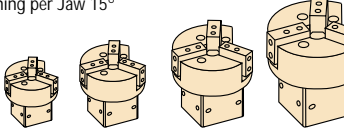
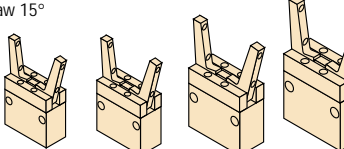
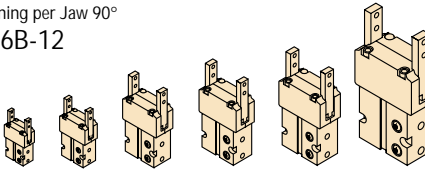
# STANDARD PARALLEL GRIPPER SELECTION GUIDE

SERIES	SIZE	GRIP FORCE* lb [N]	NOMINAL TOTAL JAW TRAVEL Inches [mm]	UNIT WEIGHT lb [kg]	FEATURES	
<b>190/191</b> 6A-2 to 6A-15 	SHORT JAW TRAVEL: STYLE 1 & 2					
	6	5.3 [24]	.157 [4]	0.11 [0.05]	<ul style="list-style-type: none"> <li>• small size</li> <li>• pneumatic service</li> <li>• two jaw travels</li> <li>• two jaw styles</li> <li>• spring assist</li> <li>• switches</li> </ul>	
	7	10.6 [47]	.276 [7]	0.25 [0.11]		
	8	21.8 [97]	.394 [10]	0.67 [0.30]		
	9	42.6 [190]	.512 [13]	1.46 [0.66]		
	LONG JAW TRAVEL: STYLE 2					
	6	3.2 [14]	.315 [8]	0.13 [0.06]		
	7	8.1 [36]	.433 [11]	0.27 [0.12]		
	8	13.1 [58]	.630 [16]	0.71 [0.32]		
	9	23.5 [105]	.866 [22]	1.62 [0.73]		
<b>GRD</b> 6A-16 to 6A-29 	SHORT JAW TRAVEL:					
	3	33 [147]	.187 [4.75]	0.25 [0.11]	<ul style="list-style-type: none"> <li>• small size</li> <li>• pneumatic service</li> <li>• high grip force</li> <li>• two jaw travels</li> <li>• spring assist</li> <li>• switches</li> <li>• low cost</li> </ul>	
	4	40 [178]	.335 [8.5]	0.37 [0.17]		
	5	87 [387]	.315 [8.0]	0.66 [0.30]		
	6	136 [604]	.423 [10.75]	1.41 [0.64]		
	LONG TRAVEL:					
	5	54 [240]	.502 [12.75]	0.72 [0.32]		
	6	91 [406]	.699 [17.75]	1.56 [0.71]		
<b>5300</b> 6A-30 to 6A-35 	6	128 [570]	.62 [15.8]	3.1 [1.41]		<ul style="list-style-type: none"> <li>• heavy duty construction</li> <li>• pneumatic service</li> <li>• high grip force</li> <li>• spring assist</li> <li>• switches</li> </ul>
	7	261 [1164]	1.00 [25.4]	7.0 [3.18]		
	8	488 [2172]	1.31 [33.3]	14.0 [6.35]		
	9	980 [4356]	1.80 [45.8]	37.0 [16.8]		
	<b>GRC</b> 6A-36 to 6A-51 	3	96 [427]	1.00 [25.5]	1.68 [0.76]	
4		209 [930]	1.53 [39]	3.98 [1.81]		
5		383 [1704]	2.00 [51]	7.35 [3.33]		
6		870 [3870]	3.07 [78]	20.47 [9.28]		
<b>GRT</b> 6A-52 to 6A-65 		1	44 [196]	0.236 [6] ▲	0.27 [0.12]	<ul style="list-style-type: none"> <li>• very low profile</li> <li>• pneumatic service</li> <li>• eight sizes</li> <li>• high grip force</li> <li>• switches</li> </ul>
	2	112 [499]	0.315 [8] ▲	0.59 [0.27]		
	3	168 [747]	0.472 [12] ▲	0.95 [0.43]		
	4	218 [971]	0.630 [16] ▲	1.75 [0.80]		
	5	378 [1683]	0.787 [20] ▲	2.82 [1.28]		
	6	569 [2531]	1.024 [26] ▲	5.1 [2.32]		
	7	880 [3912]	1.260 [32] ▲	8.75 [3.98]		
	8	1452 [6459]	1.575 [40] ▲	15.5 [7.05]		
<b>GRL</b> 6A-66 to 6A-75 	14x7	28 [124]	0.28 [7]	0.18 [0.08]	<ul style="list-style-type: none"> <li>• long travel</li> <li>• pneumatic service</li> <li>• slim profile</li> <li>• switches</li> </ul>	
	14x13	30 [132]	0.51 [13]	0.24 [0.11]		
	16x20	41 [182]	0.79 [20]	0.39 [0.18]		
	16x26	41 [182]	1.02 [26]	0.47 [0.21]		
<b>GRW</b> 6A-76 to 6A-85 	16	36 [160]	0.79 [20]	0.69 [0.3]	<ul style="list-style-type: none"> <li>• long travel</li> <li>• superior jaw stability</li> <li>• high performance</li> <li>• dependable</li> <li>• simple to use</li> </ul>	
	25	90 [400]	2.09 [53]	2.5 [1.1]		
	32	170 [756]	2.56 [65]	5.3 [2.4]		
	40	207 [921]	3.58 [91]	11.2 [5.1]		
	50	429 [1908]	4.61 [117]	22.1 [10.0]		
<b>GRR</b> 6A-86 to 6A-96 	50	460 [2046]	7.87 [200]	36.6 [16.6]	<ul style="list-style-type: none"> <li>• long travel</li> <li>• high capacity</li> <li>• narrow width</li> <li>• rugged design</li> <li>• low jaw deflection</li> </ul>	

\* Above gripping force shown is at zero tooling length and 87 psi [6 bar] (pneumatic) or 750 psi [50 bar] (hydraulic). The values shown are minimum produced. Optional spring assist can increase the gripping force shown above or can be a safety device on the following types: Series 190/191, GRD, 5300, GRC, and GRT. The spring option can also be used to allow single acting operation of Series GRC, GRD, 5300, most 190/191, and GRT Grippers.

▲ Represents the change in jaw movement as a diameter change.

# STANDARD ANGULAR GRIPPER SELECTION GUIDE

SERIES	SIZE	GRIP FORCE* lb [N]	MINIMUM DISTANCE** inches [mm]	UNIT WEIGHT lb [kg]	FEATURES
<b>8400 [190]</b> Opening per Jaw 20° 6C-2 to 6C-13 	0 1 2 3	11.7 [52] 19.7 [88] 55 [244] 81 [359]	.20 [5.1] .30 [7.6] .40 [10] .62 [16]	.06 [0.03] 0.14 [0.08] 0.39 [0.22] 1.06 [0.48]	<ul style="list-style-type: none"> <li>• small size</li> <li>• pneumatic service</li> <li>• spring assist</li> <li>• switches</li> <li>• low cost</li> </ul>
<b>8600 3 Jaw</b> Opening per Jaw 15° 6C-14 to 6C-19 	2 3 4 5	58 [258] 127 [565] 285 [1268] 730 [3247]	.64 [16] .81 [21] .97 [25] 1.20 [30]	1.43 [0.65] 2.74 [1.24] 5.25 [2.38] 9.90 [4.49]	<ul style="list-style-type: none"> <li>• lightweight</li> <li>• pneumatic service</li> <li>• self-centering</li> <li>• switches</li> </ul>
<b>5300</b> Opening per Jaw 15° 6C-20 to 6C-26 	2 3 4 5	201 [894] 499 [2220] 1025 [4559] 2167 [9639]	.81 [21] .97 [25] 1.20 [30] 1.68 [43]	2.40 [1.08] 4.87 [2.20] 9.58 [4.35] 27.73 [12.57]	<ul style="list-style-type: none"> <li>• heavy duty construction</li> <li>• pneumatic service</li> <li>• high grip force</li> <li>• spring assist</li> <li>• switches</li> </ul>
<b>GRB</b> Opening per Jaw 90° 6B-1 to 6B-12 	2 3 4 5 6 7	7.4 [33] 13.7 [61] 30 [133] 71 [315] 131 [582] 223 [992]	.47 [12] .57 [14] .67 [17] .92 [23] 1.25 [32] 1.97 [50]	.25 [0.10] .56 [0.25] .97 [0.44] 2.12 [0.96] 4.25 [1.92] 12.00 [5.44]	<ul style="list-style-type: none"> <li>• robust cam design</li> <li>• pneumatic service</li> <li>• adjustable opening</li> <li>• switches</li> </ul>

\*Above gripping force is at the corresponding minimum distance (from the jaw pivot) at 87 psi [6 bar] (pneumatic) and 750 psi [50 bar] (hydraulic).  
 Optional spring assist can increase the gripping force or be a safety device on the Series 5300 and 190.

## SEE THE PHD CLASSICS CATALOG FOR THE FOLLOWING PHD GRIPPERS:

### PARALLEL

Series 7900  
 Series 8600

### ANGULAR

Series 7900 2 & 3 Jaw  
 Series 8600 2 Jaw



CUSTOM GRIPPERS ARE AVAILABLE. PLEASE CONSULT PHD

# VERSATILITY

## SIMPLE

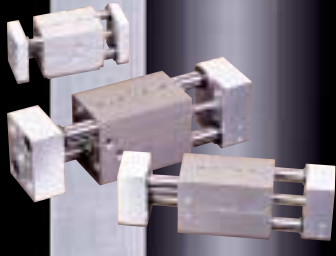
With larger tooling surfaces and additional mounting & dowel holes, Series GRW grippers are easy to mount and tool

## PERFORMANCE

The oversized guide shafts reduce deflection, and improve rigidity & reliability for longer life.

## DEPENDABILITY

A simplified design with reduced failure points eliminate risks.



## STANDARD UNITS

Size: 5 bore sizes  
Grip Force: up to 429 lb (1908 N)  
Jaw Travel: .79" (20 mm) to 4.61" (117 mm)  
Pressure: up to 100 psi (7 bar)

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