

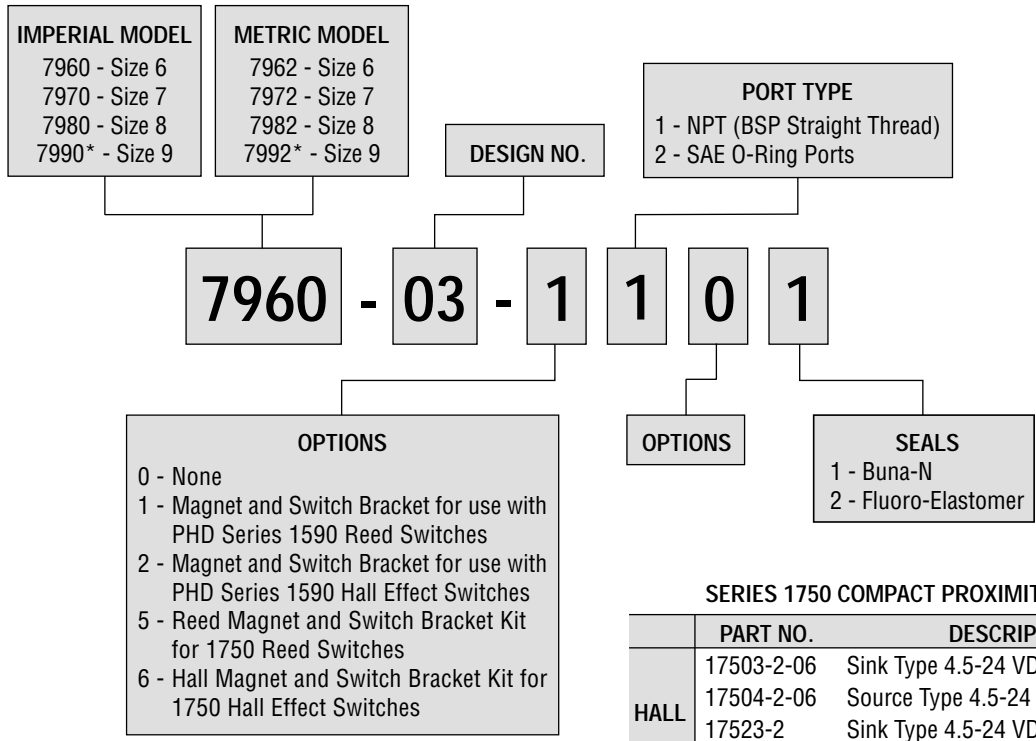


## SERIES 7900 PARALLEL GRIPPERS



*For new applications  
we recommend  
Series GRW & GRC Grippers.  
See PHD's main catalog.*

**TO ORDER SPECIFY:**  
Model, Design No., Options, Port Type, and Seals.



\*Models 799x are for pneumatic service only.

**SERIES 1590 LIQUID RESISTANT SWITCHES**

	PART NO.	DESCRIPTION
HALL	15902-1	Sink and /or Source Type 4.5-24 VDC
REED	15900-1	10 Watt Reed Switch
	15901-1	Triac

Switches must be ordered separately.

**SERIES 1750 COMPACT PROXIMITY SWITCHES**

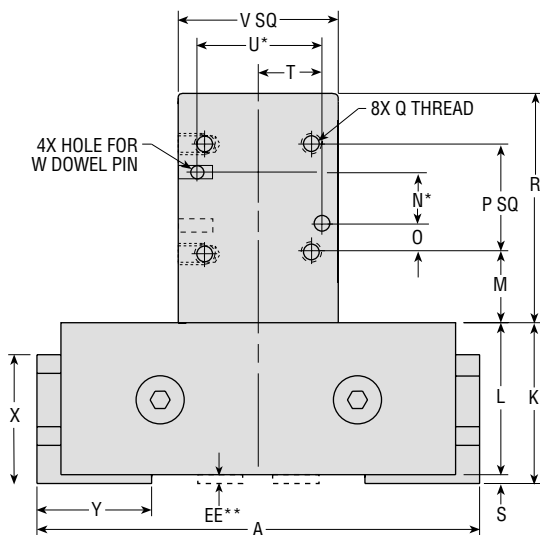
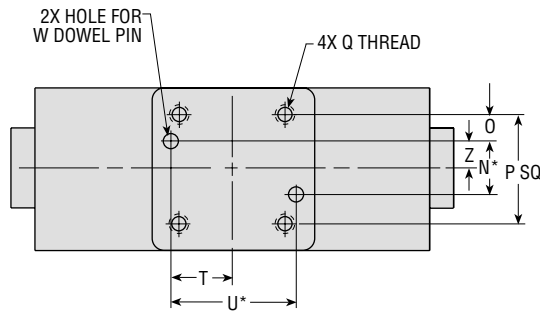
	PART NO.	DESCRIPTION
HALL	17503-2-06	Sink Type 4.5-24 VDC
	17504-2-06	Source Type 4.5-24 VDC
	17523-2	Sink Type 4.5-24 VDC, Quick Connect
	17524-2	Source Type 4.5-24 VDC, Quick Connect
REED	17502-2-06	Sink or Source Type 4.5-24 VDC
	17509-3-06	AC Type 110-120 VAC with Current Limit
	17522-2	Sink or Source Type VDC, Quick Connect
	17529-3	AC Type 110-120 VAC, Quick Connect with Current Limit

See Switches and Sensors section in PHD's main catalog for switch information.



CUSTOM GRIPPERS ARE AVAILABLE. PLEASE CONSULT PHD.

# DIMENSIONS: SERIES 7900 PARALLEL GRIPPERS

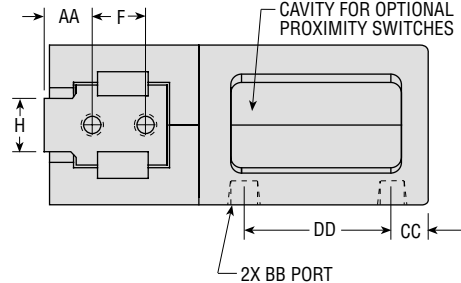
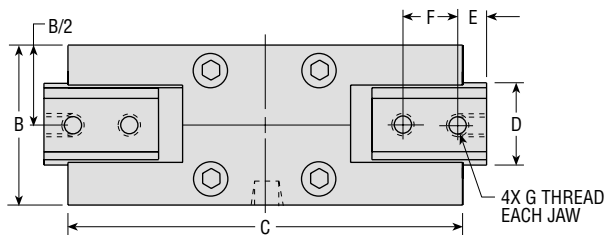


LETTER DIM.	MODEL NUMBER							
	7960	7962	7970	7972	7980	7982	7990	7992
	in	mm	in	mm	in	mm	in	mm
NOMINAL JAW TRAVEL	.62	15.8	1.00	25.4	1.31	33.3	1.80	45.8
A CLOSED*	4.16	105.6	5.71	145.0	7.22	183.4	9.98	253.5
A OPEN*	4.72	119.9	6.65	168.9	8.47	215.1	11.69	296.9
B	1.875	47.5	2.250	57.0	3.000	76.0	4.000	101.50
C	4.000	101.5	5.500	140.0	7.000	178.0	9.500	241.50
D	.960	24.5	1.130	29.0	1.440	36.5	2.190	55.5
E	.270	7.0	.420	10.5	.430	11.0	.460	11.5
F	.625	16.0	.750	19.0	1.000	25.5	1.500	38.0
G	1/4-20 x M6 x 1 x		5/16-18 x M8 x 1.25		3/8-16 x M10 x 1.5		1/2-13 x M12 x 1.75	
H	.31 DP	7.9 DP	.38 DP	x 9.7 DP	.44 DP	x 11.2 DP	.56 DP	x 14.2 DP
K	.625	16.0	.750	19.0	1.000	25.5	1.500	38.0
L	1.604	40.5	2.161	55.0	2.827	72.0	3.811	97.0
M	1.540	39.0	2.100	53.5	2.740	69.5	3.680	93.5
N	.750	19.0	1.000	25.5	1.000	25.5	1.125	28.5
N*	.7000	17.78	.7500	19.05	1.1250	28.57	1.7500	44.45
O	.275	7.0	.375	9.5	.312	8.0	.500	13.0
P	1.250	32.0	1.500	38.0	1.750	44.5	2.750	70.0
Q	10-24 x M5 x 0.8		1/4-20 x M6 x 1.0		5/16-18 M8 x 1.25		3/8-16 x M10 x 1.50	
R	.38 DP	x 9.7 DP	.38 DP	x 9.7 DP	x .44 DP	x 11.2 DP	.56 DP	x 14.2 DP
S	2.625	66.5	3.187	81.0	3.625	92.0	4.750	120.5
T	.062	1.5	.062	1.5	.087	2.5	.131	3.5
U*	.687	17.5	.875	22.0	1.094	27.5	1.562	39.5
V	1.3750	34.92	1.7500	44.45	2.1880	55.57	3.1250	79.37
V	1.750	44.5	2.250	57.0	2.750	70.0	4.000	101.5
W	5/32 x	4.0 x	3/16 x	5.0 x	1/4 x	7.0 x	5/16 x	8.0 x
X	.187 DP	5.0 DP	.250 DP	6.5 DP	.250 DP	6.5 DP	.312 DP	8.0 DP
Y	1.260	32.0	1.726	44.0	2.200	56.0	3.000	76.0
Z	1.170	30.0	1.600	40.5	1.860	47.0	2.420	61.5
Z	.350	9.0	.375	9.5	.562	14.5	.875	22.0
AA	.437	11.0	.680	17.0	.880	22.5	1.050	27.0
BB NPT	1/8 NPT	1/8 BSP	1/8 NPT	1/8 BSP	1/8 NPT	1/8 BSP	1/4 NPT	1/4 BSP
BB SAE	3/8-24	—	7/16-20	—	1/2-20	—	9/16-18	—
CC	.438	11.0	.503	13.0	.542	14.0	.636	16.0
DD	1.656	42.0	2.049	52.0	2.388	60.5	3.176	80.5
EE	.040	1.0	0	0	.035	1.0	.050	1.0

**NOTES:**

- 1) \*TOLERANCE IS  $\pm 0.0005$  [ $\pm 0.012$ ]
- 2) \*\*EE DIMENSION IS TO BUSHING BLOCK MTG SCREWS
- 3) NUMBERS IN [ ] ARE FOR METRIC UNITS AND ARE IN mm

\*A CLOSED REFLECTS THE LARGEST POSSIBLE CLOSED DIMENSION.  
 A OPEN REFLECTS THE SMALLEST POSSIBLE OPEN DIMENSION.



All dimensions are reference only unless specifically tolerated.

## *We recommend Series GRB 180 ° Jaw Motion Grippers.*

For more information, see PHD's main catalog.

### **BENEFITS**

- Series GRB Grippers provide up to 180° of angular jaw travel allowing the jaws to completely retract from the work area eliminating an otherwise required axis of travel.
- Jaws rotate completely clear of work area eliminating an otherwise required axis of travel
- Three standard jaw rotations available: 60°, 90°, and 180°
- One piece body minimizes jaw play
- Internal speed restriction removes the need for external speed controls in standard applications
- All units incorporate twin switch slots for flush switch mounting
- Two mounting surfaces
- Six sizes available
- 1-2 day shipping
- 5 million cycles minimum rated life



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## *We recommend Series 5300 Angular Oval Grippers.*

For more information, see PHD's main catalog.

### **BENEFITS**

- Double-acting for either internal or external gripping applications.
- Optional internal springs allow the unit to be used as a single-acting gripper, for additional grip force, or for grasping an object without air pressure.
- Close tolerance jaw mechanism minimizes jaw play.
- Hardened steel pivot mechanism provides long life and low maintenance.
- Available in four sizes to cover a wide range of application requirements.
- Available with a PHD Hall Effect Sensor or with PHD Hall Effect Proximity Switches for indication of jaw position and interfacing with various controllers and logic systems.



# 7900 2,3 JAW



## Series 7900 2 & 3 Jaw Angular Grippers

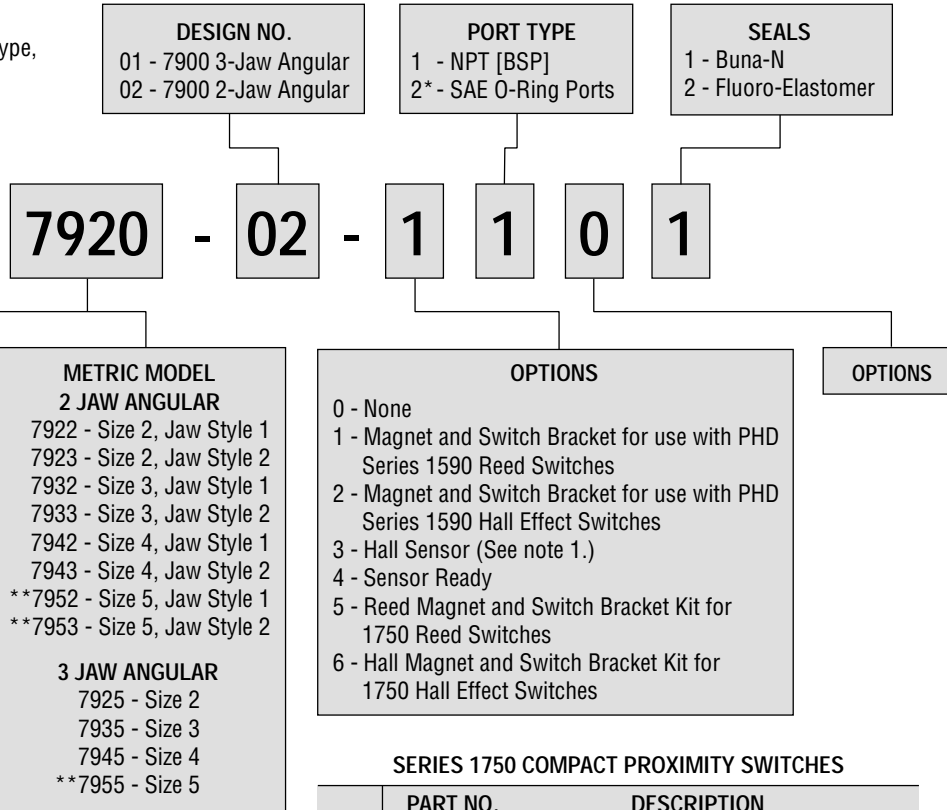


*For new applications  
we recommend  
Series GRB & 5300 Grippers.  
See PHD's main catalog.*



*For new applications  
we recommend  
Series GRT Grippers.  
See PHD's main catalog.*

**TO ORDER SPECIFY:**  
Model, Design No., Options, Port Type, and Seals.



**NOTES:**

- 1) Sensor must be used with a PHD Set Point Module. See Switches and Sensors section in PHD's main catalog for information and ordering data.
- 2) 792x Grippers are available with one switch only. All other units are available for use with two switches.
- 3) Switches must be ordered separately.
- 4) \*SAE not available on metric units.
- 5) \*\*Models 795x are for pneumatic service only.

**SERIES 1590 LIQUID RESISTANT SWITCHES**

	PART NO.	DESCRIPTION
HALL	15902-1	Sink and /or Source Type 4.5-24 VDC
REED	15900-1	10 Watt Reed Switch
	15901-1	Triac

See Switches and Sensors section in PHD's main catalog for information.

**SERIES 1750 COMPACT PROXIMITY SWITCHES**

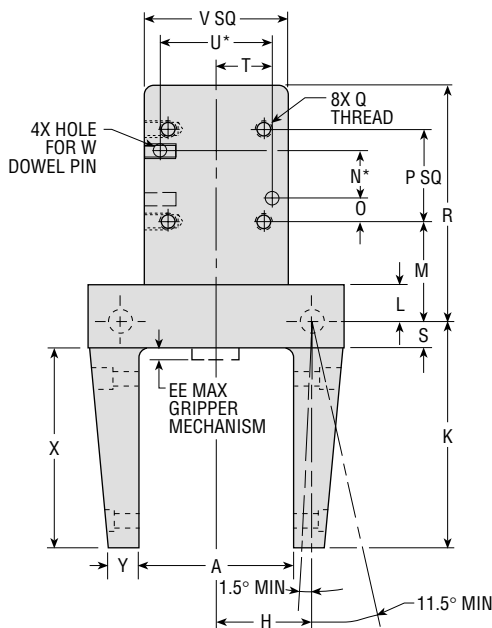
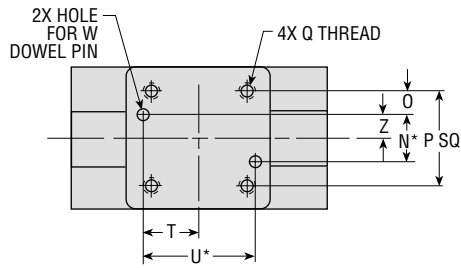
	PART NO.	DESCRIPTION
HALL	17503-2-06	Sink Type 4.5-24 VDC
	17504-2-06	Source Type 4.5-24 VDC
	17523-2	Sink Type 4.5-24 VDC, Quick Connect
	17524-2	Source Type 4.5-24 VDC, Quick Connect
REED	17502-2-06	Sink or Source Type 4.5-24 VDC
	17509-3-06	AC Type 110-120 VAC with Current Limit
	17522-2	Sink or Source Type VDC, Quick Connect
	17529-3	AC Type 110-120 VAC, Quick Connect with Current Limit

See Switches and Sensors section in PHD's main catalog for information.



CUSTOM GRIPPERS ARE AVAILABLE. PLEASE CONSULT PHD.

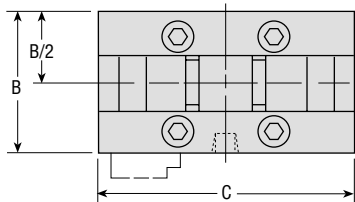
# DIMENSIONS: SERIES 7900 ANGULAR GRIPPERS - JAW STYLE 1



LETTER DIM	MODEL NUMBER							
	7920 in	7922 mm	7930 in	7932 mm	7940 in	7942 mm	7950 in	7952 mm
A	1.812	46.0	2.500	63.5	3.500	89.0	5.125	130.0
B	1.750	44.5	2.250	57.0	2.750	70.0	4.000	101.5
C	2.812	71.5	4.000	101.5	5.500	140.0	7.500	190.5
D	.750	19.0	.875	22.0	1.000	25.5	1.500	38.0
F	1.500	38.0	2.000	51.0	2.750	70.0	3.500	89.0
G	#10	M4	1/4	M6	5/16	M8	3/8	M10
H	1.062	27.0	1.500	38.0	2.000	51.0	2.875	73.0
K	2.438	62.0	3.390	86.0	4.587	116.5	5.734	145.5
L	.438	11.0	.562	14.0	.688	17.5	1.125	28.5
M	1.188	30.0	1.562	39.5	1.688	43.0	2.250	57.0
N*	.7000	17.78	.7500	19.05	1.1250	28.57	1.7500	44.45
O	.275	7.0	.375	9.5	.312	8.0	.500	13.0
P	1.250	32.0	1.500	38.0	1.750	44.5	2.750	70.0
Q	10-24 x .38 DP	M5 x 0.8 x 9.5 DP	1/4-20 x .38 DP	M6 x 1.0 x 9.5 DP	5/16-18 x .44 DP	M8 x 1.25 x 11.0 DP	3/8-16 x .56 DP	M10 x 1.50 x 14.0 DP
R	3.063	77.8	3.749	95.2	4.312	109.5	5.875	149.2
S	.312	8.0	.438	11.0	.562	14.0	.845	22.0
T	.687	17.5	.875	22.0	1.094	27.5	1.562	39.5
U*	1.3750	34.92	1.7500	44.45	2.1880	55.57	3.1250	79.37
V	1.750	44.5	2.250	57.0	2.750	70.0	4.000	101.5
W	5/32 x .187 DP	4.0 x 5.0	3/16 x .250 DP	5.0 x 6.5	1/4 x .250 DP	7.0 x 6.5	5/16 x .312 DP	8.0 x 8.0
X	2.126	54.0	2.965	75.5	4.025	102.0	4.889	124.0
Y	.285	7.5	.465	12.0	.598	15.0	.688	17.5
Z	.350	9.0	.375	9.5	.562	14.0	.875	22.0
AA	.688	17.5	.900	23.0	1.312	33.5	1.750	44.5
BB	1/8 NPT	1/8 BSP	1/8 NPT	1/8 BSP	1/8 NPT	1/8 BSP	1/4 NPT	1/4 BSP
BB SAE	3/8-24	—	7/16-20	—	1/2-20	—	9/16-18	—
CC	.438	11.0	.503	13.0	.542	14.0	.636	16.0
DD	1.656	42.0	2.049	52.0	2.388	60.5	3.176	80.5
EE	.130	3.5	.160	4.0	.200	5.0	.250	6.5

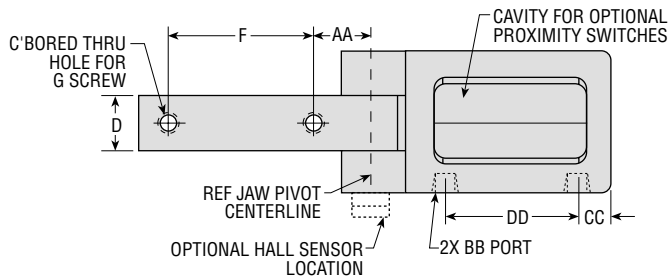
## NOTES:

- \*TOLERANCE IS  $\pm 0.0005$  [ $\pm 0.012$ ]
- NUMBERS IN [ ] ARE FOR METRIC UNITS AND ARE IN mm



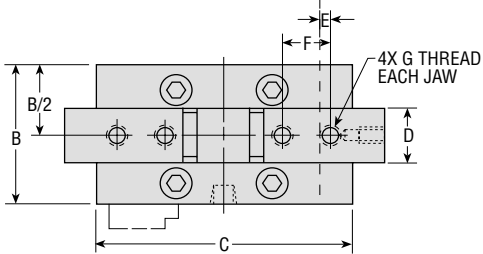
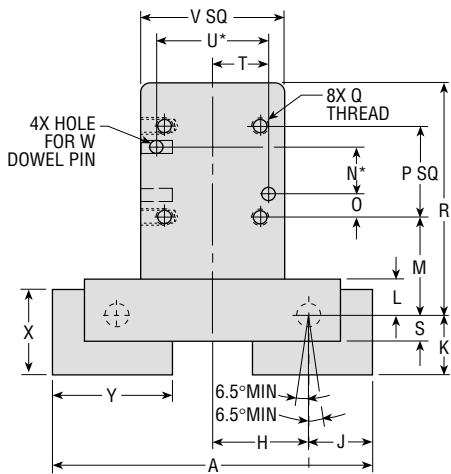
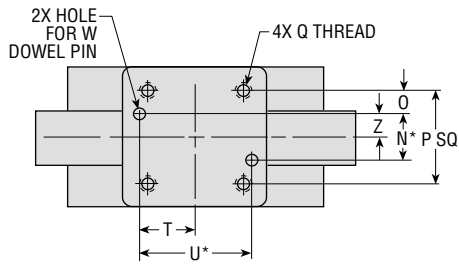
GRIPPER JAWS: SHOWN AT PARALLEL POSITION

JAW MOVEMENT SHOWS MINIMUM AMOUNT OF JAW ROTATION. JAWS MAY OPEN 3° OR CLOSE 3° BEYOND STATED MINIMUM ROTATION.



All dimensions are reference only unless specifically tolerated.

# DIMENSIONS: SERIES 7900 ANGULAR GRIPPERS - JAW STYLE 2



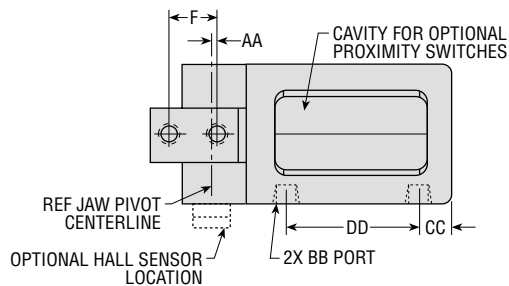
GRIPPER JAWS: SHOWN AT MID-POINT OF JAW ROTATION

JAW MOVEMENT SHOWS MINIMUM AMOUNT OF JAW ROTATION. JAWS MAY OPEN 3° OR CLOSE 3° BEYOND STATED MINIMUM ROTATION.

LETTER DIM	MODEL NUMBER							
	7921 in	7923 mm	7931 in	7933 mm	7941 in	7943 mm	7951 in	7953 mm
A	3.937	100.0	5.000	127.0	6.236	158.0	8.610	219.0
B	1.750	44.5	2.250	57.0	2.750	70.0	4.000	101.5
C	2.812	71.5	4.000	101.5	5.500	140.0	7.500	190.5
D	.750	19.0	.875	22.0	1.000	25.5	1.500	38.0
E	.231	6.0	.187	5.0	.063	1.5	0.00	0.0
F	.625	16.0	.750	19.0	1.000	25.5	1.500	38.0
G	1/4-20 x .38 DP	M6 x 1 x 9.5 DP	5/16-18 x .44 DP	M8 x 1.25 x 11.0 DP	3/8-16 x .56 DP	M10 x 1.5 x 14.0 DP	1/2-13 x .75 DP	M12 x 1.75 x 19.0 DP
H	1.062	27.0	1.500	38.0	2.000	51.0	2.875	73.0
J	.906	23.0	1.000	25.5	1.118	28.0	1.430	36.5
K	.813	21.0	.968	24.5	1.200	30.5	1.680	43.0
L	.438	11.0	.562	14.0	.688	17.5	1.125	28.5
M	1.188	30.0	1.562	39.5	1.688	43.0	2.250	57.0
N*	.7000	17.78	.7500	19.05	1.1250	28.57	1.7500	44.45
O	.275	7.0	.375	9.5	.312	8.0	.500	13.0
P	1.250	32.0	1.500	38.0	1.750	44.5	2.750	70.0
Q	10-24 x .38 DP	M5 x 0.8 x 9.5 DP	1/4-20 x .38 DP	M6 x 1.0 x 9.5 DP	5/16-18 x .44 DP	M8 x 1.25 x 11.0 DP	3/8-16 x .56 DP	M10 x 1.50 x 14.0 DP
R	3.063	77.8	3.749	95.2	4.312	109.5	5.875	149.2
S	.312	8.0	.438	11.0	.562	14.0	.845	22.0
T	.687	17.5	.875	22.0	1.094	27.5	1.562	39.5
U*	1.3750	34.92	1.7500	44.45	2.1880	55.57	3.1250	79.37
V	1.750	44.5	2.250	57.0	2.750	70.0	4.000	101.5
W	5/32 x .187 DP	4.0 x 5.0	3/16 x .250 DP	5.0 x 6.5	1/4 x .250 DP	7.0 x 6.5	5/16 x .312 DP	8.0 x 8.0
X	1.125	28.5	1.375	35.0	1.700	43.0	2.430	62.0
Y	1.500	38.0	1.875	47.5	2.430	62.0	3.430	87.0
Z	.350	8.5	.375	9.5	.562	14.0	.875	22.0
AA	.062	1.5	.095	2.5	.150	4.0	.300	7.5
BB	1/8 NPT	1/8 BSP	1/8 NPT	1/8 BSP	1/8 NPT	1/8 BSP	1/4 NPT	1/4 BSP
BB SAE	3/8-24	—	7/16-20	—	1/2-20	—	9/16-18	—
CC	.438	11.0	.503	13.0	.542	13.5	.636	16.0
DD	1.656	42.0	2.049	52.0	2.388	61.0	3.176	81.0

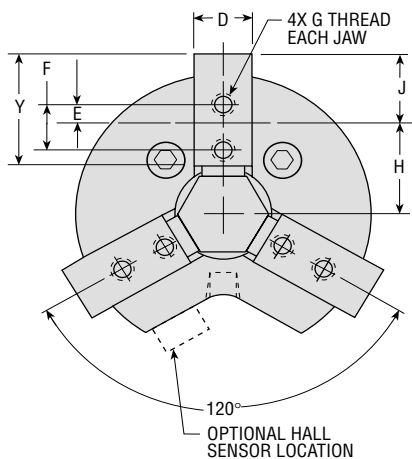
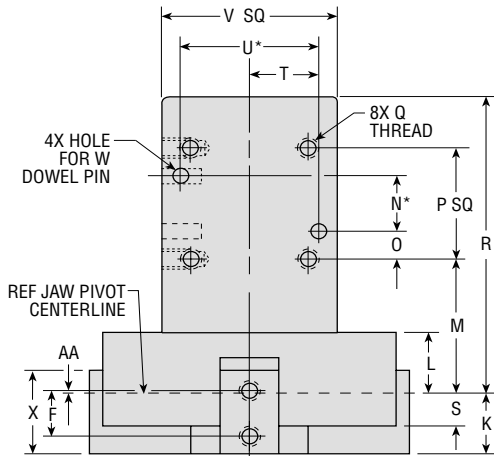
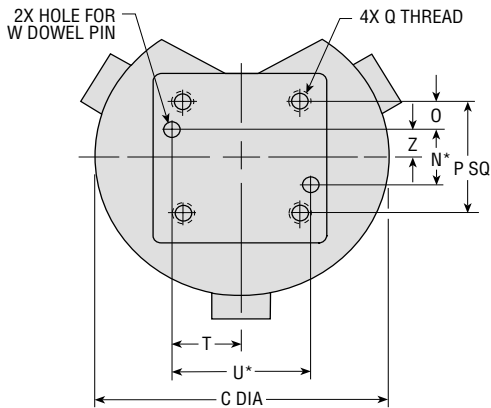
**NOTES:**

- 1) \*TOLERANCE IS  $\pm 0.0005$  [ $\pm 0.012$ ]
- 2) NUMBERS IN [ ] ARE FOR METRIC UNITS AND ARE IN mm





# DIMENSIONS: SERIES 7900 3 JAW ANGULAR GRIPPERS

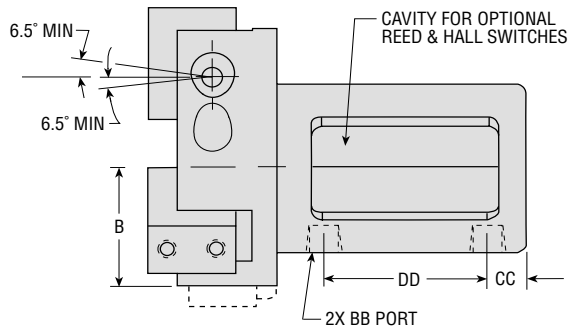


JAW MOVEMENT SHOWS MINIMUM AMOUNT OF JAW ROTATION. JAWS MAY OPEN 3° OR CLOSE 3° BEYOND STATED MINIMUM ROTATION.

LETTER DIM	MODEL NUMBER							
	7924 in	7925 mm	7934 in	7935 mm	7944 in	7945 mm	7954 in	7955 mm
B	1.246	31.5	1.587	40.5	2.022	51.5	2.594	66.0
C	3.000	76.0	3.750	95.0	4.750	120.5	6.250	159.0
D	.500	13.0	.750	19.0	.875	22.0	1.000	25.5
E	.020	0.5	.231	6.0	.187	5.0	.063	1.5
F	.437	11.0	.625	16.0	.750	19.0	1.000	25.5
G	10-24 x .28 DP	M5 x 0.8 x 7.0 DP	1/4-20 x .38 DP	M6 x 1.0 x 9.5 DP	5/16-18 x .44 DP	M8 x 1.25 x 11.0 DP	3/8-16 x .56 DP	M10 x 1.50 x 14.5 DP
H	1.056	27.0	1.250	32.0	1.625	41.0	2.312	59.0
J	.550	14.0	.906	23.0	1.000	25.5	1.118	28.5
K	.640	16.5	.813	20.5	.968	24.5	1.200	30.5
L	.813	20.5	.816	21.0	.940	24.0	1.246	31.5
M	1.563	40.0	1.816	46.0	1.941	49.5	2.371	60.0
N*	.7000	17.78	.7500	19.05	1.1250	28.57	1.7500	44.45
O	.275	7.0	.375	9.5	.312	8.0	.500	13.0
P	1.250	32.0	1.500	38.0	1.750	44.5	2.750	70.0
Q	10-24 x .38 DP	M5 x 0.8 x 9.5 DP	1/4-20 x .38 DP	M6 x 1.0 x 9.5 DP	5/16-18 x .44 DP	M8 x 1.25 x 11.0 DP	3/8-16 x .56 DP	M10 x 1.50 x 14.0 DP
R	3.438	87.5	4.000	101.5	4.565	116.0	5.996	152.0
S	.307	8.0	.434	11.0	.560	14.0	.754	19.0
T	.687	17.5	.875	22.0	1.094	27.5	1.562	39.5
U*	1.3750	34.92	1.7500	44.45	2.1880	55.57	3.1250	79.37
V	1.750	44.5	2.250	57.0	2.750	70.0	4.000	101.5
W	5/32 x .187 DP	4.0 x 5.0 DP	3/16 x .250 DP	5.0 x 6.5 DP	1/4 x .250 DP	7.0 x 6.5 DP	5/16 x .312 DP	8.0 x 8.0 DP
X	.875	22.0	1.125	28.5	1.375	35.0	1.700	43.0
Y	1.188	30.0	1.500	38.0	1.875	47.5	2.430	62.0
Z	.350	9.0	.375	9.5	.562	14.0	.875	22.0
AA	.017	0.5	.062	1.5	.095	2.5	.150	4.0
BB	1/8 NPT	1/8 BSP	1/8 NPT	1/8 BSP	1/8 NPT	1/8 BSP	1/4 NPT	1/4 BSP
BB SAE	3/8-24	—	7/16-20	—	1/2-20	—	9/16-18	—
CC	.438	11.0	.503	13.0	.542	14.0	.636	16.0
DD	1.656	42.0	2.049	52.0	2.388	60.5	3.176	80.5

**NOTES:**

- \*TOLERANCE IS ±.0005 [±0.012]
- NUMBERS IN [ ] ARE FOR METRIC UNITS AND ARE IN mm



All dimensions are reference only unless specifically tolerated.