

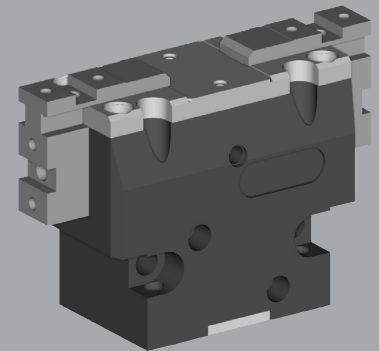
# Pneumatic Parallel Grippers

## OPE 2-Finger

OPE is a universal two-finger parallel gripper featuring high reliability and long service life, suitable for a wide range of industrial applications.

### Advantages

- Robust, lightweight housing made of hard-coated aluminum alloy.
- Sturdy C-slot with hardened steel gibs for effective jaw guidance, precise handling, and easy maintenance.
- Mounting from two sides in three screw directions for versatile and flexible integration.
- Side or top finger mounting.
- Integrated permanent magnets for direct monitoring of piston movement.
- Slots for mounting and positioning of magnetic-field sensors.
- Air supply via fitting screw connections or hose-free direct connections (optional version "X").



## SPECIFICATIONS from OPE50 to OPE80

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>OPE 50</b>	5 mm	3.5 cm <sup>3</sup>	55 N	65 N	110.0 N	130.0 N	0.55 kg	0.26 kg	± 0.05 mm
	0.20 in	0.21 in <sup>3</sup>	12.4 lb	14.6 lb	24.7 lb	29.2 lb	1.20 lb	0.57 lb	± 0.002 in
<b>OPE 50 S</b>	3 mm	3.5 cm <sup>3</sup>	92 N	109 N	184.0 N	218.0 N	0.92 kg	0.245 kg	± 0.05 mm
	0.12 in	0.21 in <sup>3</sup>	20.7 lb	24.5 lb	41.4 lb	49.0 lb	2.00 lb	0.54 lb	± 0.002 in
<b>OPE 60</b>	7.5 mm	7 cm <sup>3</sup>	75 N	83 N	150.0 N	166.0 N	0.75 kg	0.37 kg	± 0.05 mm
	0.30 in	0.43 in <sup>3</sup>	16.9 lb	18.7 lb	33.7 lb	37.3 lb	1.70 lb	0.81 lb	± 0.002 in
<b>OPE 60 S</b>	3.75 mm	7 cm <sup>3</sup>	150 N	166 N	300.0 N	332.0 N	1.50 kg	0.35 kg	± 0.05 mm
	0.15 in	0.43 in <sup>3</sup>	33.7 lb	37.3 lb	67.4 lb	74.6 lb	3.30 lb	0.77 lb	± 0.002 in
<b>OPE 70</b>	10 mm	9.5 cm <sup>3</sup>	75 N	83 N	150.0 N	166.0 N	0.75 kg	0.50 kg	± 0.05 mm
	0.39 in	0.58 in <sup>3</sup>	16.9 lb	18.7 lb	33.7 lb	37.3 lb	1.70 lb	1.10 lb	± 0.002 in
<b>OPE 70 S</b>	5 mm	9.5 cm <sup>3</sup>	150 N	166 N	300.0 N	332.0 N	1.50 kg	0.50 kg	± 0.05 mm
	0.20 in	0.58 in <sup>3</sup>	33.7 lb	37.3 lb	67.4 lb	74.6 lb	3.30 lb	1.10 lb	± 0.002 in
<b>OPE 80</b>	12 mm	16 cm <sup>3</sup>	110 N	123 N	220.0 N	246.0 N	1.10 kg	0.80 kg	± 0.05 mm
	0.47 in	0.98 in <sup>3</sup>	24.7 lb	27.7 lb	49.5 lb	55.3 lb	2.40 lb	1.76 lb	± 0.002 in
<b>OPE 80 S</b>	6 mm	16 cm <sup>3</sup>	220 N	246 N	440.0 N	492.0 N	2.20 kg	0.76 kg	± 0.05 mm
	0.24 in	0.98 in <sup>3</sup>	49 lb	55.3 lb	98.9 lb	110.6 lb	4.80 lb	1.67 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.

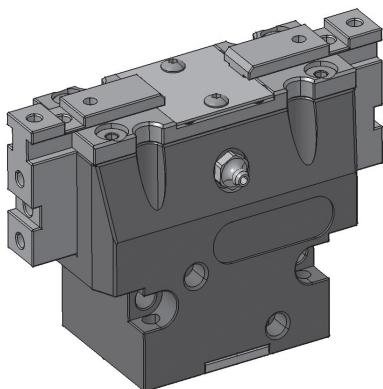
\*\* Further OPE 2-finger dimensions in the following pages

Operating Pressure **2 - 12 bar (29 - 174 psi)**

Working Temperature **5 - 60 °C (41 - 140 °F)**

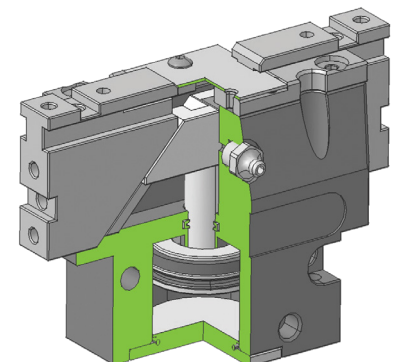
Noise Emission (Sound Pressure) **≤ 70 dB(A) in any direction**

## SECTIONAL DIAGRAM



### Guidelines for the selection of a gripper model

Selection of the correct gripper model depends on the workpiece's weight, the friction coefficient between the fingers and the workpiece and the required motion of the application. Due to inertial forces associated with motion, we recommend that the holding force of the gripper model should be from 10 to 20 times the workpiece's weight. If the application presents high acceleration/deceleration or impacts during the motion, then a further safety margin should be considered.

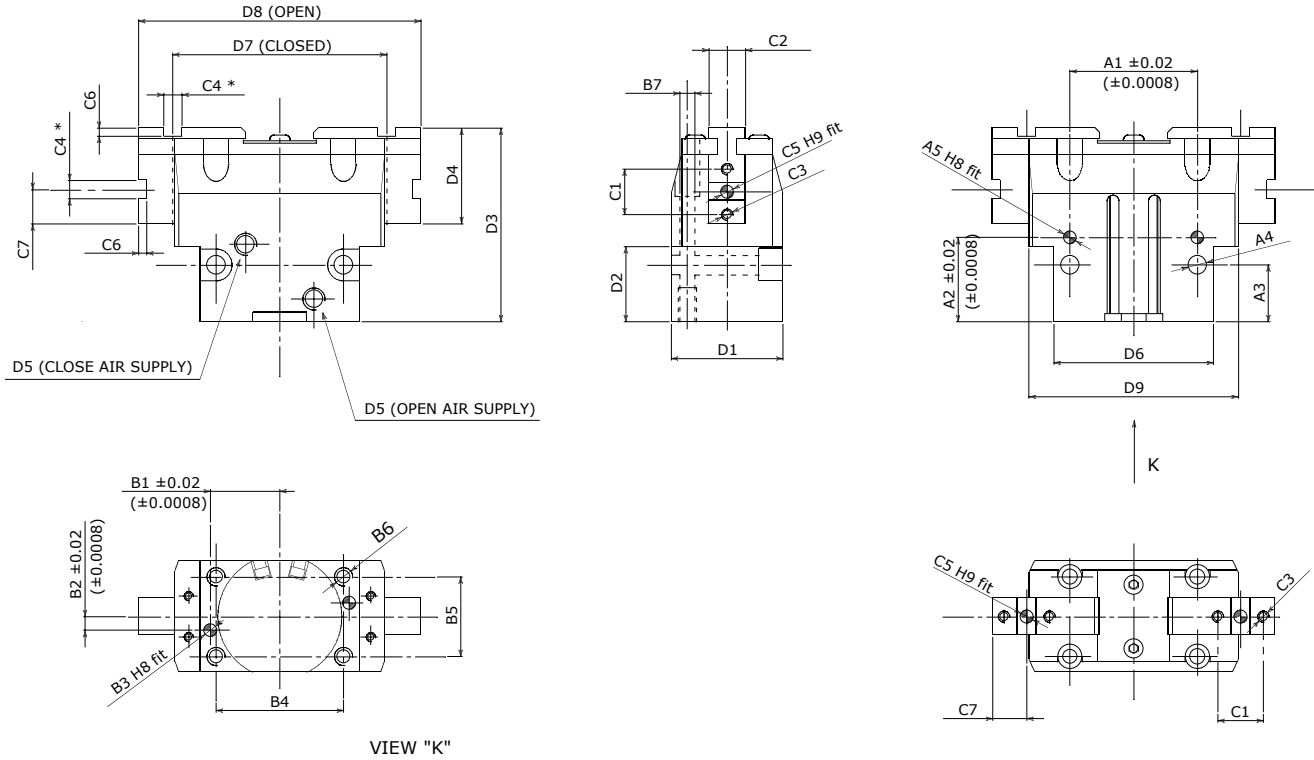


# PRODUCT INFORMATION

# OPE 2-Finger

Dowel hole depth: Body  $\geq 1.2 d$  - Jaws  $\geq 1 d$

C4\* Up to 6 mm = 0/+0.025 mm - From 6 mm to 10 mm = 0/+0.030 mm - Over 10 mm = 0/+0.040 mm



### Options

- High force version (S version)
- Hose-free direct connections (X version)
- Mounting brackets for inductive proximity switches
- Magnetic switches

	Mounting - Option # 1					Mounting - Option # 2					
	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6
OPE 50	35	28	20	4.5	4	19	5	4	35	23	M4
OPE 50 S	(1.38)	(1.10)	(0.79)	(0.18)	(0.16)	(0.75)	(0.20)	(0.16)	(1.38)	(0.91)	
OPE 60	40	30	21	5.5	4	22	6	4	40	27	M5
OPE 60 S	(1.57)	(1.18)	(0.83)	(0.22)	(0.16)	(0.87)	(0.24)	(0.16)	(1.57)	(1.06)	
OPE 70	40	32.5	23.5	5.5	4	22	6	4	40	27	M5
OPE 70 S	(1.57)	(1.28)	(0.93)	(0.22)	(0.16)	(0.87)	(0.24)	(0.16)	(1.57)	(1.06)	
OPE 80	50	34	24	6.5	5	27.5	7	5	50	32	M6
OPE 80 S	(1.97)	(1.34)	(0.94)	(0.26)	(0.20)	(1.08)	(0.28)	(0.20)	(1.97)	(1.26)	

	Finger Application							Informational Dimensions								
	C1	C2	C3	C4	C5	C6	C7	D1	D2	D3	D4	D5	D6	D7	D8	D9
OPE 50	12	12	M4	4	3	3	10	32	26.5	55	23.5	M5	44	50	60	48
OPE 50 S	(0.47)	(0.47)		(0.16)	(0.12)	(0.12)	(0.39)	(1.26)	(1.04)	(2.17)	(0.93)		(1.73)	(1.97)	(2.36)	(1.89)
OPE 60	13	14	M4	5	4	3	10.5	37	26.5	59	25	M5	50	58	73	56
OPE 60 S	(0.51)	(0.55)		(0.20)	(0.16)	(0.12)	(0.41)	(1.46)	(1.04)	(2.32)	(0.98)		(1.97)	(2.28)	(2.87)	(2.20)
OPE 70	16	14	M4	5	4	3	12.5	37	28.5	67	30.5	M5	50	72	92	70
OPE 70 S	(0.63)	(0.55)		(0.20)	(0.16)	(0.12)	(0.49)	(1.46)	(1.12)	(2.64)	(1.20)		(1.97)	(2.83)	(3.62)	(2.76)
OPE 80	18	16	M5	6	5	3.5	14	44	30.5	75	35.5	M5	62	80	104	78
OPE 80 S	(0.71)	(0.63)		(0.24)	(0.20)	(0.14)	(0.55)	(1.73)	(1.20)	(2.95)	(1.40)		(2.44)	(3.15)	(4.09)	(3.07)

\* 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



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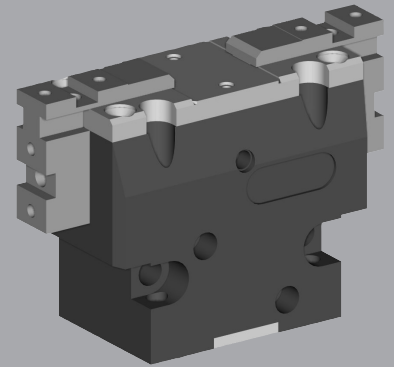
# Pneumatic Parallel Grippers

## OPE 2-Finger

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## SPECIFICATIONS from OPE95 to OPE210

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>OPE 95</b>	15 mm	27.5 cm <sup>3</sup>	150 N	170 N	300.0 N	340.0 N	1.50 kg	1.00 kg	± 0.05 mm
	0.59 in	1.68 in <sup>3</sup>	33.7 lb	38.2 lb	67.4 lb	76.4 lb	3.30 lb	2.20 lb	± 0.002 in
<b>OPE 95 S</b>	7.5 mm	27.5 cm <sup>3</sup>	300 N	340 N	600.0 N	680.0 N	3.00 kg	1.00 kg	± 0.05 mm
	0.30 in	1.68 in <sup>3</sup>	67.4 lb	76.4 lb	134.9 lb	152.9 lb	6.60 lb	2.20 lb	± 0.002 in
<b>OPE 100</b>	10 mm	75 cm <sup>3</sup>	635 N	670 N	1270.0 N	1340.0 N	6.35 kg	1.90 kg	± 0.05 mm
	0.39 in	4.58 in <sup>3</sup>	142.7 lb	150.6 lb	285.5 lb	301.2 lb	14.00 lb	4.18 lb	± 0.002 in
<b>OPE 100 S</b>	5 mm	75 cm <sup>3</sup>	1270 N	1340 N	2540.0 N	2680.0 N	12.70 kg	1.90 kg	± 0.05 mm
	0.20 in	4.58 in <sup>3</sup>	285.5 lb	301.2 lb	571.0 lb	602.5 lb	27.90 lb	4.18 lb	± 0.002 in
<b>OPE 115</b>	20 mm	61 cm <sup>3</sup>	245 N	271 N	490.0 N	542.0 N	2.45 kg	1.85 kg	± 0.05 mm
	0.79 in	3.72 in <sup>3</sup>	55.1 lb	60.9 lb	110.2 lb	121.8 lb	5.40 lb	4.07 lb	± 0.002 in
<b>OPE 115 S</b>	10 mm	61 cm <sup>3</sup>	490 N	542 N	980.0 N	1084.0 N	4.90 kg	1.85 kg	± 0.05 mm
	0.39 in	3.72 in <sup>3</sup>	110.2 lb	121.8 lb	220.3 lb	243.7 lb	10.80 lb	4.07 lb	± 0.002 in
<b>OPE 160</b>	30 mm	181 cm <sup>3</sup>	520 N	557 N	1040.0 N	1114.0 N	5.20 kg	3.95 kg	± 0.05 mm
	1.18 in	11.04 in <sup>3</sup>	116.9 lb	125.2 lb	233.8 lb	250.4 lb	11.40 lb	8.69 lb	± 0.002 in
<b>OPE 160 S</b>	15 mm	181 cm <sup>3</sup>	1040 N	1114 N	2080.0 N	2228.0 N	10.40 kg	3.70 kg	± 0.05 mm
	0.59 in	11.04 in <sup>3</sup>	233.8 lb	250.4 lb	467.6 lb	500.9 lb	22.90 lb	8.14 lb	± 0.002 in
<b>OPE 190</b>	35 mm	259 cm <sup>3</sup>	635 N	692 N	1270.0 N	1384.0 N	6.35 kg	6.80 kg	± 0.05 mm
	1.38 in	15.80 in <sup>3</sup>	142.7 lb	155.6 lb	285.5 lb	311.1 lb	14.00 lb	14.96 lb	± 0.002 in
<b>OPE 190 S</b>	17.5 mm	259 cm <sup>3</sup>	1270 N	1384 N	2540.0 N	2768.0 N	12.70 kg	6.80 kg	± 0.05 mm
	0.69 in	15.80 in <sup>3</sup>	285.5 lb	311.1 lb	571.0 lb	622.2 lb	27.90 lb	14.96 lb	± 0.002 in
<b>OPE 210</b>	40 mm	390 cm <sup>3</sup>	845 N	902 N	1690.0 N	1804.0 N	8.45 kg	9.50 kg	± 0.05 mm
	1.57 in	23.79 in <sup>3</sup>	190.0 lb	202.8 lb	379.9 lb	405.5 lb	18.60 lb	20.90 lb	± 0.002 in
<b>OPE 210 S</b>	20 mm	390 cm <sup>3</sup>	1690 N	1804 N	3380.0 N	3608.0 N	16.90 kg	9.00 kg	± 0.05 mm
	0.79 in	23.79 in <sup>3</sup>	379.9 lb	405.5 lb	759.8 lb	811.1 lb	37.20 lb	19.80 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.

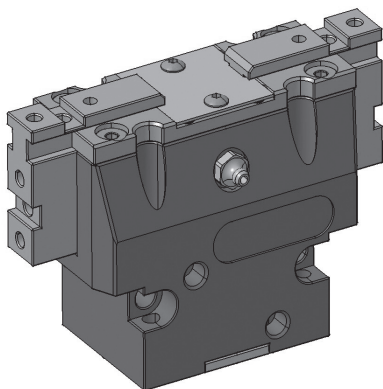
\*\* Further OPE 2-finger dimensions in the previous pages

Operating Pressure **2 - 12 bar (29 - 174 psi)**

Working Temperature **5 - 60 °C (41 - 140 °F)**

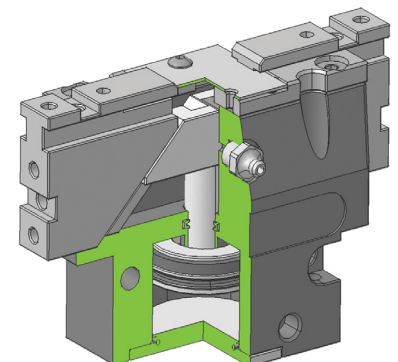
Noise Emission (Sound Pressure) **≤ 70 dB(A) in any direction**

## SECTIONAL DIAGRAM



### Guidelines for the selection of a gripper model

Selection of the correct gripper model depends on the workpiece's weight, the friction coefficient between the fingers and the workpiece and the required motion of the application. Due to inertial forces associated with motion, we recommend that the holding force of the gripper model should be from 10 to 20 times the workpiece's weight. If the application presents high acceleration/deceleration or impacts during the motion, then a further safety margin should be considered.

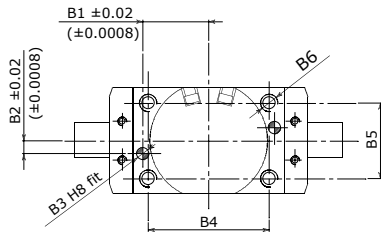
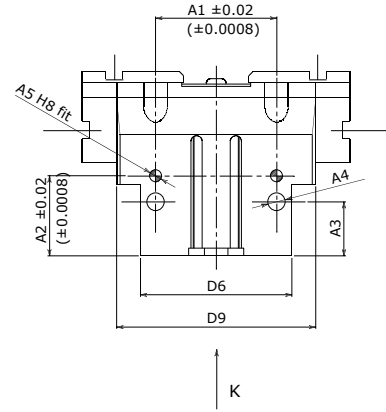
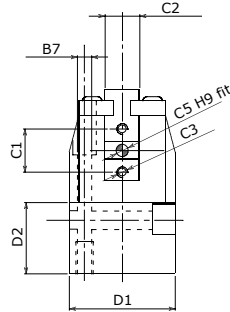
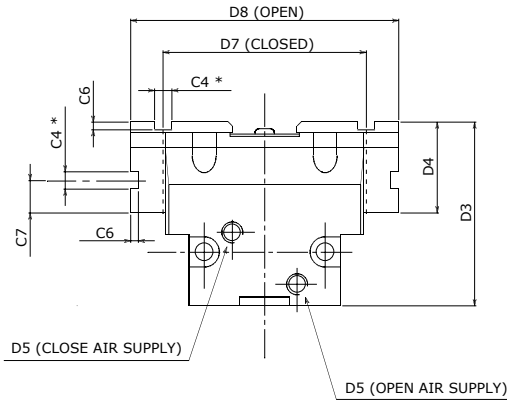


# PRODUCT INFORMATION

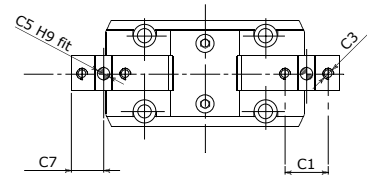
# OPE 2-Finger

Dowel hole depth: Body ≥ 1.5 d - Jaws ≥ 1.2 d

C4\* Up to 6 mm = 0/+0.025 mm - From 6 mm to 10 mm = 0/+0.030 mm - Over 10 mm = 0/+0.040 mm



VIEW "K"



	Mounting - Option # 1					Mounting - Option # 2					
	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6
OPE 95	56	37	25	8.5	6	30.5	6	6	56	35	M8
OPE 95 S	(2.20)	(1.46)	(0.98)	(0.33)	(0.24)	(1.20)	(0.24)	(0.24)	(2.20)	(1.38)	
OPE 100						45	21.5	8	80	64	M10
OPE 100 S						(1.77)	(0.85)	(0.31)	(3.15)	(2.52)	
OPE 115	65	42	30	8.5	6	35.5	10	6	65	44	M8
OPE 115 S	(2.56)	(1.65)	(1.18)	(0.33)	(0.24)	(1.40)	(0.39)	(0.24)	(2.56)	(1.73)	
OPE 160	98	57.5	50	10.5	8	44	17.5	6	81	61	M10
OPE 160 S	(3.86)	(2.26)	(1.97)	(0.41)	(0.31)	(1.73)	(0.69)	(0.24)	(3.19)	(2.40)	
OPE 190	90	70	50	10.5	8	48	18.5	8	90	67	M10
OPE 190 S	(3.54)	(2.76)	(1.97)	(0.41)	(0.31)	(1.89)	(0.73)	(0.31)	(3.54)	(2.64)	
OPE 210	100	85	60	12.5	8	54.5	24.5	8	100	79	M12
OPE 210 S	(3.94)	(3.35)	(2.36)	(0.49)	(0.31)	(2.15)	(0.96)	(0.31)	(3.94)	(3.11)	

	Finger Application							Informational Dimensions								
	C1	C2	C3	C4	C5	C6	C7	D1	D2	D3	D4	D5	D6	D7	D8	D9
OPE 95	20	16	M5	8	6	3.5	15	49	33	85	42	G 1/8	70	94	124	92
OPE 95 S	(0.79)	(0.63)		(0.31)	(0.24)	(0.14)	(0.59)	(1.93)	(1.30)	(3.35)	(1.65)		(2.76)	(3.70)	(4.88)	(3.62)
OPE 100	20	20	M6	8	6	3.5	16.5	80	(0.00)	87.5	45	G 1/8	99	100	120	99
OPE 100 S	(0.79)	(0.79)		(0.31)	(0.24)	(0.14)	(0.65)	(3.15)		(3.44)	(1.77)		(3.90)	(3.94)	(4.72)	(3.90)
OPE 115	24	18	M6	8	6	3.5	18.5	59	40	101.5	52.5	G 1/8	80	115	155	113
OPE 115 S	(0.94)	(0.71)		(0.31)	(0.24)	(0.14)	(0.73)	(2.32)	(1.57)	(4.00)	(2.07)		(3.15)	(4.53)	(6.10)	(4.45)
OPE 160	30	22	M8	10	8	4	24	78	49	134	64	G 1/8	98	162	222	160
OPE 160 S	(1.18)	(0.87)		(0.39)	(0.31)	(0.16)	(0.94)	(3.07)	(1.93)	(5.28)	(2.52)		(3.86)	(6.38)	(8.74)	(6.30)
OPE 190	35	25	M8	12	10	4.5	29	85	67	164	72	G 1/4	108	192	262	190
OPE 190 S	(1.38)	(0.98)		(0.47)	(0.39)	(0.18)	(1.14)	(3.35)	(2.64)	(6.46)	(2.83)		(4.25)	(7.56)	(10.31)	(7.48)
OPE 210	35	30	M10	14	12	5	34	99	86	196	80	G 1/4	120	212	292	210
OPE 210 S	(1.38)	(1.18)		(0.55)	(0.47)	(0.20)	(1.34)	(3.90)	(3.39)	(7.72)	(3.15)		(4.72)	(8.35)	(11.50)	(8.27)
															252.00	(9.92)

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