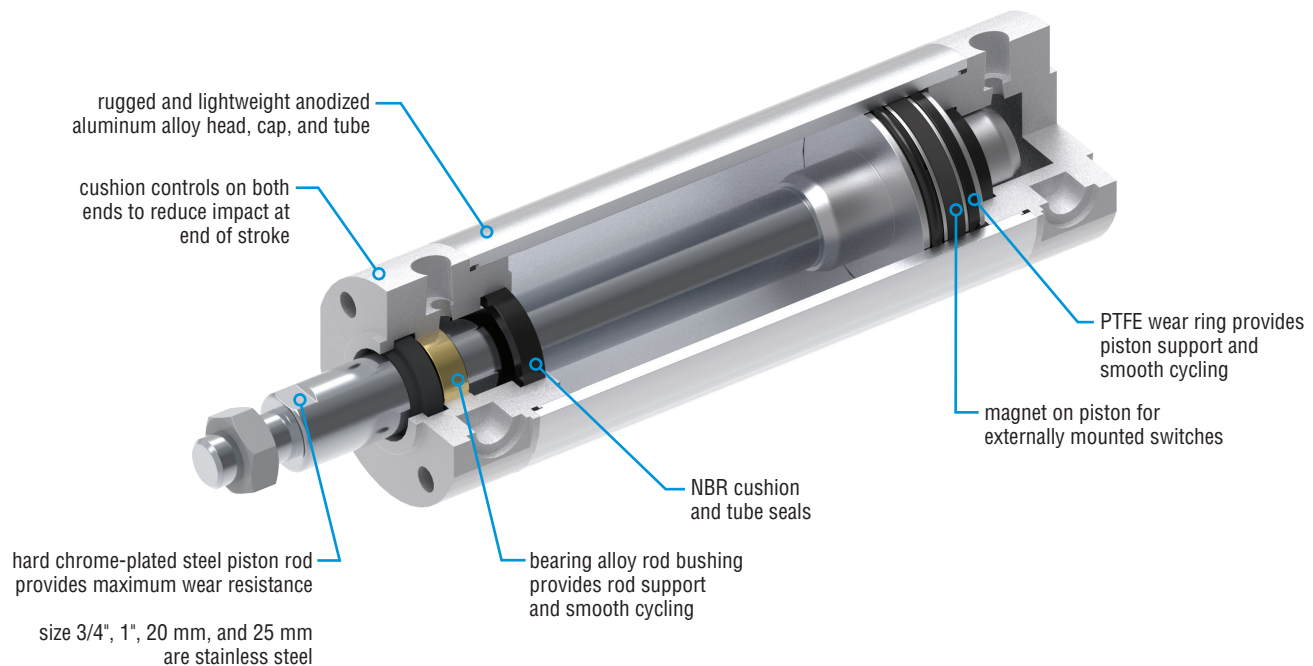


PNEUMATIC ROUND BODY CYLINDER

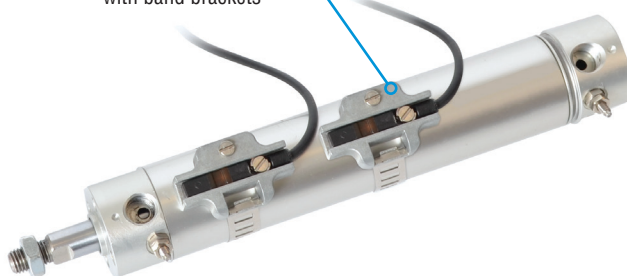
OCG

Major Benefits

- Imperial and metric models to match machine builders' specifications
- Magnets standard for switch sensing capability
- Standard cushions to reduce end of travel impact
- 6 bore sizes with 10 stroke lengths available to fit a variety of applications
- Drop-in mounting to match global standard



optional switch bundle for ease of ordering includes 2 switches with band brackets



COMPONENT	MATERIALS
HEAD & CAP	Anodized Aluminum Alloy
CYLINDER TUBE	
ROD SEAL	NBR
PISTON SEAL	
O-RINGS	
CUSHION SEAL	
CUSHION NEEDLE	Brass
PISTON WEAR RING	PTFE
ROD BUSHING	PTFE and Bronze Alloy
ROD NUT	Carbon Steel
PISTON ROD*	

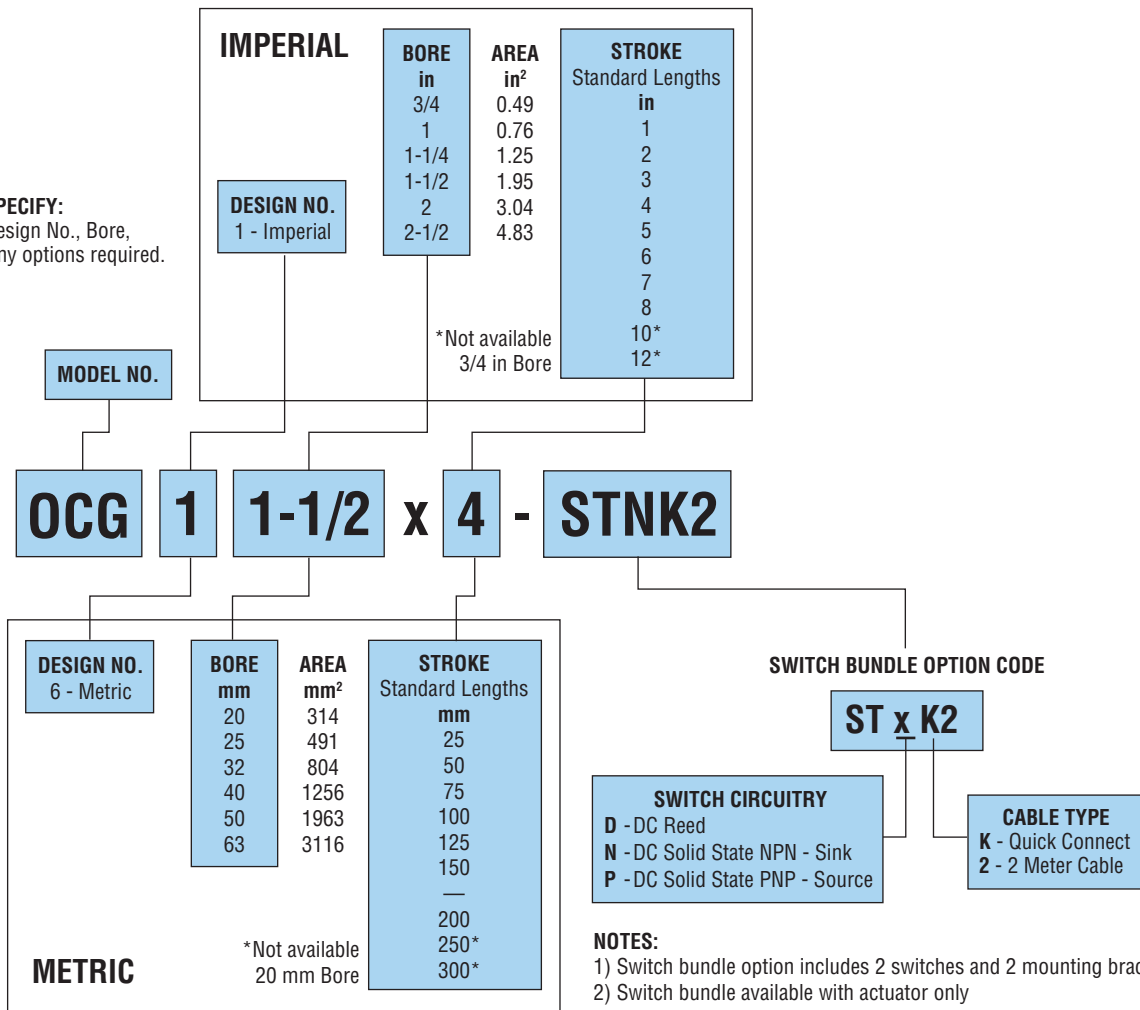
*Stainless steel sizes 3/4", 1", 20 mm and 25 mm



www.LDA.be - LDA@LDA.be - + 32(0)2-266 13 13

ORDERING DATA: Series OCG Cylinders

TO ORDER SPECIFY:
Model No., Design No., Bore,
Stroke, and any options required.



NOTES:

- 1) Switch bundle option includes 2 switches and 2 mounting brackets
- 2) Switch bundle available with actuator only
- 3) Magnets and cushions standard both directions.
- 4) See page 67 for mounting accessories.

REPAIR KITS

BORE SIZE		PART NO.
in	mm	
3/4	20	87000-01
1	25	87000-02
1-1/4	32	87000-03
1-1/2	40	87000-04
2	50	87000-05
2-1/2	63	87000-06

SWITCHES

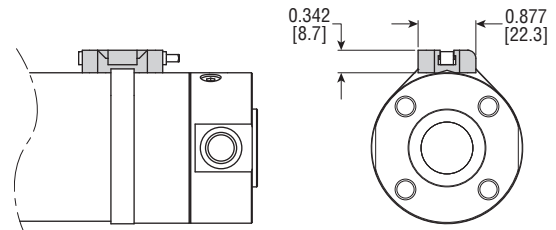
PART NO.	DESCRIPTION
85844-0	Reed, DC 5-30 V, 50 mA w/Quick Connect
85844-2	Reed, DC 5-30 V, 50 mA w/2 m cable
85845-0	Solid State NPN, DC 5-30 V, 50 mA w/Quick Connect
85845-2	Solid State NPN, DC 5-30 V, 50 mA w/2 m cable
85846-0	Solid State PNP, DC 5-30 V, 50 mA w/Quick Connect
85846-2	Solid State PNP, DC 5-30 V, 50 mA w/2 m cable
86999	Round Cylinder Switch Band Bracket

Includes one switch.

CORDSETS

MODEL NO.	CABLE LENGTH
63549-02	78.74 in [2 m]
63549-05	196.85 in [5 m]

Includes one cordset.



CAD & Sizing Assistance

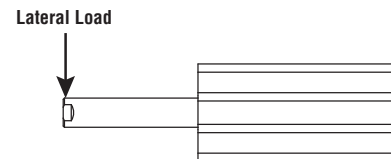
Use PHD's free online Product Sizing and
CAD Configurator at phdinc.com/myphd

SPECIFICATIONS	SERIES OCG CYLINDER
OPERATING AIR PRESSURE	8 - 140 psi [0.5 - 9.7 bar]
TEMPERATURE LIMITS	32° - 140°F [0° - 60°C]
VELOCITY	2 - 20 in/s [50 - 500 mm/s]
RATED LIFE	3 million cycles
LUBRICATION	Factory lubricated for rated life

BORE SIZE		ROD DIAMETER		ROD DIRECTION	TOTAL PISTON AREA		BASE WEIGHT		ADDER PER 1 in [25 mm]	
in	mm	in	mm		in ²	mm ²	lb	kg	lb	kg
3/4	20	0.315	8	Extend	0.49	314	0.20	0.09	0.06	0.03
				Retract	0.41	264				
1	25	0.394	10	Extend	0.76	491	0.35	0.16	0.08	0.04
				Retract	0.64	412				
1-1/4	32	0.472	12	Extend	1.25	804	0.55	0.25	0.10	0.05
				Retract	1.07	691				
1-1/2	40	0.630	16	Extend	1.95	1256	0.90	0.41	0.17	0.08
				Retract	1.64	1055				
2	50	0.787	20	Extend	3.04	1963	1.68	0.76	0.25	0.11
				Retract	2.56	1649				
2-1/2	63	0.787	20	Extend	4.83	3116	2.34	1.06	0.29	0.13
				Retract	4.34	2802				

Application & Sizing Assistance

Use PHD's free online Product Sizing and Application at www.phdinc.com/apps/sizing

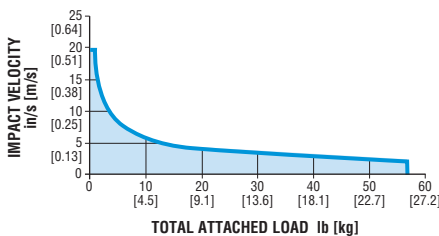


MAXIMUM LATERAL LOAD BY STROKE

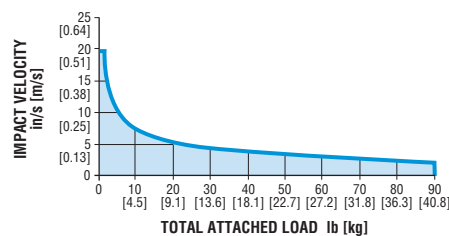
BORE SIZE		1 in 25 mm		2 in 50 mm		3 in 75 mm		4 in 100 mm		5 in 125 mm		6 in 150 mm		7 in —		8 in 200 mm		10 in 250 mm		12 in 300 mm	
in	mm	oz	g	oz	g	oz	g	oz	g	oz	g	oz	g	oz	g	oz	g	oz	g	oz	g
3/4	20	18	505	15	414	12	337	10	275	8	228	6.9	195	6.3	177	6.2	174	—	—	—	—
1	25	24	675	20	563	17	475	14	408	13	358	11.4	323	10.5	298	9.9	281	9.1	257	8	225
1-1/4	32	43	1223	35	983	28	798	23	661	20	564	18	497	16	453	15	425	13	379	10	295
1-1/2	40	55	1552	47	1323	40	1141	35	999	31	889	29	808	26	747	25	701	22	628	19	540
2	50	86	2429	76	2157	68	1925	61	1729	55	1565	50	1427	46	1311	43	1211	37	1043	31	882
2-1/2	63	140	3959	121	3435	106	3001	94	2647	83	2362	76	2138	69	1966	65	1834	59	1659	54	1535

MAXIMUM KINETIC ENERGY

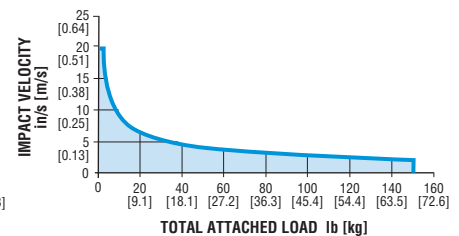
OCG1-3/4 & OCG6-20



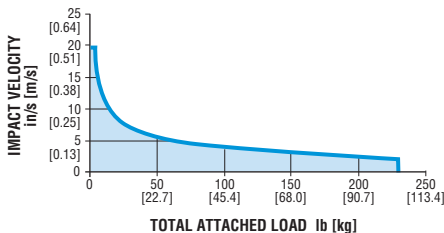
OCG1-1 & OCG6-25



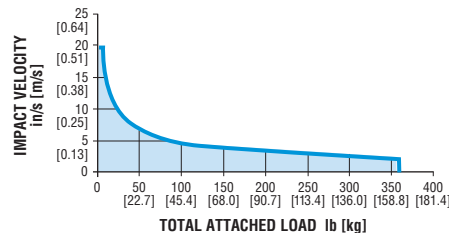
OCG1-1-1/4 & OCG6-32



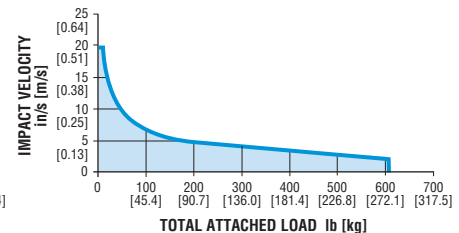
OCG1-1-1/2 & OCG6-40



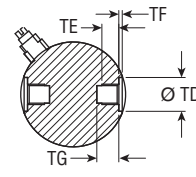
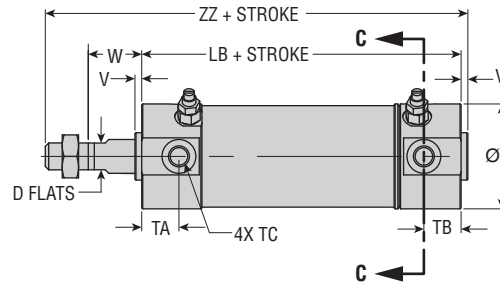
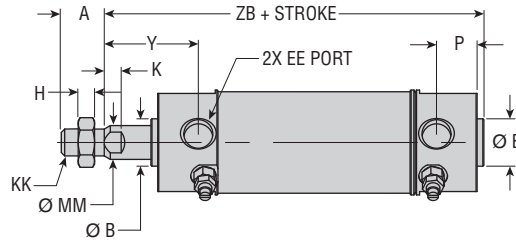
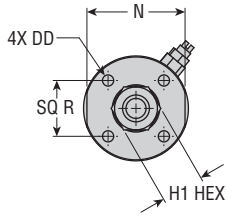
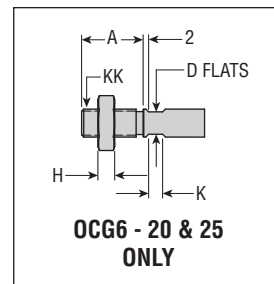
OCG1-2 & OCG6-50



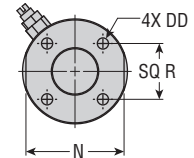
OCG1-2-1/2 & OCG6-63



DIMENSIONS: Series OCC Cylinders



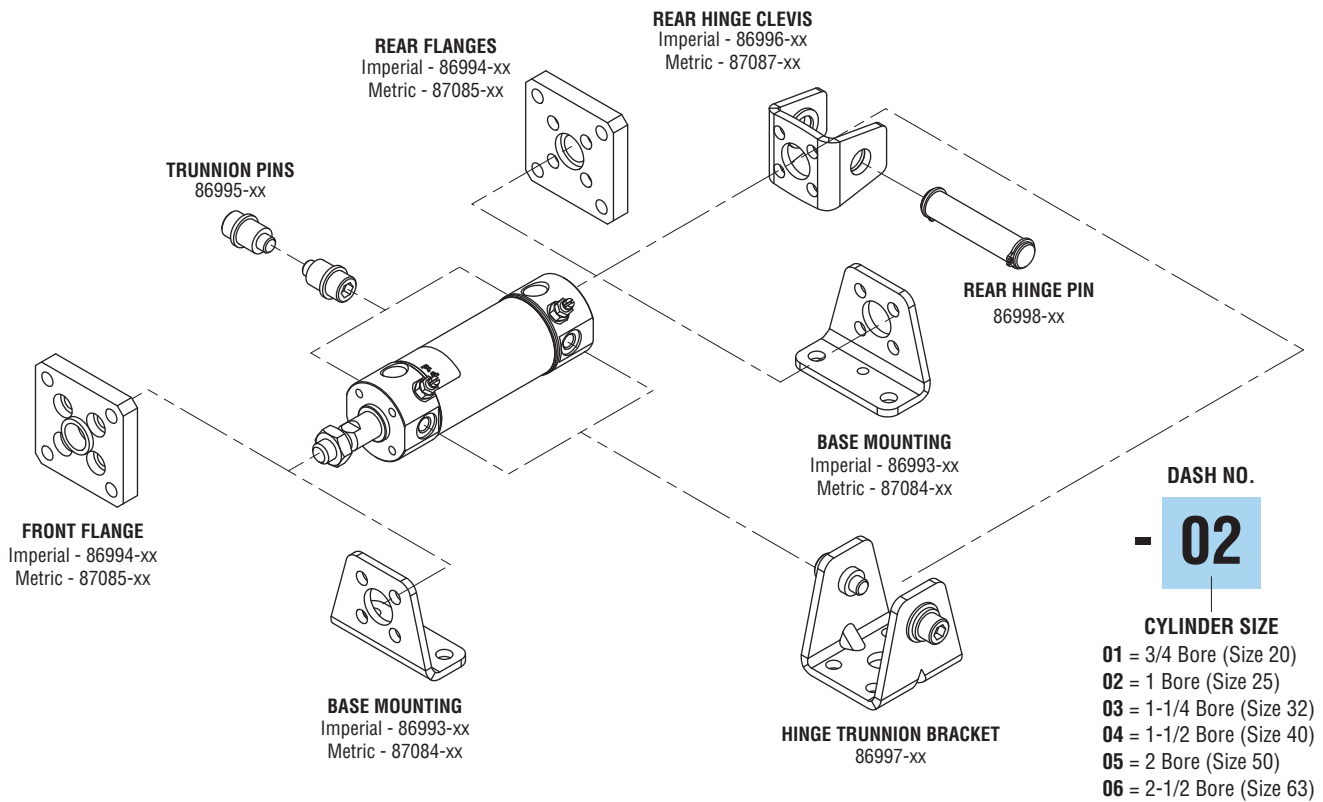
SECTION C-C
4X EACH FEATURE
DIMENSION



LETTER DIM	IMPERIAL						METRIC					
	3/4 in	1 in	1-1/4 in	1-1/2 in	2 in	2-1/2 in	20 mm	25 mm	32 mm	40 mm	50 mm	63 mm
A	0.50	0.50	0.75	0.75	0.88	0.88	18	22	22	30	35	35
B	0.472 +0.0000 /-0.0011	0.551 +0.0000 /-0.0011	0.709 +0.0000 /-0.0011	0.984 +0.0000 /-0.0013	1.181 +0.0000 /-0.0013	1.260 +0.0000 /-0.0015	12 +0.00 /-0.05	14 +0.00 /-0.05	18 +0.00 /-0.05	25 +0.00 /-0.05	30 +0.00 /-0.05	32 +0.00 /-0.05
D	0.24	0.31	0.39	0.55	0.71	0.71	6	8	10	14	18	18
DD	8-32 x 0.28 DP	10-32 x 0.30 DP	10-32 x 0.30 DP	1/4-28 x 0.47 DP	5/16-24 x 0.63 DP	3/8-24 x 0.63 DP	M4 x 0.7 x 7 DP	M5 x 0.8 x 7.5 DP	M5 x 0.8 x 8 DP	M6 x 1.0 x 12 DP	M8 x 1.25 x 16 DP	M10 x 1.5 x 16 DP
E	1.02	1.22	1.50	1.85	2.28	2.83	26	31	38	47	58	72
EE	1/8 NPT	1/8 NPT	1/8 NPT	1/8 NPT	1/4 NPT	1/4 NPT	Rc 1/8	Rc 1/8	Rc 1/8	Rc 1/8	Rc 1/4	Rc 1/4
H	0.16	0.19	0.26	0.26	0.32	0.32	5	6	6	8	11	11
H1	0.44	0.50	0.69	0.69	0.75	0.75	13	17	17	22	27	27
K	0.157	0.197	0.217	0.236	0.276	0.276	4	5	5.5	6	7	7
KK	1/4-28	5/16-24	7/16-20	7/16-20	1/2-20	1/2-20	M8 x 1.25	M10 x 1.25	M10 x 1.25	M14 x 1.5	M18 x 1.5	M18 x 1.5
LB	2.72	2.72	2.80	3.07	3.54	3.54	69	69	71	78	90	90
MM	0.315	0.394	0.472	0.630	0.787	0.787	8	10	12	16	20	20
N	0.94	1.14	1.42	1.73	2.17	2.72	24	29	36	44	55	69
P	0.47	0.47	0.43	0.47	0.51	0.51	12	12	11	12	13	13
R	0.55 ±0.004	0.65 ±0.004	0.79 ±0.004	1.02 ±0.004	1.26 ±0.004	1.50 ±0.004	14 ±0.1	16.5 ±0.1	20 ±0.1	26 ±0.1	32 ±0.1	38 ±0.1
TA	0.433	0.433	0.433	0.472	0.512	0.512	11	11	11	12	13	13
TB	0.433	0.433	0.394	0.394	0.472	0.472	11	11	10	10	12	12
TC	M5 x 0.8	M6 x 0.75	M8 x 1.0	M10 x 1.25	M12 x 1.25	M14 x 1.5	M5 x 0.8	M6 x 0.75	M8 x 1.0	M10 x 1.25	M12 x 1.25	M14 x 1.5
TD	0.315 +0.0014 /-0.000	0.394 +0.0014 /-0.000	0.472 +0.0017 /-0.000	0.551 +0.0017 /-0.000	0.630 +0.0017 /-0.000	0.709 +0.0017 /-0.000	8 +0.036 /-0.000	10 +0.036 /-0.000	12 +0.043 /-0.000	14 +0.043 /-0.000	16 +0.043 /-0.000	18 +0.043 /-0.000
TE	0.157	0.197	0.217	0.240	0.295	0.453	4	5	5.5	6	7.5	11.5
TF	0.020	0.039	0.049	0.049	0.079	0.118	0.5	1	1.25	1.25	2	3
TG	0.217	0.256	0.295	0.335	0.394	0.571	5.5	6.5	7.5	8.5	10	14.5
V	0.08	0.08	0.08	0.08	0.08	0.08	2	2	2	2	2	2
W	0.50	0.62	0.88	0.88	1.19	1.19	17	18	18	20	23	23
Y	0.97	1.09	1.35	1.39	1.74	1.74	29	30	30	33	37	37
ZB	3.30	3.42	3.76	4.03	4.81	4.81	88	89	91	100	115	115
ZZ	3.80	3.92	4.51	4.78	5.69	5.69	106	111	113	130	150	150

All dimensions are reference only unless specifically tolerated.

ACCESSORIES: Series OCG Cylinders



MOUNTING ATTACHMENTS

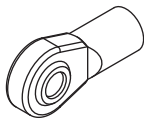
BASE PART NO.		CYLINDER SIZE DASH NO.	DESCRIPTION
IMPERIAL	METRIC		
86993	87084	-xx	Base Mounting
86994	87085	-xx	Front or Rear Flange Mounting
86995	86995	-xx	Trunnions
86996	87087	-xx	Rear Hinge Clevis
86997	86997	-xx	Rear Hinge & Trunnion Bracket
86998	86998	-xx	Rear Hinge Pin

Example: 86993-03 is a base mounting kit for size 1-1/4 bore cylinders.

RECOMMENDED ATTACHMENT MOUNTING TORQUES

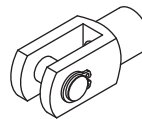
BORE SIZE		MOUNTING TORQUE		TRUNNION TORQUE	
in	mm	in-lb	Nm	in-lb	Nm
3/4	20	13.3	1.5	20	2.2
1	25	26	3	32	3.6
1-1/4	32	26	3	80	9
1-1/2	40	43	5	160	18
2	50	104	12	280	32
2-1/2	63	217	25	460	52

METRIC



ROD EYE WITH SPHERICAL BEARING (DIN 8139)

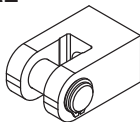
CYLINDER	STANDARD KIT NO.
OCG6-20	52493-05-1
OCG6-25	52493-01-1
OCG6-32	52493-01-1



ROD CLEVIS MOUNTING (DIN 8140)

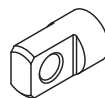
CYLINDER	STANDARD KIT NO.	-Z1 KIT NO.
OCG6-20	52492-05-1	52492-05-3
OCG6-25	52492-01-1	52492-01-3
OCG6-32	52492-01-1	52492-01-3

IMPERIAL



ROD CLEVIS MOUNTING

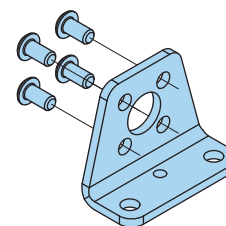
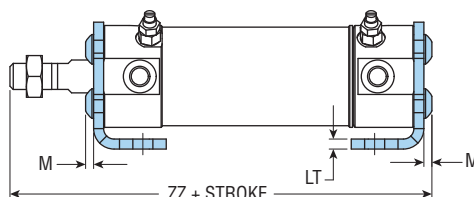
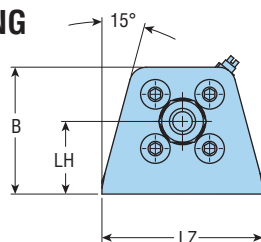
CYLINDER	STANDARD KIT NO.
OCG1 3/4	12904
OCG1 1	12906
OCG1 1-1/4	12910
OCG1 1-1/2	12910
OCG1 2	12911
OCG1 2-1/2	12911



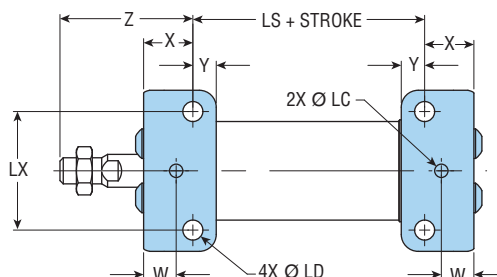
ROD EYE MOUNTING

CYLINDER	STANDARD KIT NO.
OCG1 3/4	1075-01
OCG1 1	1075-04
OCG1 1-1/4	1375-02
OCG1 1-1/2	1375-02
OCG1 2	1375-03
OCG1 2-1/2	1375-03

BASE MOUNTING

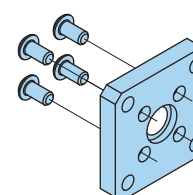
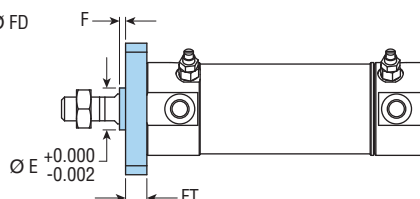
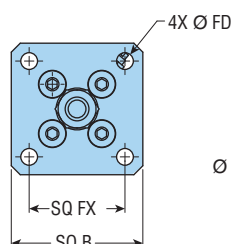


NOTE: Kit includes one base mounting bracket and fasteners.

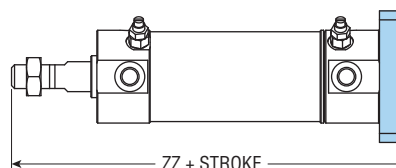


LETTER DIM	IMPERIAL						METRIC					
	3/4 in	1 in	1-1/4 in	1-1/2 in	2 in	2-1/2 in	20 mm	25 mm	32 mm	40 mm	50 mm	63 mm
	86993-01	86993-02	86993-03	86993-04	86993-05	86993-06	87084-01	87084-02	87084-03	87084-04	87084-05	87084-06
B	1.34	1.52	1.77	2.15	2.78	3.25	34	38.5	45	54.5	70.5	82.5
LC	0.16	0.16	0.16	0.16	0.20	0.20	4	4	4	4	5	5
LD	0.24	0.24	0.26	0.26	0.35	0.43	6	6	6.6	6.6	9	11
LH	0.79	0.87	0.98	1.18	1.57	1.77	20	22	25	30	40	45
LS	1.78	1.78	1.78	2.01	2.16	2.16	45	45	45	51	55	55
LT	0.12	0.12	0.12	0.12	0.18	0.18	3	3	3	3	4.5	4.5
LX	1.26	1.42	1.73	2.13	2.60	3.23	32	36	44	54	66	82
LZ	1.73	1.93	2.28	2.80	3.39	4.17	44	49	58	71	86	106
M	0.09	0.11	0.11	0.13	0.17	0.22	2.2	2.8	2.8	3.3	4.4	5.5
W	0.39	0.39	0.39	0.39	0.69	0.69	10	10	10	10	17.5	17.5
X	0.59	0.59	0.63	0.65	0.87	0.87	15	15	16	16.5	22	22
Y	0.28	0.28	0.31	0.33	0.43	0.51	7	7	8	8.5	11	13
Z	1.47	1.59	2.14	2.16	2.76	2.76	47	52	53	63.5	75.5	75.5
ZZ	3.93	4.07	4.66	4.95	5.96	6.01	109.2	114.8	116.8	134.3	156.9	158

FRONT OR REAR FLANGE MOUNTING



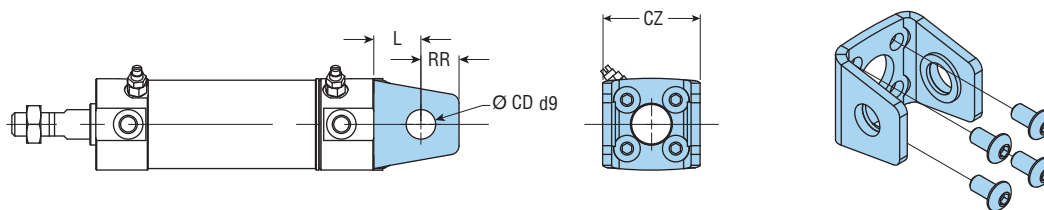
NOTE: Kit includes one flange mounting bracket and fasteners.



LETTER DIM	IMPERIAL						METRIC					
	3/4 in	1 in	1-1/4 in	1-1/2 in	2 in	2-1/2 in	20 mm	25 mm	32 mm	40 mm	50 mm	63 mm
	86994-01	86994-02	86994-03	86994-04	86994-05	86994-06	87085-01	87085-02	87085-03	87085-04	87085-05	87085-06
B	1.57	1.73	2.09	2.40	2.99	3.62	40	44	53	61	76	92
E	0.472 +0.000 /-0.002	0.551 +0.000 /-0.002	0.709 +0.000 /-0.002	0.984 +0.000 /-0.002	1.181 +0.000 /-0.002	1.260 +0.000 /-0.002	12 +0.00/-0.05	14 +0.00/-0.05	18 +0.00/-0.05	25 +0.00/-0.05	30 +0.00/-0.05	32 +0.00/-0.05
F	0.08	0.08	0.08	0.08	0.08	0.08	2	2	2	2	2	2
FX	1.10	1.26	1.50	1.81	2.28	2.76	28	32	38	46	58	70
FD	0.22	0.22	0.26	0.26	0.35	0.43	5.5	5.5	6.6	6.6	9	11
FT	0.24	0.28	0.28	0.31	0.35	0.35	6	7	7	8	9	9
ZZ	4.04	4.20	4.79	5.09	6.04	6.04	112	118	120	138	159	159

All dimensions are reference only unless specifically tolerated.

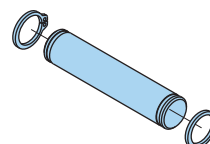
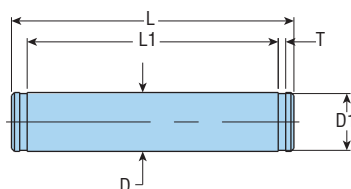
REAR CLEVIS HINGE MOUNTING



NOTE: Kit includes rear clevis hinge mounting bracket and fasteners.

LETTER DIM	IMPERIAL						METRIC					
	3/4 in	1 in	1-1/4 in	1-1/2 in	2 in	2-1/2 in	20 mm	25 mm	32 mm	40 mm	50 mm	63 mm
	86996-01	86996-02	86996-03	86996-04	86996-05	86996-06	87087-01	87087-02	87087-03	87087-04	87087-05	87087-06
CD d9	0.315	0.394	0.472	0.551	0.630	0.709	8	10	12	14	16	18
CZ	1.14	1.30	1.57	1.93	2.36	2.91	29	33	40	49	60	74
L	0.55	0.63	0.79	0.87	0.98	1.18	14	16	20	22	25	30
RR	0.43	0.51	0.59	0.71	0.79	0.87	11	13	15	18	20	22

REAR HINGE PIN

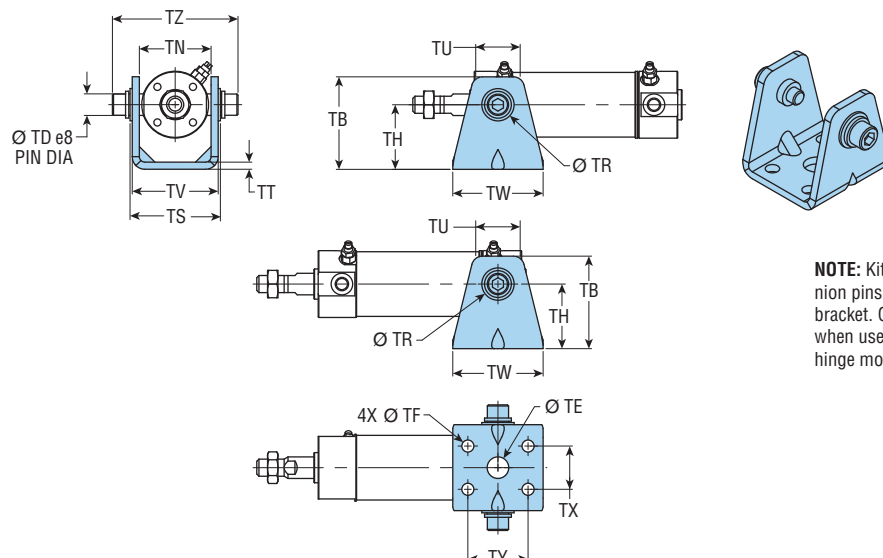


NOTE: For use with rear clevis hinge mount. Kit includes two retaining rings and one rear hinge pin.

LETTER DIM	IMPERIAL						METRIC					
	3/4 in	1 in	1-1/4 in	1-1/2 in	2 in	2-1/2 in	20 mm	25 mm	32 mm	40 mm	50 mm	63 mm
	86998-01	86998-02	86998-03	86998-04	86998-05	86998-06	86998-01	86998-02	86998-03	86998-04	86998-05	86998-06
D d9	0.315	0.394	0.472	0.551	0.630	0.709	8	10	12	14	16	18
D1	0.30	0.38	0.45	0.53	0.60	0.67	7.6	9.6	11.5	13.4	15.2	17
L	1.71	1.89	2.34	2.81	3.39	4.15	43.4	48	59.4	71.4	86	105.4
L1	1.52	1.68	2.13	2.56	3.13	3.85	38.6	42.6	54	65	79.6	97.8
T	0.04	0.05	0.05	0.05	0.05	0.05	0.9	1.15	1.15	1.15	1.15	1.35

All dimensions are reference only unless specifically toleranced.

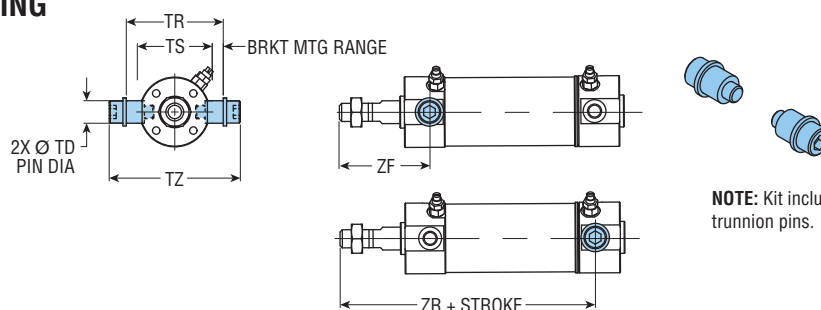
HINGE AND TRUNNION BRACKET



NOTE: Kit includes two trunnion pins and one trunnion bracket. Omit trunnion pins when used with rear clevis hinge mount.

LETTER DIM	IMPERIAL						METRIC					
	3/4 in	1 in	1-1/4 in	1-1/2 in	2 in	2-1/2 in	20 mm	25 mm	32 mm	40 mm	50 mm	63 mm
	86997-01	86997-02	86997-03	86997-04	86997-05	86997-06	86997-01	86997-02	86997-03	86997-04	86997-05	86997-06
TB	1.42	1.69	1.97	2.28	2.76	3.23	36	43	50	58	70	82
TE	0.394 +0.0039 /-0.0000	0.394 +0.0039 /-0.0000	0.394 +0.0039 /-0.0000	0.394 +0.0039 /-0.0000	0.394 +0.0039 /-0.0000	0.787 +0.0039 /-0.0000	10 +0.1/-0.0	10 +0.1/-0.0	10 +0.1/-0.0	10 +0.1/-0.0	20 +0.1/-0.0	20 +0.1/-0.0
TF	0.22	0.22	0.26	0.26	0.35	0.43	5.5	5.5	6.6	6.6	9	11
TH	0.98 ±0.0039	1.18 ±0.0039	1.38 ±0.0039	1.57 ±0.0039	1.97 ±0.0039	2.36 ±0.0039	25 ±0.1	30 ±0.1	35 ±0.1	40 ±0.1	50 ±0.1	60 ±0.1
TN	1.15	1.30	1.59	1.94	2.38	2.94	29.3	33.1	40.4	49.2	60.4	74.6
TR	0.51	0.59	0.67	0.83	0.94	1.02	13	15	17	21	24	26
TT	0.13	0.13	0.18	0.18	0.24	0.31	3.2	3.2	4.5	4.5	6	8
TU	0.71	0.81	0.93	1.07	1.17	1.35	18.1	20.7	23.6	27.3	29.7	34.3
TV	1.41	1.57	1.94	2.30	2.85	3.56	35.8	39.8	49.4	58.4	72.4	90.4
TW	1.65	1.65	1.89	2.20	2.52	2.91	42	42	48	56	64	74
TX	0.63	0.79	0.87	1.18	1.42	1.81	16	20	22	30	36	36
TY	1.10	1.10	1.10	1.18	1.42	1.81	28	28	28	30	36	46
TS	1.50	1.65	2.06	2.50	3.10	3.80	38	42	52.4	63.4	78.8	96.6
TZ	2.00	2.27	2.88	3.52	4.29	5.15	51	57.9	73.3	89.5	109.2	131
TD	0.315	0.394	0.472	0.551	0.630	0.709	8	10	12	14	16	18

TRUNNION MOUNTING



NOTE: Kit includes two trunnion pins.

LETTER DIM	IMPERIAL						METRIC					
	3/4 in	1 in	1-1/4 in	1-1/2 in	2 in	2-1/2 in	20 mm	25 mm	32 mm	40 mm	50 mm	63 mm
	86995-01	86995-02	86995-03	86995-04	86995-05	86995-06	86995-01	86995-02	86995-03	86995-04	86995-05	86995-06
TD e8	0.315	0.394	0.472	0.551	0.630	0.709	8	10	12	14	16	18
TR	1.54	1.69	2.11	2.54	3.15	3.86	39	43	53.5	64.5	80	98
TS	1.14	1.30	1.57	1.93	2.36	2.91	29	33	40	49	60	74
TZ	2.00	2.27	2.88	3.52	4.29	5.15	51	57.9	73.3	89.5	109.2	131
ZF	1.43	1.55	2.06	2.10	2.58	2.58	46	51	51	62	71	71
ZR	3.28	3.40	4.03	4.31	5.14	5.14	93	98	101	118	136	136

All dimensions are reference only unless specifically toleranced.