



# SMD Series

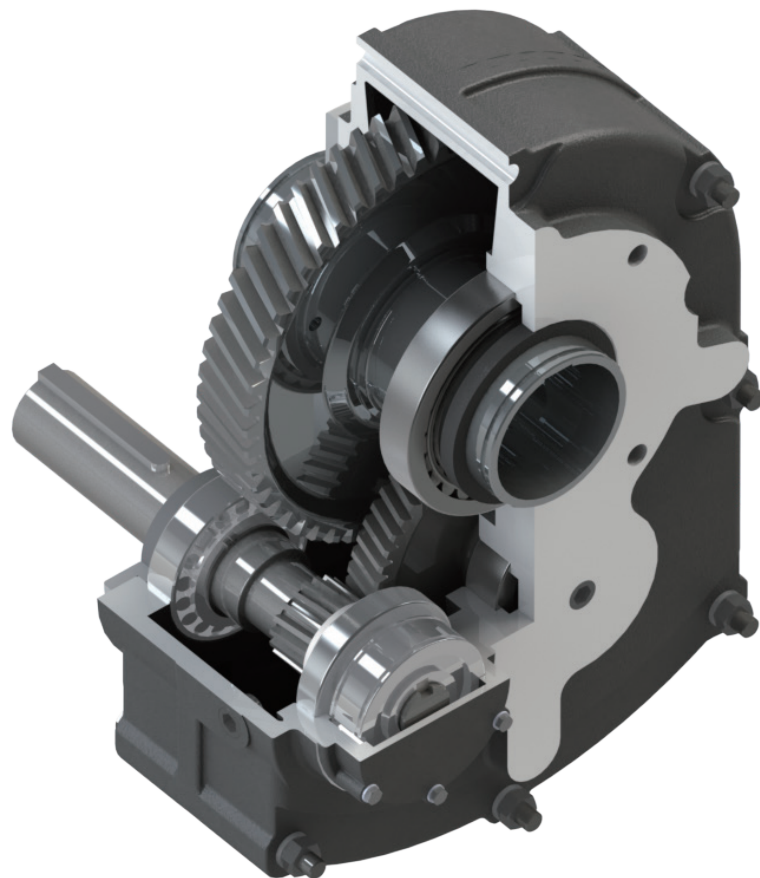
Shaft Mount Gear Reducer



## Content

1. Features.....	P. 2
2. Lubrication.....	P. 3
3. Load Classifications.....	P. 4 - 7
4. Mechanical Rating (HP) .....	P. 8
5. Output Torque (in-lb) .....	P. 9
6. Actual Ratio / Input RPM.....	P. 10 - 11
7. Dimensions - SMD.....	P. 12
8. Accessories Kits .....	P. 13
9. Assemblies - Backstop .....	P. 14 - 15
10. Assemblies - Adapter & Drive Shaft .....	P. 16
11. Dimensions - Adapter .....	P. 17
12. Dimensions - Drive Shaft .....	P. 18
13. Dimensions - Tapered Bushing .....	P. 19

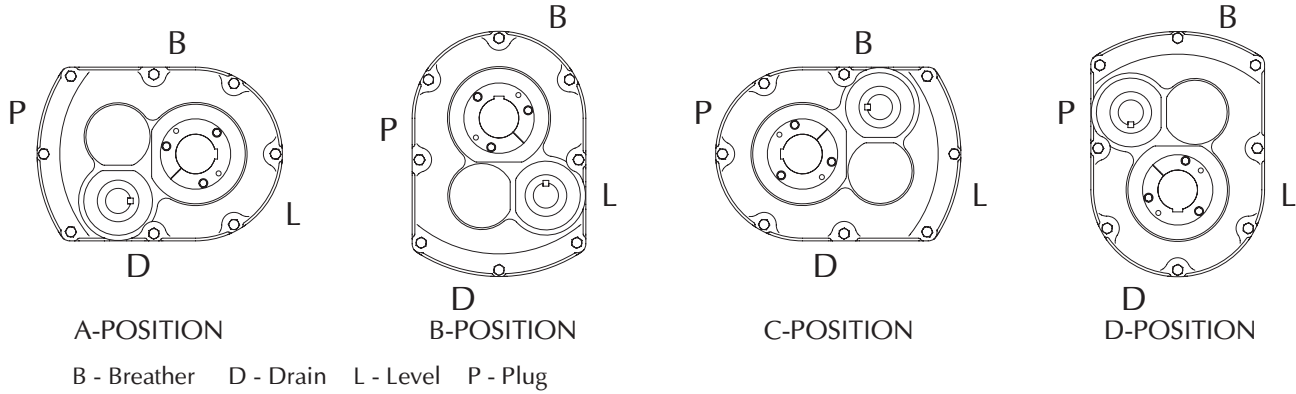
- Product configurations: Torque-Arm and Screw Conveyor (quickly/easily exchangeable).
- Performance capability: appliances through 300HP.
- Accessories package: backstops, bushings, torque arms, drive shafts, and adapters.
- Rugged cast-iron and ductile iron housing.
- High efficiency helical gear designed, 98% per gear stage.
- Robust shafts in precision machined and hardened.
- Magnetic drain plug attached for protection.
- Reliable anti-friction bearings with tapered roller design for box size 3-9 and with ball design for size 2.
- Proven seals with metal reinforcement for robustness.
- Rigorously tested before shipment.



# Lubrication

# SMD Series Shaft Mount Gear Reducer

## HORIZONTAL APPLICATIONS ▲



## VERTICAL MOUNT ▲



Oil Volume Recommendations (Quarts)						
SIZE	A	B	C	D	E	F
#2	0.95	0.90	0.69	1.00	1.74	1.80
#3	1.48	1.48	1.16	1.48	2.85	3.06
#4	2.01	2.32	1.37	1.90	4.02	4.44
#5	3.91	4.44	3.59	4.23	7.40	7.93
#6	6.66	6.97	5.92	6.87	12.68	13.63
#7	7.93	8.45	7.93	10.57	17.96	19.02
#8	10.57	11.62	11.84	11.62	23.25	23.25
#9	12.68	12.89	12.68	14.79	25.36	26.42

• US measure: 1 quart = 32 fluid ounces = 0.94646 liters

SMD Oil Volume				
SIZE	15° To 60°F (-9° To 16°C)		50° To 125°F (10° To 50°C)	
	Mobil SHC 629	Mobil SHC 630	Mobil SHC 630	Mobil SHC 632
AGMA Rating	4	5	5	6
ISO Grade	150	220	220	320
#2	N/A	1-140 RPM	N/A	1-140 RPM
#3	N/A	1-140 RPM	N/A	1-140 RPM
#4	126-140 RPM	1-125 RPM	126-140 RPM	1-125 RPM
#5	101-125 RPM	1-100 RPM	101-125 RPM	1-100 RPM
#6	101-125 RPM	1-100 RPM	101-125 RPM	1-100 RPM
#7	41-74 RPM	1-40 RPM	41-74 RPM	1-40 RPM
#8	41-70 RPM	1-40 RPM	41-70 RPM	1-40 RPM
#9	41-50 RPM	1-40 RPM	41-50 RPM	1-40 RPM

MODEL	CLASS I			CLASS II			CLASS III		
	POWER (HP)	OUTPUT (RPM)	OUTPUT TORQUE (IN-LB)	POWER (HP)	OUTPUT (RPM)	OUTPUT TORQUE (IN-LB)	POWER (HP)	OUTPUT (RPM)	OUTPUT TORQUE (IN-LB)
SMR2-1/9	7.5	85-105	5035-4076	5	85-105	3357-2717	3	85-100	2014-1712
	10	105-150	5435-3804	7.5	110-150	3891-2853	5	105-150	2717-1902
	15	160-200	5350-4280	10	150-200	3804-2853	7.5	160-200	2675-2140
SMR2-1/15	2	16-24	7065-4710	1.5	18-24	4710-3532	1.5	26-34	3261-2493
	3	26-45	6521-3768	2	24-34	4710-3324	2	38-58	2975-1949
	5	46-74	6143-3819	3	38-70	4462-2422	3	58-100	2923-1695
	7.5	78-105	5434-4037	5	70-105	4037-2691	5	105-140	2691-2018
	10	105-140	5382-4037	7.5	110-140	3853-3028			
SMR2-1/25	0.5	4-6	7065-4710	0.33	4-5	4663-3730	0.25	4-5	3532-2826
	0.75	6-8	7065-5298	0.5	6-8	4710-3532	0.33	6-8	3108-2331
	1	8-10	7065-5652	0.75	8-12	5298-3532	0.5	8-12	3532-2355
	1.5	12-16	7065-5298	1	12-16	4710-3532	0.75	12-16	3532-2649
	2	16-24	7065-4710	1.5	18-24	4710-3532	1	16-24	3532-2355
	3	26-45	6521-3768	2	24-34	4710-3324	1.5	26-34	3261-2493
	5	46-74	6143-3819	3	38-70	4462-2422	2	38-58	2975-1949
	7.5	78-85	5434-4987	5	70-85	4037-3324	3	58-85	2923-1995
SMR3-1/9	10	85-105	6714-5435	7.5	85-105	5035-4076	5	85-105	3357-2717
	15	110-140	7782-6114	10	100-140	5707-4076	7.5	110-140	3891-3057
	20	150-200	7609-5707	15	150-200	5707-4280	10	150-200	3804-2853
SMR3-1/15	3	28-30	6055-5652	2	16-24	7065-4710	2	24-38	4710-2975
	5	32-50	8831-5652	3	26-46	6521-3686	3	40-70	4239-2422
	7.5	52-74	8151-5728	5	50-74	5652-3819	5	74-105	3819-2691
	10	78-105	7246-5382	7.5	78-105	5434-4037	7.5	110-140	3853-3028
	15	110-140	7707-6055	10	100-140	5652-4037			
SMR3-1/25	0.75	4-5	10597-8477	0.5	4-5	7065-5652	0.5	6-7	4710-4037
	1	6-7	9419-8074	0.75	6-7	7065-6055	0.75	8-10	5298-4239
	1.5	8-10	10597-8477	1	8-10	7065-5652	1	10-16	5652-3532
	2	12-16	9419-7065	1.5	12-16	7065-5298	1.5	18-24	4710-3532
	3	18-30	9419-5652	2	16-24	7065-4710	2	24-38	4710-2975
	5	32-50	8831-5652	3	26-46	6521-3686	3	40-70	4239-2422
	7.5	52-74	8151-5728	5	50-74	5652-3819	5	74-85	3819-3324
	10	78-85	7246-6649	7.5	78-85	5434-4987			

## Load Classifications

MODEL	CLASS I			CLASS II			CLASS III		
	POWER (HP)	OUTPUT (RPM)	OUTPUT TORQUE (IN-LB)	POWER (HP)	OUTPUT (RPM)	OUTPUT TORQUE (IN-LB)	POWER (HP)	OUTPUT (RPM)	OUTPUT TORQUE (IN-LB)
SMR4-1/9	20	85-105	13427-10870	15	85-115	10071-7443	10	85-115	6714-4962
	25	100-135	14267-10568	20	110-150	10376-7609	15	120-150	7133-5707
	30	120-160	14267-10700	25	140-190	10190-7509	20	160-200	7133-5707
	40	160-200	14267-11413	30	170-200	10700-8560			
SMR4-1/15	5	18-24	15699-11774	3	14-22	12111-7707	3	20-34	8477-4987
	7.5	26-34	16303-12467	5	24-34	11774-8311	5	38-54	7436-5233
	10	38-54	14873-10466	7.5	38-54	11154-7849	7.5	58-80	7308-5298
	15	58-80	14616-10597	10	54-80	10466-7065	10	80-140	7065-4037
	20	80-110	14219-10276	15	85-115	9973-7372			
	25	100-140	14129-10092	20	110-140	10276-8074			
SMR4-1/25	1	4-5	14129-11303	0.75	4-5	10597-8477	0.5	4-5	7065-5652
	1.5	5-7	16955-12111	1	5-6	11303-9419	0.75	5-6	8477-7065
	2	6-8	18839-14129	1.5	6-8	14129-10597	1	6-8	9419-7065
	3	10-14	16955-12111	2	10-12	11303-9419	1.5	10-12	8477-7065
	5	16-24	17661-11774	3	14-22	12111-7707	2	14-18	8074-6280
	7.5	26-34	16303-12467	5	24-34	11774-8311	3	20-34	8477-4987
	10	38-54	14873-10466	7.5	38-54	11154-7849	5	38-54	7436-5233
	15	58-80	14616-10597	10	54-85	10466-6649	7.5	58-85	7308-4987
	20	80-85	14129-13298						
SMR5-1/9	25	78-95	18291-15018	20	78-105	14632-10870	10	78-80	7316-7133
	30	85-115	20141-14887	25	100-135	14267-10568	15	85-105	10071-8152
	40	110-150	20752-15218	30	120-160	14267-10700	20	110-135	10376-8454
	50	140-180	20381-15852	40	160-200	14267-11413	25	140-160	10190-8917
	60	170-200	20141-17120				30	170-200	10071-14267
SMR5-1/15	7.5	22-24	19267-17661	7.5	24-34	17661-12467	5	24-34	11774-8311
	10	24-34	23548-16622	10	38-54	14873-10466	7.5	38-52	11154-8151
	15	38-54	22309-15699	15	58-80	14616-10597	10	54-80	10466-7065
	20	54-78	20932-14491	20	78-110	14491-10276	15	85-110	9973-7707
	25	70-95	20184-14873	25	100-125	14129-11303	20	110-125	10276-9043
	30	85-115	19947-14743						
	40	110-125	20551-18085						
SMR5-1/25	2	4-5	28258-22606	1.5	4-5	21194-16955	1	4-5	14129-11303
	3	6-8	28258-21194	2	5-6	22606-18839	1.5	6-7	14129-12111
	5	10-14	28258-20184	3	8-14	21194-12111	2	8-12	14129-9419
	7.5	16-24	26492-17661	5	16-24	17661-11774	3	14-22	12111-7707
	10	24-34	23548-16622	7.5	24-34	17661-12467	5	24-34	11774-8311
	15	38-54	22309-15699	10	38-54	14873-10466	7.5	38-52	11154-8151
	20	54-78	20932-14491	15	58-80	14616-10597	10	54-78	10466-7246
		70-80	20184-17661	20	78-80	14491-14129			

MODEL	CLASS I			CLASS II			CLASS III		
	POWER (HP)	OUTPUT (RPM)	OUTPUT TORQUE (IN-LB)	POWER (HP)	OUTPUT (RPM)	OUTPUT TORQUE (IN-LB)	POWER (HP)	OUTPUT (RPM)	OUTPUT TORQUE (IN-LB)
SMR6-1/9	50	78-105	36581-27175	30	78-90	21949-19022	25	78-95	18291-15018
	60	95-125	36042-27392	40	90-120	25363-19022	30	95-120	18021-14267
	75	120-200	35667-21400	50	110-150	25939-19022	40	125-150	18261-15218
				60	130-180	26338-19022	50	160-200	17833-14267
			75	160-200	26750-21400	60	190-200	18021-17120	
SMR6-1/15	15	20-26	42387-32605	10	18-26	31398-21737	7.5	20-24	21194-17661
	20	26-38	43474-29745	15	28-40	30276-21194	10	26-40	21737-14129
	25	34-50	41556-28258	20	40-58	28258-19488	15	45-58	18839-14616
	30	45-62	37677-27346	25	52-78	27171-18114	20	62-74	18231-15275
	40	62-85	36462-26596	30	66-90	25689-18839	25	78-95	18114-14873
	50	78-105	36228-26912	40	90-120	25118-18839	30	95-125	17847-13564
	60	95-125	35694-27128						
SMR6-1/25	3	4-5	42387-33910	2	4-5	28258-22606	1.5	4-5	21194-16955
	5	6-8	47097-35323	3	6-8	28258-21194	2	6-7	18839-16147
	7.5	10-12	42387-35323	5	10-12	28258-23548	3	8-12	21194-14129
	10	14-18	40369-31398	7.5	14-18	30276-23548	5	14-18	20184-15699
	15	20-26	42387-32605	10	18-26	31398-21737	7.5	20-24	21194-17661
	20	26-38	43474-29745	15	28-40	30276-21194	10	26-40	21737-14129
	25	34-50	41556-28258	20	40-58	28258-19488	15	45-58	18839-14616
	30	45-62	37677-27346	25	52-78	27171-18114	20	62-70	18231-16147
	40	62-80	36462-28258	30	66-78	25689-21737			
SMR7-1/9	60	74-85	46270-40282	50	74-100	38559-28533	30	74-80	23135-21400
	75	78-200	54872-21400	60	90-120	38044-28533	40	85-100	26855-22827
				75	110-200	38909-21400	50	105-125	27175-22827
						60	125-200	27392-17120	
SMR7-1/15	20	18-22	62796-51378	20	26-34	43474-33245	10	16-24	35323-23548
	25	22-30	64223-47097	25	32-46	44153-30715	15	26-34	32605-24934
	30	26-38	65211-44618	30	40-58	42387-29232	20	38-46	29745-24572
	40	38-54	59491-41864	40	58-80	38977-28258	25	50-62	28258-22789
	50	50-74	56516-38187				30	62-80	27346-21194
						40	85-90	26596-25118	
SMR7-1/25	5	4-5	70645-56516	3	4-5	42387-33910	3	5-7	33910-24221
	7.5	6-7	70645-60553	5	6-7	47097-40369	5	8-10	35323-28258
	10	8-10	70645-56516	7.5	8-10	52984-42387	7.5	12-14	35323-30276
	15	12-16	70645-52984	10	12-16	47097-35323	10	16-24	35323-23548
	20	16-22	70645-51378	15	18-26	47097-32605	15	26-34	32605-24934
	25	22-30	64223-47097	20	24-34	47097-33245	20	38-46	29745-24572
	30	26-38	65211-44618	25	32-46	44153-30715	25	50-62	28258-22789
	40	38-54	59491-41864	30	40-58	42387-29232	30	62-70	27346-24221
	50-74	56516-38187	40	58-74	38977-30549				

## Load Classifications

MODEL	CLASS I			CLASS II			CLASS III		
	POWER (HP)	OUTPUT (RPM)	OUTPUT TORQUE (IN-LB)	POWER (HP)	OUTPUT (RPM)	OUTPUT TORQUE (IN-LB)	POWER (HP)	OUTPUT (RPM)	OUTPUT TORQUE (IN-LB)
SMR8-1/15	40	20-30	113032-75355	25	20-26	70645-54342	15	18-20	47097-42387
	50	28-40	100922-70645	30	22-32	77067-52984	20	20-26	56516-43474
	60	34-46	99734-73717	40	32-46	70645-49144	25	28-34	50461-41556
	75	45-70	94193-60553	50	40-58	70645-48721	30	34-46	49867-36858
				60	50-74	67819-45824	40	50-58	45213-38977
				75	66-74	64223-57280	50	62-78	45577-36228
				60	78-115	43474-29487			
SMR8-1/25	7.5	4-5	105968-84774	5	4-5	70645-56516	3	4-5	42387-33910
	10	6-7	94193-80737	7.5	6-7	70645-60553	5	5-7	56516-40369
	15	8-9	105968-94193	10	8-9	70645-62796	7.5	7-9	60553-47097
	20	10-12	113032-94193	15	10-14	84774-60553	10	10-14	56516-40369
	25	12-16	117742-88306	20	14-20	80737-56516	15	16-20	52984-42387
	30	16-20	105968-84774	25	18-26	78495-54342	20	20-26	56516-43474
	40	20-30	113032-75355	30	22-32	77067-52984	25	28-34	50461-41556
	50	28-40	100922-70645	40	32-46	70645-49144	30	34-46	49867-36858
	60	34-46	99734-73717	50	40-58	70645-48721	40	50-58	45213-38977
	75	45-70	94193-60553	60	50-74	67819-45824	50	62-74	45577-38187
SMR9-1/15	50	18-26	156989-108685	30	20-22	84774-77067	25	18-22	78495-64223
	60	22-32	154135-105968	40	22-30	102757-75355	30	22-30	77067-56516
	75	30-50	141290-84774	50	28-40	100922-70645	40	32-40	70645-56516
				60	34-50	99734-67819	50	45-52	62796-54342
				75	45-74	94193-57280	60	52-80	65211-42387
SMR9-1/25	15	5-6	169548-141290	7.5	4-5	105968-84774	5	4-5	70645-56516
	20	6-8	188387-141290	10	4-6	141290-94193	7.5	5-6	84774-70645
	25	8-10	176613-141290	15	8-9	105968-94193	10	6-8	94193-70645
	30	10-14	169548-121106	20	10-12	113032-94193	15	10-12	84774-70645
	40	14-20	161475-113032	25	12-16	117742-88306	20	14-16	80737-70645
	50	18-26	156989-108685	30	16-22	105968-77067	25	18-22	78495-64223
	60	22-32	154135-105968	40	22-30	102757-75355	30	22-30	77067-56516
	75	30-50	141290-84774	50	28-40	100922-70645	40	32-40	70645-56516
				60	34-50	99734-67819	50	45-52	62796-54342
75				45-74	94193-57280	60	52-74	65211-45824	

Size Output RPM	#2	#3	#4	#5	#6	#7	#8	#9
4	0.57	0.95	1.47	2.29	3.60	5.87	9.59	14.16
6	0.82	1.34	2.12	3.28	5.16	8.43	13.76	20.29
8	1.08	1.67	2.73	4.25	6.66	10.88	17.76	26.22
10	1.31	2.02	3.33	5.16	8.13	13.26	21.66	31.63
12	1.56	2.34	3.96	5.97	9.67	15.78	25.77	36.68
14	1.82	2.64	4.62	6.78	11.28	18.42	29.96	41.59
16	2.08	2.95	5.29	7.55	12.89	20.58	33.40	46.37
18	2.33	3.24	5.86	8.31	14.50	22.66	36.76	51.05
20	2.55	3.53	6.38	9.05	16.12	24.69	40.06	55.64
22	2.75	3.82	6.90	9.78	17.68	26.68	43.31	60.15
24	2.94	4.09	7.40	10.50	18.99	28.65	46.50	64.59
26	3.15	4.37	7.91	11.20	20.27	30.59	49.64	68.95
28	3.33	4.64	8.39	11.90	21.54	32.49	52.74	73.28
30	3.53	4.91	8.87	12.59	22.78	34.38	55.81	77.54
32	3.72	5.17	9.35	13.27	24.01	36.24	58.83	81.77
34	3.91	5.43	9.83	13.95	25.23	38.09	61.84	85.94
38	4.27	5.95	10.75	15.27	27.64	41.72	67.74	94.16
40	4.46	6.20	11.22	15.92	28.83	43.51	70.66	98.22
45	4.91	6.83	12.36	17.55	31.74	47.93	77.84	108.22
46	5.01	6.95	12.58	17.85	32.32	48.79	79.26	110.19
50	5.35	7.44	13.47	19.12	34.60	52.25	84.89	118.04
52	5.53	7.69	13.90	19.75	35.74	53.97	87.68	121.92
54	5.70	7.93	14.34	20.36	36.86	55.66	90.45	125.79
58	6.04	8.40	15.20	21.59	39.08	59.04	95.93	133.43
62	6.39	8.87	16.05	22.81	41.29	62.36	101.36	140.99
66	6.71	9.34	16.90	24.01	43.46	65.66	106.73	148.48
70	7.04	9.80	17.73	25.22	45.61	68.93	112.05	155.89
74	7.37	10.36	18.73	26.70	47.74	72.16	117.30	163.23
78	7.70	10.94	19.76	28.16	50.33	75.37	122.86	170.52
80	7.86	11.22	20.28	28.91	51.65	77.14	126.09	174.75
85	8.35	11.93	21.58	30.76	54.96	82.10	134.21	186.01
90	8.85	12.66	22.88	32.61	58.27	87.06	142.33	197.30
95	9.35	13.37	24.17	34.46	61.60	92.03	150.48	208.61
100	9.86	14.08	25.48	36.32	64.93	97.02	158.65	219.94
105	10.37	14.82	26.78	38.19	68.26	102.01	166.83	231.31
110	10.87	15.53	28.08	40.04	71.59	107.00	175.02	242.69
115	11.37	16.25	29.39	41.91	74.94	112.01	183.22	254.09
120	11.88	16.98	30.69	43.79	78.28	117.03	191.44	265.52
125	12.38	17.70	32.01	45.67	81.65	122.06	199.68	276.97
130	12.89	18.43	33.32	47.53	84.99	127.08	207.93	288.43
135	13.40	19.15	34.63	49.42	88.36	132.13	216.19	299.92
140	13.90	19.89	35.94	51.29	91.73	137.18	224.47	311.43
150	14.92	21.33	38.58	55.07	98.48	147.38		
160	15.94	22.79	41.21	58.85	105.24	157.52		
170	16.97	24.26	43.85	62.63	112.02	167.70		
180	17.99	25.72	46.51	66.42	118.81	177.89		
190	19.01	27.18	49.17	70.23	125.62	188.11		
200	20.04	28.66	51.83	74.04	132.44	198.35		

## Output Torque (in-lb)

Size Output RPM	#2	#3	#4	#5	#6	#7	#8	#9
4	8070	13491	20719	32364	50836	82961	135565	200016
6	7766	12584	19946	30922	48591	79377	129573	191145
8	7616	11833	19262	30003	47070	76886	125475	185207
10	7390	11406	18795	29155	45940	74933	122398	178777
12	7324	11005	18634	28138	45539	74318	121367	172767
14	7340	10667	18641	27361	45546	74343	120924	167907
16	7345	10407	18689	26670	45544	72699	117975	163804
18	7304	10160	18414	26089	45542	71153	115414	160299
20	7192	9962	18034	25583	45541	69755	113204	157215
22	7063	9801	17723	25133	45430	68538	111250	154509
24	6927	9637	17434	24729	44707	67462	109492	152091
26	6838	9495	17186	24352	44060	66486	107908	149887
28	6726	9364	16937	24021	43468	65583	106456	147903
30	6646	9243	16712	23726	42921	64766	105136	146069
32	6574	9133	16512	23439	42413	63997	103902	144410
34	6506	9033	16332	23183	41938	63315	102786	142848
38	6356	8850	15994	22715	41102	62047	100744	140034
40	6296	8765	15853	22499	40730	61470	99840	138771
45	6170	8579	15521	22036	39865	60193	97761	135919
46	6151	8543	15457	21934	39708	59943	97375	135384
50	6053	8414	15224	21617	39109	59059	95954	133428
52	6005	8353	15102	21465	38840	58656	95291	132512
54	5961	8296	15003	21309	38577	58253	94661	131650
58	5890	8188	14807	21038	38084	57525	93472	130014
62	5822	8089	14630	20796	37636	56846	92391	128519
66	5747	7998	14472	20556	37215	56222	91389	127141
70	5688	7913	14315	20362	36826	55653	90463	125858
74	5630	7909	14301	20390	36463	55109	89589	124666
78	5577	7924	14318	20404	36466	54608	89019	123553
80	5555	7924	14329	20423	36485	54495	89080	123453
85	5552	7933	14349	20453	36543	54590	89238	123677
90	5557	7949	14365	20477	36593	54673	89377	123893
95	5563	7955	14380	20501	36648	54748	89519	124104
100	5575	7960	14401	20529	36696	54830	89662	124301
105	5580	7974	14415	20557	36741	54907	89793	124504
110	5585	7980	14427	20574	36783	54977	89920	124688
115	5590	7985	14445	20598	36828	55048	90043	124871
120	5594	7996	14455	20625	36869	55120	90163	125052
125	5599	8002	14472	20646	36915	55187	90281	125226
130	5603	8013	14487	20665	36950	55249	90395	125392
135	5608	8018	14496	20689	36989	55313	90507	125559
140	5613	8028	14510	20706	37032	55378	90617	125720
150	5622	8037	14537	20747	37104	55528		
160	5632	8051	14557	20786	37175	55641		
170	5641	8064	14579	20820	37241	55750		
180	5649	8076	14603	20854	37305	55854		
190	5656	8086	14625	20890	37366	55954		
200	5662	8100	14645	20921	37426	56050		

# SMD Series

Shaft Mount Gear Reducer

## Actual Ratio / Input RPM

Size Ratio Output RPM	#2			#3			#4			#5		
	9.36	14.04	23.37	9.21	14.87	24.75	9.21	15.13	24.38	9.1	15.4	25.56
4			93			99			98			102
6			140			149			146			153
8			187			198			195			204
10			234			248			244			256
12			280			297			293			307
14			327			347			341			358
16			374			396			390			409
18		253	421			446		272	439			460
20		281	467			495		303	488			511
22		309	514			545		333	536		339	562
24		337	561			594		363	585		370	613
26		365	608			644		393	634		400	665
28		393	654		416	693		424	683		431	716
30		421	701		446	743		454	731		462	767
32		449	748		476	792		484	780		493	818
34		477	795		506	842		514	829		524	869
38		534	888		565	941		575	926		585	971
40		562	935		595	990		605	975		616	1022
45		632	1052		669	1114		681	1097		693	1150
46		646	1075		684	1139		696	1121		708	1176
50		702	1169		744	1238		757	1219		770	1278
52		730	1215		773	1287		787	1268		801	1329
54		758	1262		803	1337		817	1317		832	1380
58		814	1355		862	1436		878	1414		893	1482
62		870	1449		922	1535		938	1512		955	1585
66		927	1542		981	1634		999	1609		1016	1687
70		983	1636		1041	1733		1059	1707		1078	1789
74		1039	1729		1100	1832		1120	1804		1140	1891
78		1095	1823		1160	1931		1180	1902	710	1201	1994
80		1123	1870		1190	1980		1210	1950	728	1232	2045
85	796	1193	1986	783	1264	2104	783	1286	2072	774	1309	
90	842	1264		829	1338		829	1362		819	1386	
95	889	1334		875	1413		875	1437		865	1463	
100	936	1404		921	1487		921	1513		910	1540	
105	983	1474		967	1561		967	1589		956	1617	
110	1030	1544		1013	1636		1013	1664		1001	1694	
115	1076	1615		1059	1710		1059	1740		1047	1771	
120	1123	1685		1105	1784		1105	1816		1092	1848	
125	1170	1755		1151	1859		1151	1891		1138	1925	
130	1217	1825		1197	1933		1197	1967		1183		
135	1264	1895		1243	2007		1243	2043		1229		
140	1310	1966		1289	2082		1289	2118		1274		
150	1404			1382			1382			1365		
160	1498			1474			1474			1456		
170	1591			1566			1566			1547		
180	1685			1658			1658			1638		
190	1778			1750			1750			1729		
200	1872			1842			1842			1820		

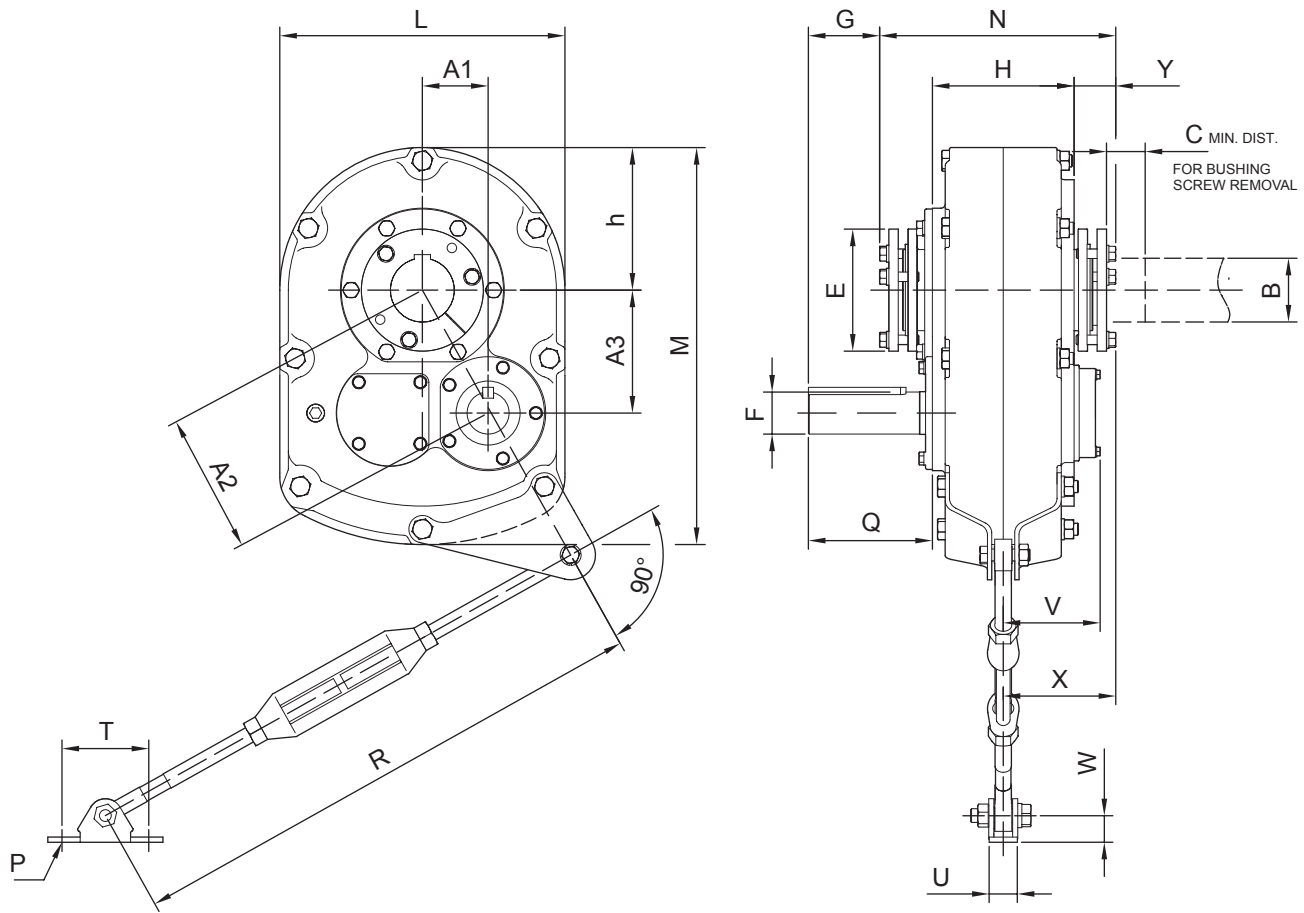
## Actual Ratio / Input RPM

Size Ratio Output RPM	#6			#7			#8		#9	
	9.25	15.33	25.14	9.16	15.14	24.35	14.79	24.23	15.12	25.66
4			101			97		97		103
6			151			146		145		154
8			201			195		194		205
10			251			244		242		257
12			302			292		291		308
14			352			341		339		359
16			402			390		388		411
18			453		273	438		436	272	462
20		307	503		303	487	296	485	302	513
22		337	553		333	536	325	533	333	565
24		368	603		363	584	355	582	363	616
26		399	654		394	633	385	630	393	667
28		429	704		424	682	414	678	423	718
30		460	754		454	731	444	727	454	770
32		491	804		484	779	473	775	484	821
34		521	855		515	828	503	824	514	872
38		583	955		575	925	562	921	575	975
40		613	1006		606	974	592	969	605	1026
45		690	1131		681	1096	666	1090	680	1155
46		705	1156		696	1120	680	1115	696	1180
50		767	1257		757	1218	740	1212	756	1283
52		797	1307		787	1266	769	1260		
54		828	1358		818	1315	799	1308		
58		889	1458		878	1412	858	1405		
62		950	1559		939	1510	917	1502		
66		1012	1659		999	1607	976	1599		
70		1073	1760		1060	1705	1035	1696		
74		1134	1860	678	1120	1802				
78	722	1196	1961	714						
80	740	1226	2011	733						
85	786	1303		779						
90	833	1380		824						
95	879	1456		870						
100	925	1533		916						
105	971	1610		962						
110	1018	1686		1007						
115	1064	1763		1053						
120	1110	1840		1099						
125	1156	1916		1145						
130	1203			1191						
135	1249			1236						
140	1295			1282						
150	1388			1374						
160	1480			1465						
170	1573			1557						
180	1665			1649						
190	1758			1740						
200	1850			1832						

# SMD Series

Shaft Mount Gear Reducer

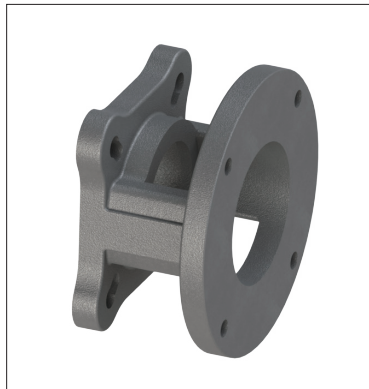
## Dimensions



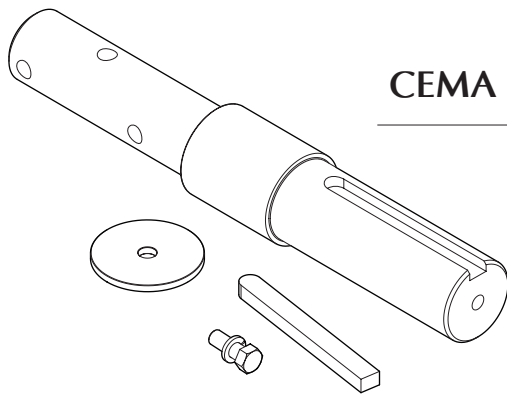
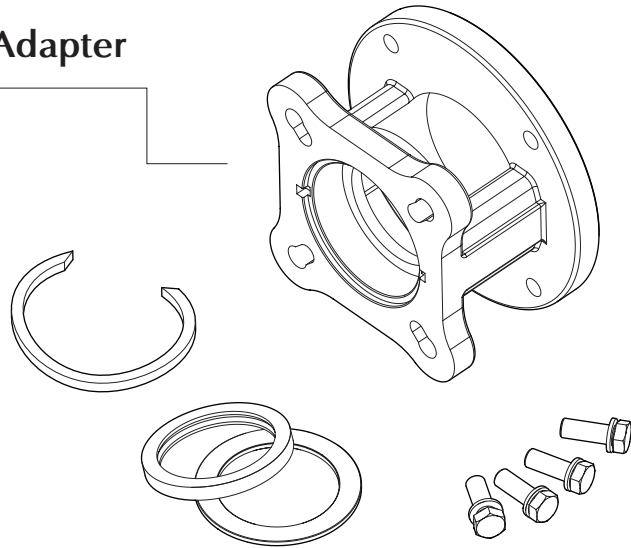
inch

Size	A1	A3	B Max	C	F	G	L	N	Q	R-Min	T	V	X
	A2	h		E	KEY	H	M	P		R-Max	U	W	Y
#2	2.13	3.76	1-15/16	1.25	1-1/8	2.15	8.39	7.44	3.58	26.94	3.00	2.87	3.74
	4.32	4.09		4.06	1/4x1/8x2-5/8	4.57	11.42	0.51		32.94	1.10	1.06	1.44
#3	2.34	4.17	2-3/16	1.50	1-1/4	2.31	9.25	9.36	4.33	26.94	3.00	3.49	4.72
	4.78	4.84		4.37	1/4x1/8x2-15/16	5.63	12.87	0.51		32.94	1.10	1.06	1.70
#4	2.76	4.79	2-7/16	1.75	1-7/16	3.26	10.39	10.29	5.40	29.19	4.00	4.03	5.20
	5.53	5.50		4.81	3/8x3/16x4	6.38	15.16	0.67		35.19	1.34	1.23	1.78
#5	3.03	5.67	2-15/16	1.81	1-15/16	3.29	13.15	10.89	5.72	29.19	4.00	4.47	5.19
	6.43	6.57		5.63	1/2x1/4x4-1/2	6.54	18.31	0.67		35.19	1.34	1.23	1.92
#6	4.08	6.73	3-7/16	1.81	2-3/16	3.58	15.12	11.76	6.03	29.19	4.75	5.24	5.79
	7.87	7.56		6.12	1/2x1/4x4-1/2	7.36	21.34	0.67		35.19	2.75	2.00	1.94
#7	5.10	8.30	3-15/16	2.06	2-7/16	3.35	18.74	13.35	6.34	29.44	4.75	4.57	6.71
	9.74	9.37		7.24	5/8x5/16x4-3/4	7.36	25.94	0.67		35.44	2.75	2.00	3.01
#8	6.03	9.50	4-7/16	2.06	2-7/16	4.07	20.24	14.56	7.11	30.00	7.00	5.89	7.35
	11.25	10.12		7.80	5/8x5/16x5-3/8	8.46	28.27	0.83		36.00	4.02	3.15	3.06
#9	6.59	10.81	4-15/16	2.44	2-7/16	6.50	22.64	14.74	9.65	30.00	7.00	6.13	7.51
	12.66	11.32		8.66	5/8x5/16x7-3/4	8.27	31.69	0.83		36.00	4.02	3.15	3.33

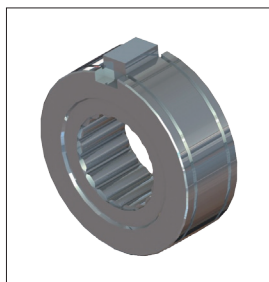
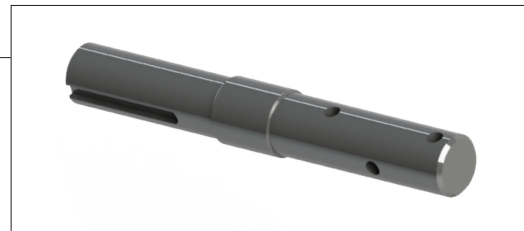
## Accessories Kits



CEMA Adapter

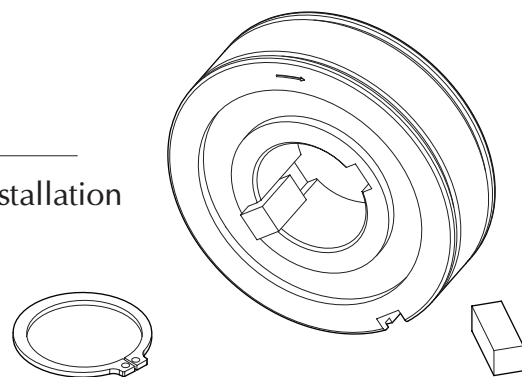


CEMA Drive Shaft



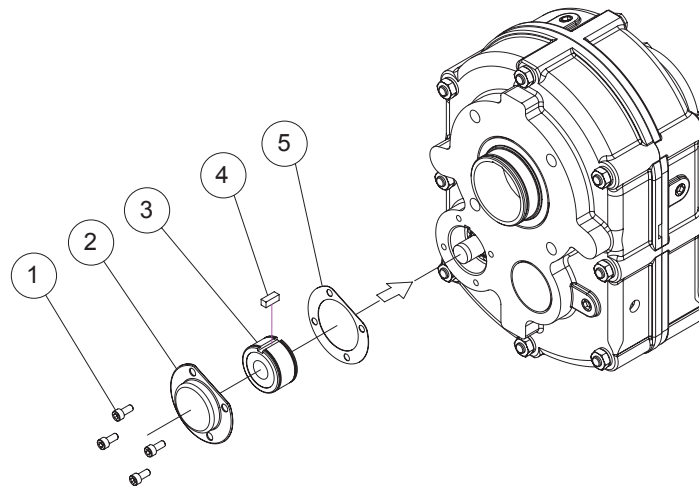
Backstops

- Quick and easy installation
- Oil lubricated
- Reversible



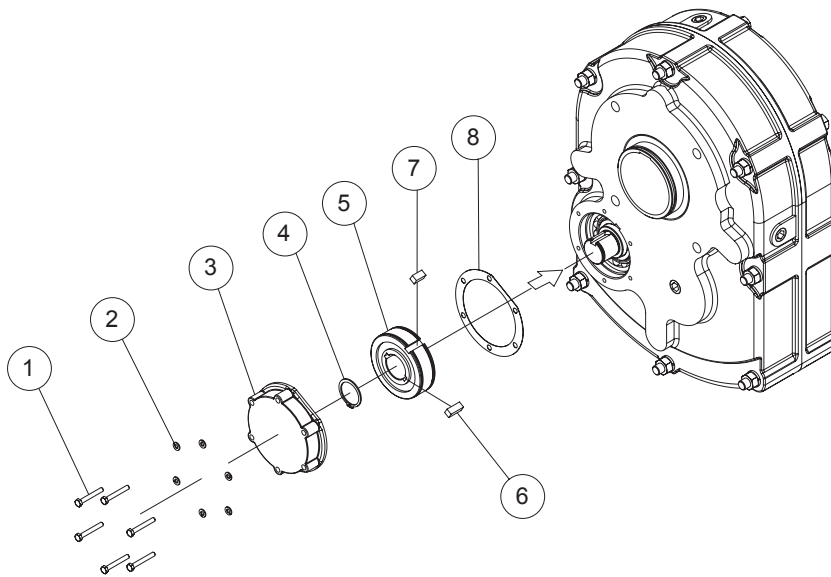
For box size: #2, #3, #4, #5

1. Bolts
2. End cover
3. Backstop
4. Key
5. Gasket



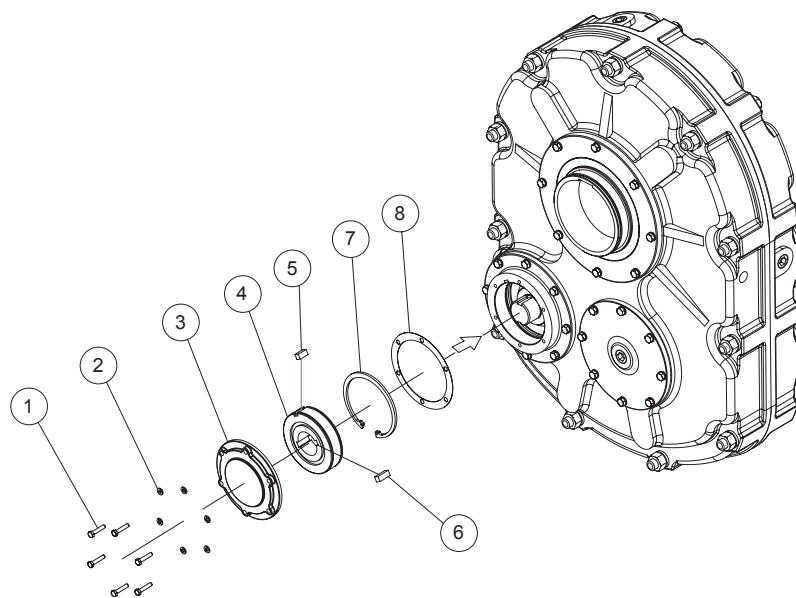
For box size: #6, #7, #8

1. Bolts
2. Spring Washer
3. End cover
4. C-clip (for #6 only)
5. Backstop
6. Key (inner)



For box size: #9

1. Bolts
2. Spring Washer
3. End cover
4. Backstop
5. Key (outer)
6. Key (inner)
7. C-clip
8. Gasket



## Assemblies - Backstop

---

**Step 1:** Remove backstop cover and gasket from the gearbox.

**Step 2:** (for #9 only) put c-clip into housing's groove.

**Step 3:** Determine the direction of required shaft rotation.

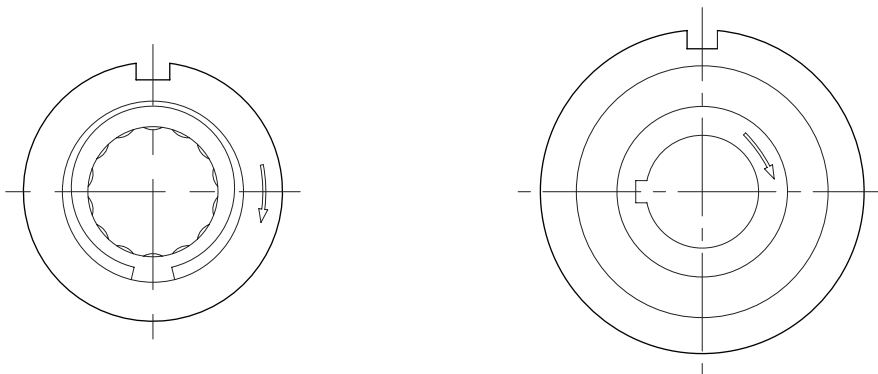
(#2~#5 backstops don't have inner race, the rotation arrow is marked on the outer race, meaning the outer race's free direction; shaft direction is opposite in other words. #6~#9 backstops have inner race, the rotation arrow is marked on the inner race, meaning the inner race's free direction as well as the shaft's free direction.)

**Step 4:** Feed the backstop into the housing, feed the key into backstop's outer race and housing's key ways. In case of backstops with inner race, feed another key into the backstop's inner race and the shaft's key ways.

**Step 5:** (for #6 only) put c-clip onto end side of shaft's groove.

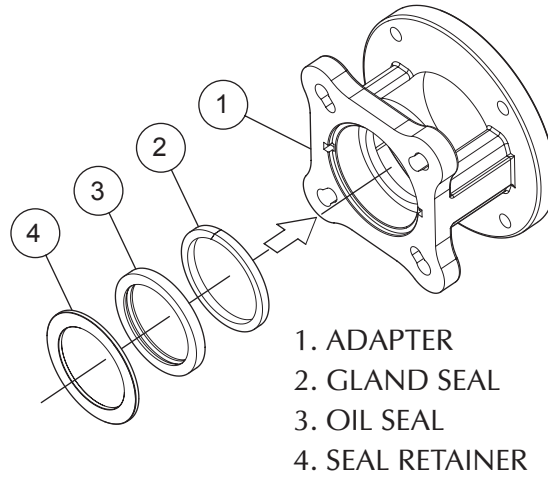
**Step 6:** Install the end cover.

**Step 7:** Refill oil

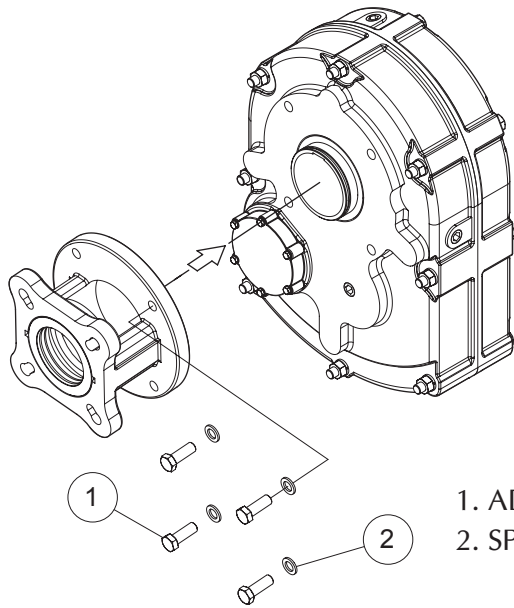


### Step 1:

Please follow the sequence of gland seal, oil seal and seal retainer to complete the adapter assemblies.



- 1. ADAPTER
- 2. GLAND SEAL
- 3. OIL SEAL
- 4. SEAL RETAINER



- 1. ADAPTER
- 2. SPRING WASHER

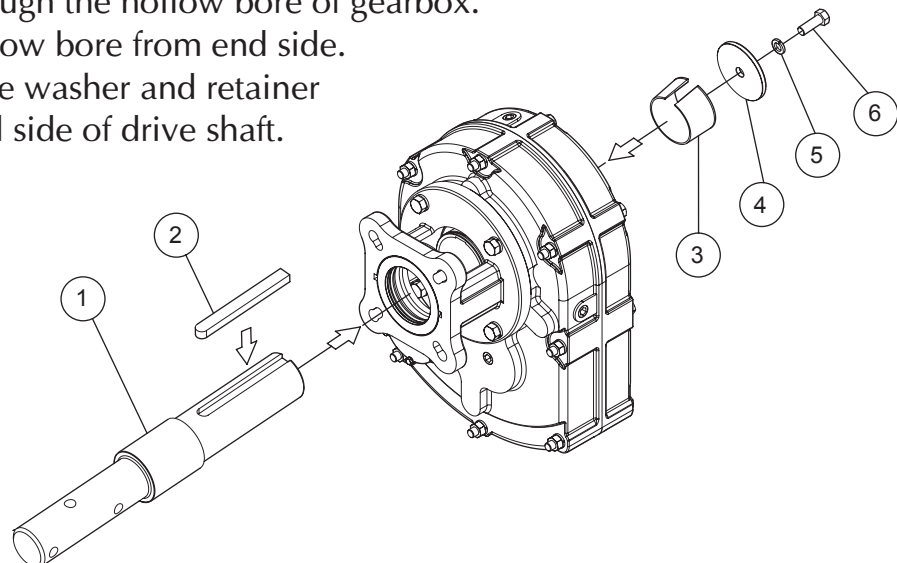
### Step 2:

Please put adapter bolts through spring washers and then fasten the adapter kit onto the gearbox.

### Step 3:

- (1) Strike the key onto the drive shaft.
- (2) Put the drive shaft through the hollow bore of gearbox.
- (3) Put the bushing in hollow bore from end side.
- (4) Put the bolt through the washer and retainer before fasten onto the end side of drive shaft.

- 1. DRIVE SHAFT
- 2. KEY
- 3. BUSHING
- 4. SHAFT RETAINER
- 5. SPRING WASHER
- 6. BOLT



## Dimensions - Adapter

# SMD Series

Shaft Mount Gear Reducer

FIG. 1

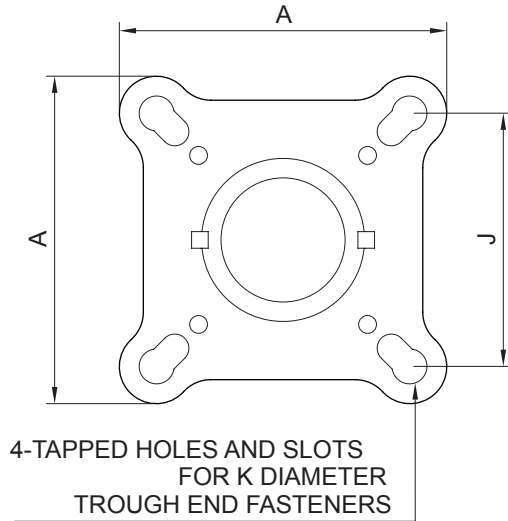
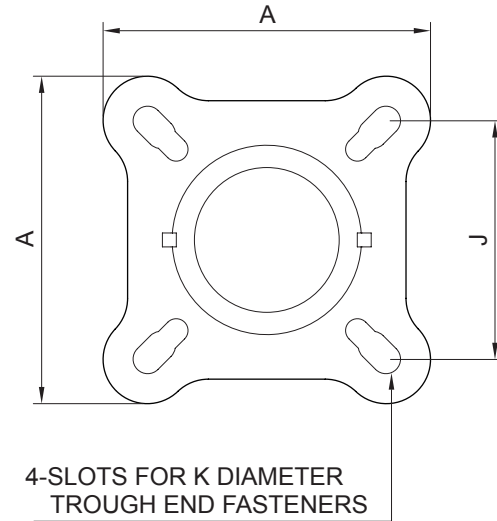


FIG. 2

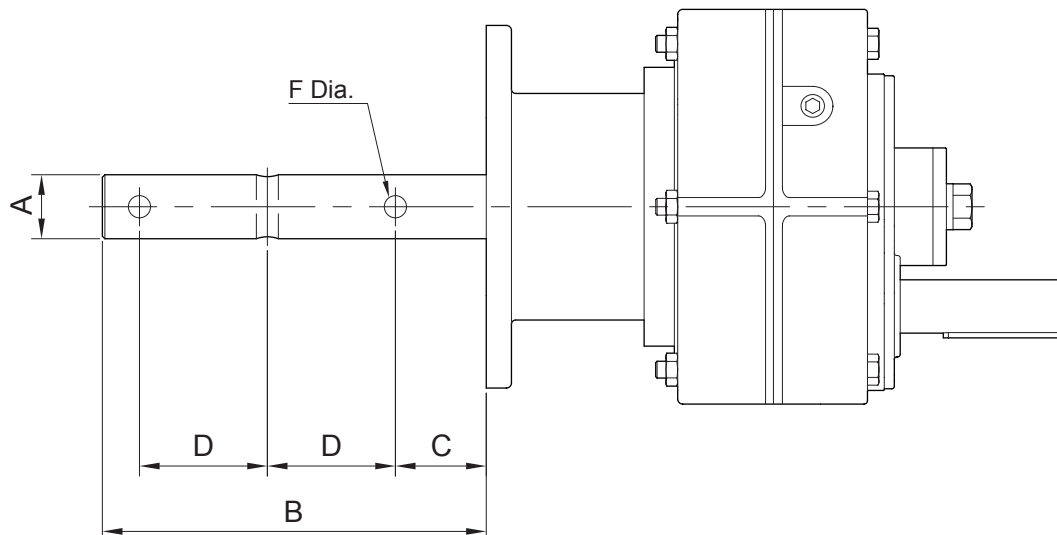


inch

Size	Drive Shaft Dia.	J	K	A	FIG.
#2	1-1/2	4	1/2-13UNC	7.75	1
	2	5-1/8	5/8		
	2-7/16	5-5/8	5/8		
	3	6	3/4		
#3	1-1/2	4	1/2-13UNC	8.5	
	2	5-1/8	5/8		
	2-7/16	5-5/8	5/8		
	3	6	3/4		
#4	1-1/2	4	1/2-13UNC	9.26	
	2	5-1/8	5/8		
	2-7/16	5-5/8	5/8		
	3	6	3/4		
	3-7/16	6-3/4	3/4		
#5	2	5-1/8	5/8	9.26	2
	2-7/16	5-5/8	5/8		
	3	6	3/4		
	3-7/16	6-3/4	3/4		
#6	2-7/16	5-5/8	5/8	9.26	
	3	6	3/4		
	3-7/16	6-3/4	3/4		

# SMD Series

Shaft Mount Gear Reducer **Dimensions - Drive Shaft**



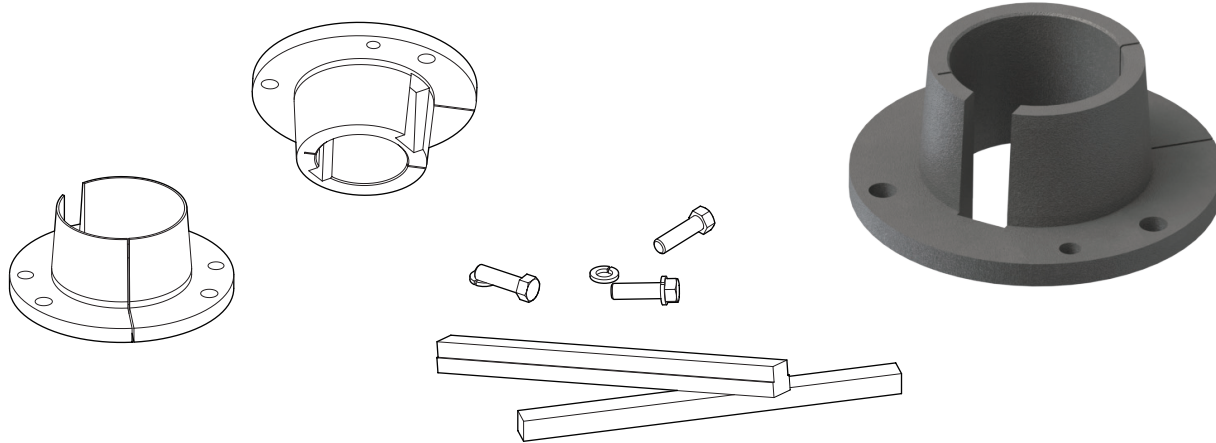
inch

Size	Drive Shaft Dia.	B	C	D	F
#2	1-1/2	9.00	2.13	3.00	0.52
	2	9.00	2.13	3.00	0.64
	2-7/16	9.69	2.75	3.00	0.64
	3	9.88	2.88	3.00	0.77
#3	1-1/2	9.00	2.13	3.00	0.52
	2	9.00	2.13	3.00	0.64
	2-7/16	9.69	2.75	3.00	0.64
	3	9.88	2.88	3.00	0.77
#4	1-1/2	9.00	2.13	3.00	0.52
	2	9.00	2.13	3.00	0.64
	2-7/16	9.69	2.75	3.00	0.64
	3	9.88	2.88	3.00	0.77
	3-7/16	14.13	3.88	4.00	0.89
#5	2	9.00	2.13	3.00	0.64
	2-7/16	9.69	2.75	3.00	0.64
	3	9.88	2.88	3.00	0.77
	3-7/16	14.13	3.88	4.00	0.89
#6	2-7/16	9.69	2.75	3.00	0.64
	3	9.88	2.88	3.00	0.77
	3-7/16	14.13	3.88	4.00	0.89

# SMD Series

## Dimensions - Tapered Bushing

### Shaft Mount Gear Reducer



Size	Bushing Bores
#2	1-5/16
	1-3/8
	1-7/16
	1-1/2
	1-5/8
	1-11/16
	1-3/4
	1-15/16
#3	1-11/16
	1-3/4
	1-7/8
	1-15/16
	2
	2-3/16
#4	1-15/16
	2
	2-1/8
	2-3/16
	2-1/4
	2-7/16
#5	2-3/16
	2-1/4
	2-7/16
	2-1/2
	2-11/16
	2-15/16

Size	Bushing Bores
#6	2-1/2
	2-11/16
	2-7/8
	2-15/16
	3
	3-7/16
#7	2-7/16
	2-11/16
	2-15/16
	3
	3-3/16
	3-7/16
	3-15/16
	3-15/16
#8	2-15/16
	3-7/16
	3-15/16
	4-3/16
#9	4-7/16
	4-7/16
	4-15/16

Size	Shaft Dia.
#2	1-1/2
	2
	2-7/16
	3
#3	1-1/2
	2
	2-7/16
#4	3
	1-1/2
	2
	2-7/16
	3
#5	3-7/16
	2
	2-7/16
#6	3
	3-7/16
	2-7/16
#7	3
	3-7/16
#8	3
	3-7/16
#9	N/A