



DIAMOND GEAR PRODUCT PORTFOLIO

*Bevel Gears | Declutch Gears | Worm Gears
Gear Accessories*



DIAMOND GEAR is a provider of high quality industrial worm gears, bevel gears, declutchable override gears, and gear accessories. With a large inventory and customization capabilities, Diamond Gear is able to service a wide range of industries such as chemical, petrochemical, refineries, maritime and oil & gas.



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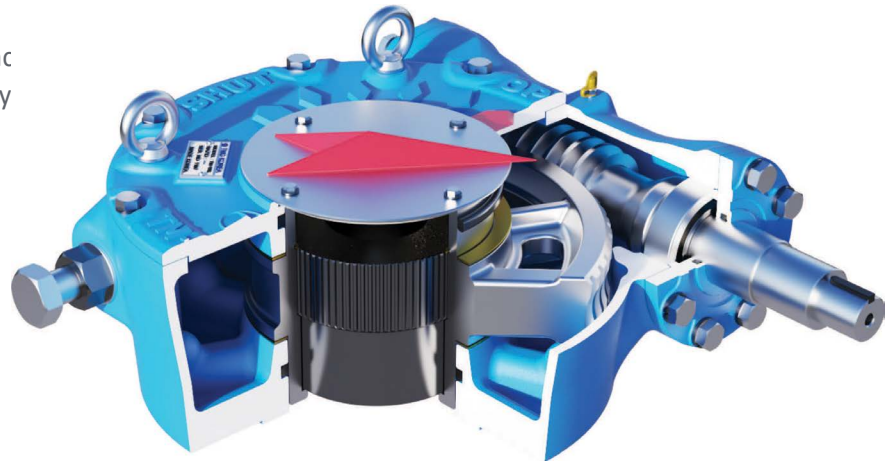
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WORM GEAR ACTUATORS

For Ball, Butterfly & Plug Valves

DGG Worm Gear Series

- Torque Range 321 Nm to 700,000 Nm.
(237 Ft-lbs to 516,293.5 Ft-lbs)
- Good Advantages with High Efficiency
- Built-in 90°, 180° and 360° Flexibility
- Stable Self-Locking Design.
- Superior Gear Contact Ratio.
- Bush direction is freely changeable through spline bushing type.



WORM GEAR GENERAL



WORM GEAR + SPUR



WORM GEAR + MOV FLANGE

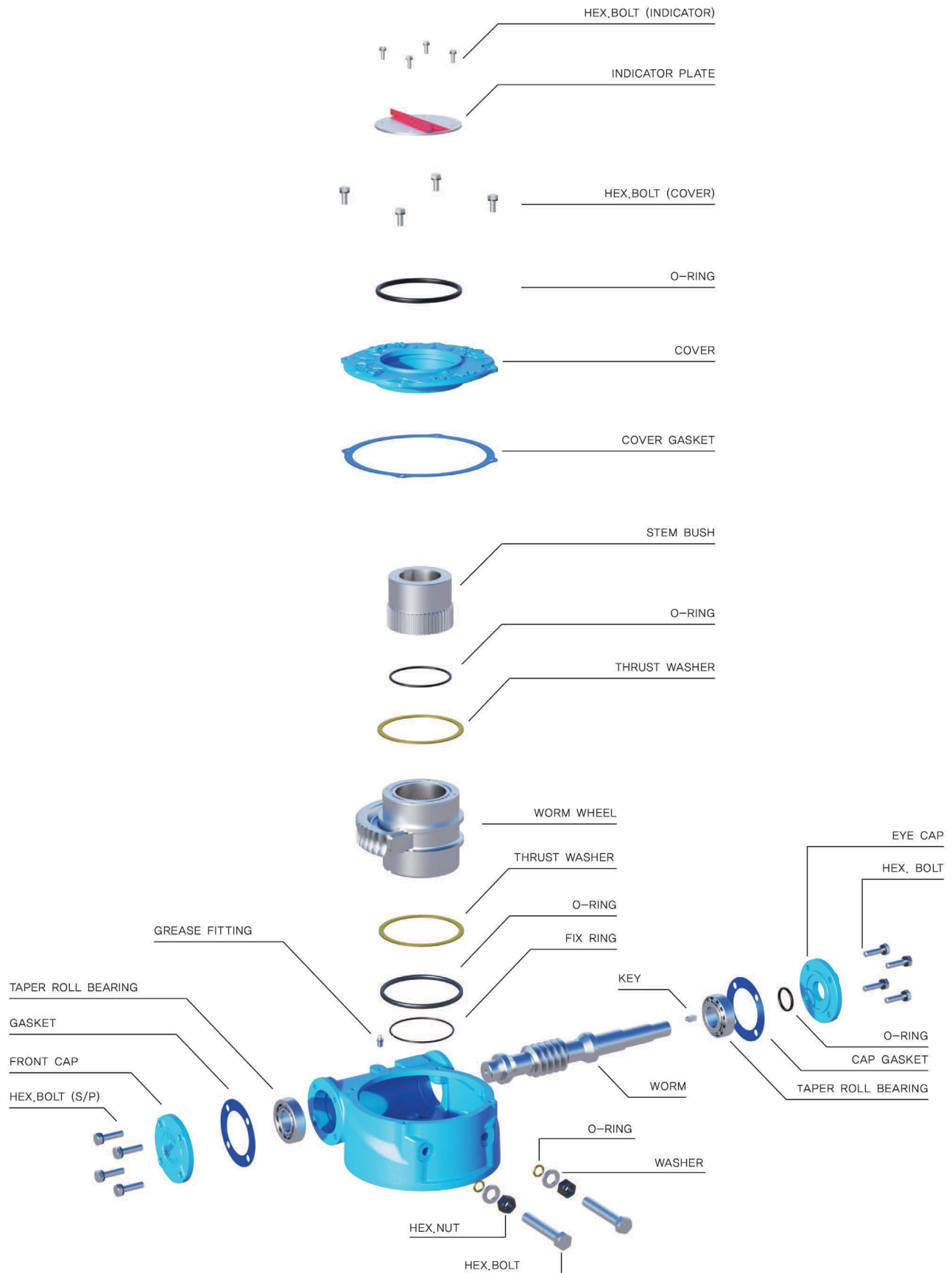


WORM GEAR OVERRIDE DECLUTCHABLE



DIAMOND GEAR

WORM GEAR ASSEMBLY





DIAMOND GEAR

WORM GEAR CONSTRUCTION



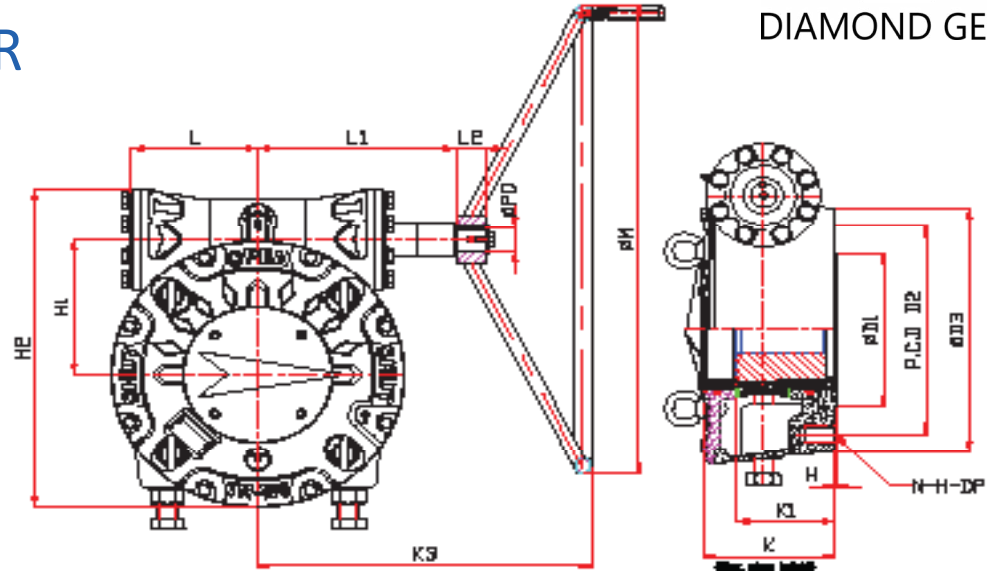
MATERIALS OF CONSTRUCTION

DESCRIPTION	DIMENSION		NOTES
	NAME	ASDG	
Housing	Ductile Iron	A536-65-45-12	
Cover	Ductile Iron	A536-65-45-12	
Worm	Carbon Steel	A576-1045	
Worm Wheel	Ductile Iron	A536-65-45-12	
Stem Bush	Ductile Iron	A536-65-45-12	
Front Cap	A576-1045	A576-1045	
End Cap	A576-1045	A576-1045	
Indicator Plate	Carbon Steel	A576-1020	
Thrust Washer	Carbon Steel	A283 GR. D	
Fixing Ring	Special Steel	W1-8	
Taper Roll Bearing	Special steel	A295-52100	
Grease Fitting	Carbon Steel	A576-1020	
Key	Carbon Steel	A576-1045	
O-Ring	Buna N	NBR	
Gasket			
HEX. Nut	Alloy Steel	A322-4140	
HEX. Bolt	Alloy Steel	A322-4140	



DIAMOND GEAR

WORM GEAR GENERAL



DIMENSION

ITEM	DIM MODEL	BASE PART								EXTERNAL							INPUT SHAFT PART			HANDLE WHEEL
		TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	K	K1	K3	L	L1	L2	ØPD	KEY		
	ØD2				N-H-DP	ØM														
3WG32	DGWT	A	FA-07	35	70	4 x 5/16-18	90	0	44.0	126.5	79.0	37.0	152.5	62.0	107.0	35	16	5x5	160	
6WG34	DGWS	A	FA-10	55	102	4 x 3/8-18	125	2	54.5	152.0	82.0	59.5	188.0	73.0	118.0	35	16	5x5	250	
9WG38	DGW0	A	FA-12	85	125	4 X 1/2-13	150	2	64.5	182.0	104.0	65.5	233.0	86.0	138.0	35	20	6x6	300	
16WG40	DGW1	A	FA-14	100	140	4 X 5/8-11	175	2	79.0	209.0	110.0	71.5	265.5	93.5	145.5	35	20	6x6	400	
28WG42	DGW2	A	FA-16	130	165	4 X 3/4-10	210	2	94.5	254.5	127.0	81.5	333.2	113.0	193.2	35	25	8x7	500	
50WG48	DGW3	B	FA-19	160	205	8 X 5/8-11	255	3	119.0	299.0	127.0	93.0	365.7	125.5	205.7	35	25	8x7	560	
80WG56	DGW4	B	*FA-19	160	205	8 X 5/8-11	255	3	127.0	315.0	145.0	99.0	365.7	125.5	205.7	35	25	8x7	560	
165WG60	DGW5	B	FA-25	200	254	8 X 5/8-11	300	3	144.5	364.5	163.0	107.0	372.0	15.5	212.0	35	30	10x8	630	
165WG60	DG-W5	B	*FA-30	230	298	8 X 3/4-10	350	3	184.5	434.5	174.0	125.0	414.5	187.5	244.5	35	30	10x8	710	
*230WG62	DGW5a	B	*FA-30	230	298	8 X 3/4-10	350	3	207.0	482.0	170.0	131.0	323.0	202.5	259.5	35	30	10x8	710	
*265WG64	DGW6	B	*FA-35	260	356	8 X 1-8	415	4	230.0	544.5	204.0	153.0	477.5	197.0	287.5	45	40	12x8	800	
*477WG68	DGW7	B	*FA-40	300	406	8 X 1-1/4-7	475	4	278.0	640.5	217.0	172.5	530.0	229.5	320.0	45	40	12x8	900	
*810WG66	DGW7a	C	*FA-48	370	483	12 X 1-1/4-7	560	4	310.0	736.0	255.0	217.5	577.5	297.5	347.5	45	40	12x8	1000	
*1034WG62	DGW8	C	*FA-48	370	483	12 X 1-1/4-7	560	4	359.5	847.0	267.0	233.0	618.5	338.5	388.5	45	40	12x8	1000	
*1565WG62	DGW9	D	*FA-60	470	603	20 X 1-1/4-7	686	4	429.5	987.0	282.0	250.0	666.0	386.0	436.0	45	40	12x8	1000	
*2435WG64	DGW10	D	*FA-60	470	603	20 X 1-1/4-7	686	4	513.0	1176.0	320.0	242.0	793.0	473.0	563.0	45	40	12x8	1000	
*4102WG68	DGW11	D	*FA-80	650	800	20-M42-65	1000	4	616.5	1397.0	343.5	324.5	893.0	573.0	663.0	45	40	12x8	1000	
*8062WG72	DGW12	D	*FA-80	650	800	20-M42-65	1000	4	809.0	1830.0	397.0	356.0	1180.0	740.0	950.0	45	40	12x8	1000	

* Not in stock. Contact salesforce for special order. The specification and image of these products can be changed without prior notice.

SPECIFICATION FOR 1/4 TURN WORM GEAR

ITEM	DIM MODEL	GEAR RATIO	Allowable MAX. Stem	MAX. Torque Capacity		M.A ±10%	MAX. Input Torque		Mount Pattern		Weight Kg
			Ø	N . m	Lbf - ft		N . m	Lbf - ft	Standard	Option	
3WG32	DGWT	32 : 1	Ø20 (6 x 6)	321.7	237.3	11.2	28.7	21.2	FA-07	FA-05	5.0
6WG34	DGWS	34 : 1	Ø28 (8 x 7)	668.2	492.8	11.9	56.2	41.4	FA-10	FA-07	6.9
9WG38	DGW0	38 : 1	Ø36 (10 x 8)	1,019.0	751.6	13.3	76.6	56.5	FA-12	FA-10	11.5
16WG40	DGW1	40 : 1	Ø46 (14 x 9)	1,873.1	1,381.5	14.0	133.8	98.7	FA-14 / FA-12		14.8
28WG42	DGW2	42 : 1	Ø65 (18 x 11)	3,170.6	2,338.5	14.7	215.7	159.1	FA-16 / FA-14		24.1
50WG48	DGW3	48 : 1	Ø75 (20 x 12)	5,670.2	4,182.1	16.8	337.5	248.9	FA-19	FA-16	31.9
80WG56	DGW4	52 : 1	Ø80 (22 x 14)	6,636.4	4,894.8	18.2	364.6	268.9	FA-19	FA-16	35.0
165WG60	DGW5	56 : 1	Ø95 (25 x 14)	9,079.5	6,696.7	19.6	463.2	341.7	FA-25	FA-19	57.5
165WG60	DG-W5	60 : 1	Ø115 (32 x 18)	18,679.9	13,777.6	21.0	889.5	656.1	FA-30	FA-25	83.0
*230WG62	DGW5a	62 : 1	Ø125 (32 x 18)	26,009.0	19,183.3	21.7	1,198.6	884.0	FA-30	FA-25	96.1
*265WG64	DGW6	64 : 1	Ø140 (36 x 20)	29,951.2	22,090.9	22.4	1,337.1	986.2	FA-35	FA-30	149.1
*477WG68	DGW7	68 : 1	Ø180 (45 x 25)	53,973.2	39,808.6	23.8	2,267.8	1,672.6	FA-40 / FA-35		210.1
*810WG66	DGW7a	66 : 1	Ø205 (50 x 28)	91,566.8	67,536.2	23.1	3,963.9	2,923.6	FA-48	FA-40	333.2
*1034WG62	DGW8	62 : 1	Ø225 (50 x 28)	116,875.7	86,203.1	21.7	5,386.0	3,972.5	FA-48	FA-40	434.1
*1565WG62	DGW9	62 : 1	Ø280 (63 x 32)	176,924.2	130,492.6	21.7	8,153.2	6,013.5	FA-60	FA-48	599.5
*2435WG64	DGW10	64 : 1	Ø320 (70 x 36)	275,173.0	202,957.2	22.4	12,284.5	9,060.6	FA-60		876.7
*4102WG68	DGW11	68 : 1	Ø360 (80 x 40)	463,548.6	341,895.9	23.8	19,476.8	14,365.4	FA-80	FA-60	1,457.2
*8062WG72	DGW12	72 : 1	Ø400 (90 x 45)	910,951.5	671,883.3	25.2	36,148.9	26,662.0	FA-80	FA-60	2,250.0

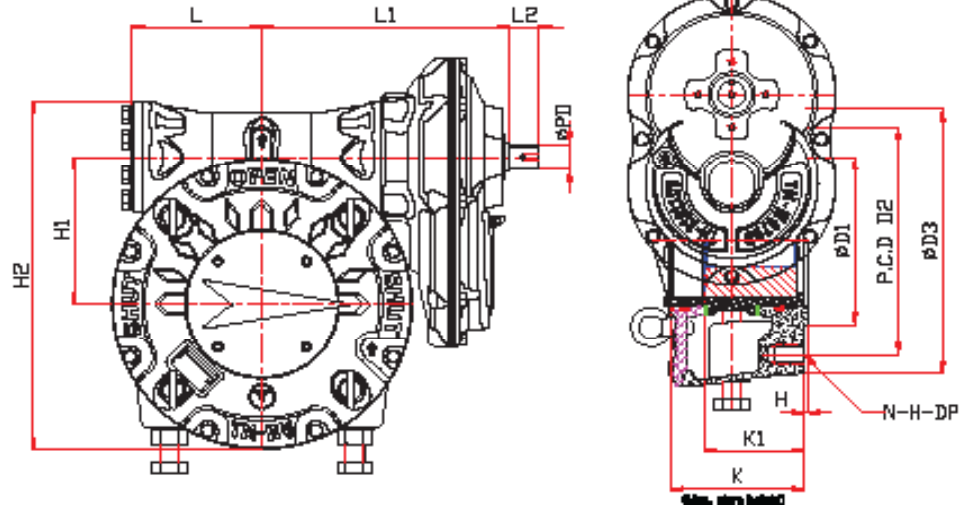
ITEM	DIM	BASE PART								EXTERNAL							INPUT SHAFT PART			HANDLE WHEEL
		TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	K	K1	K3	L	L1	L2	ØPD	KEY		
	ØD2				N-H-DP															
						MODEL													ØM	
*9WG76	DGW05	A	*FA-12	85	125	4 X 1/2-13	150	2	64.5	182.0	104.0	65.5	256.0	86.0	161.0	35	20	6x6	300	
*16WG80	DGW15	A	*FA-14	100	140	4 X 5/8-11	175	2	79.0	209.0	110.0	71.5	288.5	93.5	168.5	35	20	6x6	400	
*28WG105	DGW25	A	*FA-16	130	165	4 X 3/4-10	210	2	94.5	254.5	127.0	81.5	346.0	113.0	206.0	35	25	8x7	500	
50WG120	DGW35	B	FA-19	160	205	8 X 5/8-11	255	3	119.0	299.0	127.0	93.0	378.5	125.5	218.5	35	25	8x7	560	
80WG168	DGW45	B	FA-19	160	205	8 X 5/8-11	255	3	127.0	315.0	145.0	99.0	378.5	125.5	218.5	35	25	8x7	560	
165WG180	DGW55	B	FA-25	200	254	8 X 5/8-11	300	3	144.5	364.5	163.0	107.0	429.0	155.0	269.0	35	30	10x8	630	
230WG186	DGW5a5	B	FA-30	230	298	8 X 3/4-10	350	3	184.5	434.5	174.0	125.0	471.5	187.5	301.5	35	30	10x8	710	
265WG256	DGW65	B	FA-35	260	356	8 X 1-8	415	4	230.0	544.5	204.0	153.0	544.0	197.0	354.0	45	40	12x8	800	
*477WG272	DGW75	B	*FA-40	300	406	8 X 1-1/4-7	475	4	278.0	640.5	217.0	172.5	596.5	229.5	386.5	45	40	12x8	900	
*810WG330	DGW7a5	C	*FA-48	370	483	12 X 1-1/4-7	560	4	310.0	736.0	255.0	217.5	710.5	297.5	480.5	45	40	12x8	1000	
*1034WG310	DGW85	C	*FA-48	370	483	12 X 1-1/4-7	560	4	359.5	847.0	267.0	233.0	751.5	338.5	521.5	45	40	12x8	1000	
*1565WG310	DGW95	D	*FA-60	470	603	20 X 1-1/4-7	686	4	429.5	987.0	282.0	250.0	799.0	386.0	569.0	45	40	12x8	1000	
*2435WG320	DGW105	D	*FA-60	470	603	20 X 1-1/4-7	686	4	513.0	1176.0	320.0	242.0	906.0	473.0	676.0	45	40	12x8	1000	
*4102WG340	DGW115	D	*FA-80	650	800	20-M42-65	1000	4	616.5	1397.0	343.5	324.5	1006.0	573.0	776.0	45	40	12x8	1000	
*8062WG432	DGW125	D	*FA-80	650	800	20-M42-65	1000	4	809.0	1830.0	397.0	356.0	1178.0	740.0	948.0	45	40	12x8	1000	

ITEM	DIM	GEAR RATIO	Allowable MAX. Stem	MAX. Torque Capacity		M.A	MAX. Input Torque		Mount Pattern		Weight
	MODEL		Ø	N . m	Lbf - ft	±10%	N . m	Lbf - ft	Standard	Option	Kg
*9WG76	DGW05	76 : 1	Ø36 (10 x 8)	1,019.0	751.6	23.4	43.5	32.1	FA-12	FA-10	15.9
*16WG80	DGW15	80 : 1	Ø46 (14 x 9)	1,873.1	1,381.5	24.6	76.1	56.1	FA-14 / FA-12		19.1
*28WG105	DGW25	105 : 1	Ø65 (18 x 11)	3,170.6	2,338.5	32.3	98.2	72.4	FA-16 / FA-14		32.9
50WG120	DGW35	120 : 1	Ø75 (20 x 12)	5,670.2	4,182.1	37.0	153.2	113.0	FA-20	FA-16	40.6
80WG168	DGW45	168 : 1	Ø95 (25 x 14)	9,079.5	6,696.7	51.7	175.6	129.5	FA-25	FA-19	73.7
165WG180	DGW55	180 : 1	Ø115 (32 x 18)	18,679.9	13,777.6	55.4	337.2	248.7	FA-30	FA-25	99.1
230WG186	DGW5a5	186 : 1	Ø125 (32 x 18)	26,009.0	19,183.3	57.3	453.9	334.8	FA-30	FA-25	112.6
265WG256	DGW65	256 : 1	Ø140 (36 x 20)	29,951.2	22,090.9	78.8	380.1	280.3	FA-35	FA-30	182.0
*477WG272	DGW75	272 : 1	Ø180 (45 x 25)	53,973.2	39,808.6	83.8	644.1	475.1	FA-40 / FA-35		242.9
*810WG330	DGW7a5	330 : 1	Ø205 (50 x 28)	91,566.8	67,536.2	101.6	901.2	664.7	FA-48	FA-40	394.8
*1034WG310	DGW85	310 : 1	Ø225 (50 x 28)	116,875.7	86,203.1	95.5	1,223.8	902.6	FA-48	FA-40	495.2
*1565WG310	DGW95	310 : 1	Ø280 (63 x 32)	176,924.2	130,492.6	95.5	1,852.6	1,366.4	FA-60	FA-48	660.5
*2435WG320	DGW105	320 : 1	Ø320 (70 x 36)	275,173.0	202,957.2	98.6	2,790.8	2,058.4	FA-60		990.2
*4102WG340	DGW115	340 : 1	Ø360 (80 x 40)	463,548.6	341,895.9	104.7	4,427.4	3,265.5	FA-80	FA-60	1,569.4
*8062WG432	DGW125	432 : 1	Ø400 (90 x 45)	910,951.5	671,883.3	133.1	6,844.1	5,047.9	FA-80	FA-60	2,350.0



DIAMOND GEAR

WORM GEAR + SPUR DOUBLE



DIMENSION

ITEM	DIM MODEL	BASE PART								EXTERNAL							INPUT	SHAFT	PART	HANDLE WHEEL ØM
		TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	K	K1	K3	L	L1	L2	ØPD	KEY		
					ØD2	N-H-DP														
*9WG152	DGW0SD	A	*FA-12	85	125	4 X 1/2-13	150	2	64.5	182.0	104.0	65.5	273.0	86.0	178.0	35	20	6x6	300	
*16WG160	DGW1SD	A	*FA-14	100	140	4 X 5/8-11	175	2	79.0	209.0	110.0	71.5	305.5	93.5	185.5	35	20	6x6	400	
28WG262.5	DGW2SD	A	*FA-16	130	165	4 X 3/4-10	210	2	94.5	254.5	127.0	81.5	366.0	113.0	226.0	35	25	8x7	500	
50WG300	DGW3SD	B	*FA-19	160	205	8 X 5/8-11	255	3	119.0	299.0	127.0	93.0	398.5	125.5	238.5	35	25	8x7	560	
80WG504	DGW4SD	B	*FA-25	200	254	8 X 5/8-11	300	3	144.5	364.5	163.0	107.0	450.0	155.0	290.0	35	30	10x8	630	
165WG540	DGW5SD	B	FA-30	230	298	8 X 3/4-10	350	3	184.5	434.5	174.0	125.0	492.5	187.5	322.5	35	30	10x8	710	
*230WG558	DGW5aSD	B	*FA-30	230	298	8 X 3/4-10	350	3	207.0	482.0	170.0	131.0	507.5	202.5	337.5	35	30	10x8	710	
265WG1024	DGW6SD	B	FA-35	260	356	8 X 1-8	415	4	230.0	544.5	204.0	153.0	567.0	197.0	377.0	45	40	12x8	800	
477WG1088	DGW7SD	B	FA-40	300	406	8 X 1-1/4-7	475	4	278.0	640.5	217.0	172.5	619.5	229.5	409.5	45	40	12x8	900	
810WG1650	DGW7aSD	C	*FA-48	370	483	12 X 1-1/4-7	560	4	310.0	736.0	255.0	217.5	710.5	297.5	480.5	45	40	12x8	1000	
1034WG1550	DGW8SD	C	FA-48	370	483	12 X 1-1/4-7	560	4	359.5	847.0	267.0	233.0	751.5	338.5	521.5	45	40	12x8	1000	
*1565WG1550	DGW9SD	D	FA-60	470	603	20 X 1-1/4-7	686	4	429.5	987.0	282.0	250.0	799.0	386.0	569.0	45	40	12x8	1000	
*2435WG1600	DGW10SD	D	*FA-60	470	603	20 X 1-1/4-7	686	4	513.0	1176.0	320.0	242.0	906.0	473.0	676.0	45	40	12x8	1000	
*4102WG1700	DGW11SD	D	*FA-80	650	800	20-M42-65	1000	4	616.5	1397.0	343.5	324.5	1006.0	573.0	776.0	45	40	12x8	1000	
*8062WG2592	DGW12SD	D	*FA-80	650	800	20-M42-65	1000	4	809.0	1830.0	397.0	356.0	1188.0	740.0	958.0	45	40	12x8	1000	

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SPECIFICATION FOR 1/4 TURN WORM GEAR

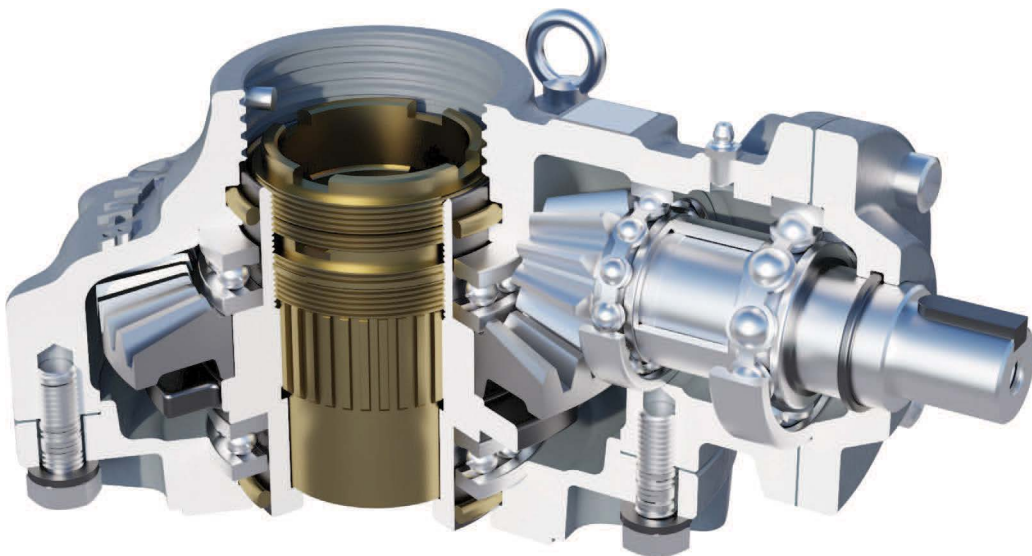
ITEM	DIM MODEL	GEAR RATIO		Allowable MAX. Stem	MAX. Torque Capacity		M.A	MAX. Input Torque		Mount Pattern		Weight
		HIGH SPEED	LOW SPEED	Ø	N . m	Lbf - ft	±10%	N . m	Lbf - ft	Standard	Option	Kg
*9WG152	DGW0SD	76 : 1	152 : 1	Ø36 (10 x 8)	1,019.0	751.6	41.2	24.7	18.2	FA-12	FA-10	16.5
*16WG160	DGW1SD	80 : 1	160 : 1	Ø46 (14 x 9)	1,873.1	1,381.5	43.4	43.2	31.9	FA-14 /	FA-12	19.8
28WG262.5	DGW2SD	105 : 1	262.5 : 1	Ø65 (18 x 11)	3,170.6	2,338.5	71.1	44.6	32.9	FA-16 /	FA-14	35.7
50WG300	DGW3SD	120 : 1	300 : 1	Ø75 (20 x 12)	5,670.2	4,182.1	81.3	69.7	51.4	FA-19	FA-16	43.4
80WG504	DGW4SD	168 : 1	504 : 1	Ø95 (25 x 14)	9,079.5	6,696.7	136.6	66.5	49.0	FA-25	FA-19	78.9
165WG540	DGW5SD	180 : 1	540 : 1	Ø115 (32 x 18)	18,679.9	13,777.6	146.4	127.6	94.1	FA-30	FA-25	104.4
*230WG558	DGW5aSD	186 : 1	558 : 1	Ø125 (32 x 18)	26,009.0	19,183.3	151.2	172.0	126.9	FA-30	FA-25	117.8
265WG1024	DGW6SD	256 : 1	1024 : 1	Ø140 (36 x 20)	29,951.2	22,090.9	277.5	107.9	79.6	FA-35	FA-30	193.7
477WG1088	DGW7SD	272 : 1	1088 : 1	Ø180 (45 x 25)	53,973.2	39,808.6	294.9	183.0	135.0	FA-40 /	FA-35	254.6
810WG1650	DGW7aSD	320 : 1	1650 : 1	Ø205 (50 x 28)	91,566.8	67,536.2	447.2	204.8	151.1	FA-48	FA-40	424.1
1034WG1550	DGW8SD	310 : 1	1550 : 1	Ø225 (50 x 28)	116,875.7	86,203.1	420.1	278.2	205.2	FA-48	FA-40	524.5
*1565WG1550	DGW9SD	310 : 1	1550 : 1	Ø280 (63 x 32)	176,924.2	130,492.6	420.1	421.1	310.6	FA-60	FA-48	689.8
*2435WG1600	DGW10SD	320 : 1	1600 : 1	Ø320 (70 x 36)	275,173.0	202,957.2	433.7	634.5	468.0	FA-60		1,042.2
*4102WG1700	DGW11SD	340 : 1	1700 : 1	Ø360 (80 x 40)	463,548.6	341,895.9	460.8	1,006.0	742.0	FA-80	FA-60	1,621.4
*8062WG2592	DGW12SD	432 : 1	2592 : 1	Ø400 (90 x 45)	910,951.5	671,883.3	702.5	1,296.7	956.4	FA-80	FA-60	2,335.0

BEVEL GEAR ACTUATORS

For Gate & Globe Valves

DGG Bevel Gear Series

- Bevel Gears are used for Multiturn applications.
- Both designs, rising and non-rising stems, are available as options.
- Torque Range 248 Nm to 64,500 Nm. (183 Ft-lbs to 47,573 Ft-lbs)
- Both manual and motorized types are available.



BEVEL GEAR GENERAL



BEVEL GEAR + SPUR

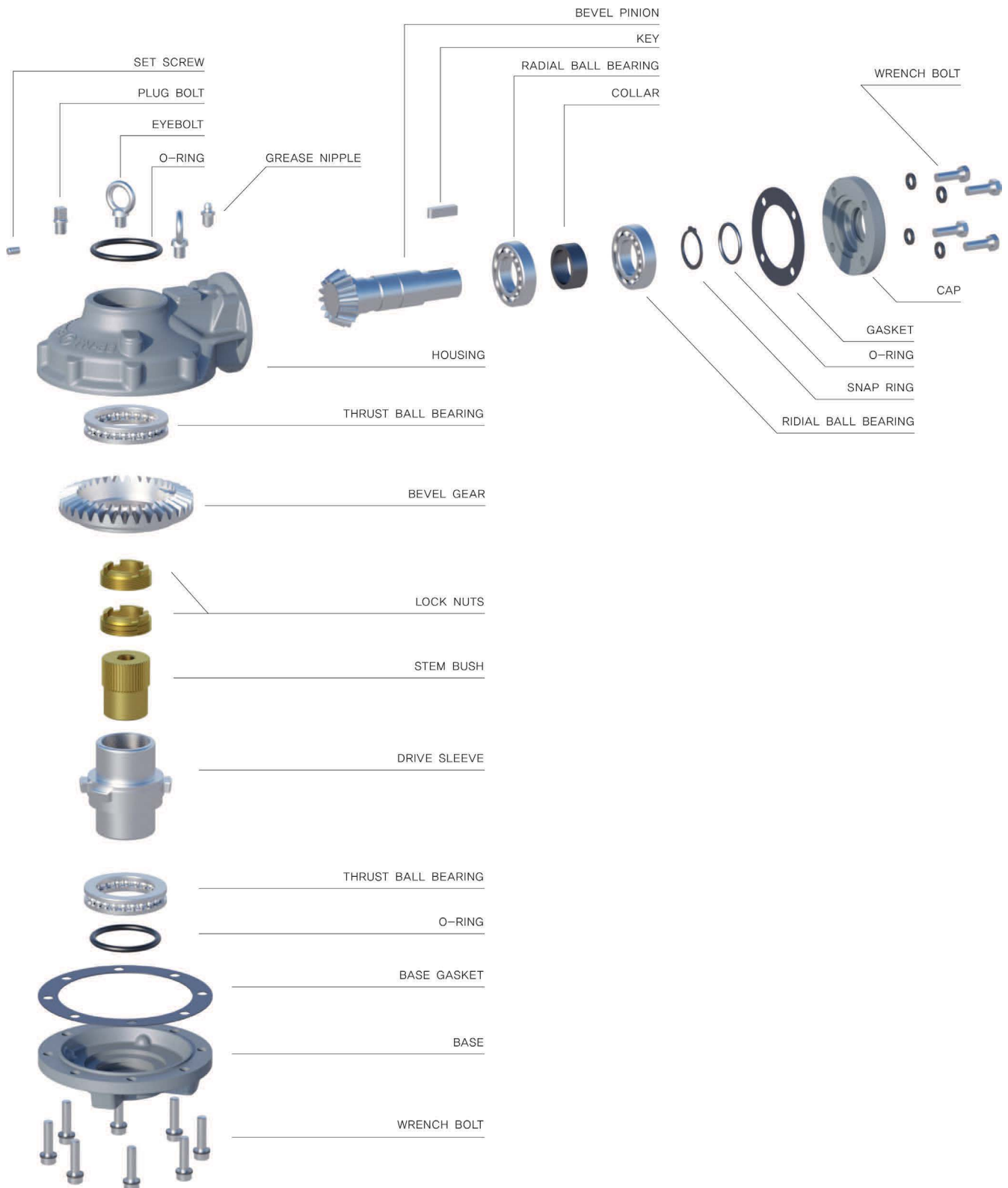


BEVEL GEAR + FLANGE



DIAMOND GEAR

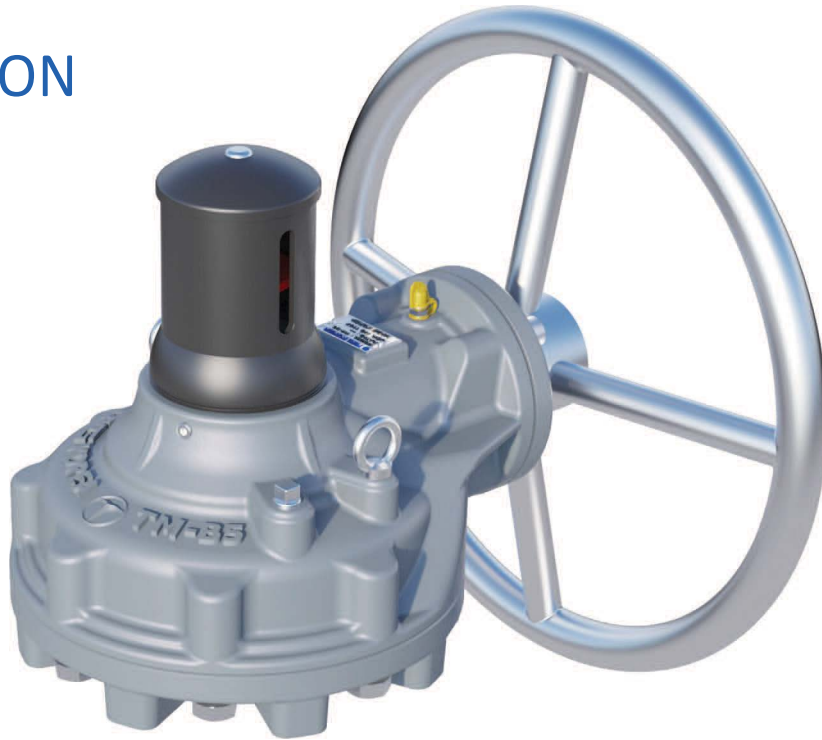
BEVEL GEAR ASSEMBLY





DIAMOND GEAR

BEVEL GEAR CONSTRUCTION



MATERIALS OF CONSTRUCTION

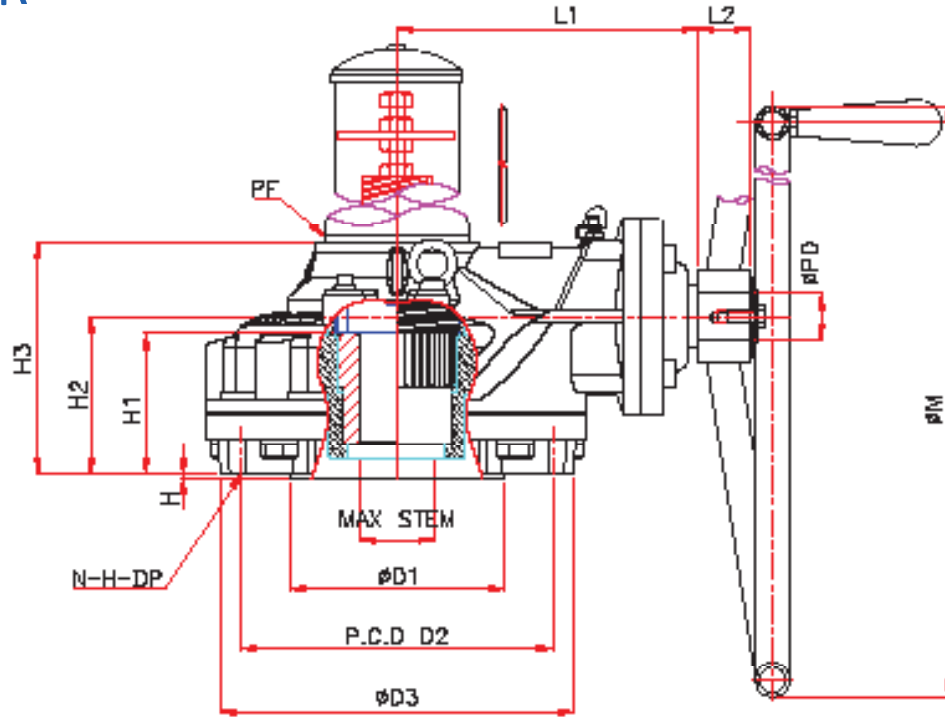
DESCRIPTION	DIMENSION		NOTES
	NAME	ASDG	
Housing	Ductile Iron	A536-65-45-12	
Base	Ductile Iron	A536-65-45-12	
Bevel Gear	Carbon Steel	A576-1045	
Bevel Pinion	Carbon Steel	A576-1045	
Drive Sleeve	Ductile Iron	A536-65-45-12	
Locknut	Carbon Steel	A576-1045	
Stem bush	BRASS	B584-C86200	
Cap	Ductile Iron	A536-65-45-12	
Wrench Bolt	Alloy Steel	A322-4140	
Radial Ball Bearing	Special Steel	A295-52100	
Thrust Ball Bearing	Special steel	A295-52100	
Plug Bolt	Carbon Steel	A307 GR. B	
O-Ring	Buna N	NBR	
Collar	Steel Pipe	A53	
Bearing Washer	Carbon Steel	A576-1045	
Bearing Nut	Carbon Steel	A576-1045	
Grease Fitting	Carbon Steel	A307 GR. B + Zn	
Set ScREW	Stainless Steel	A276-304	
End Cap Gasket		Non-asbestos	
Base Gasket		Non-asbestos	



DIAMOND GEAR

BEVEL GEAR GENERAL

**Stem
protectors
available
in steel
or plastic**



DIMENSION

ITEM	DIM MODEL	BASE PART							EXTERNAL				INPUT SHAFT PART			HANDLE WHEEL	STEM COVER
		TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	L1	L2	ØPD	KEY		
					ØD2	N-H-DP										ØM	
*2BG2.5	DGB1	A	FA-10	70	102	4 x 3/8-18	125	2	56	66.5	103	126	35	25	8X7	300	PF 2"
3.6BG3	DGB2	A	FA-12	85	125	4 X 1/2-13	150	3	58	70.5	107	133	35	25	8X7	300	PF 2"
*6BG3.5	DGB3	A	FA-14	100	140	4 X 5/8-11	175	3	64	72.0	115	159	35	30	10X8	400	PF 2 1/2"
9BG3.75	DGB4	A	FA-16	130	165	4 X 3/4-10	210	3	77	85.0	130	168	35	30	10X8	500	PF 3"
13BG4	DGB5	B	FA-19	140	205	8 X 5/8-11	245	3	91	104.0	153	198	35	30	10X8	630	PF 3"
21BG5	DGB6	B	FA-25	200	254	8 X 5/8-11	300	3	101	111.0	165	220	35	30	10X8	710	PF 4"
33BG5.5	DGB7	B	FA-30	230	298	8 X 3/4-10	350	3	125	141.0	205	280	45	40	12X8	800	PF 5"
49BG6	DGB8	B	FA-30	230	298	8 X 3/4-10	410	3	138	155.0	216	302	45	40	12X8	800	PF 5"
69BG6.5	DGB9	B	FA-35	260	356	8 X 1-8	415	3	164	182.0	258	323	45	40	12X8	900	PF 6"
112BG7	DGB10	B	FA-40	300	406	8 X 1-1/4-7	475	3	182	201.0	284	370	60	50	16X10	1,000	PF 8"
*154BG7.56	DGB11	*C	FA-48	370	483	12 X 1-1/4-7	560	3	208	222.0	316	404	60	50	16X10	1,000	PF 8"
*228BG8	DGB12	*C	FA-48	370	483	12 X 1-1/4-7	560	3	234	258.0	360	466	60	50	16X10	1,000	PF 10"
*388BG8	DGB13	*D	FA-60	470	603	20 X 1-1/4-7	686	5	278	300.0	420	557	60	50	16X10	1,000	PF 12"

* Not in stock. Contact salesforce for special order. The specification and image of these products can be changed without prior notice.

SPECIFICATION FOR MULTI TURN BEVEL GEAR

ITEM	DIM MODEL	GEAR RATIO	Allowable MAX. Stem	MAX. Torque Capacity		MAX. Thrust Capacity		M.A ±10%	MAX. Input Torque		Mount Pattern		Weight Kg
			TW / Ø (KEY)	N . m	Lbf - ft	N	Lbf		N.m	Lbf - ft	Standard	Option	
*2BG2.5	DGB1	2.5 : 1	28 / Ø22 (8 X 7)	248.0	182.9	75,460.0	16,964.1	2.4	103.3	76.2	FA-10	FA-07	9.7
3.6BG3	DGB2	3 : 1	36 / Ø30 (8 X 7)	417.0	307.6	112,700.0	25,336.0	2.9	143.8	106.1	FA-12	FA-10	11.6
*6BG3.5	DGB3	3.5 : 1	46 / Ø38 (10 X 8)	688.0	507.4	126,420.0	28,420.3	3.3	208.5	153.8	FA-14	FA-12, FA-10	17.5
9BG3.75	DGB4	3.75 : 1	54 / Ø48 (14 X 9)	1,046.0	771.5	141,120.0	31,725.0	3.6	290.6	214.3	FA-16	FA-14	24.1
13BG4	DGB5	4 : 1	62 / Ø55 (16 X 10)	1,561.0	1,151.3	190,120.0	42,740.7	3.8	410.8	303.0	FA-19	FA-14, FA-16	36.4
21BG5	DGB6	5 : 1	70 / Ø65 (18 X 11)	2,409.0	1,776.8	288,120.0	64,771.9	4.8	501.9	370.2	FA-25	FA-16, FA-219	51.3
33BG5.5	DGB7	5.5 : 1	84 / Ø80 (22 X 14)	3,734.0	2,754.1	352,800.0	79,312.6	5.2	718.1	529.6	FA-30	FA-25	89.7
49BG6	DGB8	6 : 1	95 / Ø90 (22 X 14)	5,568.0	4,106.7	401,800.0	90,328.2	5.7	976.8	720.5	FA-30	FA-25	122.4
69BG6.5	DGB9	6.5 : 1	110 / Ø95 (25 X 14)	7,774.0	5,733.8	509,600.0	114,562.6	6.2	1,253.9	924.8	FA-35	FA-25, FA-30	180.0
112BG7	DGB10	7 : 1	125 / Ø110 (28 X 16)	12,653.0	9,332.4	1,107,400.0	248,953.4	6.7	1,888.5	1,392.9	FA-40	FA-35, FA-30	269.8
*154BG7.56	DGB11	7.56 : 1	140 / Ø120 (32 X 18)	17,403.0	12,835.8	1,205,400.0	270,984.6	7.2	2,417.1	1,782.8	FA-48	FA-40	356.1
*228BG8	DGB12	8 : 1	160 / Ø145 (36 X 20)	25,791.0	19,022.5	1,950,200.0	438,422.3	7.6	3,393.6	2,503.0	FA-48	FA-40	553.6
*388BG8	DGB13	8 : 1	210 / Ø190 (45 X 25)	43,000.0	31,715.2	2,680,000.0	602,487.9	7.6	5,657.9	4,173.1	FA-60	FA-60	1,062.2

Technical drawing of a 3D-printed mechanical part, likely a valve actuator or similar component. The drawing shows a cross-section of the part with various dimensions and labels.

Dimensions:

- H_1 , H_2 , H_3 : Vertical dimensions indicating heights from the base.
- L_1 , L_2 : Horizontal dimensions indicating lengths from the base.
- ϕD_1 , ϕD_2 , ϕD_3 : Diameters of different sections of the part.
- $P.C.D. \phi 2$: Pitch Circle Diameter of a feature.
- $MAX. STEM$: Maximum stem length.
- I : A small vertical dimension.

Labels:

- PF**: Points to a feature on the top of the part.
- N-H-DP**: Points to a feature on the side of the part.

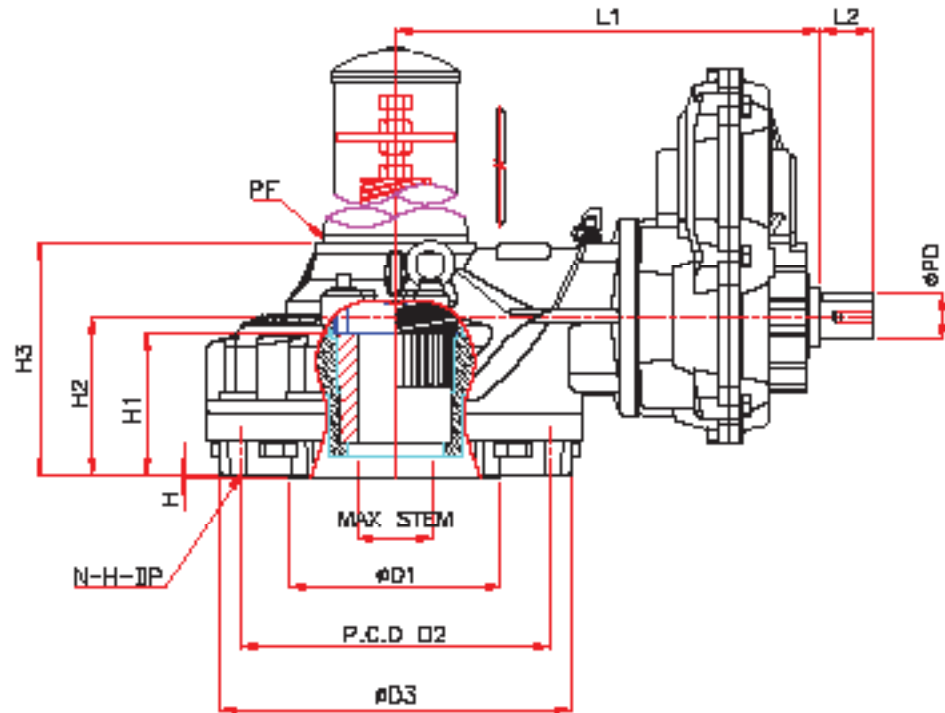
ITEM	DIM MODEL	BASE PART							EXTERNAL				INPUT SHAFT PART			HANDLE WHEEL	STEM COVER
		TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	L1	L2	ØPD	KEY	ØM	
	ØD2				N-H-DP												
*6BG7	DGB3S	*A	FA-14	100	140	4 X 5/8-11	175	3	64	72	115	223	35	20	6X6	400	PF 2 1/2"
*9BG7.5	DGB4S	*A	FA-16	130	165	4 X 3/4-10	210	3	77	85	130	232	35	20	6X6	400	PF 3"
*13BG10	DGB5S	*B	FA-19	140	205	8 X 5/8-11	245	3	91	104	153	283	35	25	8X7	560	PF 3"
*21BG12.5	DGB6S	*B	FA-25	200	254	8 X 5/8-11	300	3	101	111	165	305	35	25	8X7	560	PF 4"
*33BG16.5	DGB7S	*B	FA-30	230	298	8 X 3/4-10	350	3	125	141	205	351	35	30	10X8	710	PF 5"
*49BG18	DGB8S	*B	FA-30	230	298	8 X 3/4-10	410	3	138	155	216	373	35	30	10X8	710	PF 5"
*69BG19.5	DGB9S	*B	FA-35	260	356	8 X 1-8	415	3	164	182	258	403	35	30	10X8	710	PF 6"
112BG28	DGB10S	*B	FA-40	300	406	8 X 1-1/4-7	475	3	182	201	284	485	45	40	12x8	900	PF 8"
*154BG30.2	DGB11S	*C	FA-48	370	483	12 X 1-1/4-7	560	3	208	222	316	519	45	40	12x8	1,000	PF 8"
*228BG40	DGB12S	*C	FA-48	370	483	12 X 1-1/4-7	560	3	234	258	360	637	45	40	12x8	1,000	PF 10"
*388BG40	DGB13S	*D	FA-60	470	603	20 X 1-1/4-7	686	5	278	300	420	728	45	40	12x8	1,000	PF 12"

ITEM	DIM	GEAR RATIO	Allowable MAX. Stem	MAX. Torque Capacity		MAX. Thrust Capacity		M.A	MAX. Input Torque		Mount Pattern		WEIGHT
	MODEL		TW / Ø (KEY)	N . m	Lbf - ft	N	Lbf	±10%	N . m	Lbf - ft	Standard	Option	Kg
*6BG7	DGB3S	7:1	46 / Ø38 (10 X 8)	688.0	507.4	126,420.0	28,420.3	5.9	116.6	86.0	FA-14	FA-12, FA-10	19.6
*9BG7.5	DGB4S	7.5:1	54 / Ø48 (14 X 9)	1,046.0	771.5	141,120.0	31,725.0	6.3	166.0	122.4	FA-16	FA-14	25.6
*13BG10	DGB5S	10:1	62 / Ø55 (16 X 10)	1,561.0	1,151.3	190,120.0	42,740.7	8.4	185.8	137.0	FA-19	FA-14, FA-16	42.1
*21BG12.5	DGB6S	12.5:1	70 / Ø65 (18 X 11)	2,409.0	1,776.8	288,120.0	64,771.9	10.5	229.4	169.2	FA-25	FA-16, FA-19	67.5
*33BG16.5	DGB7S	16.5:1	84 / Ø80 (22 X 14)	3,734.0	2,754.1	352,800.0	79,312.6	13.8	270.6	199.6	FA-30	FA-25	100.1
*49BG18	DGB8S	18:1	95 / Ø90 (22 X 14)	5,568.0	4,106.7	401,800.0	90,328.2	15.0	371.2	273.8	FA-30	FA-25	133.1
*69BG19.5	DGB9S	19.5:1	110 / Ø95 (25 X 14)	7,774.0	5,733.8	509,600.0	114,562.6	16.3	476.9	351.7	FA-35	FA-25, FA-30	207.3
112BG28	DGB10S	28:1	125 / Ø110 (28 X 16)	12,653.0	9,332.4	1,107,400.0	248,953.4	23.4	540.7	398.8	FA-40	FA-35, FA-30	292.9
*154BG30.2	DGB11S	30.2:1	140 / Ø120 (32 X 18)	17,403.0	12,835.8	1,205,400.0	270,984.6	25.2	690.6	509.4	FA-48	FA-40	379.7
*228BG40	DGB12S	40:1	160 / Ø145 (36 X 20)	25,791.0	19,022.5	1,950,200.0	438,422.3	33.4	772.2	569.5	FA-48	FA-40	632.3
*388BG40	DGB13S	40:1	210 / Ø190 (45 X 25)	43,000.0	31,715.2	2,680,000.0	602,487.9	33.4	1,287.4	949.5	FA-60	FA-60	1,174.5



DIAMOND GEAR

BEVEL GEAR + SPUR DOUBLE



DIMENSION

ITEM	DIM MODEL	BASE PART								EXTERNAL				INPUT SHAFT PART			HANDLE WHEEL ØM	STEM COVER
		TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	L1	L2	ØPD	KEY			
					ØD2	N-H-DP												
*6BG14	DGB3SD	*A	FA-14	100	140	4 X 5/8-11	175	3	64	72	115	223	35	20	6X6	400	PF 2 1/2"	
*9BG15	DGB4SD	*A	FA-16	130	165	4 X 3/4-10	210	3	77	85	130	232	35	20	6X6	400	PF 3"	
*13BG25	DGB5SD	*B	FA-19	140	205	4 X 5/8-11	245	3	91	104	153	283	35	25	8X7	560	PF 3"	
*21BG31.3	DGB6SD	*B	FA-25	200	254	8 X 5/8-11	300	3	101	111	165	305	35	25	8X7	560	PF 4"	
*33BG49.5	DGB7SD	*B	FA-30	230	298	8 X 3/4-10	350	3	125	141	205	373	35	30	10X8	710	PF 5"	
*49BG54	DGB8SD	*B	FA-30	230	298	8 X 3/4-10	410	3	138	155	216	395	35	30	10X8	710	PF 5"	
*69BG58.5	DGB9SD	*B	FA-35	260	356	8 X 1-8	415	3	164	182	258	425	35	30	10X8	710	PF 6"	
*112BG112	DGB10SD	*B	FA-40	300	406	8 X 1-1/4-7	475	3	182	201	284	508	45	40	12x8	900	PF 8"	
*154BG120.9	DGB11SD	*C	FA-48	370	483	12 X 1-1/4-7	560	3	208	222	316	542	45	40	12x8	1,000	PF 8"	
*228BG200	DGB12SD	*C	FA-48	370	483	12 X 1-1/4-7	560	3	234	258	360	637	45	40	12x8	1,000	PF 10"	
*388BG200	DGB13SD	*D	FA-60	470	603	20 X 1-1/4-7	686	5	278	300	420	728	45	40	12X8	1,000	PF 12"	

* Contact Sales for special orders on these gears. The specification and image of these products can be changed without prior notice.

SPECIFICATION FOR MULTI TURN BEVEL GEAR

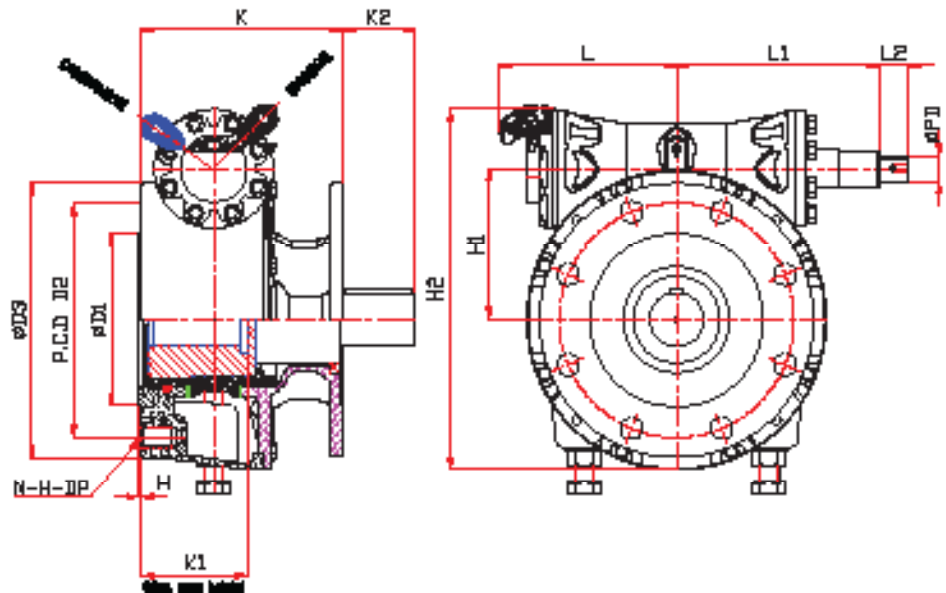
ITEM	DIM MODEL	GEAR RATIO		Allowable MAX. Stem	MAX. Torque Capacity		MAX. Thrust Capacity		M.A	MAX. Input Torque		Mount Pattern		Weight
		HIGH SPEED	LOW SPEED	TW / Ø (KEY)	N . m	Lbf - ft	N	Lbf	±10%	N.m	Lbf - ft	Standard	Option	Kg
*6BG14	DGB3SD	7:1	14:1	46 / Ø38 (10 X 8)	688.0	507.4	126,420.0	28,420.3	10.3	66.8	49.3	FA-14	FA-12, FA-10	20.3
*9BG15	DGB4SD	7.5:1	15:1	54 / Ø48 (14 X 9)	1,046.0	771.5	141,120.0	31,725.0	11.0	95.1	70.1	FA-16	FA-14	26.3
*13BG25	DGB5SD	10:1	25:1	62 / Ø55 (16 X 10)	1,561.0	1,151.3	190,120.0	42,740.7	18.4	84.8	62.5	FA-19	FA-14, FA-16	44.9
*21BG31.3	DGB6SD	12.5:1	31.3:1	70 / Ø65 (18 X 11)	2,409.0	1,776.8	288,120.0	64,771.9	23.0	104.7	77.2	FA-25	FA-16, FA-19	70.3
*33BG49.5	DGB7SD	16.5:1	49.5:1	84 / Ø80 (22 X 14)	3,734.0	2,754.1	352,800.0	79,312.6	36.4	102.6	75.7	FA-30	FA-25	105.3
*49BG54	DGB8SD	18.0:1	54:1	95 / Ø90 (22 X 14)	5,568.0	4,106.7	401,800.0	90,328.2	39.7	140.3	103.5	FA-30	FA-25	138.3
*69BG58.5	DGB9SD	19.5:1	58.5:1	110 / Ø95 (25 X 14)	7,774.0	5,733.8	509,600.0	114,562.6	43.0	180.8	133.4	FA-35	FA-25, FA-30	212.5
*112BG112	DGB10SD	28:1	112:1	125 / Ø110 (28 X 16)	12,653.0	9,332.4	1,107,400.0	248,953.4	82.4	153.6	113.3	FA-40	FA-35, FA-30	304.6
*154BG120.9	DGB11SD	30.2:1	120.9:1	140 / Ø120 (32 X 18)	17,403.0	12,835.8	1,205,400.0	270,984.6	89.0	195.5	144.2	FA-48	FA-40	391.4
*228BG200	DGB12SD	40:1	200:1	160 / Ø145 (36 X 20)	25,791.0	19,022.5	1,950,200.0	438,422.3	147.1	175.3	129.3	FA-48	FA-40	660.8
*388BG200	DGB13SD	40:1	200:1	210 / Ø190 (45 X 25)	43,000.0	31,715.2	2,680,000.0	602,487.9	147.1	292.3	215.6	FA-60	FA-60	1,224.0



DIAMOND GEAR

DECLUTCH GEAR

For Pneumatic Actuator



DIMENSION

ITEM	DIM MODEL	BASE PART							EXTERNAL							INPUT SHAFT PART			HANDLE WHEEL	
		TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	K	K1	K2	K3	L	L1	L2	ØPD	KEY	ØM
					ØD2	N-H-DP														
2.6DW31	DGWTDC	A	FA-07	35	70	4 x 5/16-18	90	0	44.0	126.5	115.0	37.0	25	152.5	111.0	107.0	35	16	5x5	160
5DW32	DGWSDC	A	FA-10	55	102	4 x 3/8-18	125	2	54.5	152.0	125.0	56.5	30	188.0	122.0	118.0	35	16	5x5	250
7DW36	DGW0DC	A	FA-12	85	125	4 X 1/2-13	150	2	64.5	182.0	159.5	60.5	30	233.0	137.0	138.0	35	20	6x6	300
13DW38	DGW1DC	A	FA-14	100	140	4 X 5/8-11	175	2	79.0	209.0	176.0	62.5	30	265.5	144.5	145.5	35	20	6x6	400
24.5DW41	DGW2DC	A	FA-16	130	165	4 X 3/4-10	210	2	94.5	254.5	200.0	72.5	50	333.2	175.6	193.2	35	25	8x7	500

The specification and image of these products can be changed without prior notice.

SPECIFICATION FOR 1/4 TURN WORM GEAR

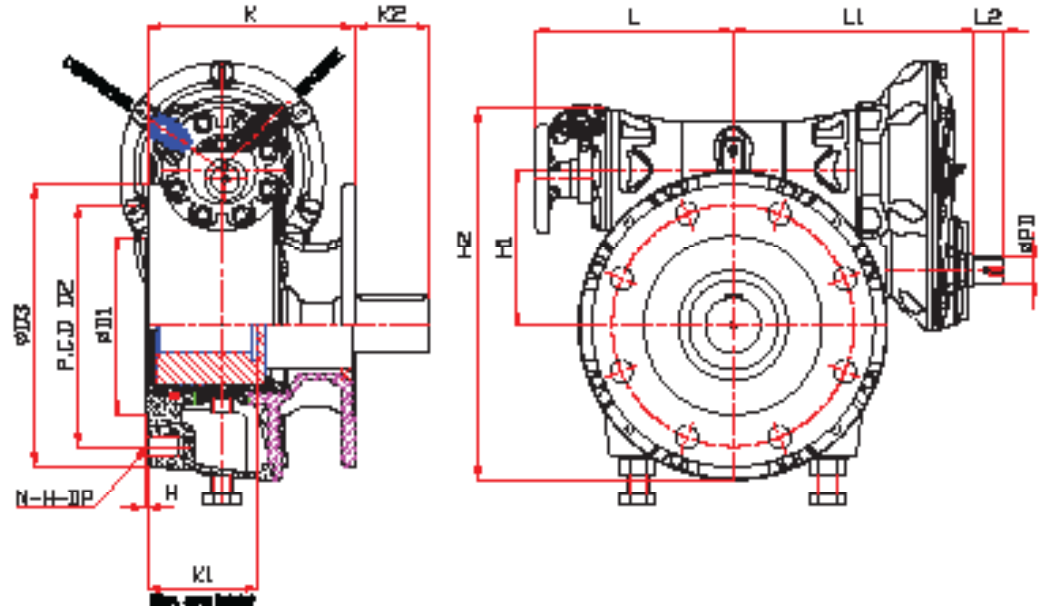
ITEM	DIM MODEL	GEAR RATIO	Allowable MAX. Stem	MAX. Torque Capacity		M.A ±10%	MAX. Input Torque		Mount Pattern		Weight Kg
			Ø	N . m	Lbf - ft		N . m	Lbf - ft	Standard	Option	
2.6DW31	DGWTDC	31 : 1	Ø20 (6 x 6)	294.7	217.4	10.9	27.0	19.9	FA-07	FA-05	6.0
5DW32	DGWSDC	32 : 1	Ø28 (8 x 7)	557.7	411.3	11.2	49.8	36.7	FA-10	FA-07	8.8
7DW36	DGW0DC	36 : 1	Ø36 (10 x 8)	788.8	581.8	12.6	62.6	46.2	FA-12	FA-10	14.8
13DW38	DGW1DC	38 : 1	Ø46 (14 x 9)	1,479.2	1,091.0	13.3	111.2	82.0	FA-14 / F-12		20.3
24.5DW41	DGW2DC	41 : 1	Ø65 (18 x 11)	2,784.4	2,053.7	14.4	193.4	142.6	FA-16 / F-14		32.6



DIAMOND GEAR

DECLUTCH GEAR + SPUR

For Pneumatic Actuator



DIMENSION

ITEM	DIM MODEL	BASE PART							EXTERNAL								INPUT SHAFT PART			HANDLE WHEEL
		TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	K	K1	K2	K3	L	L1	L2	ØPD	KEY	
					ØD2	N-H-DP														ØM
7DW64	DG-W0SDCM	A	FA-12	85	125	4 X 1/2-13	150	2	64.5	182.0	159.5	60.5	30	256.0	154.0	161.0	35	20	6x6	300
13DW67	DG-W1SDCM	A	FA-14	100	140	4 X 5/8-11	175	2	79.0	209.0	176.0	62.5	30	288.5	161.5	168.5	35	20	6x6	400
*24.5DW86.3	DGW2SDC	A	FA-16	130	165	4 X 3/4-10	210	2	94.5	254.5	200.0	72.5	50	346.0	191.0	206.0	35	25	8x7	500
43DW99	DGW3SDC	B	FA-19	160	205	8 X 5/8-11	255	3	119.0	299.0	204.0	80.0	80	388.5	203.5	218.5	35	25	8x7	560
71DW147	DGW4SDC	B	FA-25	200	254	8 X 5/8-11	300	3	144.5	364.5	246.0	119.0	80	439.0	278.0	269.0	35	30	10x8	630
147DW158	DGW5SDC	B	FA-30	230	298	8 X 3/4-10	350	3	184.5	434.5	274.0	143.0	130	491.5	312.5	301.5	35	30	10x8	710
*206DW163	DGW5aSDC	B	FA-30	230	298	8 X 3/4-10	350	3	207.0	482.0	284.0	150.0	130	506.5	343.0	316.5	35	30	10x8	710
*240DW220	DGW6SDC	B	FA-35	260	356	8 X 1-8	415	4	230.0	544.5	305.0	172.0	160	564.0	296.0	354.0	45	40	12x8	800
*388DW235	DGW7SDC	B	FA-40	300	406	8 X 1-1/4-7	475	4	278.0	640.5	355.0	180.0	170	616.5	328.5	386.5	45	40	12x8	900
*613DW292	DGW7aSDC	C	FA-48	370	483	12 X 1-1/4-7	560	4	310.0	736.0	405.0	198.0	170	710.5	376.5	480.5	45	40	12x8	1000
*821DW273	DGW8SDC	C	FA-48	370	483	12 X 1-1/4-7	560	4	359.5	847.0	416.0	213.0	170	751.5	415.5	521.5	45	40	12x8	1000

The specification and image of these products can be changed without prior notice.

SPECIFICATION FOR 1/4 TURN WORM GEAR

ITEM	DIM MODEL	GEAR RATIO	Allowable MAX. Stem	MAX. Input Torque		M.A ±10%	MAX. Input Torque		Mount Pattern		Weight Kg
			Ø	N . m	Lbf . ft		N . m	Lbf . ft	Standard	Option	
7DW64	DG-W0SDCM	64 : 1	Ø36 (10 x 8)	788.8	581.8	19.7	40.0	29.5	FA-12	FA-10	20.0
13DW67	DG-W1SDCM	67.6 : 1	Ø46 (14 x 9)	1,479.2	1,091.0	20.8	71.1	52.4	FA-14 / F-12		25.4
*24.5DW86.3	DGW2SDC	86.3 : 1	Ø65 (18 x 11)	2,784.4	2,053.7	26.6	104.7	77.2	FA-16 / F-14		42.2
43DW99	DGW3SDC	98.9 : 1	Ø75 (20 x 12)	4,856.2	3,581.7	30.5	159.2	117.4	FA-20	FA-16	54.0
71DW147	DGW4SDC	147 : 1	Ø95 (25 x 14)	8,041.1	5,930.8	45.3	177.5	130.9	FA-25	FA-19	96.7
147DW158	DGW5SDC	157.9 : 1	Ø115 (32 x 18)	16,649.8	12,280.3	48.6	342.6	252.7	FA-30	FA-25	134.1
*206DW163	DGW5aSDC	163.3 : 1	Ø125 (32 x 18)	23,276.0	17,167.5	50.3	462.7	341.3	FA-30	FA-25	145.5
*240DW220	DGW6SDC	220.4 : 1	Ø140 (36 x 20)	27,185.6	20,051.1	67.9	400.4	295.3	FA-35	FA-30	243.2
*388DW235	DGW7SDC	234.7 : 1	Ø180 (45 x 25)	43,875.1	32,360.6	72.3	606.8	447.6	FA-40 / F-35		348.1
*613DW292	DGW7aSDC	291.6 : 1	Ø205 (50 x 28)	69,274.2	51,094.0	89.8	771.4	569.0	FA-48	FA-40	565.6
*821DW273	DGW8SDC	273.3 : 1	Ø225 (50 x 28)	92,838.1	68,473.9	84.2	1,102.6	813.2	FA-48	FA-40	660.0

For Pneumatic Actuator

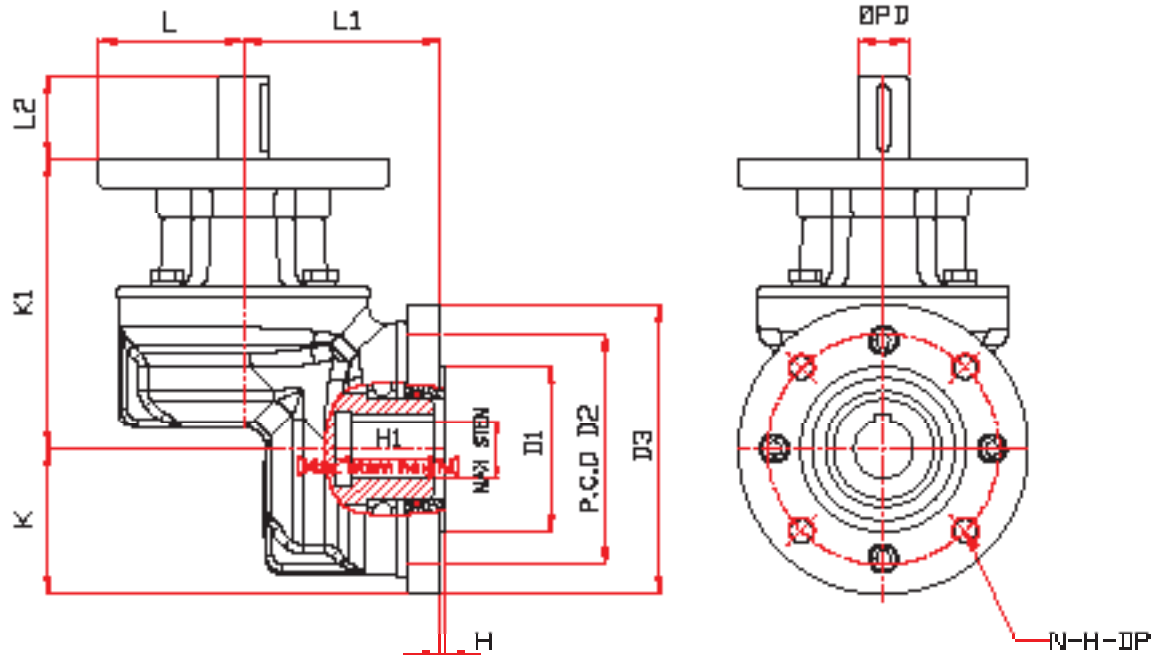


The specification and image of these products can be changed without prior notice.

ITEM	DIM MODEL	GEAR RATIO	Allowable MAX. Stem	MAX. Input Torque		M.A	MAX. Input Torque		Mount Pattern		Weight
			Ø	N . m	Lbf - ft	±10%	N . m	Lbf - ft	Standard	Option	Kg
7DW128	DG-W0SDDC	128 : 1	Ø36 (10 x 8)	788.8	581.8	34.7	22.7	16.7	FA-12	FA-10	22.6
13DW135	DG-W1SDDC	135.1 : 1	Ø46 (14 x 9)	1,479.2	1,091.0	36.6	40.4	29.8	FA-14 / F-12		28.0
24DW215	DG-W2SDDC	215.8 : 1	Ø65 (18 x 11)	2,784.4	2,053.7	58.5	47.6	35.1	FA-16 / F-14		48.3
43DW247	DG-W3SDDC	247.4 : 1	Ø75 (20 x 12)	4,856.2	3,581.7	67.1	72.4	53.4	FA-20	FA-16	60.0
71DW441	DGW4SDDC	441 : 1	Ø95 (25 x 14)	8,041.1	5,930.8	119.5	67.3	49.6	FA-25	FA-19	107.7
147DW474	DGW5SDDC	473.7 : 1	Ø115 (32 x 18)	16,649.8	12,280.3	128.4	129.7	95.7	FA-30	FA-25	145.2
206DW490	DGW5aSDDC	490 : 1	Ø125 (32 x 18)	23,276.0	17,167.5	132.8	175.3	129.3	FA-30	FA-25	156.5
240DW881	DGW6SDDC	881.8 : 1	Ø140 (36 x 20)	27,185.6	20,051.1	239.0	113.7	83.9	FA-35	FA-30	266.8
*388DW939	DGW7SDDC	938.7 : 1	Ø180 (45 x 25)	43,875.1	32,360.6	254.4	172.5	127.2	FA-40 / F-35		371.7
*613DW1458	DGW7aSDDC	1457.8 : 1	Ø205 (50 x 28)	69,274.2	51,094.0	395.1	175.3	129.3	FA-48	FA-40	614.7
*821DW1367	DGW8SDDC	1366.7 : 1	Ø225 (50 x 28)	92,838.1	68,473.9	370.4	250.6	184.8	FA-48	FA-40	709.1



MITER GEAR



DIMENSION

ITEM	DIM MODEL	BASE PART							EXTERNAL					INPUT SHAFT PART			
		TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	K	K1	L1	L2	ØPD	KEY
					ØD2	N-H-DP											
	DG-MITER F10	A	FA-10	70	102	4 x 3/8-18	125	3	60	77	176	77	119	50	35	10X8	8X7
	DG-MITER F14	A	FA-14	100	140	4 X 5/8-11	175	3	60	87.5	176	87.5	119	50	35	10X8	12X8

The specification and image of these products can be changed without prior notice.

SPECIFICATION FOR MULTI TURN BEVEL GEAR

MODEL	DIM GEAR RATIO	Allowable MAX. Stem	MOV Mount Pattern	MAX. Torque Capacity		WEIGHT Kg
				N.m	Lbf - ft	
DG-MITER F10	1 : 1	Ø35 (10 X 8)	F-10	247	182	17.8
DG-MITER F14	1 : 1	Ø35 (10 X 8)	F-14	247	182	20.4



TEST PERFORMANCE FOR IP 67/68

1. TEST PROCEDURE

1.1 TEST FOR INGRESS PROTECTION -IP6X-

- This examination retracts air that become 80 times of bulk of specimen tank that abstraction is tested doing not exceed 60 bulks per time inside tank repeatedly.

1.2 1.1 TEST FOR INGRESS PROTECTION -IPX8-

- The test is made by completely continuous immersing the enclosure in water as specified by the manufacture so that the following conditions are satisfied.
 - The lowest point of enclosures is located 1000mm below the surface of the water.
 - The duration of the test is 24 hours.

2. TEST RESULT

2.1 TEST FOR INGRESS PROTECTION -IP6X-

- The protection is satisfactory.

2.2 TEST FOR INGRESS PROTECTION -IPX8-

- The protection is satisfactory.



IP6X TEST



IP8X TEST



Picture of test specimen overallhaul before test



IP6X TEST



IP8X TEST



Picture of test specimen overallhaul after test



Certificate of Test	
 Korea Marine Equipment Research Institute 1129-02, Dongguk-Do, Yangju-Gu, Incheon, 406-806, Korea (Tel: 02-31-400-1000 Fax: 02-31-400-1001)	Certificate No.: KOMER-4586-11708 Page (1) / 2 Pages
1. Client Name : TMG KOREA CORP Address : #5171-1 Daejeo 2-Doong, Gangseo-Gu, Busan, Korea Date of Receipt : July 8, 2011	
2. Use of Report : For certification	
3. Test Sample Name of Product : WORM GEAR Model : TM-W3 (new)	
4. Date of Test : July 25, 2011 ~ July 27, 2011	
5. Test method Used : IEC 60529:2001-02 Degrees of protection provided by enclosures (IP Code)	
6. Testing Environment Temperature : (25.0 ± 1.0) °C , Relative Humidity : (65 ± 5) % R.H.	
7. Test Results : Pass	
The results shown in this test report refer only to the sample(s) tested unless otherwise stated. This Test Report cannot be reproduced, except in full.	
Affirmation Tested by : Ji-hoon Yu	Technical Manager Name : Hyun-Sang Kwon
The above test certificate is the accredited test results by Korea Laboratory Accreditation Scheme, which signed the ILAC-MRA.	
July 29, 2011	
The President of Korea Marine Equipment Research Institute	
KOMER-P-24-01(9)	2011. 06. 16

Certificate of Test	
 Korea Marine Equipment Research Institute 1129-02, Dongguk-Do, Yangju-Gu, Incheon, 406-806, Korea (Tel: 02-31-400-1000 Fax: 02-31-400-1001)	Certificate No.: KOMER-4586-11709 Page (1) / 2 Pages
1. Client Name : TMG KOREA CORP Address : #5171-1 Daejeo 2-Doong, Gangseo-Gu, Busan, Korea Date of Receipt : July 8, 2011	
2. Use of Report : For certification	
3. Test Sample Name of Product : BEVEL GEAR Model : TM-B4	
4. Date of Test : July 25, 2011 ~ July 27, 2011	
5. Test method Used : IEC 60529:2001-02 Degrees of protection provided by enclosures (IP Code)	
6. Testing Environment Temperature : (25.0 ± 1.0) °C , Relative Humidity : (65 ± 5) % R.H.	
7. Test Results : Pass	
The results shown in this test report refer only to the sample(s) tested unless otherwise stated. This Test Report cannot be reproduced, except in full.	
Affirmation Tested by : Ji-hoon Yu	Technical Manager Name : Hyun-Sang Kwon
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July 29, 2011	
The President of Korea Marine Equipment Research Institute	
KOMER-P-24-01(9)	2011. 06. 16



DIAMOND GEAR

PAINTING FACILITY & FINAL INSPECTION

TRANSFORMATION	TRANSFORMATION	FORMULA	TRANSFORMATION
Painting Facilities	49m ²	Primary Filter Facilities	250m ² /m
Dry Facilities	56m ²	Secondary Adsorption Facilities	50m ² /m
		Adsorption Facilities	





BASIC FORMULAS & CONVERSIONS

- **MECHANICAL ADVANTAGE** = Output Torque / Input Torque
= (Gear Ratio X Efficiency %)
- **EFFICIENCY (%)** = Output Torque X 100 / Input Torque X Gear Ratio
- **OUTPUT TORQUE (N.m)** = Input Torque X Mechanical Advantage
- **INPUT TORQUE (N.m)** = Output Torque / Mechanical Advantage

- **GEAR RATIO** = Number Of Turns Of Input / Number Of Turns Of Output
- **NUMBER OF TURNS TO CLOSE** = Gear Ratio / 4
(Quarter Turn Gear Box)

- **HANDWHEEL RIM EFFORT (N)** = Input Torque X 2 (N.m) / Handwheel Diameter (M)
- **NUMBER OF TURNS TO CLOSE** = Gear Ratio / 4
(Quarter Turn Gear Box)

- **OPERATING TIME (SEC)** = Ratio X 60 / RPM (360°)
(360°)
- **OPERATING TIME (SEC)** = (Ratio X 60 / RPM) / 4
(Quarter Turn Gear Box)
- **OPERATING TIME (SEC)** = (Ratio X 60 / RPM) X Valve Operating Turns
(Multi Turn Gear Box)



DIAMOND GEAR

GREASE APPLICATIONS FOR VARIOUS ENVIRONMENTS

Low temperature grease in stock.

High temperature grease is available to order.



Temperature Range for GREASE APPLICATION		
HIGHEST TEMPERATURE	80°C ~ 300°C	-4°F ~ 572°F * Not in stock
HIGH TEMPERATURE	-20°C ~ 200°C	-4°F ~ 392°F ** In stock
NORMAL TEMPERATURE	-25°C ~ 110°C	-13°F ~ 230°F * Not in stock
LOW TEMPERATURE	-40°C ~ 120°C	-40°F ~ 248°F * Not in stock
LOWEST TEMPERATURE	-60°C ~ 120°C	-76°F ~ 248°F * Not in stock

Options available to order. Contact Sales

TRANSFORMATION	FORMULA
CELSIUS To Fahrenheit	$^{\circ}\text{F} = ^{\circ}\text{C} \times 1.8 + 32$
Fahrenheit To CELSIUS	$^{\circ}\text{C} = (^{\circ}\text{F} - 32) / 1.8$

SPECIAL GREASE

1. Silicone Grease
2. Eco Grease
3. Food Grease
4. Incombustibility Grease

AMBLENT TEMPERATURES

* The Gearbox is suitable for operation at an ambient temperature range of -20°C ~ + 80°C

FULL SERVICE VALVE REPAIR & MODIFICATION SHOP

Diamond Gear's full service in house modification shop specializes in precision machining, welding, and industrial valve modification and testing. Located at the manufacturing facility in Houston, TX, the specialized shop includes a team of experienced machinists along with certified welders and valve fitters who use calibrated, state-of-the-art equipment to ensure an outstanding finished product and exceptional service. For more information or specific questions on how the shop can assist you, call 713-590-0270.

- Modifications/Changes
- Installs
- Welding
- Inspection & Testing





OFFICE

13750 Hollister Road
Houston, TX 77086

CONTACT

713.590.0270 | www.diamond-gear.com