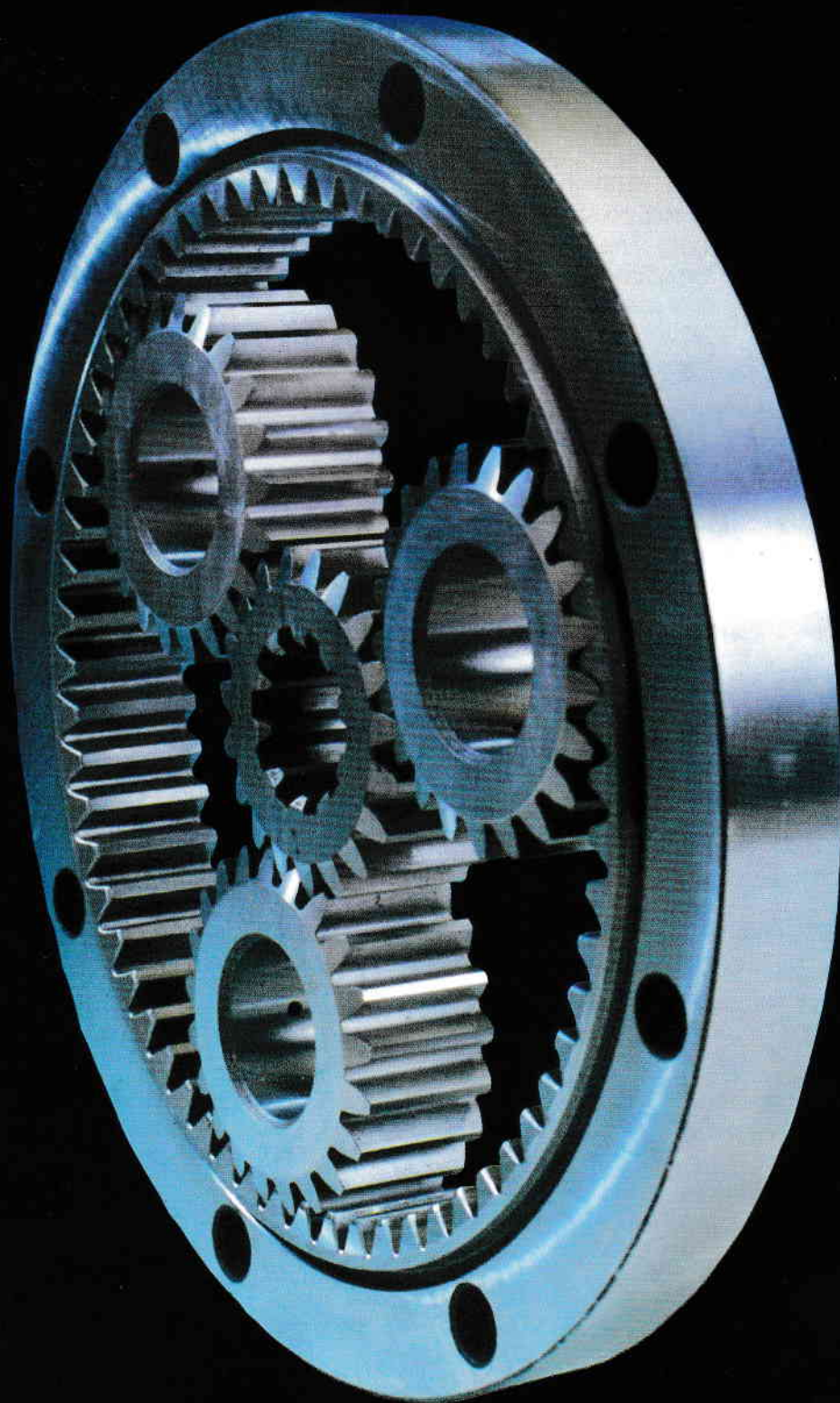


Planetary Drives



The planetary gear drives offered in this series have a modular construction. Based on different sizes, each module has nominal rated torque values and various reduction ratios. This range of planetary drives has been designed according to latest production and design concepts. This range will meet the power transmission requirements of many industries.

Operating Principle

Usually for speed reduction, input is given to sun gear and reduced output is taken through planet carrier and ring gear is stationary. The reduction is essentially co-axial and direction of rotation remains the same.

Table 1 Mechanical Service Factor - SF

Power Source	Duration of working in hours per day	Load classification		
		Uniform	Moderate Shock	Heavy Shock
Electric motor, steam	Under - 3	0.80	1.00	1.50
Turbine or hydraulic	3 to 10	1.00	1.25	1.75
Motor	Over - 10	1.25	1.50	2.00
Multi-cylinder internal	Under - 3	1.00	1.25	1.75
Combustion engine	3 to 10	1.25	1.50	2.00
	Over - 10	1.50	1.75	2.25
Single cylinder internal	Under - 3	1.25	1.50	2.00
Combustion engine	3 to 10	1.50	1.75	2.25
	Over - 10	1.75	2.00	2.50

Note - Starting torque should not exceed 2.0 times the nominal of the gearbox.

Technical Features

- Compact in size.
- Co-axial reduction.
- High torque capacity.
- Uniform stress distribution.
- High overhang load capacity.
- Longer life
- Maintenance free performance
- Hardened and ground gears.
- Low noise.
- High efficiency .
- Foot and flange mounting.
- Custom built special orientations .
- Easy to fit and adapt.

Material Construction

The Product is designed with the help of computers for the optimum power to weight ratio. All components are designed keeping in mind stringent requirements.

Ring Gears : Ring gears are manufactured from high alloy steel and heat treated to absorb impact loads and give desired wear life, the production process selected to avoid distortion of gear teeth due to heat treatment.

Planets : Planets are manufactured from high alloy steel and heat treated for case carburising or nitriding to achieve the optimum strength and wear resistance. Planet bores are ground and honed to achieve desired finish and tolerance. Gear teeth are ground for model 2003 and above to reduce noise level. To increase load carrying capacity and for uniform load distribution planets are selected in sets.

Sun Gear : Sun Gears are manufactured from high alloy steel and heat treated for case carburising or nitriding to achieve the optimum strength and wear resistance. Gear teeth are ground for model 2003 and above to reduce noise level. Sun gears are mounted on input shaft or carrier with the help of splines and in small models with keys to achieve desired power transmission.

Planet Carriers : Planet carriers are manufactured from alloy steel casting or forging or bars and machined with CNC machining center to achieve desired accuracy of planet pin hole runout and accuracy.

Shafts : Shafts are manufactured from high alloy steel and heat treated to achieve maximum strength to transmit power and absorb high impact loads.

Casing / Housing : Casing foot or flange type are designed to absorb vibration and support reaction loads. These are manufactured from graded cast iron or cast steel according to power transmission and designed to optimum weight to power ratio.

Broughtout parts : All standard parts such as bearings, seals, hardware are procured directly from reputed manufacturers for genuineness and cost effectiveness.



Table - 3

Single Stage

Model	Reduction Ratio	Mechanical in - Nm	Thermal in - Kw
2000	3.48-7.20	50	0.5
2001	3.48-7.20	100	0.75
2002	3.48-7.20	300	1.0
2003	3.48-7.20	500	3.7
2004	3.48-7.20	900	5.0
2005	3.48-7.20	1800	10
2006	3.48-7.20	4000	18
2007	3.48-7.20	8000	25
2008	3.48-7.20	15000	33
2009	3.48-7.20	20000	60
2010	3.82-4.44	40000	100
2011	3.82-4.44	60000	125
2012	3.82-4.44	100000	150
2013	3.82-4.44	200000	250
2014	3.82-4.44	300000	300
2015	3.82-4.44	500000	500

Double Stage

Model	Reduction Ratio	Mechanical in - Nm	Thermal in - Kw
2000	12.11-41.54	70	0.5
2001	12.11-41.54	120	0.75
2002	12.11-41.54	450	1.0
2003	12.11-41.54	650	3.0
2004	12.11-41.54	1100	3.7
2005	12.11-41.54	2000	7.5
2006	12.11-41.54	5000	15
2007	12.11-41.54	9000	22
2008	12.11-41.54	16000	30
2009	12.11-41.54	25000	45
2010	13.29-31.97	47000	50
2011	13.29-31.97	85000	65
2012	13.29-31.97	135000	70
2013	13.29-31.97	270000	85
2014	13.29-31.97	450000	90
2015	13.29-31.97	800000	95

Triple Stage

Model	Reduction Ratio	Mechanical in - Nm	Thermal in - Kw
2000	50.78 - 220.80	80	0.5
2001	50.78 - 220.80	150	0.75
2002	50.78 - 220.80	500	1.0
2003	50.78 - 220.80	750	2.2
2004	50.78 - 220.80	1250	3.0
2005	50.78 - 220.80	2500	5.0
2006	50.78 - 220.80	7000	10
2007	50.78 - 220.80	10000	15
2008	50.78 - 220.80	18000	18
2009	50.78 - 220.80	30000	30
2010	50.78 - 220.80	49000	35
2011	50.78 - 220.80	90000	45
2012	50.78 - 220.80	150000	50
2013	50.78 - 220.80	300000	65
2014	50.78 - 220.80	500000	70
2015	50.78 - 220.80	900000	85

Four Stage

Model	Reduction Ratio	Mechanical in - Nm	Thermal in - Kw
2000	269 - 2154	80	0.5
2001	269 - 2154	150	0.75
2002	269 - 2154	500	1.0
2003	269 - 2154	750	2.2
2004	269 - 2154	1250	3.0
2005	269 - 2154	2500	5.
2006	269 - 2154	7000	10
2007	269 - 2154	10000	15
2008	269 - 2154	18000	18
2009	269 - 2154	30000	30
2010	269 - 2154	49000	35
2011	269 - 2154	90000	45
2012	269 - 2154	150000	50
2013	269 - 2154	300000	65
2014	269 - 2154	500000	70
2015	269 - 2154	1000000	85

Note - For other details of model 2010 to 2015 contact factory



Model Combination

Model Combination for free input

Input	Stage Number		Output
	Second	Third	

Double Stage

2000			2000
2001			2001
2002			2002
2002			2003
2002			2004
2003			2005
2004			2006
2005			2007
2006			2008
2007			2009
2008			2010
2009			2011
2010			2012
2011			2013
2012			2014
2013			2015

Three Stage

2000	2000		2000
2001	2001		2001
2002	2002		2002
2002	2002		2003
2002	2002		2004
2003	2003		2005
2002	2004		2006
2003	2005		2007
2004	2006		2008
2005	2007		2009
2006	2008		2010
2007	2009		2011
2008	2010		2012
2009	2011		2013
2010	2012		2014
2011	2013		2015

Four Stage

2000	2000	2000	2000
2001	001	2001	2001
2002	2002	2002	2002
2002	2002	2002	2003
2002	2002	2002	2004
2002	2002	2003	2005
2002	2002	2004	2006
2002	2003	2005	2007
2002	2004	2006	2008
2003	2005	2007	2009
2005	2006	2008	2010
2005	2007	2009	2011
2006	2008	2010	2012
2007	2009	2011	2013
2008	2010	2012	2014
2009	2011	2013	2015

Standard Reduction Ratio

Sr. No.	Stage Number				Total Ratio
	Input	Second	Third	Output	
1				3.48	3.48
2				3.82	3.82
3				4.26	4.26
4				5.77	5.77
5				7.20	7.20
6	3.48			3.48	12.11
7	3.82			3.82	14.59
8	3.82			4.26	16.27
9	4.26			4.26	18.15
10	3.48			5.77	20.08
11	3.82			5.77	22.04
12	3.48			7.20	25.06
13	3.82			7.20	27.50
14	4.26			7.20	30.67
15	7.20			5.77	41.54
16	3.48	3.82		3.82	50.78
17	3.48	3.82		4.26	56.63
18	3.48	4.26		4.26	63.15
19	3.82	4.26		4.26	69.32
20	4.26	4.26		4.26	77.31
21	3.48	3.48		7.20	87.19
22	3.48	3.82		7.20	95.71
23	3.48	4.26		7.20	106.7
24	3.82	4.26		7.20	117.2
25	4.26	4.26		7.20	130.7
26	3.48	5.77		7.20	144.6
27	3.82	5.77		7.20	158.7
28	3.48	7.20		7.20	180.4
29	3.82	7.20		7.20	198.0
30	4.26	7.20		7.20	220.8
31	3.48	4.26	4.26	4.26	269.0
32	3.82	4.26	4.26	4.26	295.3
33	3.82	3.82	3.82	5.77	321.6
34	3.48	4.26	4.26	5.77	364.4
35	3.48	3.82	4.26	7.20	407.7
36	3.48	4.26	4.26	7.20	454.7
37	3.82	4.26	4.26	7.20	499.1
38	4.26	4.26	4.26	7.20	556.6
39	3.48	3.48	7.20	7.20	627.8
40	3.48	3.82	7.20	7.20	689.1
41	3.48	4.26	7.20	7.20	768.5
42	3.82	4.26	7.20	7.20	843.6
43	4.26	4.26	7.20	7.20	940.8
44	3.48	5.77	7.20	7.20	1041
45	3.82	5.77	7.20	7.20	1143
46	4.26	5.77	7.20	7.20	1274
47	3.82	7.20	7.20	7.20	1426
48	4.26	7.20	7.20	7.20	1590
49	5.77	5.77	7.20	7.20	1726
50	5.77	7.20	7.20	7.20	2154

Maximum Input Capacity in Kw.

Input Speed (in RPM) - 1400

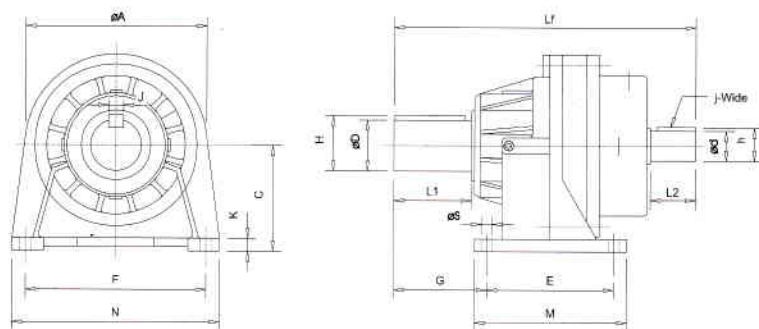
Service Factor 1.4

Reduction Ratio	Efficiency %	Output Speed	Size of the Model									
			2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
3.48	0.96	402	4.1	8.0	15	31	65	129	258	517	930	1550
3.82	0.96	366	3.8	7.0	14	28	59	118	235	471	847	1412
4.26	0.96	329	3.4	6.3	13	25	53	106	211	422	760	1266
5.77	0.96	243	2.5	4.7	9.0	19	39	78	156	312	561	935
7.20	0.96	194	2.0	3.7	7.0	15	31	62	125	250	449	749
12.1	0.92	116	1.1	2.1	4.3	9.0	18	36	71	142	256	427
14.6	0.92	96	0.9	1.8	3.5	7.0	15	30	59	118	213	354
16.3	0.92	86	0.8	1.6	3.2	6.4	13	26	53	106	191	318
18.1	0.92	77	0.8	1.4	2.8	5.7	12	24	47	95	171	285
20.1	0.92	70	0.7	1.3	2.6	5.1	11	21	43	86	154	257
22.0	0.92	64	0.63	1.2	2.3	4.7	10	20	39	78	141	235
25.1	0.92	56	0.55	1.0	2.1	4.1	9.0	17	34	69	124	206
27.5	0.92	51	0.50	0.9	1.9	3.8	8.0	16	31	63	113	188
30.7	0.92	46	0.45	0.8	1.7	3.4	7.0	14	28	56	101	169
41.5	0.92	34	0.33	0.62	1.2	2.5	5.2	10	21	41	75	124
51	0.87	28	0.26	0.48	1.0	1.9	4.0	8.0	16	32	58	96
57	0.87	25	0.23	0.43	0.9	1.7	3.6	7.0	14	29	52	86
63	0.87	22	0.21	0.39	0.8	1.5	3.2	6.4	13	26	46	77
69	0.87	20	0.19	0.35	0.7	1.4	2.9	5.9	12	24	42	71
77	0.87	18	0.17	0.32	0.63	1.3	2.6	5.3	11	21	38	63
87	0.87	16	0.15	0.28	0.56	1.1	2.3	4.7	9.0	19	34	56
96	0.87	15	0.14	0.26	0.51	1.0	2.1	4.3	9.0	17	31	51
107	0.87	13	0.12	0.23	0.46	0.9	1.9	3.8	8.0	15	27	46
117	0.87	12	0.11	0.21	0.42	0.8	1.7	3.5	7.0	14	25	42
131	0.87	11	0.10	0.19	0.37	0.7	1.6	3.1	6.2	12	22	37
145	0.87	10	0.09	0.17	0.34	0.68	1.4	2.8	5.6	11	20	34
159	0.87	8.8	0.08	0.15	0.31	0.62	1.3	2.6	5.1	10	18	31
180	0.87	7.8	0.07	0.14	0.27	0.54	1.1	2.3	4.5	9.0	16	27
198	0.87	7.1	0.07	0.12	0.25	0.49	1.0	2.1	4.1	8.0	15	25
221	0.87	6.3	0.06	0.11	0.22	0.44	0.9	1.8	3.7	7.0	13	22
269	0.84	5.2	0.05	0.09	0.18	0.35	0.7	1.5	2.9	5.8	11	18
295	0.84	4.7	0.04	0.08	0.16	0.32	0.67	1.3	2.7	5.3	10	16
322	0.84	4.4	0.04	0.07	0.15	0.29	0.61	1.2	2.4	4.9	9.0	15
364	0.84	3.8	0.03	0.06	0.13	0.26	0.54	1.1	2.2	4.3	8.0	13
408	0.84	3.4	0.03	0.06	0.12	0.23	0.48	1.0	1.9	3.9	7.0	12
455	0.84	3.1	0.03	0.05	0.10	0.21	0.43	0.9	1.7	3.5	6.2	10
499	0.84	2.8	0.03	0.05	0.09	0.19	0.39	0.8	1.6	3.2	5.7	9.0
557	0.84	2.5	0.02	0.04	0.08	0.17	0.35	0.7	1.4	2.8	5.1	8.0
628	0.84	2.2	0.02	0.04	0.08	0.15	0.31	0.63	1.3	2.5	4.5	8.0
689	0.84	2.0	0.02	0.03	0.07	0.14	0.29	0.57	1.1	2.3	4.1	7.0
769	0.84	1.8	0.02	0.03	0.06	0.12	0.26	0.51	1.0	2.0	3.7	6.1
844	0.84	1.7	0.01	0.03	0.06	0.11	0.23	0.47	0.9	1.9	3.4	5.6
941	0.84	1.5	0.01	0.03	0.05	0.10	0.21	0.42	0.8	1.7	3.0	5.0
1041	0.84	1.3	0.01	0.02	0.05	0.09	0.19	0.38	0.8	1.5	2.7	4.5
1143	0.84	1.2	0.01	0.02	0.04	0.08	0.17	0.34	0.7	1.4	2.5	4.1
1274	0.84	1.1	0.01	0.02	0.04	0.07	0.15	0.31	0.62	1.2	2.2	3.7
1426	0.84	1.0	0.01	0.02	0.03	0.07	0.14	0.28	0.55	1.1	2.0	3.3
1590	0.84	0.9	0.01	0.01	0.03	0.06	0.12	0.25	0.49	1.0	1.8	3.0
1726	0.84	0.8	0.01	0.01	0.03	0.05	0.11	0.23	0.46	0.9	1.6	2.7
2154	0.84	0.7	0.01	0.01	0.02	0.04	0.09	0.18	0.37	0.7	1.3	2.2



Dimension Sheet

Foot - Free Input
Models - 2000 to 2009



Single Stage

All Dimensions in mm

Model	Output				Input				Mounting								Others	
	D j6	H	J p9	L1	d j6	h	j p9	L2	C	E	F	M	N	G	S	K	A	Lf
2000-1	19	21.5	6	30	14	16	5	20	80	60	100	85	125	44	9	10	90	156
2001-1	24	27	8	40	14	16	5	20	100	90	120	125	150	64	14	12	120	181
2002-1	28	31	8	40	28	31	8	40	100	90	120	120	150	57	14	12	135	267
2003-1	38	41	10	55	28	31	8	40	100	90	140	120	170	71	14	15	150	287
2004-1	50	53.5	14	75	28	31	8	40	120	110	180	150	220	97	14	15	200	321
2005-1	65	69	18	90	50	53.5	14	70	140	150	210	200	260	117	18	20	250	449
2006-1	80	85.5	22	110	50	53.5	14	70	160	200	300	250	350	137	18	25	290	532
2007-1	95	100	25	135	50	53.5	14	70	200	250	350	300	400	162	22	25	330	588
2008-1	10	116	28	170	70	75	20	100	200	250	350	300	400	197	22	25	355	700
2009-1	20	127	32	180	70	75	20	100	250	300	400	360	460	213	26	30	400	734

Double Stage

2000-2	19	21.5	6	30	14	16	5	20	80	60	100	85	125	44	9	10	90	173
2001-2	24	27	8	40	14	16	5	20	100	90	120	125	150	64	14	12	120	203
2002-2	28	31	8	40	28	31	8	40	100	90	120	120	150	57	14	12	135	315
2003-2	38	41	10	55	28	31	8	40	100	90	140	120	170	71	14	15	150	335
2004-2	50	53.5	14	75	28	31	8	40	120	110	180	150	220	97	14	15	200	369
2005-2	65	69	18	90	50	53.5	14	70	140	150	210	200	260	117	18	20	250	424
2006-2	80	85.5	22	110	28	31.0	8	40	160	200	300	250	350	137	18	25	290	513
2007-2	95	100	25	135	50	53.5	14	70	200	250	350	300	400	162	22	25	330	659
2008-2	110	116	28	170	50	53.5	14	70	200	250	350	300	400	197	22	25	355	733
2009-2	120	127	32	180	50	53.5	14	70	250	300	400	360	460	213	26	30	400	779

Triple Stage

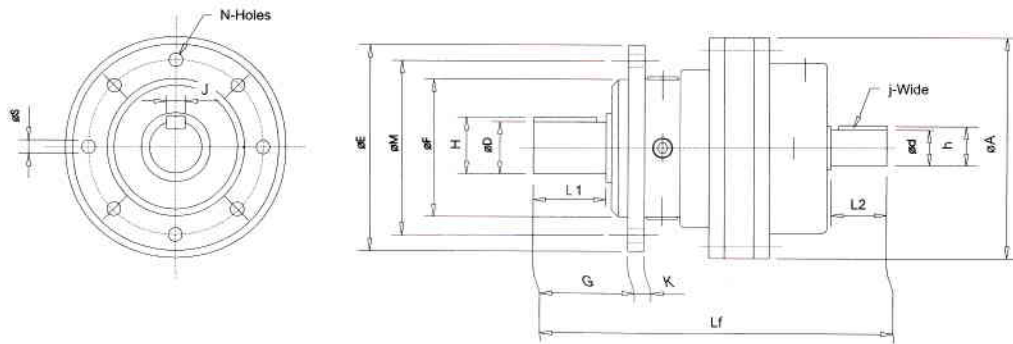
2000-3	19	21.5	6	30	14	16	5	20	80	60	100	85	125	44	9	10	90	189
2001-3	24	27	8	40	14	16	5	20	100	90	120	125	150	64	14	12	120	223
2002-3	28	31	8	40	28	31	8	40	100	90	120	120	150	57	14	12	135	363
2003-3	38	41	10	55	28	31	8	40	100	90	140	120	170	71	14	15	150	383
2004-3	50	53.5	14	75	28	31	8	40	120	110	180	150	220	97	14	15	200	417
2005-3	65	69	18	90	50	53.5	14	70	140	150	210	200	260	117	18	20	250	472
2006-3	80	85.5	22	110	28	31.0	8	40	160	200	300	250	350	137	18	25	290	561
2007-3	95	100	25	135	28	31.0	8	40	200	250	350	300	400	162	22	25	330	629
2008-3	110	116	28	170	28	31.0	8	40	200	250	350	300	400	197	22	25	355	714
2009-3	120	127	32	180	50	53.5	14	70	250	300	400	360	460	213	26	30	400	849

Four Stage

2000-4	19	21.5	6	30	14	16	5	20	80	60	100	85	125	44	9	10	90	206
2001-4	24	27	8	40	14	16	5	20	100	90	120	125	150	64	14	12	120	243
2002-4	28	31	8	40	28	31	8	40	100	90	120	120	150	57	14	12	135	411
2003-4	38	41	10	55	28	31	8	40	100	90	140	120	170	71	14	15	150	431
2004-4	50	53.5	14	75	28	31	8	40	120	110	180	150	220	97	14	15	200	465
2005-4	65	69	18	90	50	53.5	14	70	140	150	210	200	260	117	18	20	250	520
2006-4	80	85.5	22	110	28	31.0	8	40	160	200	300	250	350	137	18	25	290	609
2007-4	95	100	25	135	28	31.0	8	40	200	250	350	300	400	162	22	25	330	677
2008-4	110	116	28	170	28	31.0	8	40	200	250	350	300	400	197	22	25	355	762
2009-4	120	127	32	180	28	31.0	8	40	250	300	400	360	460	213	26	30	400	820

Dimension Sheet

Flange - Free Input
Models- 2000 to 2005



Single Stage

All Dimensions in mm.

Model	Output				Input				Mounting								Others	
	D j6	H	J p9	L1	d j6	h	j p9	L2	E	M	F h8	N	S	K	G	A	Li	
2000-1	19	21.5	6	30	14	16	5	20	90	75	60	8	5.5	-	34	90	156	
2001-1	24	27	8	40	14	16	5	20	120	105	80	8	6.5	-	45	120	181	
2002-1	28	31	8	40	28	31	8	40	135	115	80	8	8.5	10	45	135	267	
2003-1	38	41	10	55	28	31	8	40	150	135	100	8	8.5	12	68	150	287	
2004-1	50	53.5	14	75	28	31	8	40	200	165	130	8	13	18	90	200	321	
2005-1	65	69	18	90	50	53.5	14	70	220	190	160	8	13	15	106	250	449	

Double Stage

2000-2	19	21.5	6	30	14	16	5	20	90	75	60	8	5.5	-	34	90	173
2001-2	24	27	8	40	14	16	5	20	120	105	80	8	6.5	-	45	120	203
2002-2	28	31	8	40	28	31	8	40	135	115	80	8	8.5	10	45	135	315
2003-2	38	41	10	55	28	31	8	40	150	135	100	8	8.5	12	68	150	335
2004-2	50	53.5	14	75	28	31	8	40	200	165	130	8	13	18	90	200	369
2005-2	65	69	18	90	50	53.5	14	70	220	190	160	8	13	15	106	250	424

Triple Stage

2000-3	19	21.5	6	30	14	16	5	20	90	75	60	8	5.5	-	34	90	189
2001-3	24	27	8	40	14	16	5	20	120	105	80	8	6.5	-	45	120	223
2002-3	28	31	8	40	28	31	8	40	135	115	80	8	8.5	10	45	135	363
2003-3	38	41	10	55	28	31	8	40	150	135	100	8	8.5	12	68	150	383
2004-3	50	53.5	14	75	28	31	8	40	200	165	130	8	13	18	90	200	417
2005-3	65	69	18	90	50	53.5	14	70	220	190	160	8	13	15	106	250	472

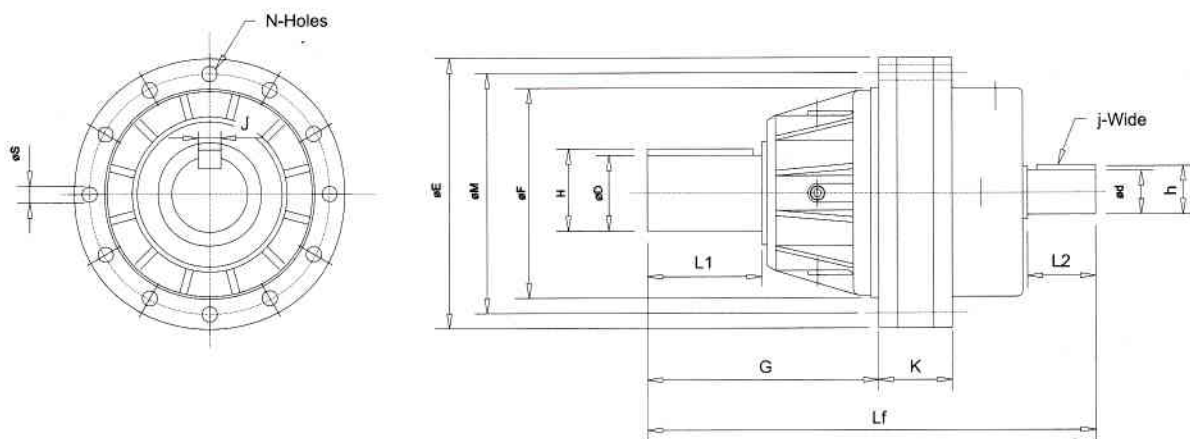
Four Stage

2000-4	19	21.5	6	30	14	16	5	20	90	75	60	8	5.5	-	34	90	206
2001-4	24	27	8	40	14	16	5	20	120	105	80	8	6.5	-	45	120	243
2002-4	28	31	8	40	28	31	8	40	135	115	80	8	8.5	10	45	135	411
2003-4	38	41	10	55	28	31	8	40	150	135	100	8	8.5	12	68	150	431
2004-4	50	53.5	14	75	28	31	8	40	200	165	130	8	13	18	90	200	465
2005-4	65	69	18	90	50	53.5	14	70	220	190	160	8	13	15	106	250	520



Dimension Sheet

Flange - Free Input
Models- 2006 to 2009



Single Stage

All Dimensions in mm

Model	Output				Input				Mounting						Others	
	D j6	H	J p9	L1	d j6	h	j p9	L2	E	M	F h8	N	S	K	G	Lf
2006-1	80	85.5	22	110	50	53.5	14	70	290	265	240	12	13	85	262	532
2007-1	95	100	25	135	50	53.5	14	70	330	300	270	12	17	95	310	588
2008-1	110	116	28	170	70	74.5	20	100	355	325	290	12	17	110	360	700
2009-1	120	127	32	180	70	74.5	20	100	400	360	335	12	17	120	385	734

Double Stage

2006-2	80	85.5	22	110	28	31.0	8	40	290	265	240	12	13	85	262	513
2007-2	95	100	25	135	50	53.5	14	70	330	300	270	12	17	95	310	659
2008-2	110	116	28	170	50	53.5	14	70	355	325	290	12	17	110	360	733
2009-2	120	127	32	180	50	53.5	14	70	400	360	335	12	17	120	385	779

Triple Stage

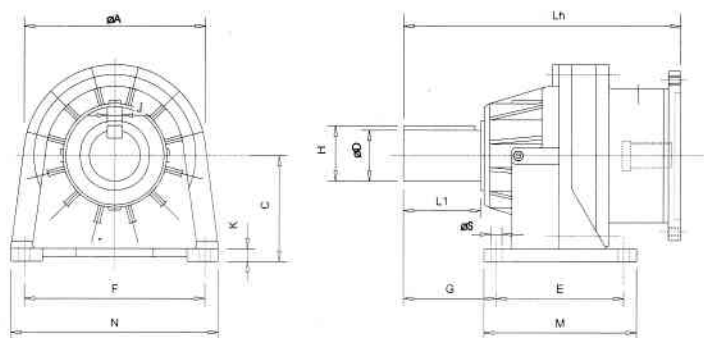
2006-3	80	85.5	22	110	28	31.0	8	40	290	265	240	12	13	85	262	561
2007-3	95	100	25	135	28	31.0	8	40	330	300	270	12	17	95	310	629
2008-3	110	116	28	170	28	31.0	8	40	355	325	290	12	17	110	360	714
2009-3	120	127	32	180	50	53.5	14	70	400	360	335	12	17	120	385	849

Four Stage

2006-4	80	85.5	22	110	28	31.0	8	40	290	265	240	12	13	85	262	609
2007-4	95	100	25	135	28	31.0	8	40	330	300	270	12	17	95	310	677
2008-4	110	116	28	170	28	31.0	8	40	355	325	290	12	17	110	360	762
2009-4	120	127	32	180	28	31.0	8	40	400	360	335	12	17	120	385	820

Dimension Sheet

**Foot - Hollow Input
Models -2000 to 2009**



Single Stage

All Dimensions in mm.

Model	Output							Mounting					Others		Motor Frame
	Dj6	H	Jp9	L1	C	E	F	M	N	G	S	K	A	Lh	
2000-1	19	21.5	6	30	80	60	100	85	125	44	9	10	90	140	63
2001-1	24	27	8	40	100	90	120	125	150	64	14	12	120	165	63
2002-1	28	31	8	40	100	90	120	120	150	57	14	12	135	245	63-90
2003-1	38	41	10	55	100	90	140	120	170	71	14	15	150	265	80-112
2004-1	50	53.5	14	75	120	110	180	150	220	97	14	15	200	299	80-112
2005-1	65	69	18	90	140	150	210	200	260	117	18	20	250	408	100-180
2006-1	80	85.5	22	110	160	200	300	250	350	137	18	25	290	491	100-180
2007-1	95	100	25	135	200	250	350	300	400	162	22	25	330	547	100-180
2008-1	110	116	28	170	200	250	350	300	400	197	22	25	355	629	132-200
2009-1	120	127	32	180	250	300	400	360	460	213	26	30	400	663	132-250

Double Stage

2000-2	19	21.5	6	30	80	60	100	85	125	44	9	10	90	157	63
2001-2	24	27	8	40	100	90	120	125	150	64	14	12	120	186	63
2002-2	28	31	8	40	100	90	120	120	150	57	14	12	135	293	63-90
2003-2	38	41	10	55	100	90	140	120	170	71	14	15	150	313	63-90
2004-2	50	53.5	14	75	120	110	180	150	220	97	14	15	200	347	63-90
2005-2	65	69	18	90	140	150	210	200	260	117	18	20	250	402	100-112
2006-2	80	85.5	22	110	160	200	300	250	350	137	18	25	290	562	80-180
2007-2	95	100	25	135	200	250	350	300	400	162	22	25	330	618	100-180
2008-2	110	116	28	170	200	250	350	300	400	197	22	25	355	692	100-180
2009-2	120	127	32	180	250	300	400	360	460	213	26	30	400	738	100-180

Triple Stage

2000-3	19	21.5	6	30	80	60	100	85	125	44	9	10	90	173	63
2001-3	24	27	8	40	100	90	120	125	150	64	14	12	120	207	63
2002-3	28	31	8	40	100	90	120	120	150	57	14	12	135	341	63-90
2003-3	38	41	10	55	100	90	140	120	170	71	14	15	150	361	63-90
2004-3	50	53.5	14	75	120	110	180	150	220	97	14	15	200	395	63-90
2005-3	65	69	18	90	140	150	210	200	260	117	18	20	250	450	63-90
2006-3	80	85.5	22	110	160	200	300	250	350	137	18	25	290	539	63-132
2007-3	95	100	25	135	200	250	350	300	400	162	22	25	330	682	90-160
2008-3	110	116	28	170	200	250	350	300	400	197	22	25	355	763	90-160
2009-3	120	127	32	180	250	300	400	360	460	213	26	30	400	809	100-160

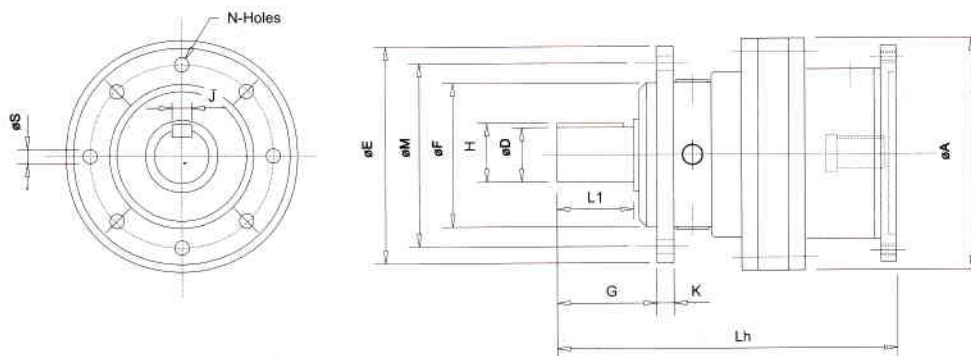
Four Stage

2000-4	19	21.5	6	30	80	60	100	85	125	44	9	10	90	190	63
2001-4	24	27	8	40	100	90	120	125	150	64	14	12	120	227	63
2002-4	28	31	8	40	100	90	120	120	150	57	14	12	135	389	63-90
2003-4	38	41	10	55	100	90	140	120	170	71	14	15	150	409	63-90
2004-4	50	53.5	14	75	120	110	180	150	220	97	14	15	200	443	63-90
2005-4	65	69	18	90	140	150	210	200	260	117	18	20	250	498	63-90
2006-4	80	85.5	22	110	160	200	300	250	350	137	18	25	290	587	63-100
2007-4	95	100	25	135	200	250	350	300	400	162	22	25	330	655	71-100
2008-4	110	116	28	170	200	250	350	300	400	197	22	25	355	740	71-100
2009-4	120	127	32	180	250	300	400	360	460	213	26	30	400	798	90-112



Dimension Sheet

Flange Hallow Input
Models 2000 to 2005



Single Stage

All Dimensions in mm.

Model	Output				Mounting							Others		Motor Frame
	Dj6	H	Jp9	L1	E	M	Fh8	N	S	K	G	A	Lh	
2000-1	19	21.5	6	30	90	75	60	8	5.5	-	34	90	140	63
2001-1	24	27	8	40	120	105	80	8	6.5	-	45	120	165	63
2002-1	28	31	8	40	135	115	80	8	8.5	10	45	135	245	63-90
2003-1	38	41	10	55	150	135	100	8	8.5	12	68	150	265	80-112
2004-1	50	53.5	14	75	200	165	130	8	13	18	90	200	299	80-112
2005-1	65	69.0	18	90	220	190	160	8	13	15	106	250	408	100-180

Double Stage

2000-2	19	21.5	6	30	90	75	60	8	5.5	-	34	90	157	63
2001-2	24	27	8	40	120	105	80	8	6.5	-	45	120	186	63
2002-2	28	31	8	40	135	115	80	8	8.5	10	45	135	293	63-90
2003-2	38	41	10	55	150	135	100	8	8.5	12	68	150	313	63-90
2004-2	50	53.5	14	75	200	165	130	8	13	18	90	200	347	63-90
2005-2	65	69.0	18	90	220	190	160	8	13	20	106	250	402	100-112

Triple Stage

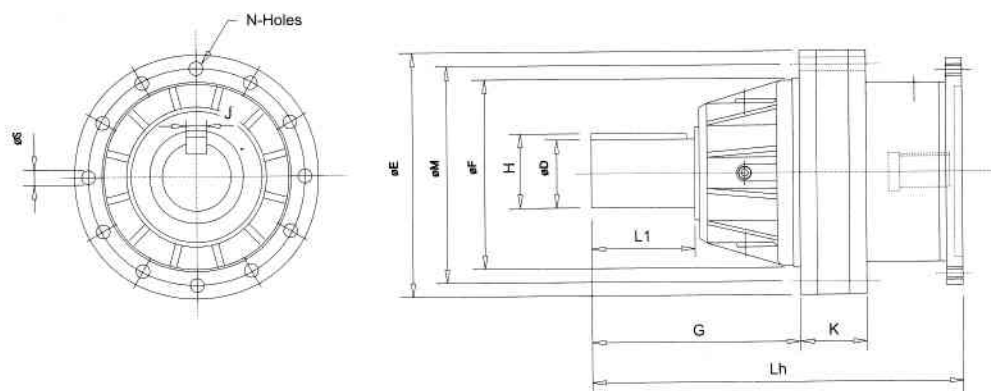
2000-3	19	21.5	6	30	90	75	60	8	5.5	-	34	90	173	63
2001-3	24	27	8	40	120	105	80	8	6.5	-	45	120	207	63
2002-3	28	31	8	40	135	115	80	8	8.5	10	45	135	341	63-90
2003-3	38	41	10	55	150	135	100	8	8.5	12	68	150	361	63-90
2004-3	50	53.5	14	75	200	165	130	8	13	18	90	200	395	63-90
2005-3	65	69.0	18	90	220	190	160	8	13	20	106	250	450	63-90

Four Stage

2000-4	19	21.5	6	30	90	75	60	8	5.5	-	34	90	190	63
2001-4	24	27	8	40	120	105	80	8	6.5	-	45	120	227	63
2002-4	28	31	8	40	135	115	80	8	8.5	10	45	135	389	63-90
2003-4	38	41	10	55	150	135	100	8	8.5	12	68	150	409	63-90
2004-4	50	53.5	14	75	200	165	130	8	13	18	90	200	443	63-90
2005-4	65	69.0	18	90	220	190	160	8	13	20	106	250	498	63-90

Dimension Sheet

Flange - Hollow Input
Models - 2006 to 2009



Single Stage

All Dimensions in mm

Model	Output			Mounting							Others		Motor Frame
	Dj6	H	Jp9	L1	E	M	Fh8	N	S	K	G	Lh	
2006-1	80	85.5	22	110	290	265	240	12	13	85	262	491	100-180
2007-1	95	100	25	135	330	300	270	12	17	95	310	547	100-180
2008-1	110	116	28	170	355	325	290	12	17	110	360	629	132-200
2009-1	120	127	32	180	400	360	335	12	17	120	385	663	132-250

Double Stage

2006-2	80	85.5	22	110	290	265	240	12	13	85	262	562	80-180
2007-2	95	100	25	135	330	300	270	12	17	95	310	618	100-180
2008-2	110	116	28	170	355	325	290	12	17	110	360	692	100-180
2009-2	120	127	32	180	400	360	335	12	17	120	385	738	100-180

Triple Stage

2006-3	80	85.5	22	110	290	265	240	12	13	85	262	539	63-132
2007-3	95	100	25	135	330	300	270	12	17	95	310	682	90-160
2008-3	110	116	28	170	355	325	290	12	17	110	360	763	90-160
2009-3	120	127	32	180	400	360	335	12	17	120	385	809	100-160

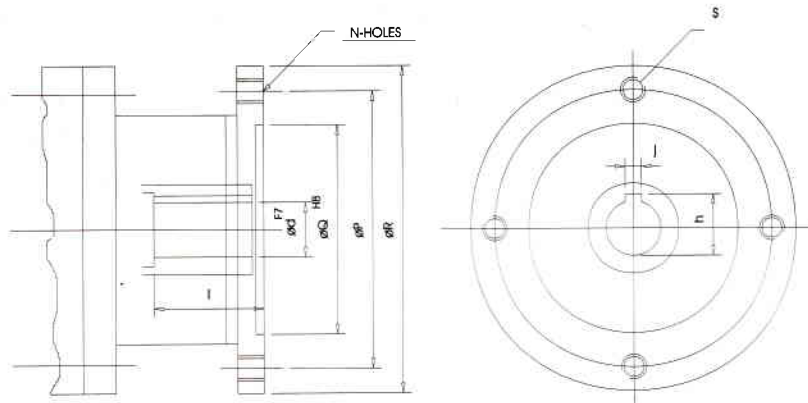
Four Stage

2006-4	80	85.5	22	110	290	265	240	12	13	85	262	587	63-100
2007-4	95	100	25	135	330	300	270	12	17	95	310	655	71-100
2008-4	110	116	28	170	355	325	290	12	17	110	360	740	71-100
2009-4	120	127	32	180	400	360	335	12	17	120	385	798	90-112



Dimension Sheet

Motor Mounting Details.



Motor Mounting Dimensions

All dimensions in mm

Motor Frame	Hollow Shaft				Mounting					Available Standard B 5 type Motors with speed and power			
	d f7	h	j	l	R	P	Q h8	N	S	3000 RPM	1440 RPM	960 RPM	720 RPM
63	11	13	4	25	140	115	95	4	M 8	0.25	0.25	-	-
71	14	16	5	32	160	130	110	4	M 8	0.33 / 0.50	0.33 / 0.50	0.33 / 0.50	0.1 / 0.1
80	19	22	6	42	200	165	130	4	M10	0.75 / 1 / 1.5	0.75 / 1	0.5 / 0.75	0.25 / 0.33
90	24	27	8	52	200	165	130	4	M10	2.0	1.5 / 2	1.0 / 1.5	0.5 / 0.75
100	28	31	8	62	250	215	180	4	M12	3.0 / 4.0	3.0 / 4.0	2.0	1.0 / 1.5
112	28	31	8	62	250	215	180	4	M12	5.0 / 5.5	5.0	3.0	2.0
132	38	41	10	82	300	265	230	4	M12	7.5 / 10	7.5 / 10	5.0 / 7.5	3.0 / 4.0
160	42	45	12	112	350	300	250	4	M16	12.5 / 15 / 20	12.5 / 15 / 20	10 / 12.5 / 15	5 / 7.5 / 10.0
180	48	52	14	112	350	300	250	4	M16	25 / 30	25 / 30	20	12.5 / 15.0
200	55	59	16	112	400	350	300	4	M16	40 / 50	40	25 / 30	25.00
225	60	64	18	145	450	400	350	8	M16	60	50 / 60	40	25 / 30

Modelwise suitable motor frame sizes

Planetary Drives

Frame	Single Stage	Two Stage	Three Stage	Four Stage
63	2001 / 2002	2000 / 2001 / 2002	2000 / 2001 / 2002	2000 / 2001 / 2002
71	2002	2002 / 2003 / 2004	2002 / 2003 / 2004	2002 / 2003 / 2004
80	2002 / 2003 / 2004	2002 / 2003 / 2004	2002 / 2003 / 2004	2002 / 2003 / 2004
90	2002 / 2003 / 2004	2002 / 2003 / 2004	2002 / 2003 / 2004	2002 / 2003 / 2004
100	2003 / 2004 / 2005	2003 / 2004 / 2005	2003 / 2004 / 2005	2006 / 2007 / 2008
112	2003 / 2004 / 2005	2003 / 2004 / 2005	2003 / 2004 / 2005	2006 / 2007 / 2008
132	2005 / 2006 / 2007	2005 / 2006 / 2007	2006 / 2007 / 2008	2008 / 2009
160	2005 / 2006 / 2007	2005 / 2006 / 2007	2006 / 2007 / 2008	2008 / 2009
180	2006 / 2007 / 2008	2006 / 2007 / 2008	2006 / 2007 / 2008	2008 / 2009
200	2008 / 2009	2009		
225	2009			

Modelwise suitable motor frame sizes

Cycloidal Drives

Frame	Single Stage		Two Stage		Three Stage	
63	SP 0	-	SP 3	SP 0 0	SP 2 4	SP 0 0 0
71	SP 0	-	SP 4	SP 0 0	SP 4 7	SP 0 0 0
80	SP 2	-	SP 5	SP 2 4	SP 5 8	SP 2 4 6
90	SP 3	-	SP 6	SP 3 5	SP 6 9	SP 3 5 8
100	SP 4	-	SP 7	SP 4 6	SP 7 10	SP 4 6 9
112	SP 5	-	SP 8	SP 5 8	SP 8 12	SP 5 8 12
132	SP 6	-	SP 9	SP 6 9	SP 9 13	SP 6 9 13
160	SP 6	-	SP 9	SP 6 9	SP 9 13	SP 6 9 13
180	SP 7	-	SP 9	SP 7 10	SP 9 13	SP 7 10 13
200	SP 8	-	SP 9	SP 8 11	SP 9 13	
225	SP 8	-	SP 9	SP 8 12	SP 9 13	