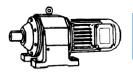


# HELICAL GEARBOXES BHSERIES

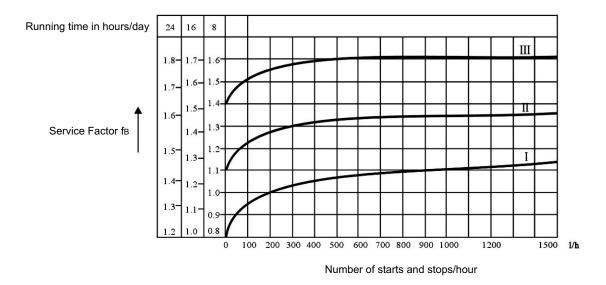




#### SELECTION OF HELICAL GEAR UNIT

In order to select the most suitable gear unit it is essential that a thorough knowledge of the driven machine are known. The gear units are normally designed for constant torque load with only a few starts/stops. If this conditions do not exist, it is necessary to determine a service factor. FB, from the start/stop frequency, Load class, and the daily operating time as shown in the dia-gram below.

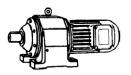
For gearmotors, the appropriate service factor taken from the diagram is then compared with the Service factor given with each speed/power combination listed in the gearmotor selection tables. To ensure a long, trouble tree service life it is essential that the unit selected has a service factor equal to, or greater than, that determined from the diagram.



#### Load Classification

- I Uniform load. Permissible mass acceleration factor ≤0.2
- II Moderate shock load. Permissible mass acceleration factor ≤3.
- III Heavy shock load. Permissible mass acceleration factor ≤10.
- For mass acceleration factor > 10 please refer to our technical department.

Example: Load classification I at 200 starts And stops/hour, running at 24 hours/day, fB = 1.35.

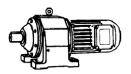




# SELECTION OF LUBRICANT OIL

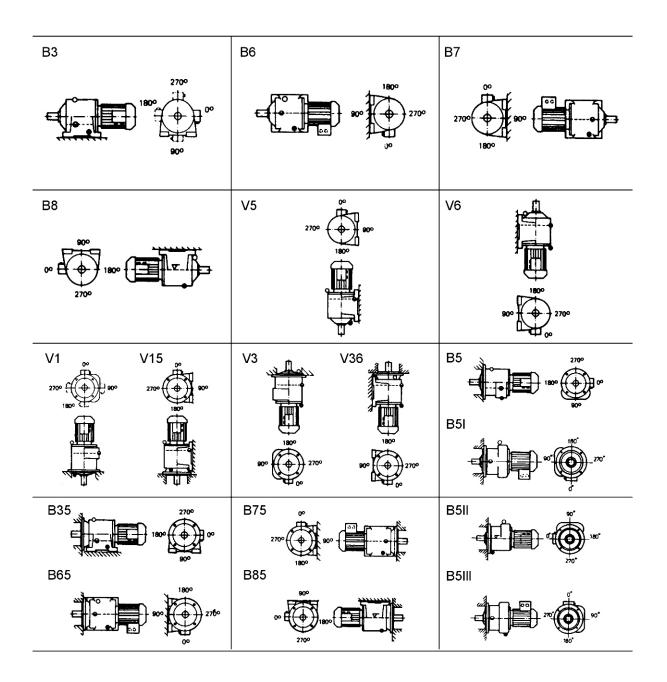
Proper viscosity of lubricant is contributive to sense the friction of gears, so the speed reducer can fully apply its function in the case of high load or impact load. The table below shows the selection of lubricants for BONVARIO helical gear boxes.

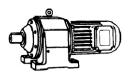
Application	Lubrication type	Ambient tempera- Toure C	ISO ISO viscosity class	BP	M⊚bil	SHELL
		+40 to 0	VG 220	BP Energol GR-XP220	Mobilgear 630	Shell Omala Oil 220
		+25 to-15	VG 150 VG 100	BP Energol GR-XP100	Mobilgear 629	Shell Omala Oil 100
	Oil	+10 to-30	VG 68-46 VG 32	BP Energol GR-XP68	Mobil D.T.E 15M	Shell Tellus Oil T32
Helical,shaft		-20 to -50	VG 22 VG 15	BP Energol LPT 22	Mobil D.T.E 11M	Aero Shell Fluid 41
Mounted Helical, Helical-Bevel	Grease	+40 to-15		BP Energrease HT-EP 00	Mobilpex 44	Shell Grease S 3655
		-40 to +80	VG 220		Mobil SHC 630	
	Special Lubricants	-40 to +10	VG 32		Mobil SHC 624	





#### MOUNTING POSITIONS AND RESPECTIVE OIL LEVEL INDICATIONS







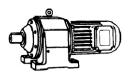
<u>Code:</u>

 $f{\sf B}\,$  - service factor

i - gear ratio

0	
-	

Pm	Пa	Ma	I.	FRa	fв			
Kw	r/min	N.m		N		S	ize	kg
0.12	8.0	143	110.87	5530	1.10	.43	D 63N4	14
	9.0	127	95.22	5650	1.25	43	D 63N4	16
	11	104	81.44	5800	1.55			
	13	88	110.87	5880	1.80	43	D 63K6	14
	14	82	95.22	5900	1.95	43	D 63K6	16
	17	67	81.44	5960	2.40			
	20	57	70.57	6000	2.80			
	22	52	61.75	6010	3.10			
	36	32	24.36	1860	2.20	32	D 63N6	10
	42	27	20.84	1790	2.60	32	D 63N6	10
	50	23	17.73	1710	3.05			
	57	20	24.36	1660	3.50	32	D 63K4	10
	66	17	20.84	1590	4.10	32	D 63K4	10
	78	15	17.73	1520	4.15			
	90	13	15.28	1460	4.60			
	108	11	12.87	1400	5.45			
	126	9	11.01	1310	5.45			
	148	8	9.37	1250	6.25			
	172	7	8.07	1190	7.15			
0.18	6.0	285	145.61	12500	1.95	73	D 63L6	36
	7.0	245	127.28	12500	2.30	73	D 63L6	40
	8.0	215	168.79	12600	2.60	73	D 63N4	36
	9.0	191	145.61	12600	2.95	73	D 63N4	40
	11	156	123.84	12600	3.85			
	5.5	315	155.61	6920	1.10	63	D 63L6	24
	6.5	265	134.24	7350	1.30	63	D 63L6	25
	7.5	230	117.34	7590	1.50			
	8.5	200	155.61	7770	1.75	63	D 63N4	23
	10	172	134.24	7910	2.05	63	D 63N4	24
	11	156	117.34	7980	2.25			
	13	132	103.65	8070	2.65			
	9.0	191	95.22	5050	0.85	43	D 63L6	15
	11	156	81.44	5420	1.05	43	D 63L6	17
	12	143	108.32	5530	1.10	43	D 63N4	14
	14	123	95.22	5680	1.30	43	D 63N4	16
	16	107	81.44	5780	1.50			
	19	90	70.57	5870	1.80			
	21	82	61.75	5900	1.95			
	24	72	56.17	5950	2.20			
	27	64	48.44	5860	2.50			
	35	49	24.36	1740	1.45	32	D 63L6	10
	41	42	20.84	1690	1.65	32	D 63L6	11
	49	35	17.73	1630	2.00			





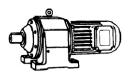
<u>Code:</u>

 $f\mathsf{B}\,$  - service factor

i - gear ratio

0	

Pm	na	Ma	1	FRa	fв			
Kw	r/min	N.m		N		s	ize	kg
0.18	54	32	24.36	1590	2.20	32	D 63N4	10
	63	27	20.84	1540	2.60	32	D 63N4	10
	74	23	17.73	1480	2.85			
	86	20	15.28	1420	3.00			
	103	17	12.87	1380	3.55			
	120	14	11.01	1290	3.50			
	141	12	9.37	1240	4.15			
	164	10	8.07	1190	5.00			
	153	11	17.73	1220	4.55	32	D 63K2	10
	178	10	15.28	1160	5.00	32	D 63K2	10
	212	8 7	12.87	1120	5.65			
	248		11.01	1050	6.45			
	292	6	9.37	1000	6.65			
	338	5	8.07	960	8.00			
0.25	2.4	990	277.63	26300	2.10	93	DT80N8	110
	3.0	795	228.38	26500	2.65	93	DT80N8	107
	3.2	745	213.56	17600	1.50	83	DT80N8	69
	3.6	665	189.66	17800	1.65	83	DT80N8	69
	4.5	530	145.61	11600	1.05	73	DT80N8	41
	5.5	435	127.28	12000	1.30	73	DT80N8	45
	6.0	400	145.61	12100	1.40	73	DT71D6	37
	7.0	340	127.28	12300	1.65	73	DT71D6	41
	7.5	320	168.79	12400	1.75	73	D 63L4	36
	9.0	265	145.61	12500	2.10	73	D 63L4	40
	10	240	123.84	12500	2.50			
	5.5	435	155.61	5380	0.80	63	DT71D6	25
	6.5	365	134.24	6380	0.95	63	DT71D6	26
	7.5	320	117.34	6870	1.10			
	8.5	280	103.65	7230	1.25			
	8.5	280	155.61	7230	1.25	63	D 63L4	24
	9.5	250	134.24	7460	1.40	63	D 63L4	25
						05	D 05D4	
	11	215	117.34	7690	1.65			
	13	184	103.65	7850	1.90			
	14	171	94.71	7920	2.05			
	16	149	82.62	8010	2.35			
	18	133	72.73	8070	2.65			
	12	199	108.32	4960	0.80	43	D 63L4	15
	14	171	95.22	5270	0.95	43	D 63L4	17
						45	D 0514	17
	16	149	81.44	5480	1.05			
	18	133	70.57	5610	1.20			
	21	114	61.75	5740	1.40			
	23	104	56.17	5800	1.55			
	27	88	48.44	5720	1.80			
	31	77	41.97	5510	2.10			
	35	68	36.73	5320	2.35			
	39	61	33.41	5160	2.60			
	47	51	27.95	4860	2.85			

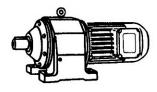




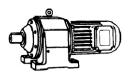
<u>Code:</u>

 $f\mathsf{B}\,$  - service factor

i - gear ratio



Pm	na	Ma	I	FRa	fв			
Kw	r/min	N.m		Ν		S	lize	kg
0.25	36	66	24.33	1590	1.05	32	DT71D6	11
	42	57	20.84	1550	1.25	32	DT71D6	12
	49	49	17.73	1520	1.45			
	53	45	24.33	1500	1.55	32	D 63L4	10
	62	39	20.84	1450	1.80	32	D 63L4	11
	73	33	17.73	1410	1.95			
	85	28	15.28	1370	2.15			
	102	23	12.87	1320	2.50			
	119	20	11.01	1240	2.45			
	139	17	9.37	1200	2.95			
	162	15	8.07	1150	3.35			
	150	16	17.73	1190	3.15	32	D 63N2	10
	174	14	15.28	1140	3.55	32	D 63N2	10
	207	11	12.87	1100	3.75			
	242	10	11.01	1030	4.50			
0.37	2.4	1470	277.63	25700	1.45	93	DT90S8	116
0.07	3.0	1180	228.38	26100	1.80	93	DT90S8	113
	3.4	1040	254.79	26200	2.20	93	DT80K6	109
	4.0	880	209.58	26400	2.60	93	DT80K6	106
	3.2	1100	213.56	16300	1.00	83	DT90S8	74
	3.6	980	189.66	16800	1.10	83	DT90S8	74
	4.0	880	213.56	17200	1.25	83	DT80K6	67
	4.5	785	189.66	17500	1.40	83	DT80K6	67
	5.0	705	169.49	17700	1.70			
	6.0	590	150.52	18000	2.05			
	5.5	640	127.28	10900	0.90	73	DT90S8	46
						73	DT90S8	50
	6.0	590	145.61	11200	0.95	73	DT80K6	39
	7.0	505	127.28	11700	1.10	73	DT80K6	43
	8.0	440	168.79	12000	1.25	73	DT71D4	37
	9.5	370	145.61	12200	1.50	73	DT71D4	41
	11	320	123.84	12400	1.90			
	13	270	108.26	12500	2.20			
	14	250	95.63	12500	2.40			
	16	220	87.38	12600	2.75			
						63	DT80K6	26
	8.5	415	103.65	5700	0.85	63	DT80K6	27

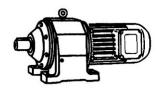




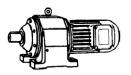
<u>Code:</u>

 $f\mathsf{B}\,$  - service factor

i - gear ratio

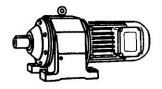


Pm	Na	Ma	I	FRa	fв			
Kw	r/min	N.m		Ν		s	ize	kg
0.37	9.0	395	155.61	5990	0.90	63	DT71D4	25
	10	355	134.24	6500	1.00	63	DT71D4	26
	12	295	117.34	7100	1.20			
	13	270	103.65	7310	1.30			
	15	235	94.71	7560	1.50			
	17	210	82.62	7720	1.65			
	19	186	72.73	7840	1.90			
	21	168	64.26	7830	2.10			
	25	141	56.02	7470	2.50			
	28	126	48.65	7240	2.80			
		177	70.57	5210	0.00	42	DT71D4	16
	20 22	177	70.57 61.75	5210 5270	0.90	43 43	DT71D4	16 18
		161		5370	1.00	43	DT71D4	18
	25	141	56.17	5550	1.15			
	28	126	48.44	5440	1.25			
	33	107	41.97	5220	1.50			
	38	93	36.73	5030	1.70			
	41	86	33.41	4930	1.85			
	49	72	27.95	4670	2.00			
	56	63	24.46	4500	2.30			
	62	57	22.25	4370	2.55			
	72	49	19.15	4190	2.95			
	87	41	15.84	3980	3.05	42	DT71D4	15
	101	35	13.72	3810	4.15	42	DT71D4	17
	49	72	17.73	1330	0.95	32	DT80K6	13
		(CDC)/				32	DT80K6	13
	57	62	24.33	1320	1.15	32	DT71D4	11
	66	54	20.84	1300	1.30	32	DT71D4	12
	78	45	17.73	1280	1.45			
	90	39	15.28	1250	1.55			
	108	33	12.87	1210	1.75			
	126	28	11.01	1150	1.75			
	148	24	9.37	1110	2.10			
	172	21	8.07	1070	2.40			
	149	24	17.73	1130	2.10	32	D 63L2	10
	173	20	15.28	1090	2.50	32	D 63L2	11
	207	17	12.87	1050	2.50			
	242	15	11.01	990	3.00			
	284	12	9.37	960	3.35			
	330	11	8.07	910	3.65			

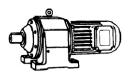




- Code: fB service factor
- i gear ratio
- Na output rpm



Pm	Na	Ma	i	FRa	fв			
Kw	r/min	N.m		Ν	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	S	ize	kg
0.55	2.4	2190	277.63	23900	0.95	93	DT90L8	117
	3.0	1750	228.38	25300	1.20	93	DT90L8	114
	3.4	1540	254.79	25600	1.50	93	DT80N6	110
	4.0	1310	209.58	25900	1.75	93	DT80N6	107
	5.0	1050	277.63	26200	2.00	93	DT80K4	109
	5.5	960	254.79	26300	2.40	93	DT80K4	106
	6.5	810	209.58	26400	2.85			
	4.0	1310	213.56	15200	0.85	83	DT80N6	69
	4.5	1170	189.66	15900	0.95	83	DT80N6	69
	5.0 6.0	1050 880	169.49 150.52	16500 17200	1.15 1.35			
		880	130.32	17200	1.55			
	6.5	810	213.56	17400	1.35	83 83	DT80K4 DT80K4	67
	7.5	700	189.66	17700	1.55	03	D100K4	67
	8.0	655	169.49	17900	1.85			
	9.0 10	585 525	150.52 137.87	18000 18100	2.05 2.30			
	10	480	121.12	18200	2.50			
	13	405	107.42	18400	2.95			
	9.5	555	145.61	11400	1.00	73	DT80K4	39
	11	480	123.84	11800	1.25	73	DT80K4	43
	13	405	108.26	12100	1.50			
	14	375	95.63	12200	1.60			
	16	330	87.38	12400	1.80			
	18	290	76.22	12500	2.05			
	21	250	67.10	12500	2.40			
	23	230	59.28	12600	2.60			
	12	440	117.34	5290	0.80	63	DT80K4	26
	13	405	103.65	5850	0.85	63	DT80K4	27
	15	350	94.71	6560	1.00			
	17 19	310 275	82.62 72.73	6970 7270	1.15 1.25			
	21	250	64.26	7430	1.23			
	25	210	56.02	7140	1.65			
	28	188	48.65	6940	1.85			
	32	164	42.98	6710	2.15			
	35	150	39.27	6560	2.35			
	40	131	34.26	6330	2.65			
	57	92	24.24	5790	2.70	62	DT80K4	25
	64	82	21.41	5600	3.05	62	DT80K4	26
	28	188	48.44	5090	0.85	43	DT80K4	18
	33 38	159 138	41.97 36.73	4930 4780	1.00 1.15	43	DT80K4	20
	38 41	128	33.41	4700	1.13			
	49	107	27.95	4460	1.35			
	56	94	24.46	4320	1.55			
	62	85	22.25	4210	1.70			
	72	73	19.15	4050	2.00			
	83	63	16.62	3900	2.30			
	96	55	14.36	3750	2.65			
	87	60	15.84	3870	2.10	42	DT80K4	17
	101	52	13.72	3710	2.80	42	DT80K4	19
	115	46	12.01	3580	3.15			

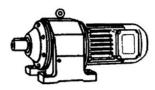




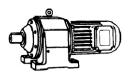
<u>Code:</u>

fB - service factor

i - gear ratio



Pm	na	Ma	1	FRa	fв			
Kw	r/min	N.m		N		\$	Size	kg
0.55	78	67	17.73	1100	0.95	32	DT80K4	13
	90	58	15.28	1100	1.05	32	DT80K4	13
	148	35	9.37	1010	1.45			
	172	31	8.07	980	1.60			
	152	35	17.73	1030	1.45	32	DT71D2	11
	177	30	15.28	1000	1.65	32	DT71D2	12
	210	25	12.87	980	1.75			
	246	21	11.01	930	2.15			
	289	18	9.37	900	2.20			
	336	16	8.07	860	2.50			
0.75	3.4	2110	204.1	32900	1.65	103	DT100LS8	177
	3.8	1840	176.89	33200	2.15	103	DT100LS8	166
	3.0	2390	228.38	22900	0.90	93 93	DT100LS8 DT100LS8	122 119
	3.5	2050	254.79	24500	1.10	93	DT90S6	116
	4.5	1590	209.58	25600	1.45	93	DT90S6	113
	5.0	1430	277.63	25800	1.45	93	DT80N4	110
	5.5	1300	254.79	26000	1.75	93	DT80N4	107
	6.5	1100	209.58	26200	2.10			
	7.5 8.5	960 840	185.28 165.42	26300 26400	2.40 2.75			
	5.5	1300	169.49	15200	0.90	83	DT90S6	74
	6.0	1190	150.52	15800	1.00	83	DT90S6	74
	6.5	1100	213.56	16300	1.00	83	DT80N4	69
	7.5	960	189.66	16900	1.15	83	DT80N4	69
	8.0	900	169.49	17100	1.35			
	9.0	795	150.52	17500	1.50			
	10	715	137.87	17700	1.70			
	11	650	121.12	17900	1.85			
	13 14	550	107.42 96.01	18100	2.20			
	16	510 450	84.61	18200 18300	2.35 2.65			
	11	650	123.84	10900	0.90	73	DT80N4	41
	13	550	108.26	11500	1.10	73	DT80N4	45
	14	510	95.63	11700	1.20			
	16	450	87.38	11900	1.35			
	18	400	76.22	12100	1.50			
	21	340	67.10	12300	1.75			
	23	310	59.28	12400	1.95			
	27 31	265 230	51.68 44.05	12500 12600	2.25 2.60			

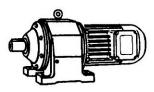




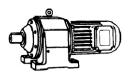
Code:

 $f{\sf B}\,$  - service factor

İ - gear ratio



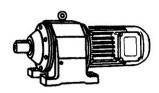
Pm	na	Ma	i	FRa	fв			
kw	r/min	N·m		N		S	ize	kg
0.75	17	420	82.62	5620	0.85	63	DT80N4	28
	19	375	72.73	6260	0.95	63	DT80N4	29
	21	340	64.26	6670	1.05			
	25	285	56.02	6780	1.25			
	28	255	48.65	6620	1.35			
	32	225	42.98	6420	1.55			
	35	205	39.27	6300	1.70			
	40	179	34.26	6110	1.95			
	46	156	30.16	5900	2.25			
	52	138	26.64	5720	2.55			
	59	121	23.23	5540	2.90			
	57	126	24.24	5640	2.00	62	DT80N4	27
	64	112	21.41	5470	2.25	62	DT80N4	28
	71	101	19.56	5310	2.50			
	81	88	17.06	5120	2.85			
	38	188	36.73	3990	0.85	43	DT80N4	19
	41	175	33.41	4240	0.90	43	DT80N4	21
	49	146	27.95	4240	1.00			
	56	128	24.46	4120	1.15			
	62	116	22.25	4030	1.25			
	72	99	19.15	3900	1.45			
	83	86	16.62	3770	1.70			
	96	75	14.36	3630	1.95			
	87	82	15.84	3750	1.50	42	DT80N4	18
	101	71	13.72	3610	2.05	42	DT80N4	20
	115	62	12.01	3490	2.35			
	126	57	10.92	3400	2.55			
	147	49	9.40	3260	2.95			
	148	48	9.37	900	1.05	32	DT80N4	14
	172	42	8.07	880	1.20	32	DT80N4	15
	152	47	17.73	930	1.05	32	DT80K2	13
	177	40	15.28	920	1.25	32	DT80K2	13
	289	25	9.37	840	1.60			
	336	21	8.07	820	1.90			
	3.3	3180	204.1	31300	1.10	103	DT100L8	180
1.1	3.7	2760	176.89	32000	1.45	103	DT100L8	169
	4.5	2330	209.58	23200	1.00	93	DT90L6	117
						93	DT90L6	114



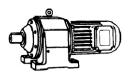


Cod	de:

- fB service factor
- i gear ratio
- Na output rpm



$\mathbf{Pm}$	na	Ma	i	FRa	fв			
kw	r/min	N·m		N		Si	ze	kg
.1	5.0	2100	277.63	24300	1.00	93	DT90S4	116
	5.5	1910	254.79	25000	1.20	93	DT90S4	113
	6.5	1620	209.58	25500	1.40			
	7.5	1400	185.28	25800	1.65			
	8.5	1240	165.42	26000	1.85			
	9.5	1110	148.56	26200	2.05			
	11	960	132.03	26300	2.40			
	12	880	114.47	26400	2.60			
	8.5	1240	169.49	15600	0.95	83	DT90S4	74
	9.5	1110	150.52	16200	1.10	83	DT90S4	74
	10	1050	137.87	16500	1.15			
	12	880	121.12	17200	1.35			
	13	810	107.42	17400	1.50			
	15	700	96.01	17700	1.70			
	17	620	84.61	17900	1.95			
	19	555	73.15	18100	2.15			
	21	500	66.15	18200	2.40			
	24	440	58.67	18300	2.75			
	15	700	95.63	10500	0.85	73	DT90S4	46
	16	655	87.38	10800	0.90	73	DT90S4	50
	18	585	76.22	11300	1.05			
	21	500	67.10	11700	1.20			
	24	440	59.28	12000	1.35			
	27	390	51.68	12200	1.55			
	32	330	44.05	12400	1.80			
	36	290	38.43	12500	2.05			
	41	255	33.83	12500	2.35			
	47	225	29.89	12200	2.65			
	61	172	22.95	11300	2.90	72	DT90S4	45
	69	152	20.16	10900	3.70	72	DT90S4	48
	25	420	56.02	7000	0.85	63	DT90S4	32
	29	360	48.65	6030	0.95	63	DT90S4	33
	33	320	42.98	5890	1.10			
	36	290	39.27	5820	1.20			
	41	255	34.26	5680	1.35			
	46	230	30.16	5540	1.50			
	53	198	26.64	5390	1.75			
	60 71	175	23.23	5240 5040	2.00			
	71 85	148 124	19.68 16.55	5040 4820	2.35 2.80			
	58	181	24.24	5360	1.40	62	DT90S4	31
	65	162	21.41	5220	1.55	62	DT9054	32
	72	146	19.56	5090	1.70			
	82	128	17.06	4920	1.95			
	88	119	15.95	4780	2.75			
	63	167	22.25	2440	0.85	43	DT90S4	23
	73	144	19.15	3010	1.00	43	DT90S4	25
	84	125	16.62	3440	1.15			
	97	108	14.36	3420	1.35			
	102	103	13.72	3420	1.40	42	DT90S4	23
	117	90	12.01	3310	1.60	42	DT90S4	25
	128	82	10.92	3240	1.75			
	149	71	9.40	3120	2.05			
	172	61	8.16	3010	2.30			
	193	54	7.27	2910	2.40			
	224 258	47 41	6.26 5.43	2790 2690	2.55 2.70			

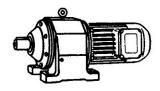




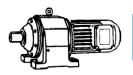
Code:

 $f{\sf B}\,$  - service factor

i - gear ratio



Pm	na	Ma	i	FRa	fв			
kw	r/min	N·m		Ν		S	ize	kg
1.1	170	62	15.84	3020	2.00	42	DT80N2	18
	197	53	13.72	2910	2.75	42	DT80N2	20
	225	47	12.01	2800	3.10	NG 1963		
	177	59	15.28	770	0.85	32	DT80N2	14
	289	36	9.37	740	1.10	32	DT80N2	15
	336	31	8.07	730	1.30			
1.5	3.5	4090	204.1	28400	0.85	103	DT112M8	189
1.5	4.0	3580	176.89	30500	1.10	103	DT112M8	178
	4.4	3180	204.1	31300	1.10	103	DT100L6	180
	5.4	2600	176.89	32200	1.55	103	DT100L6	169
	6.4	2200	143.02	32800	1.80	100	2110010	105
	5.5	2600	254.79	21700	0.90	93	DT90L4	117
	7.0	2050	209.79	24500	1.10	93	DT90L4	114
	7.5	1910	185.28	25000	1.20			
	8.5	1690	165.42	25400	1.35			
	9.5	1510	148.56	25700	1.50			
	11	1300	132.03	26000	1.75			
	12	1190	114.47	26100	1.95			
	14	1020	101.59	26300	2.25			
	17	840	85.63	26400	2.75			
	10	1430	137.87	14400	0.85	83	DT90L4	75
	12	1190	121.12	15800	1.00	83	DT90L4	75
	13	1100	107.42	16300	1.10			
	15	960	96.01	16900	1.25			
	17	838	84.61	17300	1.45			
	19	755	73.15	17600	1.60			
	21	680	66.15	17800	1.75			
	24	595	58.67	18000	2.00			
	27	530	52.44	18100	2.25			
	31	460	46.21	18300	2.60			
	36	400	39.95	18300	3.00			
	39	365	35.95	17900	2.35	82	DT90L4	73
	45	320	31.78	17200	3.15	82	DT90L4	73
	21	680	67.10	10700	0.90	73	DT90L4	47
	24	595	59.28	11200	1.00	73	DT90L4	51
	27	530	51.68	11600	1.15			
	32	450	44.05	11900	1.35			
	37	385	38.43	12200	1.55			
	42	340	33.83	12200	1.75			
	48	300	29.89	11800	2.00			
	54	265	26.06	11400	2.25			
	64	225	22.08	10900	2.65			

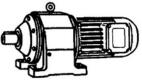


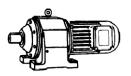
Code:

fB - service factor



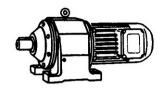
	r ratio						٣	2,64
-							(	ð J
Na - outp	Jut ipin							E
Pm	na	Ma	i	FRa	fв			
kw	r/min	N·m		N		Si	ze	kg
1.5	62	230	22.95	11000	2.15	72	DT90L4	46
	70	205	20.16	10600	2.75	72	DT90L4	49
	33	435	42.98	5340	0.80	63	DT90L4	34
	36	400	39.27	5300	0.90	63	DT90L4	35
	41 47	350 305	34.26 30.16	5230 5140	1.00 1.15			
	53	270	26.64	5050	1.30			
	61	235	23.23	4920	1.50			
	72	199	19.68	4770	1.75			
	86	167	16.55	4590	2.10			
	59	245	24.24	5050	1.00	62	DT90L4	33
	66	215	21.41	4960	1.15	62	DT90L4	34
	73	196	19.56	4840	1.30			
	83 89	173 161	17.06 15.95	4710 4560	1.45 2.05			
	102	140	13.91	4430	2.35			
	116	123	12.25	4290	2.70			
	95	160	16.62	1280	0.95	42	DTOOL 4	25
	85 99	169 145	16.62 14.36	1380 2030	0.85	43 43	DT90L4 DT90L4	25 26
	103 118	139 121	13.72 12.01	2680 3070	1.05	42 42	DT90L4 DT90L4	24 26
	130	121	10.92	3070	1.30	42	D190L4	20
	151	95	9.40	2980	1.55			
	174	82	8.16	2890	1.70			
	195	73	7.27	2780	1.80			
	227	63	6.26	2680	1.90			
	262 302	55 47	5.43 4.70	2590 2500	2.00 2.15			
	197	73 64	13.72	2800	2.00	42 42	DT90S2	23 25
	225 247	58	12.01 10.92	2710 2650	2.25 2.50	42	DT90S2	25
	287	50	9.40	2550	2.90			
2.2	5.4 6.4	3820 3230	176.89 143.02	29700 31200	1.05 1.25	103 103	DV112M6 DV112M6	189 178
	6.9	3000	204.1	31600	1.15	103	DT100LS4	122
	7.9	2630	176.89	31600 32200	1.5	103	DT100LS4	122 119
	9.9 11	2100 1910	143.02	32900 33100	1.9			
	13	1620	143.02 127.74 112.31	33400	2.1 2.45			
	14	1500	100.36	33500	2.65			
	7.5	2800	185.28	20400	0.80	93	DV100LS4	122
	8.5	2470 2210	165.42	22500	0.95	93	DV100LS4	119
	9.5 11	1910	148.56 132.03	23800 25000	1.05			
	12	1750	114.47	25300	1.30			
	14	1500	101.59	25700	1.55			
	16	1310	85.63	25900	1.75			
	20	1050	69.94	26200	2.20			
	23 24	910 880	60.96 58.06	26400	2.55			
	24	780	51.60	26400 26100	2.60 2.95			
	15	1400	96.01	14600	0.85	83	DT100LS4	80
	17	1240	84.61	15600	0.95	83	DT100LS4	80
	19	1110	73.15	16200	1.10	05	21.00001	00
	21	1000	66.15	16700	1.20			
	24	880	58.67	17200	1.35			
	27	780	52.44	17500	1.55			
	30	700	46.21	17700	1.70			
	35	600	39.95	18000	2.00			
	40	525	35.08	17300	2.30			
	49	430	28.77	16300	2.80			



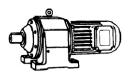




- Code: fB service factor
- i gear ratio
- Na output rpm



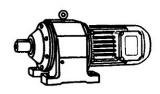
	na	Ma	i	FRa	fв			
kw	r/min	N·m		N			Size	kg
2.2	39	540	35.95	17500	1.55	82	DT100LS4	78
	44	475	31.78	16900	2.10	82	DT100LS4	78
	49	430	28.38	16400	2.20			
	55	380	25.49	15900	2.90			
	32	655	44.05	10800	0.90	73	DT100LS4	50
	36	585	38.43	11300	1.05	73	DT100LS4	54
	41	510	33.83	11700	1.20			
	47	445	29.89	11400	1.35			
	54	390	26.06	11000	1.55			
	63	335	22.08	10600	1.80			
	61	345	22.95	10500	1.45	72	DT100LS4	49
	69	305	20.16	10300	1.85	72	DT100LS4	52
	78	270		10000	2.05	12	DIIOLO4	52
			17.88					
	88	240	15.98	9670	2.35			
	99	210	14.08	9370	2.65			
	53	395	26.64	4450	0.90	63	DT100LS4	38
	60	350	23.23	4410	1.00	63	DT100LS4	39
	71	295	19.68	4340	1.20			
	85	245	16.55	4240	1.45			
	72	290	19.56	4460	0.85	62	DT100LS4	37
	82	255	17.06	4370	1.00	62	DT100LS4	38
	88	240	15.95	4200	1.40			
	101	210	13.91	4110	1.55			
	114	184	12.25	4030	1.80			
	129	163	10.82	3930	2.00			
	148	142	9.43	3820	2.30			
	175	120	7.99	3680	2.75			
	113	186	24.24	4120	1.35	62	DT90L2	33
	128	164	21.41	4010	1.50	62	DT90L2	34
	141	149	19.56	3930	1.70			
	161 172	130 122	17.06 15.95	3810 3700	1.90 2.70			
	128	164	10.92	1020	0.90	42	DT100LS4	28
	149	141	9.40	1610	1.05	42	DT100LS4	30
	172	122	8.16	2060	1.15	42	DITOLDY	50
	193	109	7.27	1950	1.20			
	224	94	6.26	2310	1.30			
	258	81	5.43	2450	1.35			
	298	71	4.70	2370	1.40			
	200	105	13.70	2420	1.40	42	DT90L2	24
	229	92	12.01	2540	1.60	42	DT90L2	26
	252	83	10.92	2490	1.75	-		
	293	72	9.40	2410	2.00			
	337	62	8.16	2340	2.25			
	378	56	7.27	2250	2.30			
	439	48	6.26	2170	2.50			
	506	42	5.43	2090	2.60			
	585	36	4.70	2020	2.80			
3	6.4	4410	143.02	26600	0.90	103	DV132S6	196



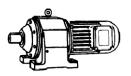


#### Code:

- fB service factor
- i gear ratio
- Na output rpm



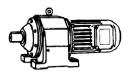
Pm	na	Ma	i	FRa	fв			
w	r/min	N·m		N		5	Size	kg
	6.9	4090	204.1	28400	0.85	103	DT100L4	180
	7.9	3580	176.89	30500	1.10	103	DT100L4	169
	9.9	2870	143.02	31800	1.40			
	11	2600	127.74	32200	1.55			
	13	2200	112.31	32800	1.80			
	14	2050	100.36	32900	1.95			
	17	1690	84.00	33300	2.35			
	20	1430	70.51	33500	2.80			
	11	2600	132.03	21700	0.90	93	DT100L4	125
	12	2390	114.47	22900	0.95	93	DT100L4	122
	14	2050	101.59	24500	1.10			
	16	1790	85.63	25200	1.30			
	20	1430	69.94	25800	1.60			
	23	1250	60.96	26000	1.85			
	24	1190	58.06	26100	1.95			
	27	1060	51.60	25500	2.15			
	31	920	44.74	24500	2.50			
	35	820	39.70	23700	2.80			
	21	1360	66.15	14900	0.90	83	DT100L4	83
	24	1190	58.67	15800	1.00	83	DT100L4	83
	27	1060	52.44	16500	1.15			
	30	960	46.21	16900	1.25			
	35	820	39.95	17400	1.45			
	40	715	35.08	16800	1.70			
	49	585	28.77	15900	2.05			
	57	505	24.52	15300	2.40			
	39	735	35.95	17000	1.15	82	DT100L4	81
	44	650	31.78	16500	1.55	82	DT100L4	81
	49	585	28.38	16000	1.60			
	55	520	25.49	15500	2.10			
	62	460	22.65	15000	2.40			
	71	405	19.64	14400	2.70			
	41	700	33.83	10500	0.85	73	DT100L4	54
	47	610	29.89	10800	1.00	73	DT100L4	58
	54	530	26.06	10500	1.15			
	63	455	22.08	10100	1.30			
	61	470	22.95	7880	1.05	72	DT100L4	53
	69	415	20.16	8310	1.35	72	DT100L4	56
	78	365	17.88	8670	1.55			
	88	325	15.98	8860	1.70			
	99	290	14.08	8980	1.95			
	115	250	12.17	8740	2.25			
	127	225	11.00	8480	2.45			
	144	199	9.69	8190	2.50			
	71	405	19.68	2810	0.85	63	DT100L4	41
	85	335	16.55	3810	1.05	63	DT100L4	41 42
						ANY CONTRACTOR		
	88	325	15.95	3800	1.00	62	DT100L4	40
	101	285	13.91	3750	1.15	62	DT100L4	41
	114	250	12.25	3710	1.30			
	129	220	10.82	3660	1.50			
	148	194	9.43	3570	1.70			
	175	164	7.99	3470	2.00			
	208	138	6.72	3360	2.40			
	230	125	6.09	3280	2.00			
	271	106	5.16	3170	2.35			
	323	89	4.34	3040	2.45			





- Code: fB service factor
- i gear ratio

Pm	na	Ma	i	FRa	fB			
kw	r/min	N·m		N		5	Size	kg
3	143	200	19.56	3680	1.25	62	DT100L2	40
	164	175	17.06	3590	1.45	62	DT100L2	41
	176	163	15.95	3470	2.00			
	201	143	13.91	3380	2.30			
	229	125	12.25	3290	2.65			
	259	111	10.82	3200	2.95			
	172	167	8.16	147	0.85	42	DT100L4	30
	193	148	7.27	161	0.90	42	DT100L4	32
	224	128	6.26	745	0.95			
	258	111	5.43	1220	1.00			
	298	96	4.70	1610	1.05			
	256	112	10.92	1580	1.30	42	DT100L2	30
	298	96	9.40	1950	1.50	42	DT100L2	32
	343	84	8.16	2180	1.65			
	385	74	7.27	2130	1.75			
	447	64	6.26	2060	1.90			
	516	56	5.43	1990	1.95			
	596	48	4.70	1930	2.10			
	698	41	4.01	1860	2.20			
4	7.9	4780	176.89	24100	0.85	103	DV112M4	189
•	9.9	3820	143.02	29700	1.05	103	DV112M4	178
	11	3470	127.74	30700	1.15			
	13	2940	112.31	31700	1.35			
	14	2730	100.36	32000	1.45			
	17	2250	84.00	32700	1.80			
	20	1910	70.51	33100	2.10			
	23	1660	62.18	33000	2.40			
	27	1410	52.11	31600	2.85			
	14	2730	101.59	20900	0.85	93	DV112M4	136
	17	2250	85.63	23600	1.00	93	DV112M4	133
	20	1910	69.94	25000	1.20			
	23	1660	60.96	25500	1.40			
	24	1590	58.06	25500	1.45			
	28	1360	51.60	24500	1.70			
	32	1190	44.74	23700	1.95			
	36	1060	39.70	22900	2.15			
	42	910	33.47	22000	2.55			
	48	795	29.66	21200	1.90	92	DV112M4	131
	54	705	26.49	20500	2.00	92	DV112M4	128
	27	1410	52.44	13000	0.85	83	DV112M4	92
	31	1230	46.21	14300	1.00	83	DV112M4	92
	36	1060	39.95	15400	1.15			
	41	960	35.08	15900	1.25			
	49	780	28.77	15400	1.55			
	58	660	24.52	14800	1.80			
	45	850	31.78	15800	1.20	82	DV112M4	90
	50	765	28.38	15400	1.25	82	DV112M4	90
	56	680	25.49	15000	1.60			
	63	605	22.65	14500	1.80			
	72	530	19.64	14000	2.10			
	81	470	17.43	13600	2.35			
	97	395	14.69	12900	2.80			
	54	705	26.06	9870	0.85	73	DV112M4	64
	64	595	22.08	9580	1.00	73	DV112M4	68



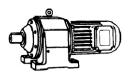


Code:	
	-

- fB service factor
- i gear ratio
- Na output rpm

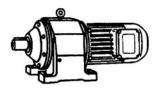
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Pm	na	Ma	i	FRa	fB			
kw	r/min	N·m		N		S	ize	kg
4	70	545	20.16	5540	1.05	72	DV112M4	63
	79	485	17.88	6120	1.15	72	DV112M4	66
	89	430	15.98	6630	1.30			
	101	380	14.08	7020	1.45			
	117	325	12.17	7450	1.70			
	129	295	11.00	7210	1.85			
	147	260	9.69	7400	1.90			
	169	225	8.38	7570	2.45			
	193	198	7.36	7370	2.25			
	235	163	6.04	6980	2.75			
	102	375	13.91	2030	0.90	62	DV112M4	51
	116	330	12.25	2790	1.00	62	DV112M4	52
	131	290	10.82	3300	1.15			
	151	255	9.43	3250	1.30			
	178	215	7.99	3200				
					1.55			
	211	181	6.72	3130	1.80			
	233	164	6.09	3080	1.50			
	275	139	5.16	2990	1.80			
	327	117	4.34	2890	1.90			
5.5	11	4780	127.74	24100	0.85	103	DV132S4	196
	13	4040	112.31	28700	1.00	103	DV132S4	185
	14	3750	100.36	30100	1.05		2.10201	
	17	3090	84.00	31500	1.30			
	20	2630	70.51	32200	1.50			
			62.18	31800	1.75			
	23	2280			2.05			
	27	1950	52.11	30500				
	30	1750	48.51	29700	2.30			
	35	1500	40.59	28600	2.65			
	20	2630	69.94	21600	0.85	93	DV132S4	142
	23	2280	60.96	23500	1.00	93	DV132S4	139
	25	2100	58.06	24000	1.10			
	28	1880	51.60	23400	1.20			
	32	1640	44.74	22700	1.40			
					1.60			
	36	1460	39.70	22100				
	43	1220	33.47	21100	1.90			
	52	1010	27.33	20100	2.30			
	60	880	23.82	19400	2.60			
	48	1090	29.66	20600	1.40	92	DV132S4	137
	54	970	26.49	20000	1.45	92	DV132S4	134
	62	850	23.25	19200	2.45			
	69	760	20.77	18700	2.75			
	26	1400	20.05	1.4200	0.80	02	DUI2284	08
	36	1460	39.95	14200	0.80	83	DV132S4	98
	41	1280	35.08	15200	0.95	83	DV132S4	98
	50	1050	28.77	14600	1.15			
	58	910	24.52	14100	1.30			
	56	940	25.49	13600	1.15	82	DV132S4	96
	63	830	22.65	14000	1.35	82	DV132S4	96
	73	720	19.64	13500	1.55			
	82	640	17.43	13100	1.70			
	97	540	13.69	12600	2.05			
	124	425	11.51	11700	2.60			
			10.22	11300	0.95			
	1.40							
	140 166	375 315	8.61	10800	2.70			

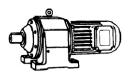




- Code: fB service factor
- i gear ratio
- Na output rpm



Pm	na	Ma	i	FRa	fв			
kw	r/min	N·m		N		Si	ze	kg
5.5	89	590	15.98	8420	0.95	72	DV132S4	70
	102	515	14.08	8210	1.10	72	DV13284	73
	118	445	12.17	7980	1.25			
	130	405	11.00	7750	1.35			
	148	355	9.69	7540	1.40			
	171	305	8.38	7310	1.80			
	194	270	7.36	6020	1.65			
	237	220	6.04	6350	2.05			
	278	189	5.15	6450	2.40			
	152	345	9.43	1290	0.95	62	DV132S4	56
	179	295	7.99	2140	1.10	62	DV132S4	57
	213	245	6.72	2810	1.35			
	235	225	6.09	2530	1.10			
	277	190	5.16	2740	1.30			
	329	160	4.34	2680	1.40			
	305	172	9.43	2710	1.90	62	DV13282	56
	360	146	7.99	2650	2.25	62	DV132S2	57
	429	122	6.72	2570	2.70			- /
	473	111	6.09	2520	2.25			
	558	94	5.16	2440	2.65			
	664	79	4.34	2350	2.80			
7.5	15	4780	100.36	24100	0.85	103	DV132M4	216
1.5	17	4210	84.00	27700	0.95	103	DV132M4	205
	21	3410	70.51	30700	1.15			
	23	3110	62.18	30200	1.30			
	28							
		2560	52.11	29000	1.55			
	30	2390	48.51	28500	1.65			
	36	1990	40.59	27300	2.00			
	43	1670	34.07	26200	2.40			
	48	1490	30.05	25400	2.70			
	51	1400	28.49	25100	2.35	102	DV132M4	209
	58	1230	25.09	24200	2.45	102	DV132M4	197
	25	2870	58.06	19900	0.80	93	DV132M4	162
	28	2560	51.60	21900	0.90	93	DV132M4	159
	32	2240	44.74	21400	1.05			
	37	1940	39.70	20800	1.20			
	43							
		1670	33.47	20200	1.40			
	53	1350	27.33	19300	1.70			
	61	1170	23.82	18600	1.95			
	74	970	19.57	17800	2.35			
	49	1460	29.66	19700	1.05	92	DV132M4	157
	55	1300	26.49	19100	1.10	92	DV132M4	154
	62	1160	23.25	18600	1.80			
	70	1020	20.77	18000	2.05			
	82	870	17.58	17300	2.40			
	98	730	14.75	16500	2.90			
	50	1430	28.77	13600	0.85	83	DV132M4	120
	59	1210	24.52	13200	1.00	83	DV132M4	120



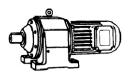


Code	:

- fB service factor
- i gear ratio
- Na output rpm

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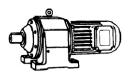
Pm	na	Ma	i	FRa	fв			
kw	r/min	N·m		N			Size	kg
7 6	57	1260	25.49	8410	0.85	82	DV132M4	118
7.5	64	1120	22.65	9530	1.00	82	DV132M4	118
	74	970	19.64	10600	1.15	02	DVIDDNIA	110
	83	860	17.43	11400	1.30			
	99	725	14.69	12000	1.50			
	126	570	11.51	11200	1.95			
	142	505	10.22	10900	2.20			
	168	425	8.61	10400	2.00			
	206	350	7.03	9860	2.00			
	200	300	6.13	9510	2.35			
	288	250	5.04	8990	2.33			
	103	695	14.08	7560	0.80	72	DV132M4	
	119	600	12.17	7420	0.95	72	DV132M4	
	132	545	11.00	7190	1.00			
	150	480	9.69	7040	1.05			
	173	415	8.38	6870	1.35			
	197	365	7.36	3860	1.25			
	240	300	6.04	4530	1.50			
	282	255	5.15	4940	1.75			
9.2	20	4390	70.51	26700	0.90	103	DV132ML4	225
	23	3820	62.18	28800	1.05	103	DV132ML4	214
	28	3140	52.11	27800	1.25			
	30	2930	48.51	27500	1.35			
	35	2510	40.59	26600	1.60			
	42	2090		25600	1.90			
			34.07					
	48	1830	30.05	24800	2.20			
	57	1540	25.18	23800	2.60			
	51	1720	28.49	24500	1.90	102	DV132ML4	218
	57	1540	25.09	23800	1.95	102	DV132ML4	206
	68	1960	21.11	22700	2.70			
	32	2750	44.74	20300	0.85	93	DV132ML4	172
	36	2440	39.70	20000	0.95	93	DV132ML4	169
	43	2040	33.47	19400	1.15			
	53	1660	27.33	18600	1.40			
	60	1460	23.82	18100	1.60			
	74	1190	19.57	17300	1.95			
	62	1420	23.25	18000	1.50	92	DV132ML4	167
	69	1270	20.77	17600	1.65	92	DV132ML4	164
	82	1070	17.58	16900	1.95			and Table 1
	98	900	14.75	16200	2.35			
	111	790	13.01	15700	2.65			
	73	1200	19.64	12300	0.90	82	DV132ML4	127
	83	1060	17.43	12000	1.05	82	DV132ML4	127
	98	900	14.69	11600	1.20			
	125	705	11.51	10800	1.55			
	141	625	10.22	10600	1.75			
	167	525	8.61	10200	1.60			
	205	430	7.03	9660	1.65			
	235	375	6.13	9330	1.85			
	286	305	5.04	8860	1.95			
	172	510	8.38	6540	1.10	72	DV132ML4	100
	196	450	7.36	6400	1.00	72	DV132ML4	103
	238	370	6.04	6190	1.20			
	280	315	5.15	5990	1.45			





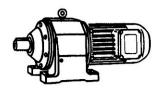
- Code: fB service factor
- i gear ratio
- Na output rpm

Pm	na	Ma	i	FRa	fв			
kw	r/min	N·m		N		;	Size	kg
1	23	4570	62.18	25600	0.90	103	DV160M4	229
	28	3750	52.11	26700	1.05	103	DV160M4	218
	30	3500	48.51	26400	1.15	10,000		
	35	3000	40.59	25700	1.35			
	42	2500	34.07	24800	1.60			
	48	2190	30.05	24100	1.85			
	57 69	1840	25.18 20.78	23200	2.15			
		1520		22200	2.65	100	DUICOLA	202
	51	2060	28.49	23800	1.60	102	DV160M4	222
	57	1840	25.09	23200	1.65	102	DV160M4	210
	68	1540	21.11	22300	2.25			
	80 90	1310 1170	17.93 16.08	21400 20700	2.65 3.00			
		1170	10.08	20700	5.00			
	43	2440	33.47	18600	0.95	93	DV160M4	176
	53	1980	27.33	17900	1.15	93	DV160M4	173
	60	1750	23.82	17500	1.30			
	74	1420	19.57	16800	1.60			
	62	1690	23.25	17500	1.25	92	DV160M4	171
	69	1520	20.77	17100	1.40	92	DV160M4	168
	82	1280	17.58	16500	1.65			
	98	1070	14.75	15800	1.95			
	111	950	13.01	15300	2.20			
	132	795	10.90	14700	2.65			
	154	680	9.37	14000	2.35			
	183	575	7.87	13400	2.80			
	207	505	6.94	12900	2.95			
	83	1270	17.43	11400	0.85	82	DV160M4	131
	98	1070	14.69	11200	1.05	82	DV160M4	131
	125	840	11.51	10500	1.30			
	141	745	10.22	10200	1.50			
	167	630	8.61	9880	1.35			
	205	510	7.03	9440	1.35			
	235	445	6.13	9140	1.55			
	286	365	5.04	8700	1.65			
15	30	4780	48.51	23900	0.85	103	DV160L4	294
	36	3980	40.59	23500	1.00	103	DV160L4	283
	43	3330	34.07	22900	1.20			
	49	2920	30.05	22500	1.35			
	58	2470	25.18	21800	1.60			
	70	2050	20.78	21000	1.95			
	51	2810	28.49	22400	1.15	102	DV160L4	287
	58	2470	25.09	21900	1.20	102	DV160L4	275
	69	2080	21.11	21100	1.70			
	81	1770	17.93	20400	2.00			
	91	1570	16.08	19900	2.25			
	104	1380	14.02	19200	2.55			
	113	1270	12.92	18900	2.75			
	53	2700	27.33	16400	0.85	93	DV160L4	241
	61	2350	23.82	16100	1.00	93	DV160L4	238
	75	1910	19.57	15700	1.20			
	63	2270	23.25	16100	0.95	92	DV160L4	236
	70	2050	20.77	15900	1.00	92	DV160L4	233
	83	1730	17.58	15400	1.20	22	D / 100L4	235
	99	1450	14.75	14900	1.45			



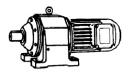


- Code: fB service factor
- i gear ratio
- Na output rpm

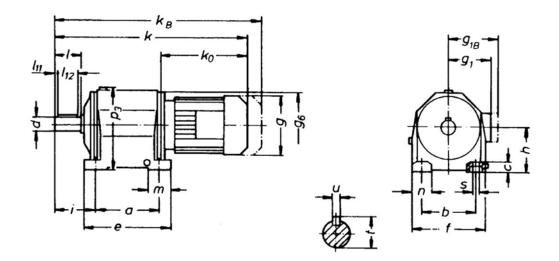


Pm	na	Ma	i	FRa	fв			
kw	r/min	N·m		Ν			Size	kg
15	134	1070	10.90	14000	1.95	92	DV160L4	236
	156	920	9.37	13400	1.75	92	DV160L4	233
	186	770	7.87	12900	2.10			
	210	680	6.94	12500	2.20			
	251	570	5.82	11900	2.65			
	127	1130	11.51	9610	0.95	82	DV160L4	194
	143	1000	10.22	9470	1.10	82	DV160L4	194
	170	840	8.61	9230	1.00			
	208	690	7.03	8890	1.00			
	238	600	6.13	8660	1.15			
	290	495	5.04	8300	1.20			
18.5	36	4910	40.59	21700	0.80	103	DV180M4	320
	43	4110	34.07	21400	0.95	103	DV180M4	309
	49	3610	30.05	21200	1.10			
	58	3050	25.18	20700	1.30			
	71	2490	20.78	20000	1.60			
	69	2560	21.11	20200	1.35	102	DV180M4	313
	82	2150	17.93	19600	1.65	102	DV180M4	301
	91	1940	16.08	19200	1.80			
	104	1700	14.02	18600	2.05			
	113	1560	12.92	18300	2.25			
	131	1350	11.17	17700	2.60			
	162	1090	9.05	16900	2.45			
	185	960	7.90	16300	2.65			
	202	870	7.27	16000	2.75			
	233	760	6.29	15300	2.75			
	75	2360	19.57	14700	0.95	93 93	DV180M4 DV180M4	267 264
	83	2130	17.58	14600	1.00	92	DV180M4	262
	99	1780	14.75	14200	1.20	92	DV180M4	259
	113	1560	13.01	13900	1.35			
	134	1320	10.90	13500	1.60			
	156	1130	9.37	12900	1.40			
	186	950	7.87	12500	1.70			
	211	840	6.94	12100	1.80			
	252 305	700 580	5.82 4.80	11600 11100	2.15 2.35			
							DIMONT :	
22	43	4890	34.07	19900	0.80	103	DV180L4	334
	49	4290	30.05	19800	0.95	103	DV180L4	323
	58 71	3620 2960	25.18 20.78	19600 19100	1.10 1.35			
	69	3040	21.11	19300	1.15	102	DV180L4	327
	82	2560	17.93	18800	1.35	102	DV180L4	315
	91	2310	16.08	18500	1.50			
	104	2020	14.02	18000	1.75			
	113	1860	12.92	17700	1.90			
	131	1600	11.17	17200	2.20			
	162	1300	9.05	16500	2.05			
	185	1140	7.90	16000	2.25			
	202	1040	7.27	15600	2.30			
	233	900	6.29	15100	2.35			
	83	2530	17.58	13800	0.85	92	DV180L4	276
	99	2120	14.75	13500	1.00	92	DV180L4	273
	113	1860	13.01	13000	1.15			
	134	1570	10.90	13000	1.35			



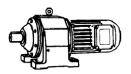


#### Foot mounted helical gear box with motor mounting flange



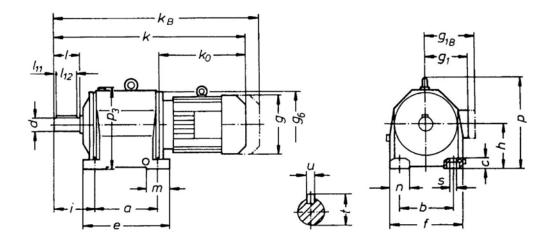
Size		a	b	c	e	f	g	$g_1$	g <sub>1B</sub>	g <sub>6</sub>	h	i	k	k <sub>B</sub>	k <sub>0</sub>	m	n	<b>p</b> <sub>3</sub>	8	d 1	111 112	t u
32	D63 DT71D DT80	85	110	12	110	135	<u>127</u> 145	95 121	95 127	134	75 -0.5	58	306 316 366	338 380 430	154 164 214		25	141	10	20 40	4 32	22.5 6
42 43	D63 DT71D DT80 DT90 DT100	130	110	20	160	145	127 145 197	95 121 155 163		120	90 -0.5	75	398 407 457 477 530	430 471 521 562 615	196 205 255 275 328	40	35	165	9	25	7	28
62 63	D63 DT71D DT80 DT90 DT100 DV112M DV132S	165	135	25	200	190	127 145 197 221	95 121 <u>155</u> 163 176	169	160	115 -0.5	90	439 448 498 518 568 603 651	471 512 562 603 653 683 731	190   199   249   269   319   354   402	60	55	206	14	30	7	33

Check dimension g/2 in comparsion to h Dimensions  $k_B$  refer to DC motors Dimensions  $g_{1B}$  refer to "Increased Safely" motors





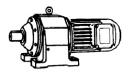
#### Foot mounted helical gear box with motor mounting flange



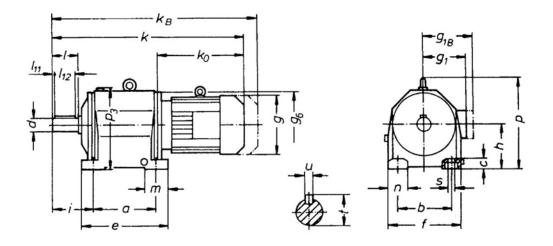
Size		a	b	c	e	f	g	$g_1$	$g_{1B}$	g,	h	i	k	k <sub>B</sub>	k <sub>0</sub>	m	n	р р3	s	d 1	111 112	t u
73 73	D63 DT71D DT80 DT90 DT100 DV112M DV132S DV132M	205	170	30	245	230	145 197 221	121 <u>155</u> 163 176		200	140 -0.5	115	484 493 543 561 611 647 692 712	516 557 607 646 696 727 772 824	184 193 243 261 311 347 392 412	70	60	287	18	40	5	43
	DV132ML						275	230	230				772	884	472			251		80	70	12
82 83	DT80 DT90 DT100 DV112M DV132S	260	215	45	310	290	145 197 221	121 155 163 176	127 161 169 182	250	180	140	613 632 682 717 762	677 717 767 797 842	238 257 307 342 387	90	75	361	18	50	10	53.5
00	DV132M DV132ML DV160M DV160L							230 253	230 253				782 842 890		407 467 515			316		100	80	14

Check dimension g/2 in comparsion to h Dimensions  $k_B$  refer to DC motors Dimensions  $g_{1B}$  refer to "Increased Safely" motors



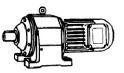


#### Foot mounted helical gear box with motor mounting flange



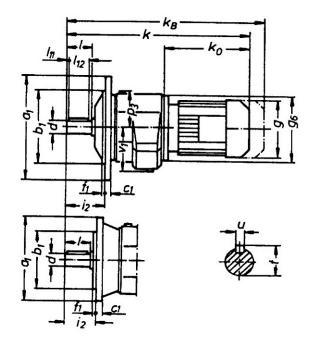
Size	a b	c	e	f	g	g <sub>1</sub>	g <sub>1B</sub>	$\mathbf{g}_6$	h	i	k	k <sub>B</sub>	k <sub>0</sub>	m	n	р р <sub>3</sub>	8	d 1	l <sub>11</sub> l <sub>12</sub>	t u
	DT80 310				145	121	127				671	735	231			431		60	10	64
	DT90				197	155	161				691	776	251							
	DT100				197	163	169				742	827	302							
	DV112M				221	176	182				777	857	337							
92	DV132M									1.00	822	902	382	100	00		~~			
93	DV132M DV132ML	55	365	340	275	230	230	300	225	160	842	954	402	100	90		22			
	DV132ML DV160M				_		_				902	1014	462							
	DV160L				331	253	253				950	1106	510							
	DV180				001	200	200				1022									
	$\frac{DV180}{DV200}$ 250				394	285	285				1069		_			386		120	100	18
	DT100 370				197	163	169				807	892	295			500		70	15	74.5
	DV112M 370										843	923	331			500		/0	15	/4.5
	DV1328				221	176	182				888	968	376							
	DV132M										908	1020	396							
102	DV132ML	65	440	400	275	230	230	350	250	185	968	1080	456	125	110		26			
103	DV160M								-0.5											
	DV160L				331	253	253					1172								
	DV180				551							1244								
	DV200 290				394	285						1291				437		140	110	20
	DV225				0,74	289	289				1217	1373	705							

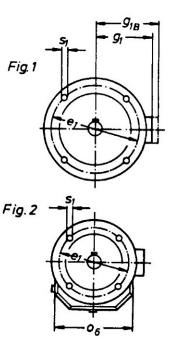
Check dimension g/2 in comparsion to h Dimensions k<sub>B</sub> refer to DC motors Dimensions g<sub>1B</sub> refer to "Increased Safely"motors





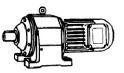
Flange mounted helical gear box with motor mounting flange





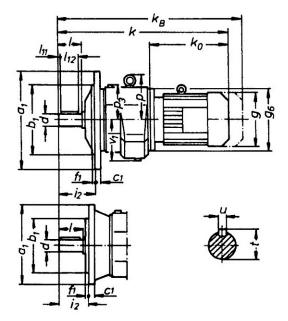
Size		a <sub>1</sub>	Fig.	<b>b</b> <sub>1</sub>	$\mathbf{c}_1$	<b>e</b> <sub>1</sub>	$\mathbf{f}_1$	g	$\mathbf{g}_1$	g <sub>1B</sub>	<b>g</b> 6	$\mathbf{i}_2$	Fig.	k	k <sub>B</sub>	k <sub>0</sub>	0 <sub>6</sub> P3	<b>s</b> <sub>1</sub>	$\mathbf{v}_1$	d 1	1 <sub>11</sub> 1 <sub>12</sub>	t u
	DT63							127	95	95				324	356	154	135			20	4	22.5
32	DT71D DT80	120	2	80	8	100	3	145	121	127	134	44	-	334 384	398 448	164 214	66	6.6	73	40	32	6
	D63	120	2	80	8	100	3	127	95	95		55		418	450	196	145	6.6		25	7	28
42 43	DT71D DT80	160	2	110	10	130	3.5	145	121	127	120	55	-	427 477	491 541	205 255		9	91			
15	DT90							197	155	161				497	582	275						
	DT100	200	1	130	12	165	3.5		163	169		85		550	635	328	75	11		50	40	8
	D63	160	2	110	10	130	3.5	127	95	95		65	$\frac{2}{1}$		494 471	190	190	9		30	7	33
	DT71D												2	471	535	199						
	Dt80							145	121	127			2		512 585	249						
62								_		_			1	498								
63	DT90	200	2	130	10	165	3.5	107	155	161	160	65	$\frac{2}{1}$		626 603	269		11	118			
	Dt100							197	163	169			2	591	676 683	319						
	DV112M							_					2		706	354						
	D V 112141							221	176	182			1	603	683	334						
	DV132S	250	1	180	15	215	4					80	$\frac{2}{1}$	674 651	754 731	402	91	14		60	50	8

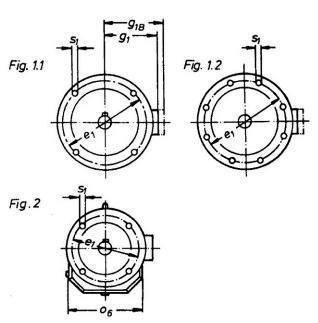
Dimensions  $k_{\text{B}}$  refer to DC motors Dimensions  $g_{\text{1B}}$  refer to "Increased Safely"motors





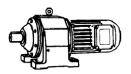
Flange mounted helical gear box with motor mounting flange





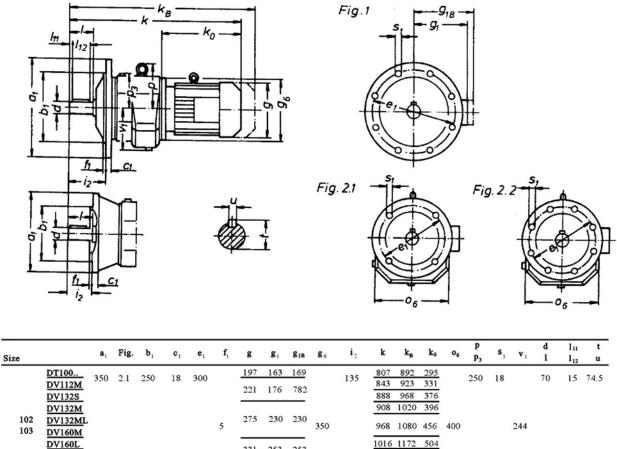
Size		<b>a</b> <sub>1</sub>	Fig.	<b>b</b> <sub>1</sub>	$\mathbf{c}_1$	e <sub>1</sub>	$\mathbf{f}_{1}$	g	$\mathbf{g}_1$	g <sub>1B</sub>	<b>g</b> 6	<b>i</b> <sub>2</sub>	k	k <sub>B</sub>	k <sub>0</sub>	06	p p <sub>3</sub>	$\mathbf{s}_1$	$\mathbf{v}_1$	d 1	1 <sub>11</sub> 1 <sub>12</sub>	t u
	D63	250	2	180	15	215		127	95	95		86	502	534	184		147	14		40	5	43
	DT71D							145	121	127			511	575	193							
70	DT80 DT90								155	161			561 579	625 664	243 261							
72 73	DT100						4	197		169	200		629	714	311	230			142			
15	DV112M							221	176	100			665	745	347							
	DV132S							221	1/6	182			710	790	392							
	DV132M	300	1.1	230	16	265		275	230	230		130	730	842	412		111	14		80	70	12
	DV132ML DT80	,											790 633	902 697	472 238							
	DT80 DT90	300	2	230	16	265	4	145		127		110	652	737	258		181	14		50	10	53.5
	DT100							197		169			702	787	307							
82	DV112M							221					737	817	342							
83	DV132S							221	176	182	250		782	862	387	290			183			
	DV132M												802	914	407							
	DV132ML DV160M							275	230	230			862	974	467							
	DV160M DV160L	350	1.1	250	18	300	5	331	253	253		160	910	1066	515		137	18		100	80	14
	DT80	350	2	250	10	300		145	121	127		130	693	757	231		206	10		60	10	64
	DT90	350	2	250	18	300		197	155	161		150	713	798	251		200	10		60	10	04
	DT100							197	163	169			764	849	302							
92	DV112M							221	176	182			799 844	879 924	337 382							
93	DV132S DV132M						5				300		864	924	402	340			225			
	DV132ML							275	230	230	300					5 10			220			
	DV160M							210	200	200			924	1036	462							
	DV160L							331	253	253				1128								
	DV180	450	1.2	350	20	400			255	200		180		1200			161	18		120	100	18
	DV200	450	1.2	550	20	100		394	285	285			1091	1247	629			1010			405270	

Dimensions  $k_B$  refer to DC motors Dimensions  $g_{1B}$  refer to "Increased Safely" motors

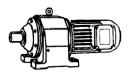




#### Flange mounted helical gear box with motor mounting flange

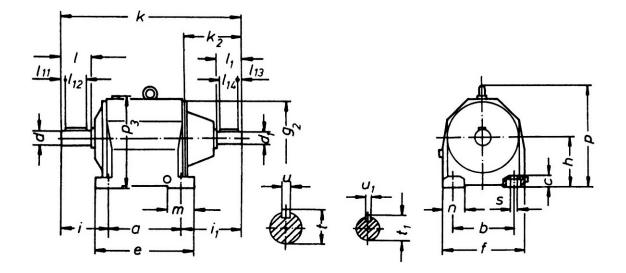


	DT100	350	2.1	250	18	300		197	163	169		135	807	892	295		250	18		70	15	74.5
	DV112M	550		200		500		221	176	782		100	843	923	331		200			10		/ 4.5
	DV132S							221	1/0	102			888	968	376							
	DV132M												908	1020	396							
102	DV132ML						5	275	230	230	350		968	1080	456	400			244			
103	DV160M						5			_	550		200	1000	450	400			244			
	DV160L							331	253	253			1016	1172	504							
	DV180							551	233	233			1088	1244	576							
	DV200	450	1	350	22	400		394	285	285		195	1135	1291	623		187	10		1.40	110	20
	DV225	430	1	350	22	400		394	289	289		195	1217	1373	705		18/	18		140	110	20

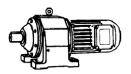




Foot mounted inline helical gear box

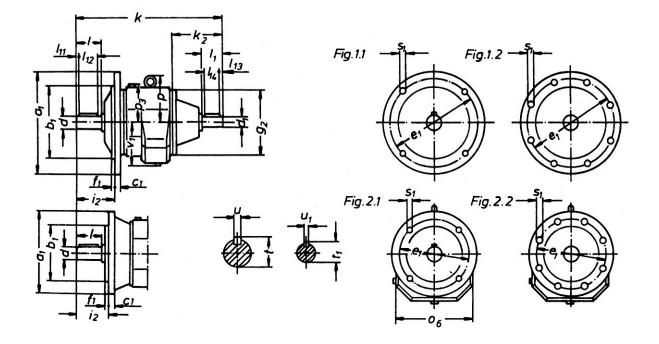


Size	a b	c	e f	<b>g</b> <sub>2</sub>	h	i	i,	k	<b>k</b> <sub>2</sub>	m n	р р <sub>3</sub>	S	d 1	1 <sub>11</sub> 1 <sub>12</sub>	t	u	<b>d</b> <sub>1</sub> <b>1</b> <sub>1</sub>	1 <sub>13</sub>	1,14	t,	<b>u</b> <sub>1</sub>
42 43	130 110	20	160 145	120	90 -0.5	75	112	317	115	40 35	- 165	9	25 50	7 40	28	8	16 40	4	32	18	5
62 63	165 135	25	200 190	160	115 -0.5	90	114	369	120	60 55	- 206	14	30 60	7 50	33	8	19 40	4	32	21.5	6
72 7 <b>3</b>	205 170	30	245 230	200	140 -0.5	115	120	440	140	70 60	287 251	18	40 80	5 70	43	12	24 50	5	40	27	8
82 83	260 215	45	310 290	250	180 -0.5	140	155	555	180	90 75	361 316	18	50 100	10 80	53.5	14	28 60	5	50	31	8
92 93	310 250	55	365 340	300	225 -0.5	160	190	660	220	100 90	431 386	22	60 120	10 100	64	18	38 80	5	70	41	10
102 103	370 290	65	440 400	350	250 -0.5	185	227	782	270	125 110	500 437	26	70 140	15 110	74.5	20	42 110	10	70	45	12



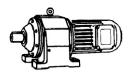


Flange mounted inline helical gear box

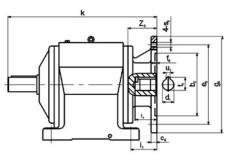


ize	<b>a</b> <sub>1</sub>	Fig.	<b>b</b> <sub>1</sub>	<b>c</b> <sub>1</sub>	e <sub>1</sub>	$\mathbf{f}_1$	<b>g</b> <sub>2</sub>	<b>i</b> <sub>2</sub>	K	К <sub>2</sub> О <sub>6</sub>	Р Р 3	<b>s</b> <sub>1</sub>	$\mathbf{v}_1$	d 1	1 <sub>11</sub> 1 <sub>12</sub>	t u	dı	1,	1,1	1 <sub>13</sub>	$\mathbf{t}_1$ $\mathbf{u}_1$
42	120	2.1	80	8	100	3		55		115	-	6.6		25	7	28					18
43	160	2.1	110	10	130		120	55	337	1.45		9	91	50	10	•	16	40	4	32	_
	200	1.1	130	12	165	3.5		85		145	75	11		50	40	8					5
62	160	2.1	110	10	130	3.5		65	392	120	-	9		30	7	33					21.5
63	200	2.1	130	10	165	3.5	160	65	392			11	118				19	40	4	32	
	250	1.1	180	15	215	4		80	369	190	91	14		60	50	8					6
72	250	2.1	180	15	215	4	200	86	450	140	147	14	1.40	40	5	43	24	50	5	40	27
73	300	1.1	230	16	265	4	200	130	458	230	111	14	142	80	5 70	12	24	50	5	40	8
82	300	2.1	230	16	265	4	250	110	575	180	181	14	100	50	10	53.5	28	60	5	50	31
83	350	1.1	250	18	300	5	250	160	5/5	290	137	18	183	100	80	14	28	60	5	50	8
92	350	2.1	250	18	300	5	200	130	682	220	206	18	255	60	10	64	20	80	5	70	41
93	450	1.2	350	20	400	3	300	190	082	340	161	18	255	120	100	18	38	80	3	70	10
102	350	2.1	250	18	300	5	250	135	782	270	250	18	244	70	15	74.5	42	110	10	70	45
103	450	1.2	350	22	400	3	350	195	182	400	187	18	244	140	110	20	42	110	10	70	12





#### HELICAL GEAR UNITS FITTED WITH ADAPTER FOR MOUNTING ICE MOTORS



Size	Frame	<b>b</b> 6	C6	e6	f6	<b>g</b> 6	iı	k	\$6	<b>Z</b> 6	dı	h	tı	u
32	LS63	95	12	115	3.5	140	47.5	192.5	M8	45	11	27.5	12.8	4
	LS71	110	12	130	4	160	52.5	197.5		50	14	35	16.3	5
	LS80	130	12	165	4	200	62.5	207.5	M10	60	19	43	21.8	6
42 43 42 43	LS63	95	12	115	3.5	140	42	247	M8	45	11	27.5	12.8	4
	LS71	110	12	130	4	160	47	252		50	14	35	16.3	5
	LS80	130	12	165	4	200	57	262	M10	60	19	43	21.8	6
	LS90										24	54	27.3	8
62 63 62 63	LS63	95	12	115	3.5	140	39	294	1.00	45	11	27.5	12.8	4
	LS71	110	12	130	4	160	44	299	M8	50	14	35	16.3	5
	LS80	120	10	1.00		000			M10	60	19	43	21.8	6
	LS90	130	12	165	4	200	54	309			24	54	27.3	
	LS100	100	16			0.50			M12	65				
	LS112	180	15	215	5	250	59	314			28	67	31.3	
72 73 72 73	LS63	95	12	115	3.5	140	25	345	M8	45	11	27.5	12.8	4
	LS71	110	12	130	4	160	30	350		50	14	35	16.3	4
	LS80	130	12	165	4	200	40	360	M10	60	19	43	21.8	6
	LS90	150	12								24	54	27.3	
	LS100	180	15	215	5	250	45	365	2412	65		67	31.3	1
	LS112										28			
	LS132	230	16	265	6	300	65	385	M12	85	38	83	41.3	1
82 83 82 83	LS80	120	12	165		200		125	M10	60	19	43	21.8	(
	LS90	130	12	165	4	200	35	435			24	54	27.3	
	LS100	180	16	21.6	6	250	40	440	M12	65		67	21.2	8
	LS112	180	15	215	5	250	40	440			28	67	31.3	
	LS132	230	16	265		300	60	460		85	38	83	41.3	1
	LS160	250	18	300	6	350	90	490	M16	115	42	114	45.3	j
92 93 92 93	LS100	180	15	215	5	250	35	505	M12	65	26	67	31.3	8
	LS112	180									28	67		
	LS132	230	16	265		300	55	525		85	38	83	41.3	1
	LS160	250	10	200	6	250	85	555	M16	115	42	11.4	45.3	1
	LS180	250	18	300		350					48	114	51.8	1
102 103 102 103	LS100	190	190 15	215	5	250	22	577	M12	65	20	62	21.2	
	LS112	180	15	215		250	22				28	67	31.3	8
	LS132	230	16	265	6	300	42	597		85	38	83	41.3	1
	LS160	250	10	300		250	20	627	MIG		42	11.4	45.3	1
	LS180	250	18	300		350	72	627	M16	115	48	114	51.8	1

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