

Characteristics

Characteristic	Standard	Option
Toothing	Spiral toothed bevel gear set	See chapter 7.2.2
Gear ratios	1:1 to 6:1	
Housing / Flanges	1.4581 / 1.4305	See chapter 7.2.1
Threaded mounting holes	Customer-specific	See chapter 7.2.4
Shaft	1.4305, shaft ends greased Fit with ISO 6 tolerance with parallel keyway: according to DIN 6885 Sheet 1	See chapter 4.6.2
Hollow shaft	1.4305, shafts greased Fit with ISO 7 tolerance with parallel keyway: according to DIN 6885 Sheet 1	See chapter 4.6.3
Radial shaft seal ring:	NBR, form A	See chapter 4.8
Ambient temperature	-10°C to +90°C. The values of the performance tables are valid for +20°C	See chapter 4.9.3
Circumferential backlash	< 30 arcmin	See chapter 7.2.11
Protection class	IP 56	See chapter 4.5
Corrosion protection	-	See chapter 7.2.12
Bearing life L10h:	more than 15,000h	See chapter 4.9.1
Oil change intervals	Not required	See chapter 7.2.9
Lubricants	Synthetic lubricant, NSF-approved (NOTOX)	See chapter 7.2.9
Type plate	Etched	

Performance data

n_1 [rpm]	1:1			1.5:1			2:1			3:1			4:1			5:1			6:1		
	n_2 [rpm]	P_{1N} [kW]	T_{2N} [Nm]	n_2 [rpm]	P_{1N} [kW]	T_{2N} [Nm]	n_2 [rpm]	P_{1N} [kW]	T_{2N} [Nm]	n_2 [rpm]	P_{1N} [kW]	T_{2N} [Nm]	n_2 [rpm]	P_{1N} [kW]	T_{2N} [Nm]	n_2 [rpm]	P_{1N} [kW]	T_{2N} [Nm]	n_2 [rpm]	P_{1N} [kW]	T_{2N} [Nm]
3000	3000	39.68	120	2000	24.91	113	1500	16.53	100	1000	12.12	110	750	8.51	103	600	6.61	100	500	5.18	94
2400	2400	37.04	140	1600	22.22	126	1200	14.68	111	800	11.46	130	600	7.34	111	480	5.56	105	400	4.58	104
1500	1500	26.78	162	1000	17.08	155	750	11.41	138	500	8.05	146	375	4.96	120	300	3.80	115	250	2.95	107
1000	1000	20.28	184	667	12.87	175	500	8.38	152	333	5.87	160	250	3.75	136	200	2.73	124	167	2.06	112
750	750	16.20	196	500	10.47	190	375	6.86	166	250	4.60	167	188	3.06	148	150	2.15	130	125	1.61	117
500	500	11.46	208	333	7.34	200	250	4.96	180	167	3.20	174	125	2.12	154	100	1.50	136	83	1.09	119
250	250	5.92	215	167	3.76	204	125	2.62	190	83	1.62	177	63	1.12	162	50	0.79	143	42	0.56	121
50	50	1.21	220	33	0.76	210	25	0.55	200	17	0.34	180	13	0.23	170	10	0.17	150	8	0.11	120
P_{1Nt} [kW]	9.0			9.0			9.0			9.0			9.0			9.0			9.0		
T_{2max} [Nm]	430			210			320			280			280			250			200		

The mass of the gearbox may deviate depending on the gear ratio.

Permissible radial force F_{r1} and axial force F_{a1} on shaft N_1

The permissible radial forces depend on torque, rotational speed and direction. They must be calculated for the respective case of application. Please enquire these.

n_1 [rpm]	3000		1000		500		250		100		50	
T_2 [Nm]	F_r [N]	F_a [N]	F_r [N]	F_a [N]	F_r [N]	F_a [N]	F_r [N]	F_a [N]	F_r [N]	F_a [N]	F_r [N]	F_a [N]
< 140	700	350	870	435	1150	575	1370	685	1700	850	2000	1000
> 140	590	295	730	365	960	480	1140	570	1420	710	1670	835

Permissible radial force F_{r2} and axial force F_{a2} on shaft N_2

n_2 [rpm]	3000		1000		500		250		100		50	
T_2 [Nm]	F_r [N]	F_a [N]	F_r [N]	F_a [N]	F_r [N]	F_a [N]	F_r [N]	F_a [N]	F_r [N]	F_a [N]	F_r [N]	F_a [N]
< 140	1300	650	1700	850	2000	1000	2500	1250	3000	1500	3800	1900
> 140	1082	541	1420	710	1670	835	2080	1040	2500	1250	3170	1585

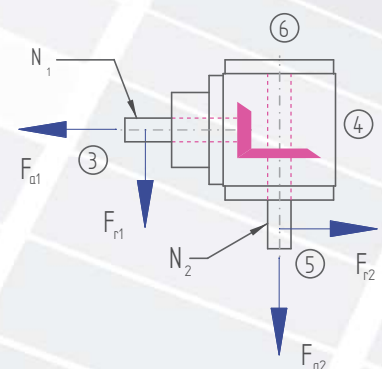
Inertia moments/mass

The mass of the gearbox may deviate depending on the gear ratio.

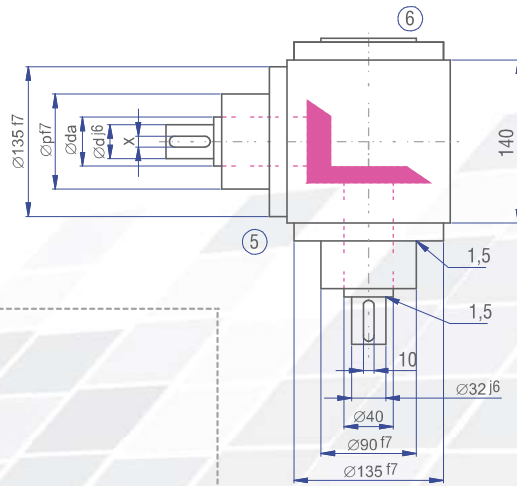
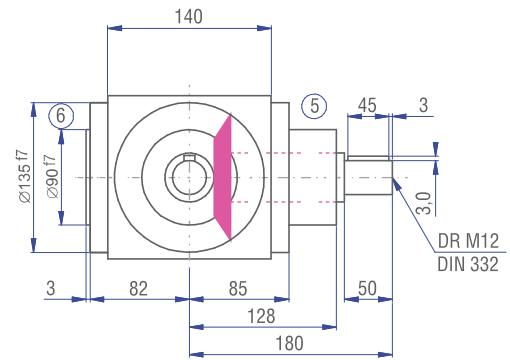
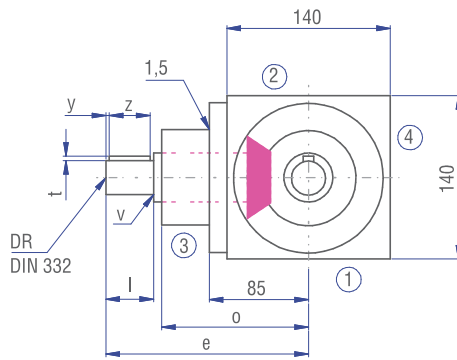
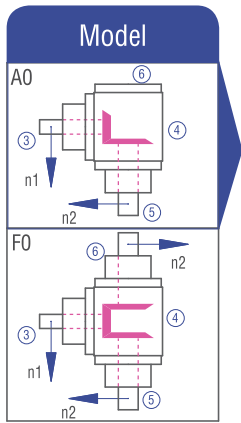
Model	Inertia moment [kgcm ²]						
	1:1	1.5:1	2:1	3:1	4:1	5:1	6:1
AO	26.2670	11.8569	8.6762	6.4356	1.8432	1.5320	1.3708
BO	36.0994	18.7513	12.2785	7.9547	2.6978	2.2113	1.8426
CO	36.0994	18.7513	12.2785	7.9547	2.6978	2.2113	1.8426
DO	37.0815	19.1878	12.5241	8.0639	2.7592	2.2506	1.8698
EON	32.6630	17.2240	11.4194	7.5729	2.4830	2.0739	1.7471
EOS	39.0643	20.0691	13.0198	8.2842	2.8831	2.3299	1.9249
FO	39.4005	17.6940	11.9596	7.8949	2.6641	2.0574	1.7356
GO	49.2329	24.7711	17.6713	12.9310	3.7202	3.2180	2.8486
HO	49.2329	24.7711	17.6713	12.9310	3.7202	3.2180	2.8486
JO	50.2150	25.2076	17.9169	13.0402	3.7816	3.2573	2.8758
KON	45.7965	23.2438	16.8122	12.5492	3.5054	3.0806	2.7531
KOS	52.1978	26.0889	18.4126	13.2605	3.9055	3.3366	2.9309

Mass
[kg]

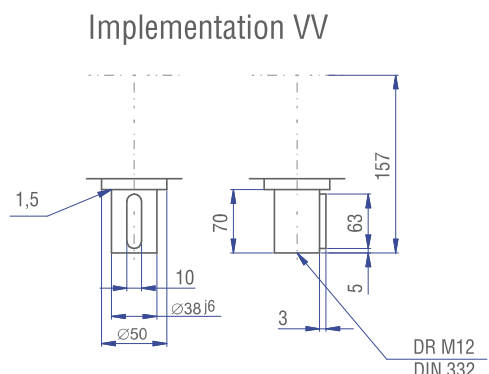
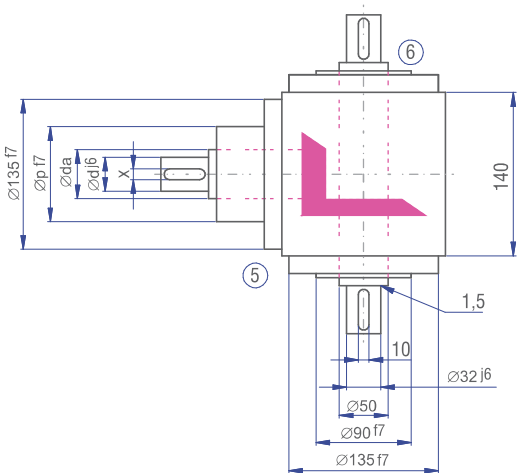
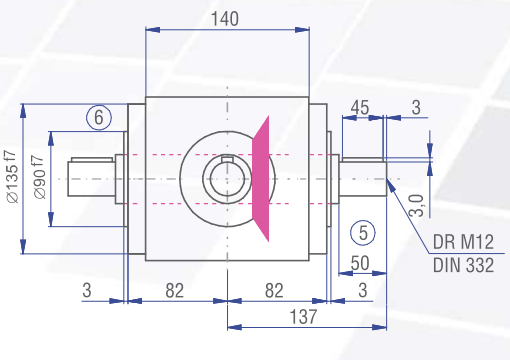
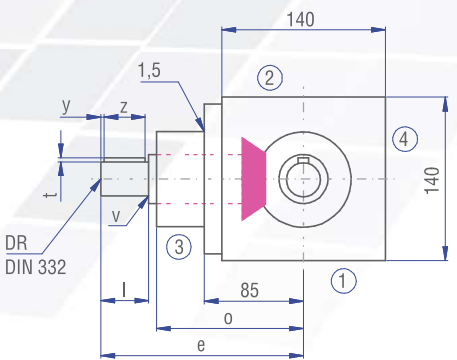
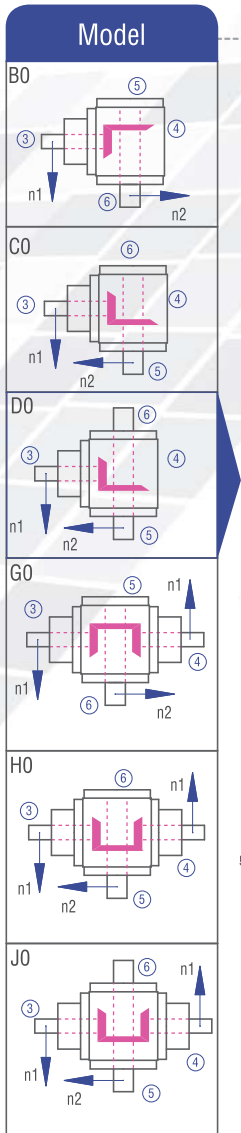
19.0
18.5
18.5
19.0
18.0
18.7
23.0
22.7
22.7
23.2
22.2
22.9



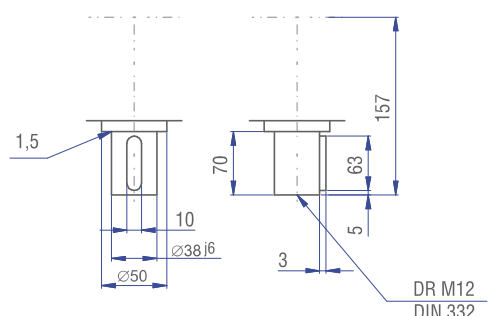
7.2.21 Type HDV 140 – Hygiene-design bevel gearboxes



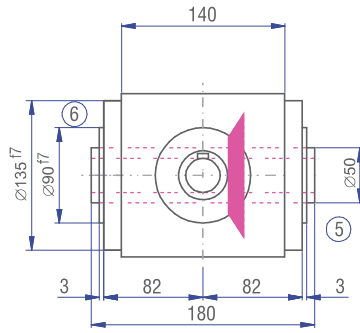
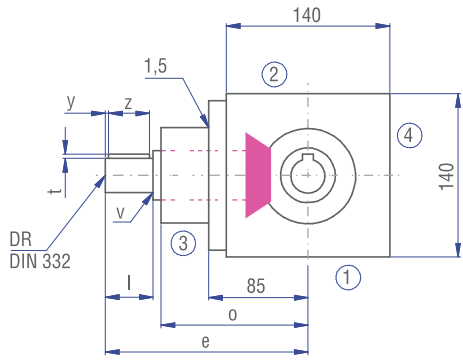
	Gear ratio						
	1:1	1.5:1	2:1	3:1	4:1	5:1	6:1
d [mm]	40	40	40	40	40	40	40
da [mm]	32	32	32	28	24	24	24
l [mm]	180	180	180	180	195	195	195
v [mm]	50	50	50	50	50	50	50
x [mm]	128	128	128	128	143	143	143
y [mm]	90	90	90	90	85	85	85
z [mm]	3	3	3	3	3	3	3
t [mm]	1.5	1.5	1.5	1	1	1	1
e [mm]	10	10	10	8	8	8	8
o [mm]	3	3	3	3	3	3	3
p [mm]	45	45	45	45	45	45	45
DR M	12	12	12	10	8	8	8



Implementation VV



The dimensions of the Models not shown can be figured by mirroring available dimensions.



Implementation

