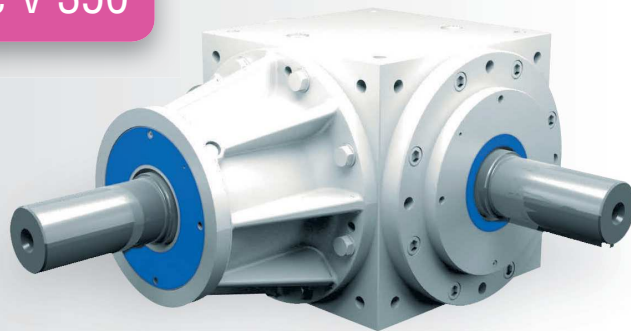


6.3.14 Standard bevel gearboxes – Type V 350



Characteristics

Characteristic	Standard	Option
Toothings	Spiral toothed bevel gear set	See chapter 6.2.1
Gear ratio	1:1 to 6:1	
Housing / Flanges	Grey cast iron; steel	
Threaded mounting hole	On all housing surfaces without flange and on all flanges.	See chapter 6.2.3
Shaft	Material 1 C45, shaft ends greased Fit with ISO 6 tolerance with parallel keyway: according to DIN 6885 Sheet 1	See chapter 4.6.2
Hollow shaft	Material 1 C45, 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 6.2.10
Protection class	IP 54	See chapter 4.5
Corrosion protection	Prime coat; layer thickness > 40 µm	See chapter 4.4.1
Bearing life L10h	more than 15,000h	See chapter 4.9.1
Oil change intervals	Not required if the oil temperature is kept < 90°C The lifetime of the bearings can be increased by the factor 1.5 if the oil is changed after the first 500 service hours and then every 5000 service hours.	See chapter 6.2.8
Lubricant	Synthetic lubricants	See chapter 6.2.8

Performance data

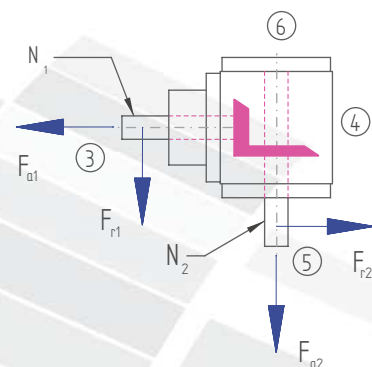
n ₁ [rpm]	1:1			1.5:1			2:1			3:1			4:1			5:1			6:1		
	n ₂ [rpm]	P _{1N} [kW]	T _{2N} [Nm]	n ₂ [rpm]	P _{1N} [kW]	T _{2N} [Nm]	n ₂ [rpm]	P _{1N} [kW]	T _{2N} [Nm]	n ₂ [rpm]	P _{1N} [kW]	T _{2N} [Nm]	n ₂ [rpm]	P _{1N} [kW]	T _{2N} [Nm]	n ₂ [rpm]	P _{1N} [kW]	T _{2N} [Nm]	n ₂ [rpm]	P _{1N} [kW]	T _{2N} [Nm]
2400										800	160.48	1,820	600	113.75	1,720	480	78.83	1,490	400	56.88	1,290
1500	1500	267.84	1,620	1000	206.19	1,870	750	200.06	2,420	500	122.35	2,220	375	78.95	1,910	300	56.54	1,710	250	41.61	1,510
1000	1000	210.53	1,910	667	188.55	2,560	500	155.41	2,820	333	96.26	2,620	250	58.14	2,110	200	42.33	1,920	167	31.41	1,710
750	750	195.92	2,370	500	141.42	2,560	375	129.37	3,130	250	81.29	2,950	188	47.95	2,320	150	35.88	2,170	125	24.25	1,760
500	500	155.41	2,820	333	112.63	3,070	250	94.52	3,430	167	59.34	3,230	125	34.72	2,520	100	26.67	2,420	83	16.72	1,820
250	250	94.52	3,440	167	67.11	3,650	125	54.15	3,930	83	34.26	3,730	63	19.43	2,820	50	16.09	2,920	42	9.28	2,020
50	50	24.47	4,440	33	16.34	4,500	25	12.79	4,640	17	7.79	4,240	13	4.17	3,030	10	3.56	3,230	8	1.95	2,120
P _{1Nt} [kW]	90.0			90.0			90.0			90.0			90.0			90.0			90.0		
T _{2max} [Nm]	5400			5200			5000			4500			3500			3500			2300		

Permissible radial force F_{r1} and axial force F_{a1} on shaft N₁

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]
< 2400	14500	7250	15000	7500	17500	8750	22500	11250	27500	13750	33000	16500
> 2400	12000	6000	12500	6250	14500	7250	18700	9350	23000	11500	27500	13750

Permissible radial force F_{r2} and axial force F_{a2} on shaft N₂

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]
< 2400	17500	8750	18100	9050	21100	10550	26150	13075	34200	17100	40200	20100
> 2400	14500	7250	15080	7540	17580	8790	21790	10895	28500	14250	33500	16750

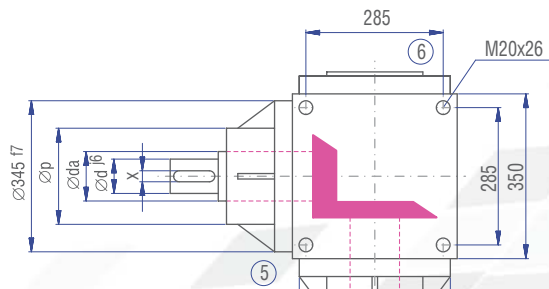
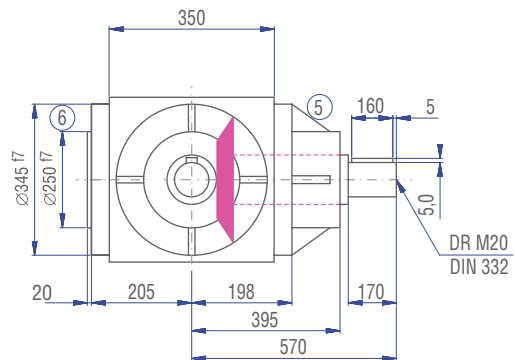
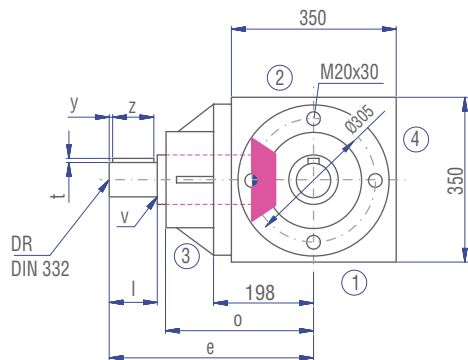
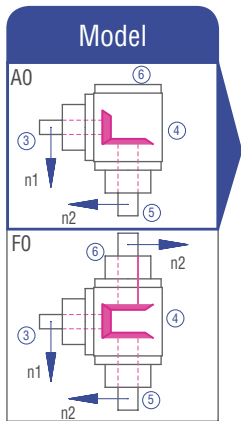


Inertia moments/mass

Inertia moment J₁ related to the fast-rotating shaft (N₁)

Model	Inertia moment [kgcm ²]							Mass [kg]
	1:1	1.5:1	2:1	3:1	4:1	5:1	6:1	
A0	3388.00	1707.00	1021.00	585.000	473.000	296.000	261.000	269.0
B0	3634.00	1793.00	1063.00	605.000	485.000	304.000	266.000	280.0
C0	3634.00	1793.00	1063.00	605.000	485.000	304.000	266.000	280.0
D0	3699.00	1822.00	1079.00	612.000	489.000	306.000	268.000	287.0
E0N	3459.00	1716.00	1019.00	586.000	474.000	297.000	262.000	259.0
E0S	3694.00	1820.00	1078.00	612.000	489.000	306.000	268.000	264.0
F0	5082.00	2593.00	1573.00	805.000	606.000	386.000	317.000	340.0
G0	5328.00	2613.00	1533.00	969.000	825.000	511.000	471.000	372.0
H0	5328.00	2613.00	1533.00	969.000	825.000	511.000	471.000	372.0
J0	5393.00	2642.00	1549.00	976.000	829.000	513.000	473.000	379.0
K0N	5153.00	2536.00	1489.00	950.000	814.000	504.000	467.000	351.0
K0S	5388.00	2640.00	1548.00	976.000	829.000	513.000	473.000	356.0

6.3.14 Standard bevel gearboxes – Type V 350



	Gear ratio						
	1:1	1.5:1	2:1	3:1	4:1	5:1	6:1
d [mm]	80	80	80	65	65	55	55
da [mm]	90	90	90	90	90	72	72
l [mm]	170	170	170	140	140	110	110
v [mm]	1.5	1.5	1.5	1.5	1.5	1.5	1.5
x [mm]	22	22	22	18	18	16	16
y [mm]	5	5	5	7.5	7.5	10	10
z [mm]	160	160	160	125	125	90	90
t [mm]	5	5	5	4	4	4	4
e [mm]	570	570	570	540	540	510	510
o [mm]	395	395	395	395	395	395	395
p [mm]	250	250	250	250	250	250	250
DR M	20	20	20	20	20	20	20

