

6.4.11 Type VS 230 – Type V with step-up ratio

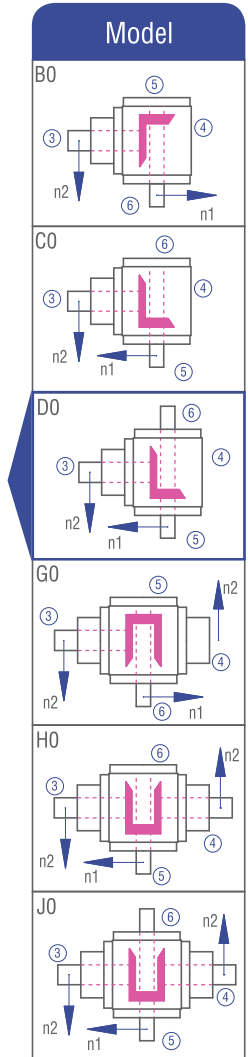
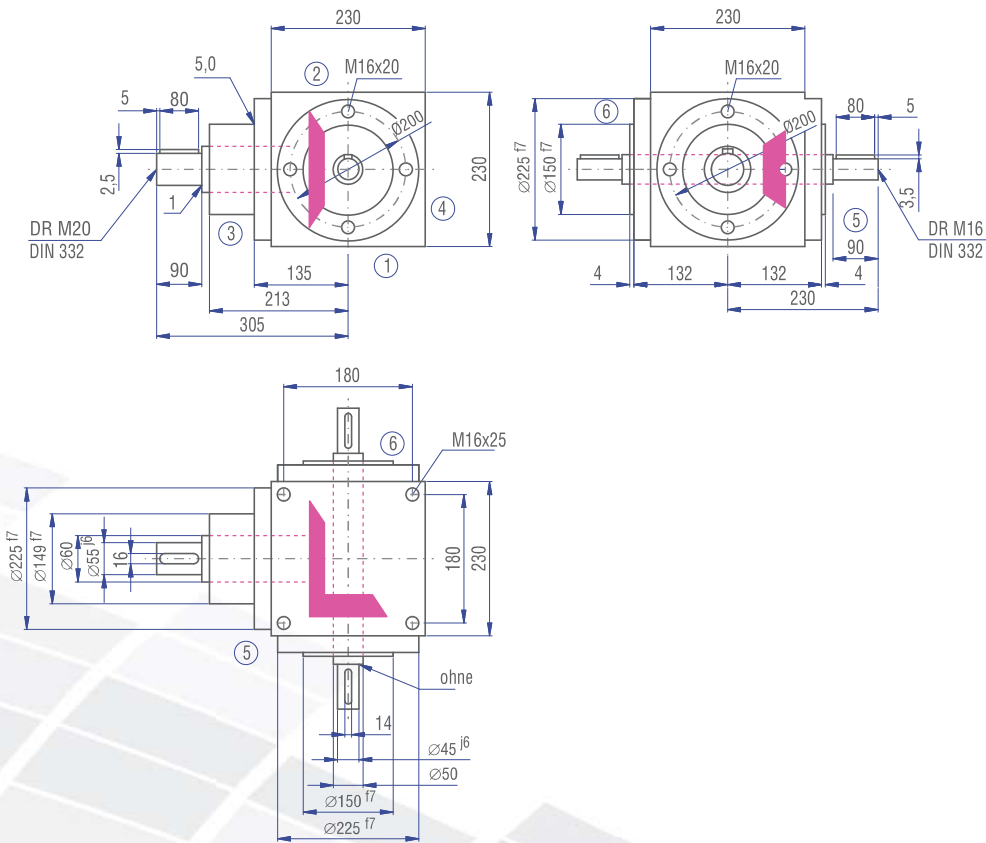


Characteristics

Characteristic	Standard	Option
Toothing	Bevel gear set, spiral-toothed	See chapter 6.2.1
Gear ratio	1.5:1 to 2:1	
Housing / Flanges	Grey cast iron; steel	
Threaded mounting holes	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	Not deliverable	
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]	1.5:1			2:1		
	n ₂ [rpm]	P _{1N} [kW]	T _{2N} [Nm]	n ₂ [rpm]	P _{1N} [kW]	T _{2N} [Nm]
3000	2000	99.20	450	1500	87.63	530
2400	1600	91.35	518	1200	80.02	605
1500	1000	72.20	655	750	59.11	715
1000	667	56.21	765	500	45.19	820
750	500	45.47	825	375	36.79	890
500	333	33.79	920	250	26.73	970
250	167	20.57	1,120	125	16.88	1,225
50	33	4.89	1,330	25	3.66	1,330
P _{1Nt} [kW]	34.0			34.0		
T _{2max} [Nm]	1400			1400		



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

n_2 [rpm]	1500		1000		500		250		100		50	
T_{2N} [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]
< 750	4600	2300	5150	2575	7200	3600	9450	4725	11250	5625	13100	6550
> 750	3832	1916	4290	2145	6000	3000	7876	3938	9376	4688	10918	5459

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

n_1 [rpm]	3000		1000		500		250		100		50	
T_{1N} [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]
Not specified												

Inertia moments/mass

Inertia moment J_2 related to the slowly rotating shaft (N_2)

Model	Inertia moment [kgcm ²]	
	1.5:1	2:1
B0	440.000	528.000
C0	440.000	528.000
D0	442.000	532.000
G0	661.000	749.000
H0	661.000	749.000
J0	663.000	753.000

Mass ca. [kg]
75.0
75.0
77.0
98.0
98.0
100.0

