

## Ordering - Code

**Z 12 JE 1 O L S 2 N**

Range (Z - ZX)

Size (08-10-12-16-20-25-31)

Shaft (C-Y-J-F) (B-W-H-E)  
(N-L-P-K) (A-V-G-D) (R-S-M-T)

Ratio U = n1/n2  
1-1,25-1,5-2-3-4-5-6

Direction of rotation (I or O)

Mounting Position (K-L-M-N-P)

Fixing Faces (R-S-T-U-X-Z)

Lubrication (1 = Grease)  
(2 = Oil) - (3 = Other)

Without Cooling System

## Corrected Output Power

$$P_{n1} = P \cdot K_a \cdot K_i \cdot K_t$$

Corrected Output Power

Power Absorbed by Machine

Service Factor

Life Factor

Temperature Factor

### Service Factor Ka

Prime mover	Nominal or infrequent Starting	Moderate Shocks or fairly frequent starting	Heavy Shocks or very frequent starting
Electric motor	1,00	1,25	1,50
Internal combustion engine 4 to 6 cylinders	1,25	1,50	1,75
Internal combustion engine 1 to 3 cylinders	1,50	1,75	2,25

### Life

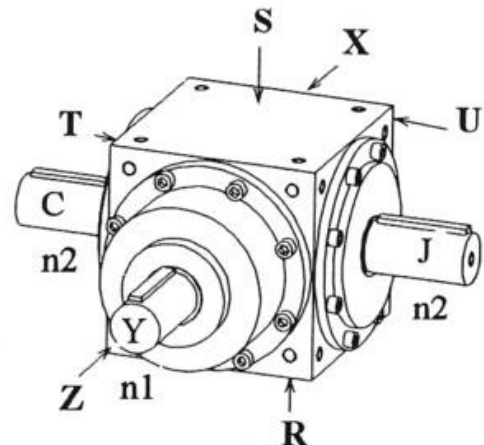
	100h	1000h	5000h	10000h	15000h	20000h	40000h
<b>Ki</b>	0.65	0.80	0.95	1	1.05	1.15	1.4

### Ambient Temperature

	10°	20°	30°	40°	50°
<b>Kt</b>	0.8	1	1.2	1.4	2

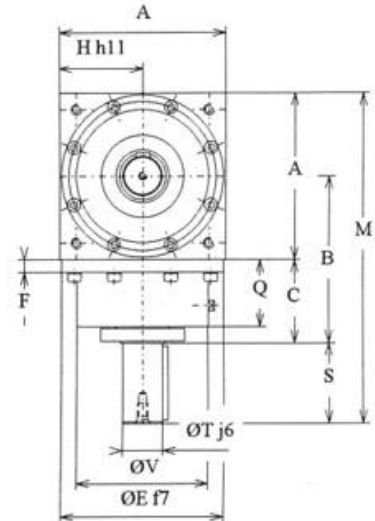
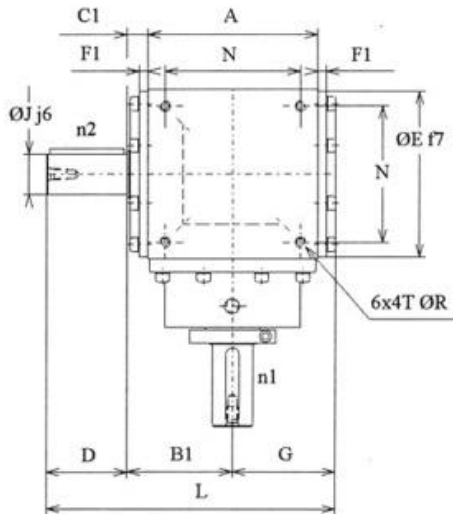
## CHARACTERISTICS

- ◆ 7 Sizes : 08-10-12-16-20-25-31.
- ◆ 9 Ratios : 0,8-1,25-1,5-2-3-4-5-6.
- ◆ Mounting : all positions.
- ◆ Identical dimensions for all ratios (except diameter and length of shaft n1).
- ◆ Close grain cast iron housing with identical fixing holes (possible on the 6 faces).
- ◆ Identical spigot location for mounting on sides n1 and n2.
- ◆ Fixing with tapped holes or with flange.
- ◆ All ratios, solid or hollow shafts, special flanges on request.
- ◆ Pinions = high load capacity (Klingelnberg spiral bevel gears - Life > 50000 h).
- ◆ Viton oil seals.
- ◆ Running temperature < 90 °C (depending on power and speed).
- ◆ Efficiency from 95 % to 98 % (depending on number of oil seals and lubrication).
- ◆ Rotation in both directions
- ◆ Outline drawing available on DXF format for CAD.
- ◆ Grease filled gearboxes are supplied with draining and filling plug.
- ◆ For oil and grease characteristics and change periods, see maintenance book.
- ◆ For further information, see general catalogue.
- ◆ ZI = Forward neutral reverse unit
- ◆ ZD = Clutch unit
- ◆ ZX = Tridirectional unit (3 or 4 shafts n1).
- ◆ 7 standard ratios for ZX type (1,25 - 1,5 - 2 - 3 - 4 - 5 - 6)

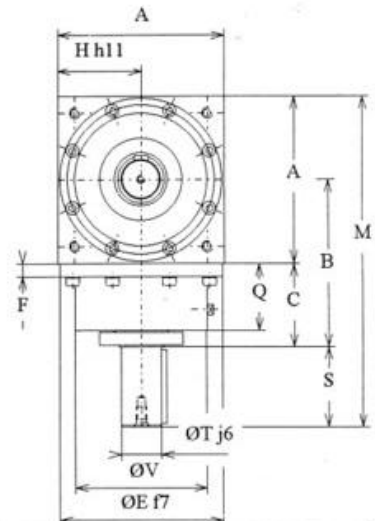
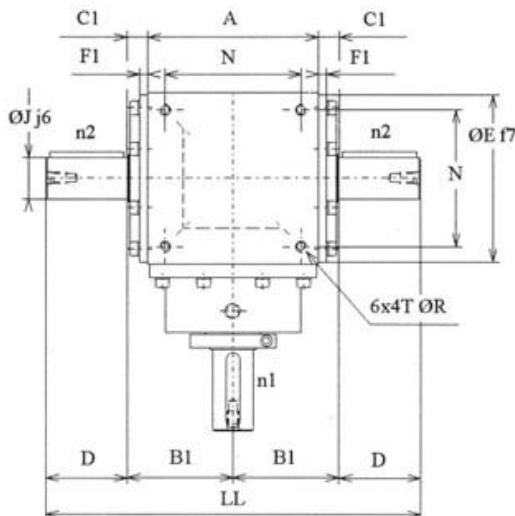


# BEVEL UNITS

## 1 SOLID SHAFT $n_1$ + 1 SOLID SHAFT $n_2$



## 1 SOLID SHAFT $n_1$ + 2 SOLID SHAFTS $n_2$



ALL RATIOS																		
Size	A	B1	C1	E	F1	G	H	N	R*	B	C	F	Q	V	D	J	L	LL
08	80	50	10	78	4	49	40	65	M5	80	40	8	36	62	40	20	139	180
10	100	62	12	98	5	61	50	80	M6	100	50	10	38	79	50	25	173	224
12	125	77.5	15	122	6	75.5	62.5	100	M8	125	62.5	10	50	98	60	30	213	275
16	160	100	20	155	9	98	80	125	M10	160	80	12	64	123	70	35	268	340
20	200	120	20	195	10	118	100	160	M12	200	100	15	81	149	80	45	318	400
25	250	148	23	245	13	146	125	200	M16	250	125	13	102	190	100	60	394	496
31	315	181	23.5	310	15	178.5	157.5	250	M16	315	157.5	15	132.5	220	125	75	484.5	612

U:1-1.25-1.5-2			
Size	S	T	M
08	40	20	160
10	50	25	200
12	60	30	247.5
16	70	35	310
20	80	45	380
25	100	60	475
31	125	75	597.5

U:3-4-5-6			
Size	S	T	M
08	30	15	150
10	40	20	190
12	50	25	237.5
16	60	30	300
20	70	35	370
25	80	45	455
31	100	60	572.5

Shaft key as per NFE 22 175							
Ø	a	b	K	L1	m	L2	
15	5	5	17	25	M5	8	
20	6	6	22.5	35	M6	10	
25	8	7	28	45	M8	15	
30	8	7	33	55	M8	15	
35	10	8	38	65	M10	19	
45	14	9	48.5	75	M12	24	
60	18	11	64	95	M16	29	
75	20	12	79.5	120	M16	29	

