Bevel Gearboxes DZA

General data: 4 sizes and 2 versions.
Ratio either 1 : 1 or 2 : 1. Any mounting position possible.
Ratio for gearing up to max. 750 min^{-1} possible.

Housing: Thick-walled, one-piece cast aluminium housing, fully oil-tight and dust-proof.

Gearing: The gears are to the Coniflex system, case hardened.

Shafts/bearing system: Input and output shaft are ground and mounted on ball bearings. **From size 2 with keyways.**

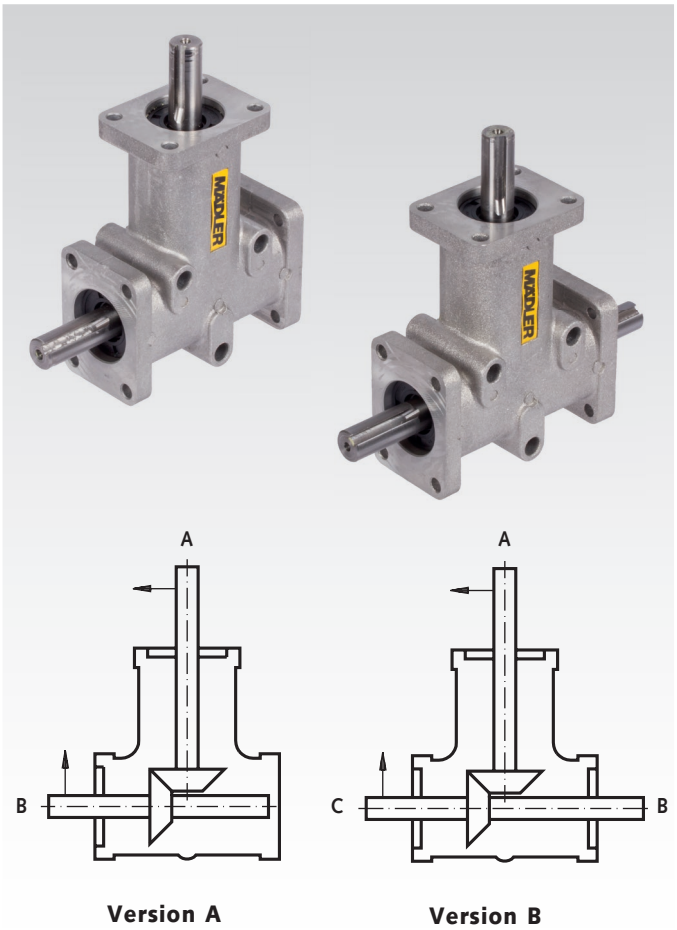
Lubrication/maintenance: Lubricated for life, viscosity ISO VG 150. Gearboxes are maintenance free.

Angular backlash: 15 to 30 angular minutes.

Permiss. operating temperature: -18°C to +80°C.

Ordering details: e.g.: Product No., Type, Ratio, Size, Version

Product No.	Ratio	Size	Version	Shaft-Ø mm	Weight kg
410 010 00	1 : 1	1	A	8	0,30
410 020 00	1 : 1	1	B	8	0,31
410 012 00	1 : 1	2	A	15	1,25
410 022 00	1 : 1	2	B	15	1,31
410 014 00	1 : 1	3	A	20	3,75
410 024 00	1 : 1	3	B	20	3,89
410 016 00	1 : 1	4	A	25	6,20
410 026 00	1 : 1	4	B	25	6,52
410 010 02	2 : 1	1	A	8	0,30
410 020 02	2 : 1	1	B	8	0,31
410 012 02	2 : 1	2	A	15	1,25
410 022 02	2 : 1	2	B	15	1,31
410 014 02	2 : 1	3	A	20	3,75
410 024 02	2 : 1	3	B	20	3,89
410 016 02	2 : 1	4	A	25	6,20
410 026 02	2 : 1	4	B	25	6,52



Version A **Version B**

Performance Data

Output Speed* min^{-1}	Ratio i	Size 1 Input Power kW	Size 1 Output Torque** Nm	Size 2 Input Power kW	Size 2 Output Torque** Nm	Size 3 Input Power kW	Size 3 Output Torque** Nm	Size 4 Input Power kW	Size 4 Output Torque** Nm
50	1 : 1	0,02	3,5	0,05	10,0	0,18	35,0	0,31	60
100	1 : 1	0,03	3,0	0,10	9,5	0,34	32,0	0,61	58
200	1 : 1	0,06	2,8	0,20	9,5	0,64	30,5	1,17	56
400	1 : 1	0,11	2,6	0,38	9,0	1,22	29,0	2,18	52
700	1 : 1	0,18	2,5	0,65	8,8	2,09	28,5	3,37	46
1400	1 : 1	0,35	2,4	1,29	8,8	3,99	27,2	6,45	44
2000***	1 : 1	0,31	1,5	1,15	5,5	3,77	18,0	7,33	35
3000***	1 : 1	0,38	1,2	1,26	4,0	4,71	15,0	7,54	24
50	2 : 1	0,02	3,0	0,04	8,0	0,14	26,0	0,26	50
100	2 : 1	0,03	2,5	0,07	7,0	0,25	24,0	0,46	44
200	2 : 1	0,05	2,2	0,14	6,8	0,46	22,0	0,90	43
400	2 : 1	0,09	2,1	0,29	6,8	0,88	21,0	1,72	41
700	2 : 1	0,15	2,0	0,50	6,8	1,47	20,0	3,00	40,9
1400	2 : 1	0,18	1,2	0,66	4,5	2,35	16,0	3,67	25

* The gearboxes are thus dimensioned, that the lifetime comes to 10,000 hours at full load and a starting speed of 1,400 min^{-1}.

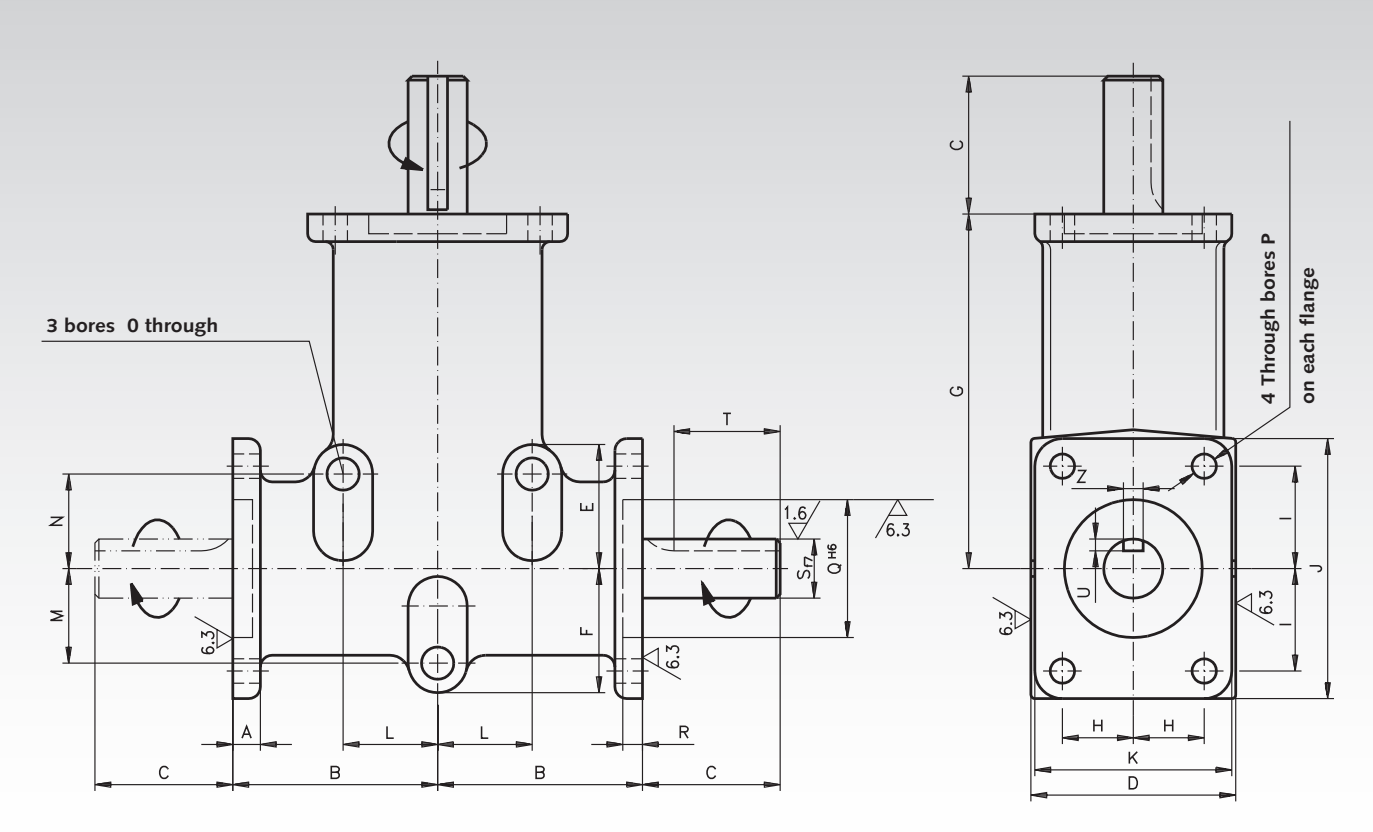
** Only for version A. At version B, the torque at each output shaft end may be only 50%.

*** Speeds above 1,400 min^{-1} shorten the lifespan and are only permitted for a short time. If the permiss. operating temperature is exceeded, oil leaks may occur.

Input shaft / output shaft, speed

At both types and both ratios, the input can be at shaft A as well as at shaft B/C.
At ratio 1:1 the maximum speed is 1,400 min^{-1}.
Ratio 2:1 can be used for gearing down and also for gearing up.
Gearing down: Input at shaft A with max. speed 1,400 min^{-1} (output speed max. 700 min^{-1}).
Gearing up: Input at shaft B/C with max. speed 750 min^{-1} (output speed max. 1,500 min^{-1}).

Dimensions Table Bevel Gearboxes DZA



Size	Shaft-Ø mm	No. of Output-Shafts	Ratio	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T*	U	Z	Weight kg
				Dim. in mm																						
1	8	1	1 : 1	6	34	15	34	21	21	60	11	15	40	32	16	16	16	5,2	4,2	22	2	8	-	-	-	0,30
1	8	2	1 : 1	6	34	15	34	21	21	60	11	15	40	32	16	16	16	5,2	4,2	22	2	8	-	-	-	0,31
1	8	1	2 : 1	6	34	15	34	21	21	60	11	15	40	32	16	16	16	5,2	4,2	22	2	8	-	-	-	0,30
1	8	2	2 : 1	6	34	15	34	21	21	60	11	15	40	32	16	16	16	5,2	4,2	22	2	8	-	-	-	0,31
2	15	1	1 : 1	10	52	35	52	31,5	31,5	90	18	26	66	50	24	24	24	8,2	6,2	35	3	15	27	3	5	1,25
2	15	2	1 : 1	10	52	35	52	31,5	31,5	90	18	26	66	50	24	24	24	8,2	6,2	35	3	15	27	3	5	1,31
2	15	1	2 : 1	10	52	35	52	31,5	31,5	90	18	26	66	50	24	24	24	8,2	6,2	35	3	15	27	3	5	1,25
2	15	2	2 : 1	10	52	35	52	31,5	31,5	90	18	26	66	50	24	24	24	8,2	6,2	35	3	15	27	3	5	1,31
3	20	1	1 : 1	8,5	75	50	76	47	47	140	27	38	97	74	38	38	38	9,0	8,5	52	2,5	20	40	3,5	6	3,75
3	20	2	1 : 1	8,5	75	50	76	47	47	140	27	38	97	74	38	38	38	9,0	8,5	52	2,5	20	40	3,5	6	3,89
3	20	1	2 : 1	8,5	75	50	76	47	47	140	27	38	97	74	38	38	38	9,0	8,5	52	2,5	20	40	3,5	6	3,75
3	20	2	2 : 1	8,5	75	50	76	47	47	140	27	38	97	74	38	38	38	9,0	8,5	52	2,5	20	40	3,5	6	3,89
4	25	1	1 : 1	13	80	70	100	81	57,5	150	38	38	99	98	45	45	70	10,3	10,3	62	3,5	25	60	4	8	6,20
4	25	2	1 : 1	13	80	70	100	81	57,5	150	38	38	99	98	45	45	70	10,3	10,3	62	3,5	25	60	4	8	6,52
4	25	1	2 : 1	13	80	70	100	81	57,5	150	38	38	99	98	45	45	70	10,3	10,3	62	3,5	25	60	4	8	6,20
4	25	2	2 : 1	13	80	70	100	81	57,5	150	38	38	99	98	45	45	70	10,3	10,3	62	3,5	25	60	4	8	6,52

* Size 1 without feather key groove.

Permissible Radial and Axial Loads

Size	F_R** N	F_A*** N
1	60	20
2	140	50
3	300	80
4	400	160

** Permiss. radial force for F_A=0.
*** Permiss. axial force for F_R=0.

Size	1	2	3	4
Oil volume (in dm^3)	0.03	0.06	0.10	0.13

Operating Factors

Operating hours per day	3	8	12	24
Uniform load	0,7	0,9	1	1,3
Light shocks	0,9	1	1,3	1,8
Heavy shocks	1,3	1,6	1,8	2,3

Operating temperature -18° to + 80°C.