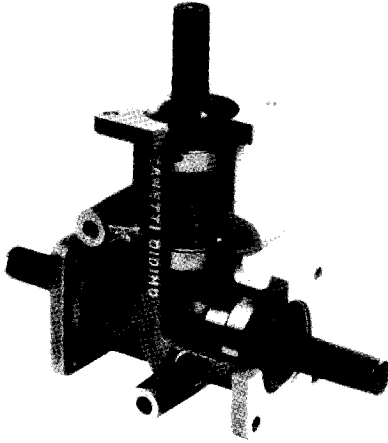


gearboxes

DZ right angle drive

Manufactured in 5 sizes, DZ right angle drives are characterised by their rugged construction, quiet operation and reliable service life. All 5 sizes are available in 1:1 and 2:1 ratios and in 2 shaft and 3 shaft configurations. The 2 shaft version is also available to order in reverse rotation.



housing

Cast in good quality aluminium alloy, the sections are generously proportioned to give protection in heavy duty applications. The castings are free of porosity and oil-tight and are externally peened. This improves the surface hardness of the casting and its visual texture.

gears

Manufactured in Nickel Chrome steels, the gears are to the Coniflex system, cut on Gleason machines. The straight tooth form allows rotation in either direction with no change in drive characteristics. To maximise wear life, gears are case hardened. The bulk of the tooth form thus remains tough and elastic to better withstand impact loads.

shafts

Manufactured in high quality steel alloys, the shafts are ground and surface treated for corrosion protection. They are machined with keyways to DIN standards.

bearing system

Heavy duty, high quality ball bearings are used throughout to ensure optimum reliability under the heaviest operating conditions.

lubrication & oil seals

Gearboxes are supplied correctly filled with lubricant retained by seals which remain functional under most operating conditions. Special oil seals are available for high temperature use or for particularly aggressive environments. These are supplied to order.

selection & performance

1. Begin by converting your units of power or torque into kW or Nm as appropriate.
2. From Table 1 determine a service factor corresponding with your application.
3. Multiply your value for kW or Nm by this service factor.
4. Determine the ratio required.

cont. next column

5. Address Table 2. For a given input speed, locate a value that matches or exceeds the figure you have determined for kW or Nm. Read off the size of gearbox at the head of the column and address the box in Table 3 corresponding with the size and ratio selected.
6. Specify from the three options in accordance with your application and quote the corresponding order code in all communications. Note that the 2 shaft drives with non-standard rotation are not stock items and are supplied to order.

before specifying, please check that:

7. The radial load on each shaft does not exceed the values listed in Table 4.
8. The axial load acting on each shaft does not exceed the values listed on Table 4.
9. The range of operating temperatures does not exceed -18°C to 75°C .

If the drive is used as a speed multiplier, the input should not be allowed to exceed 500 rpm.

Oils and mineral greases should be free of chlorine derivatives and additives with an aromatic base.

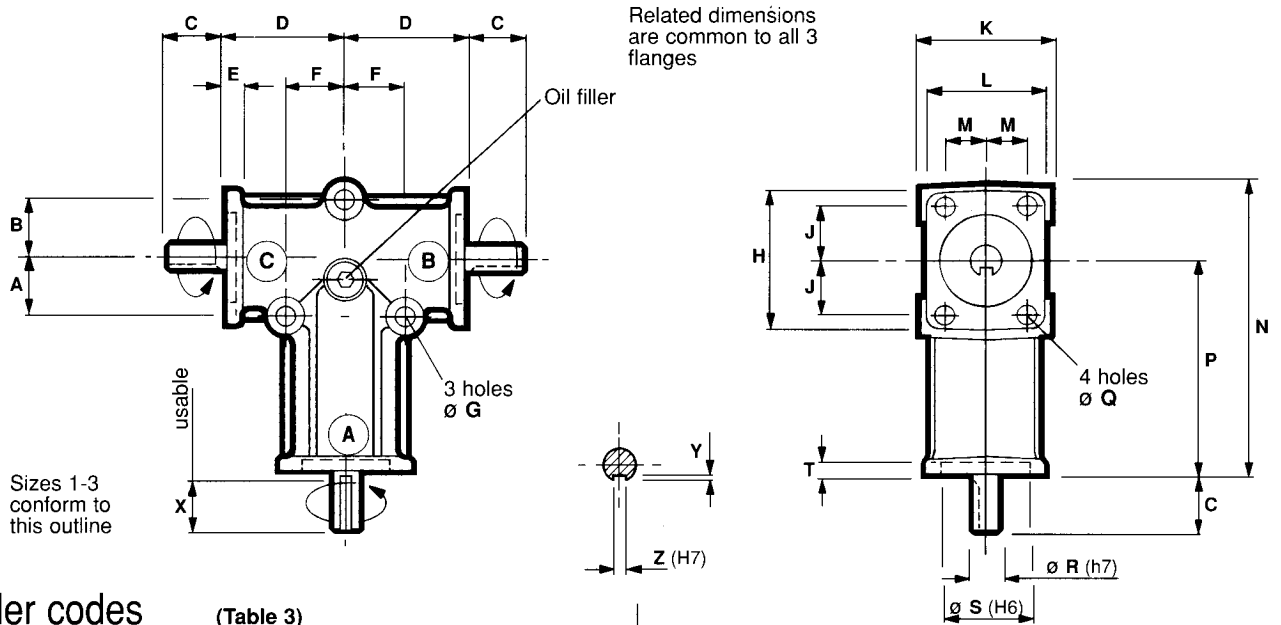
Avoid direct exposure of the oil seals to particularly dusty or abrasive environments.

Table 1. Service factors

	hrs. of operation per day			
	3	8	12	24
uniform load	0.7	0.9	1.0	1.3
intermittent load	0.9	1.0	1.3	1.8
severe intermittent load	1.3	1.6	1.8	2.3

Table 2

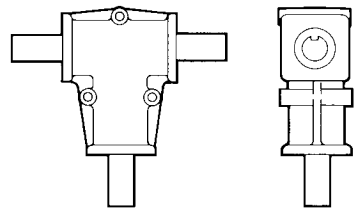
	Size 1		Size 2		Size 3		Size 4		Size 5	
	input rpm	output ratio	input power kW	output torque Nm	input power kW	output torque Nm	input power kW	output torque Nm	input power kW	output torque Nm
50	0.026	4.7	0.093	16.5	0.28	50.5	0.50	89.0	0.74	132.0
100	0.047	4.2	0.162	14.5	0.49	44.0	0.89	79.0	1.32	118.0
200	0.082	3.7	0.280	12.6	0.85	38.0	1.54	69.0	2.27	102.0
300	0.113	3.4	0.386	11.6	1.15	34.7	2.09	62.9	3.10	93.2
400	0.142	3.2	0.470	10.6	1.44	32.5	2.60	58.7	3.85	86.9
600	0.195	2.9	0.665	10.0	1.98	29.7	3.53	53.1	5.21	78.4
800	0.242	2.7	0.847	9.6	2.50	28.4	4.34	49.2	6.40	72.6
1000 1:1	0.287	2.6	1.014	9.2	3.00	27.1	5.10	46.3	7.58	68.3
1200	0.331	2.5	1.177	8.9	3.47	26.2	5.82	44.0	8.57	64.8
1400	0.368	2.4	1.320	8.6	3.87	25.2	6.46	42.1	9.50	61.9
1600	0.407	2.3	1.455	8.3	4.26	24.3	7.10	40.5	10.44	59.5
1800	0.442	2.3	1.571	8.0	4.61	23.5	7.67	39.1	11.25	57.3
2000	0.476	2.2	1.723	7.9	4.98	22.8	8.22	37.9	12.11	55.5
2500	0.556	2.1	2.105	7.8	5.75	21.3	9.53	35.3	13.93	51.6
3000	0.632	2.0	2.494	7.7	6.54	20.2	10.78	33.3	15.71	48.5
50	0.010	1.7	0.038	6.7	0.15	27.0	0.26	46.0	0.41	72.2
100	0.017	1.5	0.069	6.2	0.29	26.0	0.49	44.0	0.76	67.7
200	0.030	1.3	0.131	5.9	0.55	24.5	0.95	42.5	1.41	63.3
300	0.042	1.3	0.186	5.6	0.77	23.0	1.36	41.0	2.03	61.0
400	0.053	1.2	0.235	5.3	0.98	22.0	1.73	39.0	2.51	56.6
600 2:1	0.074	1.1	0.332	5.0	1.40	21.0	2.46	37.0	3.56	53.6
800	0.092	1.0	0.423	4.8	1.76	20.0	3.09	35.0	4.35	49.3
1000	0.106	1.0	0.496	4.5	2.09	19.0	3.64	33.0	5.25	47.5
1200	0.122	0.9	0.569	4.3	2.38	18.0	4.10	31.0	5.90	44.6
1400	0.135	0.9	0.645	4.2	2.79	17.9	4.53	29.5	6.52	42.5
1600	0.147	0.8	0.719	4.1	3.12	17.8	5.09	29.0	7.33	41.8



order codes

(Table 3)

Size	Ratio	Total Nr. Shafts	Order Code
1	1:1	3 ABC	389.01.11
		2 AB	390.01.11
		2 AC	391.01.11N NON-STD ROTN
	2:1	3 ABC	389.01.12
		2 AB	390.01.12
		2 AC	391.01.12N NON-STD ROTN
2	1:1	3 ABC	389.02.11
		2 AB	390.02.11
		2 AC	391.02.11N NON-STD ROTN
	2:1	3 ABC	389.02.12
		2 AB	390.02.12
		2 AC	391.02.12N NON-STD ROTN
3	1:1	3 ABC	389.03.11
		2 AB	390.03.11
		2 AC	391.03.11N NON-STD ROTN
	2:1	3 ABC	389.03.12
		2 AB	390.03.12
		2 AC	391.03.12N NON-STD ROTN
4	1:1	3 ABC	389.04.11
		2 AB	390.04.11
		2 AC	391.04.11N NON-STD ROTN
	2:1	3 ABC	389.04.12
		2 AB	390.04.12
		2 AC	391.04.12N NON-STD ROTN
5	1:1	3 ABC	389.05.11
		2 AB	390.05.11
		2 AC	391.05.11N NON-STD ROTN
	2:1	3 ABC	389.05.12
		2 AB	390.05.12
		2 AC	391.05.12N NON-STD ROTN



The outline of sizes 4 and 5 differs from sizes 1 to 3 in the relative disposition of the three fixing bosses and associated webbing

dimensions

	Size 1	Size 2	Size 3	Size 4	Size 5
A	16	24	38	70	70
B	16	24	38	45	45
C	15	35	50	70	70
D	34	52	75	80	80
E	5	7	8	13	13
F	16	24	38	45	45
G	5.2	8.2	8.2	10.3	10.3
H	40	66	96	98	98
J	15	26	38	38	38
K	33	52	76	100	100
L	32	50	74	98	98
M	11	18	27	38	38
N	81	123	188	205	205
P	60	90	140	150	150
Q	4.2	6.2	8.2	10.3	10.3
R (h7)	8	15	20	25	35 (f7)
S (H6)	22	35	55	65	72
T	2.5	5	3.5	3.5	5.5
X	-	27	40	60	55
Y	-	3	3.5	4	5
Z (H7)	-	5	6	8	10

Table 4. Axial & radial loading

Size	Max. axial load in Kg	Max. radial load in Kg
1	21	11
2	41	20
3	76	43
4	88	49
5	97	55

Sizes 2 to 5 which have keywayed shafts, are supplied complete with a set of feather keys.