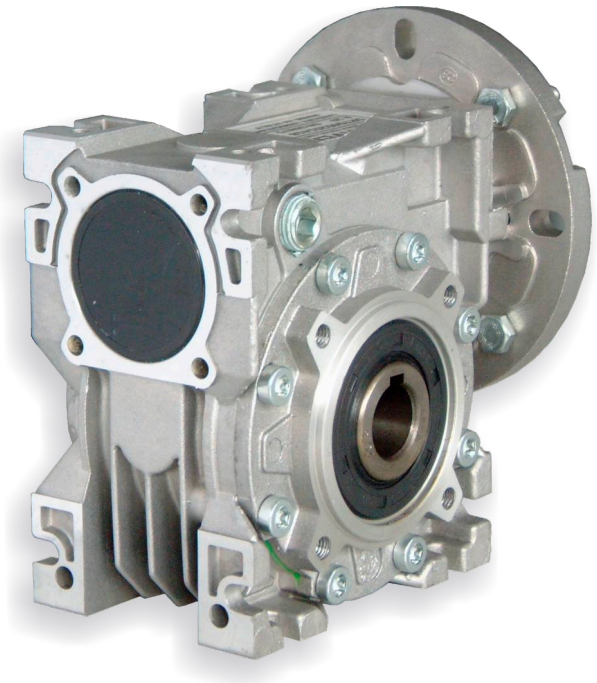
FRT 28 / 40 / 50 / 60

Worm gear box with IEC motor flange

- Universal mounting facility
- Housing made of aluminium-diecast
- Hollow shaft output with keyway

- Optional with solid axle output
- Optional with torque arm
- Optional in ATEX114 design



03/19-089.162.04

FRT28

Admissible torque and efficiency

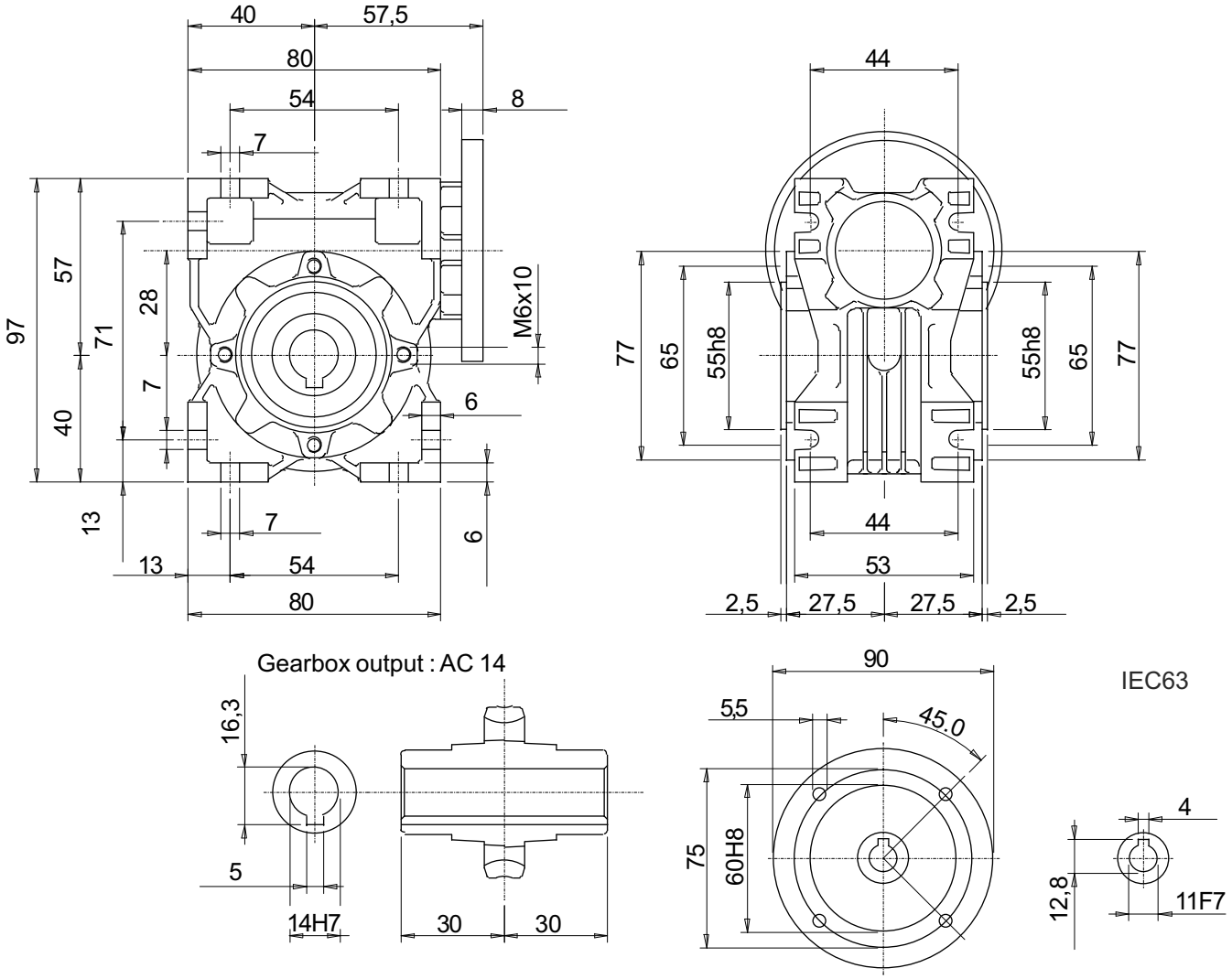
FRT28		2800 min^{-1}		1400 min^{-1}		900 min^{-1}		700 min^{-1}	
i	ß	T_{2n}	h	T_{2n}	h	T_{2n}	h	T_{2n}	h
7	23°11'	13	0,86	18	0,84	22	0,82	23	0,81
10	16°41'	14	0,83	18	0,81	20	0,78	23	0,77
15	11°18'	14	0,79	18	0,77	21	0,72	22	0,71
20	10°23'	13	0,77	16	0,74	19	0,70	21	0,69
28	6°06'	15	0,69	20	0,66	22	0,61	24	0,60
40	5°14'	14	0,64	17	0,62	20	0,56	21	0,55
49	4°19'	13	0,61	17	0,57	19	0,52	20	0,51
56	3°03'	12	0,54	15	0,51	16	0,45	17	0,44
70	2°27'	11	0,49	12	0,45	13	0,43	13	0,40
80	2°37'	10	0,49	12	0,45	11	0,40	11	0,39
100	2°20'	7	0,46	8	0,43	8	0,37	8	0,36

i = ratio
ß = Spiral angle

Self locking:

Spiral angle	ß > 20°	20°> ß > 10°	10° > ß > 5°	5° > ß > 3°	3° > ß > 1°
Reversability	full	high	good	low	none
Self locking	none	none	low	good	full

Dimensions:



Available motor flange: IEC56, IEC63

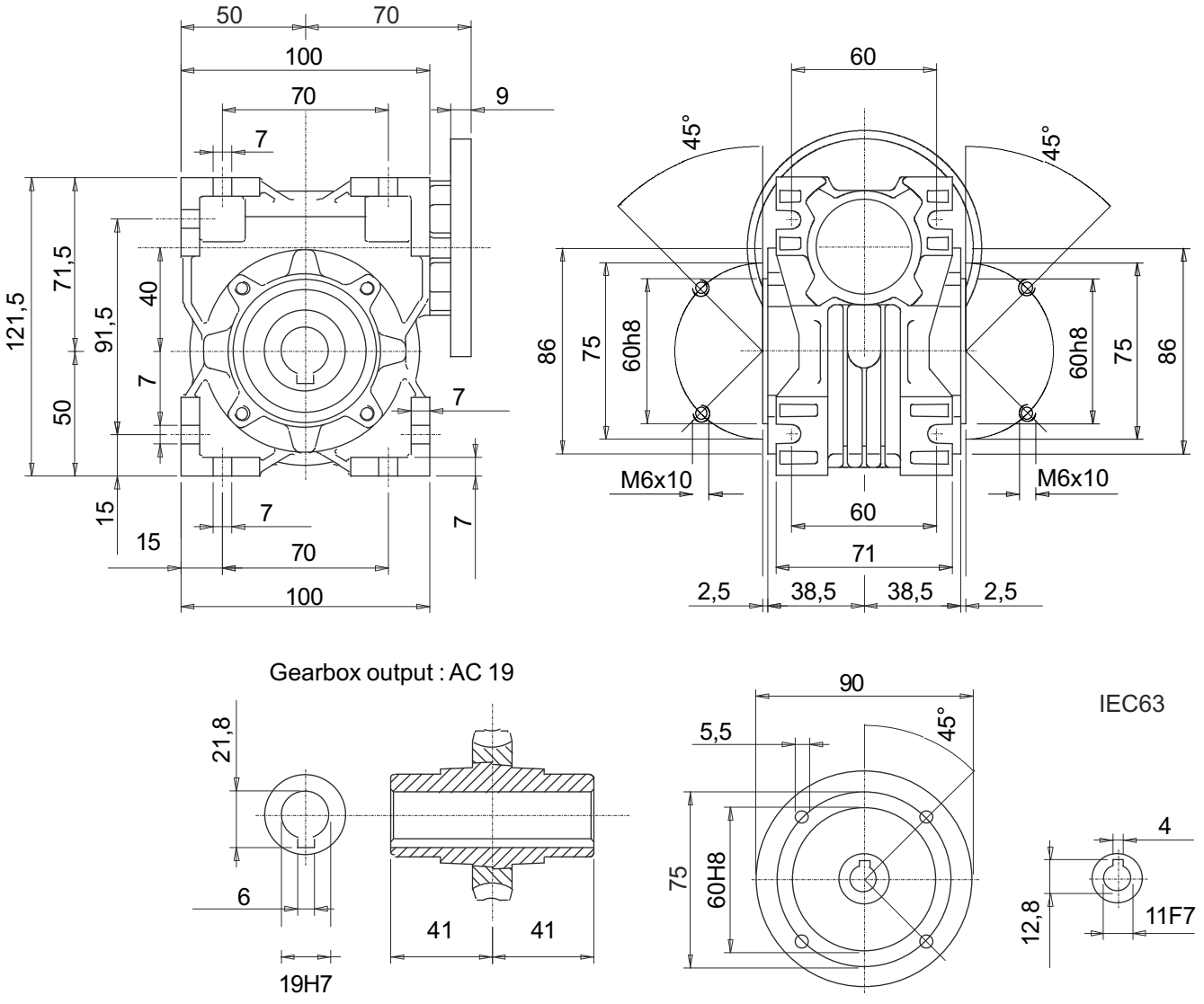
FRT40

Admissible torque and efficiency

FRT40		2800 min^{-1}		1400 min^{-1}		900 min^{-1}		700 min^{-1}	
i	ß	T_{2n}	h	T_{2n}	h	T_{2n}	h	T_{2n}	h
5	30°57'	32	0,89	45	0,857	54	0,86	59	0,85
7	21°36'	31	0,87	45	0,85	52	0,83	58	0,82
10	16°41'	34	0,85	46	0,83	54	0,80	58	0,79
15	11°18'	34	0,81	44	0,78	52	0,74	58	0,73
20	8°31'	30	0,78	39	0,75	45	0,70	49	0,68
28	5°39'	34	0,72	48	0,68	52	0,63	55	0,59
40	4°17'	32	0,66	42	0,61	46	0,56	49	0,53
49	3°48'	31	0,62	41	0,58	43	0,52	46	0,51
56	3°25'	30	0,60	38	0,56	41	0,49	45	0,48
70	3°01'	29	0,57	36	0,52	40	0,46	43	0,44
80	2°51	28	0,54	32	0,50	39	0,44	41	0,42
100	2°38'	26	0,51	29	0,46	36	0,2	38	0,39

i = Ratio
ß = Spiral angle

Dimensions:



Available motor flange: IEC56, IEC63, IEC71

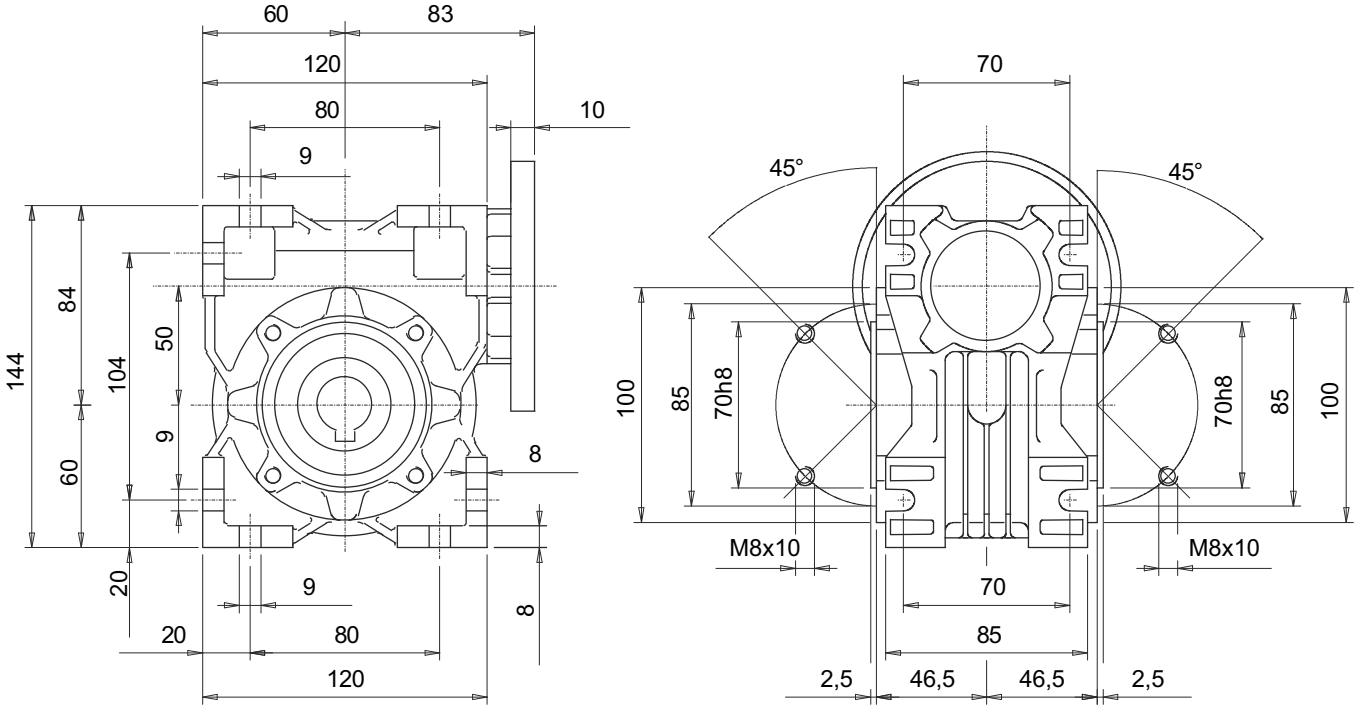
FRT50

Admissible torque and efficiency

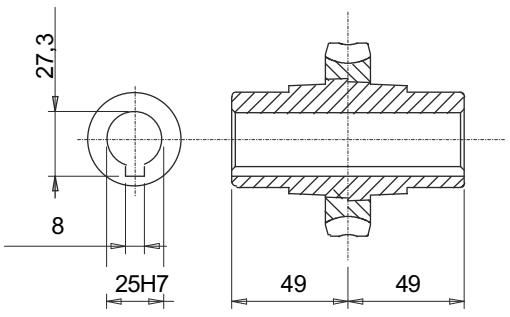
FRT50		2800 min^{-1}		1400 min^{-1}		900 min^{-1}		700 min^{-1}	
i	ß	T_{2n}	h	T_{2n}	h	T_{2n}	h	T_{2n}	h
5	30°57'	58	0,90	81	0,88	96	0,86	106	0,86
7	23°52'	62	0,88	75	0,86	95	0,85	110	0,83
10	16°41'	59	0,86	75	0,84	95	081	100	0,80
15	11°18'	61	0,82	74	0,78	91	0,76	99	0,75
20	8°59'	52	0,80	65	0,76	79	0,72	86	0,71
28	6°19'	66	0,75	85	0,71	99	0,65	106	0,64
40	4°31'	59	0,69	72	0,64	85	0,58	91	0,57
49	4°14'	56	0,66	76	0,62	81	0,56	87	0,54
56	3°42'	53	0,64	71	0,60	80	0,54	83	0,52
70	2°44'	46	0,58	63	0,53	67	0,47	70	0,45
80	2°51	49	0,58	58	0,52	67	0,46	72	0,44
100	2°17'	40	0,52	43	0,47	55	0,42	62	0,39

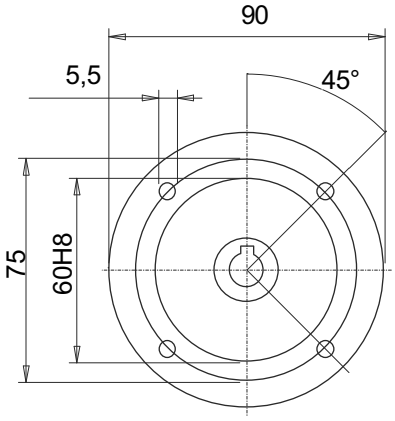
i = Ratio
ß = Spiral angle

Dimensions:

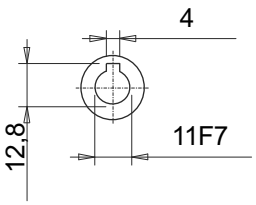


Gearbox output : AC 25





IEC63



Available motor flange: IEC63, IEC71, IEC80

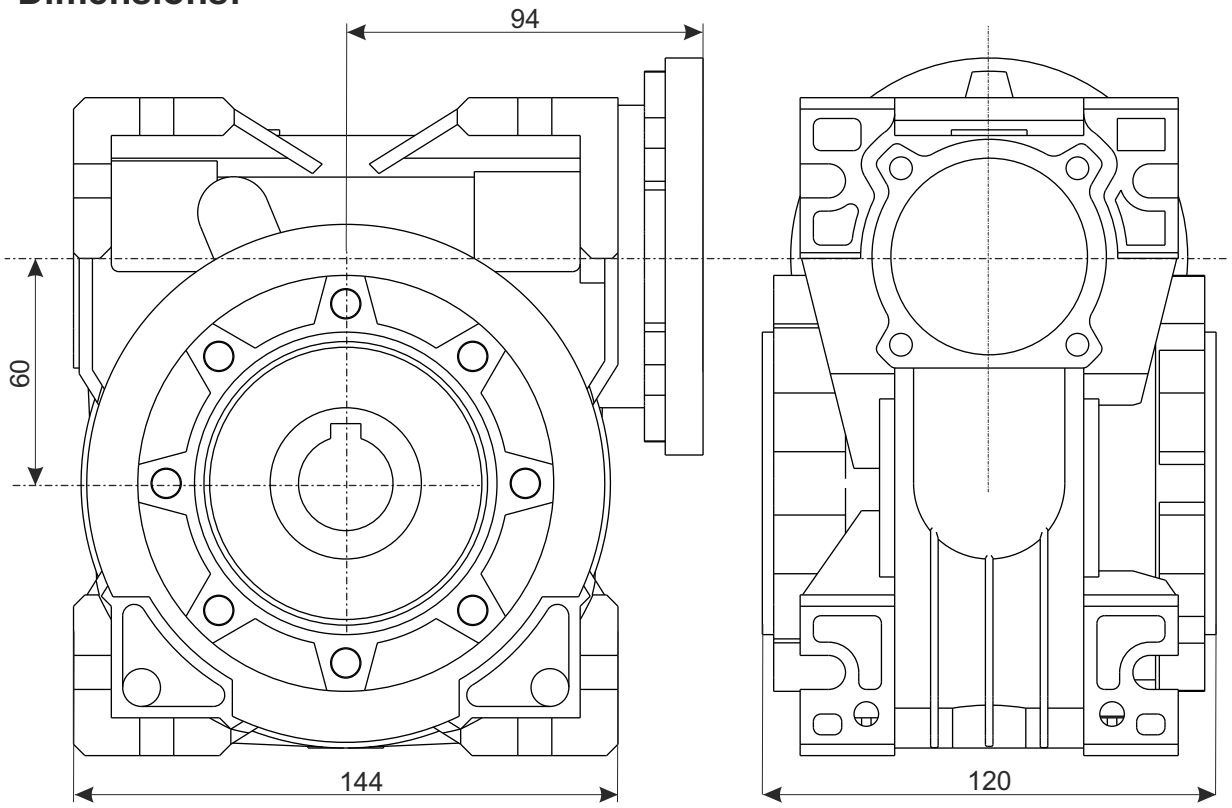
FRT60

Admissible torque and efficiency

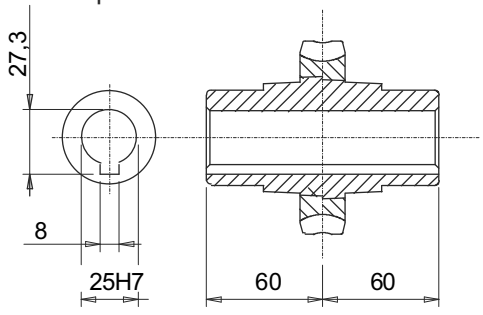
FRT60		2800 min^{-1}		1400 min^{-1}		900 min^{-1}		700 min^{-1}	
i	ß	T_{2n}	η	T_{2n}	η	T_{2n}	η	T_{2n}	η
5	36°32'	90	0,90	125	0,89	150	0,87	165	0,87
7	25°33'	93	0,88	113	0,86	150	0,85	164	0,84
10	19°0'	104	0,87	133	0,84	163	083	177	0,81
15	12°55'	110	0,84	130	0,81	166	0,75	178	0,77
20	11°18'	108	0,82	122	0,77	161	0,76	175	0,74
28	6°49'	116	0,76	139	0,71	175	0,68	187	0,67
40	5°42'	105	0,73	135	0,66	152	0,64	165	0,62
49	5°11'	85	0,71	128	0,62	135	0,61	140	0,59
56	3°55'	92	0,66	123	0,60	130	0,55	139	0,54
70	3°38'	92	0,64	122	0,55	125	0,53	128	0,51
80	2°51'	85	0,60	106	0,53	115	0,48	120	0,46
100	2°51'	68	0,58	83	0,49	94	0,47	100	0,44

i = Ratio
ß = Spiral angle

Dimensions:



Output: Holow shaft AC25



Other dimensions: 3D model

Available motor flange: IEC71, IEC80, IEC90

- SERVICE FACTORS FS = F1 • F2
  for lifespan of 15.000h

F_1	a	b	c	F_2	d
3 - 4 h	0.8	1.0	1.5	6	1.0
8 - 10 h	1.0	1.2	1.8	60	1.2
10 - 24 h	1.4	1.6	2.0	120	1.4

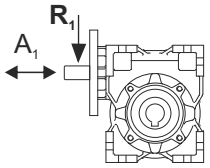
a = Uniform load
b = Variable load
c = Shock load
d = Start/stops per hour

- WEIGHTS & LUBRICANTS

FRT	kg	l
28	1.1	0.03
40	2.5	0.08
50	3.8	0.13
60	6.5	0.20

- INPUT RADIAL LOADS R_1 [daN]

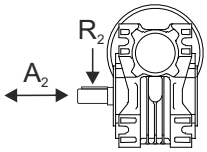
A1 = 0.2 x R1



min^{-1}	2800	1400	900	700	500	300
FRT 28	5	7	8	9	10	12
FRT 40	11	15	16	17	18	20
FRT 50	15	20	22	25	28	30
FRT 60	23	30	33	35	37	40

- RADIAL LOADS R_2 [daN] WITH STANDARD BEARINGS

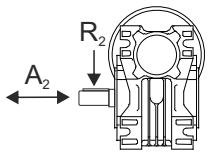
$A_2 = 0.2 \times R_2$



min^{-1}	280	200	140	93	70	50	35	29	25	20	18	14	Bearing
FRT28	- - -	45	50	55	60	62	70	75	80	90	95	100	16005
FRT40	100	100	110	120	135	150	160	170	180	190	200	230	16006
FRT50	145	125	145	170	190	200	230	240	260	280	290	320	16008
FRT60	225	240	250	290	330	360	390	430	320	500	420	560	6008

- RADIAL LOADS R_2 [daN] WITH HEAVY DUTY BEARINGS

$A_2 = 0.2 \times R_2$



min^{-1}	280	200	140	93	70	50	35	29	25	20	18	14	Bearing
FRT28	- - -	65	75	82	90	93	105	112	120	130	130	130	6005
FRT40	140	150	155	165	190	210	225	240	250	260	260	260	32006
FRT50	200	175	200	240	260	300	340	360	390	420	420	420	32008
FRT60	290	300	320	370	420	480	510	570	610	660	660	660	30208

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