Note!

1. The structure scheme, appearance diagram and other attached diagrams in sample are examples, there is no strict proportion requirement. If you need exact dimension of certain types, please contact our sales dept... (The unmarked dimension units are mm).
2. Gear unit has been tested before delivered, users should add lubrication oil before running.
3. We can only refer to the marked oil in the manual. Actual oil filing level should be the same with the mark on oil immersion lens.
4. Lubrication oil viscosity should be selected according to working conditions ambient temperature.
5. To prevent accidents, all the rotation parts should be added with protective covers according to safety regulation of the nation and region.
6. The solid shaft input structure gear unit is not equipped with any motor.
7. Motors of Y series are supplied with protection guard of IP54 unless otherwise specified.
8. Unless otherwise specified, you will receive the terminal box at 0°.

Guidelines for the selection

□ Gear units are designed under the circumstance of steady load, stated operating time per day and a few starting times. But the practical condition will be not as perfect as the designed circumstance. So we must confirm driven machine factor f1, prime mover factor f2, starting factor f3 according to actual load type, operating time, starting frequency. Let it less than or equal to the service factor fb of selection table, viz f1 x f2 x f3 ≤fB. The needed torque of service machine multiply the service factor (f1 x f2 x f3) should less than or equal to gear units permissible torque.

Viz $T_N \geq T_2 \times f1 \times f2 \times f3$

f1 – Driven machine factor

f2 – Prime mover factor

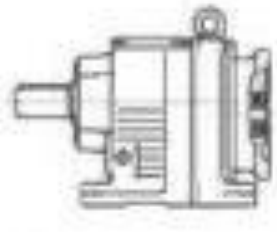
f3 – Start factor

T_2 – The torque required by the machine

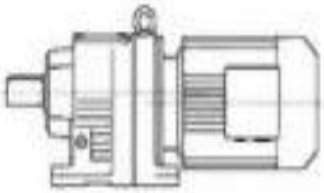
T_N – Gear unit permissible torque

□ We accept the orders of products of special specification, and provide our customer with exclusive design service.

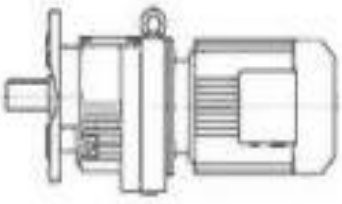
Noted: Along with the update of technology etc., the Product manual of DM Group will be changed.



TR (TRF)…..Y….
Customers provide the motor by themselves need connected flange.

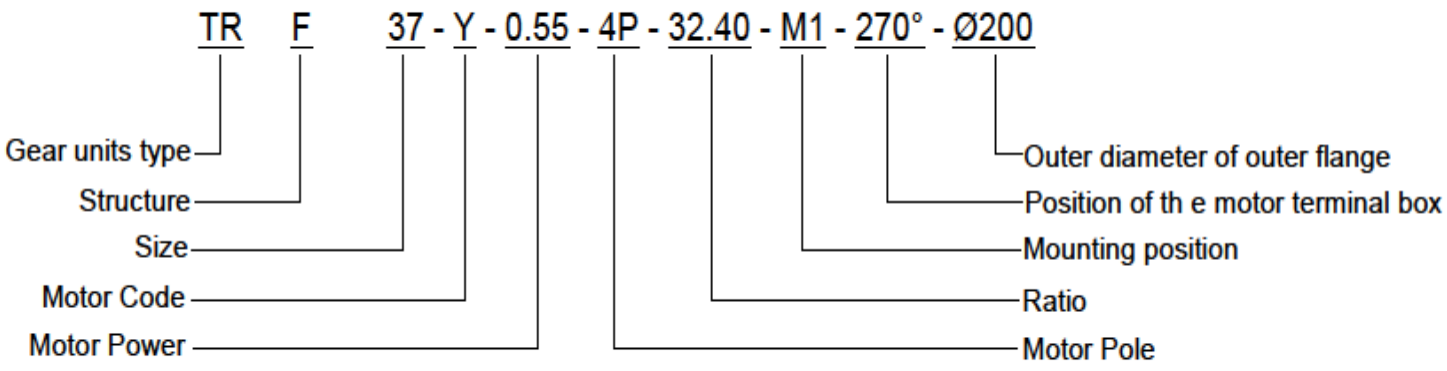


TR……Y…….
Foot-mounted helical gear units.



TRF…..Y…..
Flange-mounted helical gear units.

Type Designations:



R series:
helical gear units

Structure:

Foot-mounted	(–)
Flange-mounted	F
Foot-mounted with shaft input	S
Flange-mounted with shaft input	FS

Size:
(see selection table)

Motor code:

Common motor	Y(Y2)
Flameproof motor	B
Direct current motor	Z
Brake motor	YEJ
Multi-speed motor	D
Variable frequency motor	YVP
Electromagnetic variable speed motor	YCT
Metallurgy hoisting motor	R
Transduction braking motor	YVPJ
Roller way	G

Motor power, pole:
See selection table

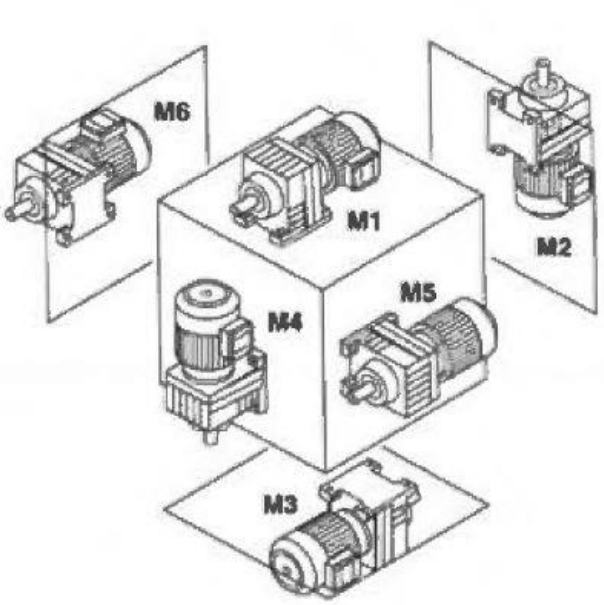
Ratio:
See selection table

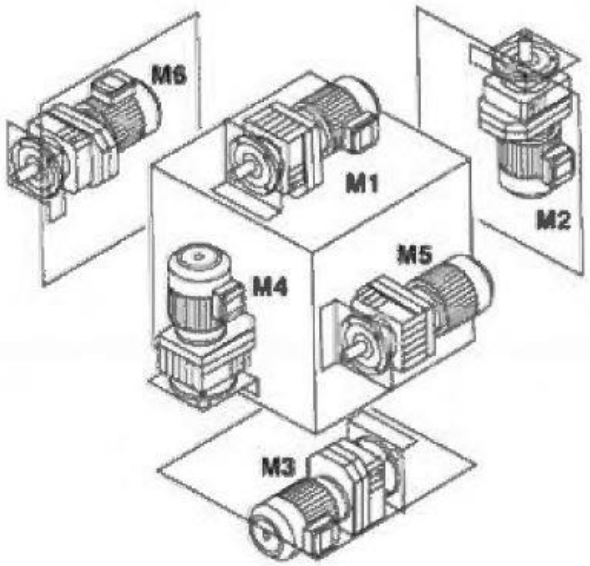
Mounting positions:
M1, M2, M3, M4, M5, M6.(See page3)

Positions of motor terminal box:
0°, 90°, 180°, 270°(See page2)

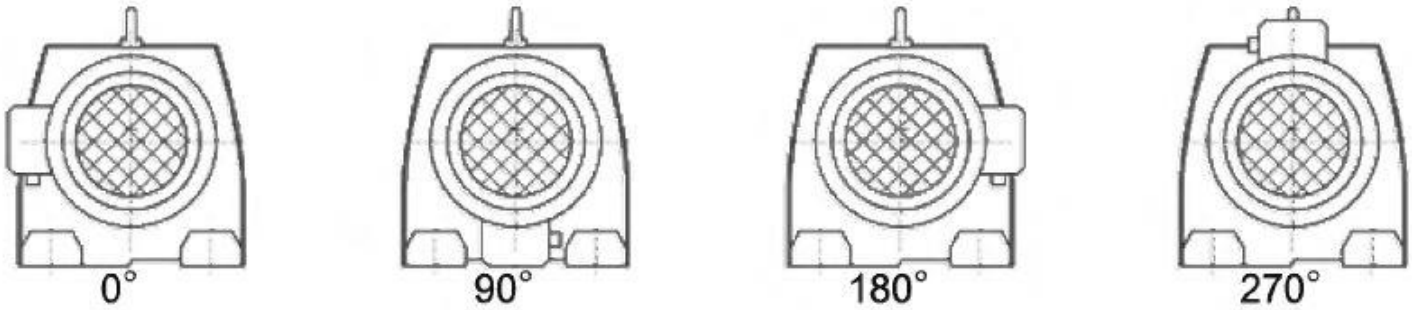
Outer diameter of output flange:
See the chart of mounting dimension (It will be omitted when foot mounting)

Mounting positions





Position of motor terminal box:



Input power rating and permissible torque

Size	17	27	37	47	57	67	77	87	97	107	137	147	167
Structure	TR							TRF					
Input power rating (kw)	0.18 ~ 0.75	0.18 ~ 3	0.18 ~ 3	0.18 ~ 5.5	0.18 ~ 7.5	0.18 ~ 7.5	0.18 ~ 11	0.55 ~ 22	0.55 ~ 30	2.2 ~ 45	5.5 ~ 55	11 ~ 90	11 ~ 160
Ratio	3.83 ~ 74.84	3.37 ~ 135.09	3.33 ~ 134.82	3.83 ~ 176.88	4.39 ~ 186.89	4.29 ~ 199.81	5.21 ~ 195.24	5.36 ~ 246.54	4.49 ~ 289.74	5.06 ~ 249.16	5.15 ~ 222.60	5.00 ~ 163.31	10.24 ~ 229.71
Permissible torque (n-m)	85	130	200	300	450	600	820	1550	3000	4300	8000	13000	18000

Gear unit weight

Size	TR-17	TR-27	TR-37	TR-47	TR-57	TR-67	TR-77	TR-87	TR-97	TR-107	TR-137	TR-147	TR-167
Weight (kgs)	4	5.5	8.5	10	18	25	36	63	101	153	220	400	700

Oil level chart:

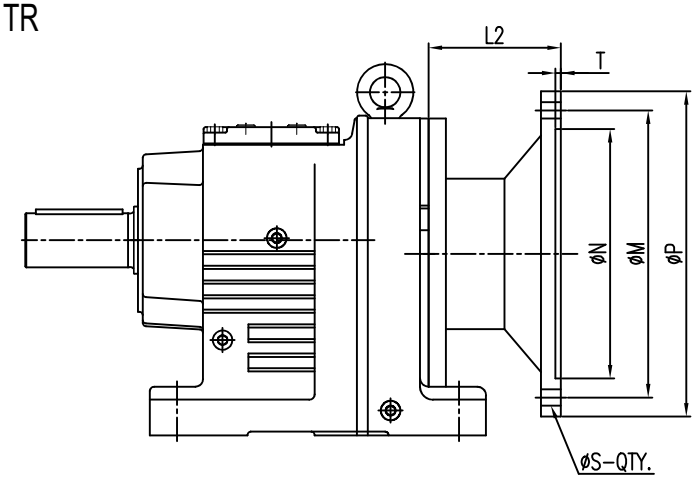
TR….

Size	Oil level (L)					
	M1	M2	M3	M4	M5	M6
TR-17	0.25	0.6	0.35	0.6	0.35	0.35
TR-27	0.25/0.4	0.7	0.4	0.7	0.4	0.4
TR-37	0.3/1	0.9	1	1.1	0.8	1
TR-47	0.7/1.5	1.6	1.5	1.7	1.5	1.5
TR-57	0.8/1.7	1.9	1.7	2.1	1.7	1.7
TR-67	1.1/2.3	2.6/3.5	2.8	3.2	1.8	2
TR-77	1.2/3	3.8/4.3	3.6	4.3	2.5	3.4
TR-87	2.3/6	6.7/8.4	7.2	7.7	6.3	6.5
TR-97	4.6/9.8	11.7/14	11.7	13.4	11.3	11.7
TR-107	6/13.7	16.3	16.9	19.2	13.2	15.9
TR-137	10/25	28	29.5	31.5	25	25
TR-147	15.4/40	46.5	48	52	39.5	41
TR-167	27/70	82	78	88	66	69

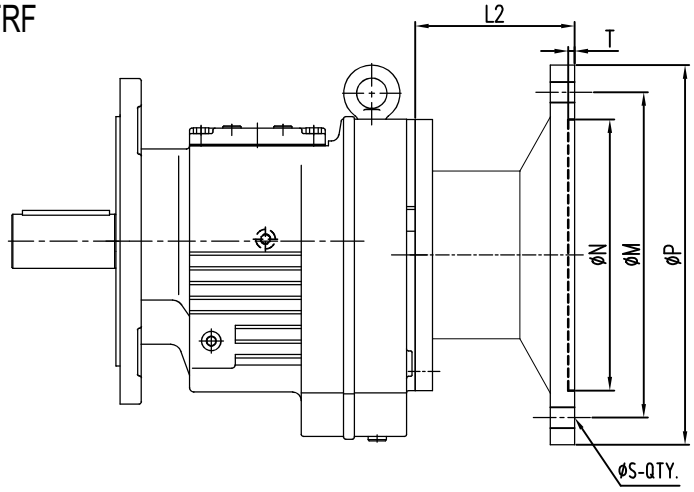
TRF….

Size	Oil level (L)					
	M1	M2	M3	M4	M5	M6
TRF-17	0.25	0.6	0.35	0.6	0.35	0.35
TRF-27	0.25/0.4	0.7	0.4	0.7	0.4	0.4
TRF-37	0.4/1	0.9	1	1.1	0.8	1
TRF-47	0.75/1.5	1.6	1.5	1.7	1.5	1.5
TRF-57	0.8/1.7	1.8	1.7	2	1.7	1.7
TRF-67	1.2/2.5	2.7/3.6	2.7	3.1	1.9	2.1
TRF-77	1.2/2.6	3.8/4.1	3.3	4.1	2.4	3
TRF-87	2.4/6	6.8/7.9	7.1	7.7	6.3	6.4
TRF-97	5.1/10.2	11.9/14	11.2	14	11.2	11.8
TRF-107	6.3/14.9	15.9	17	19.2	13.1	15.9
TRF-137	9.5/25	27	29	32.5	25	25
TRF-147	16.4/42	47	48	52	42	42
TRF-167	26/70	82	78	88	65	71

TR



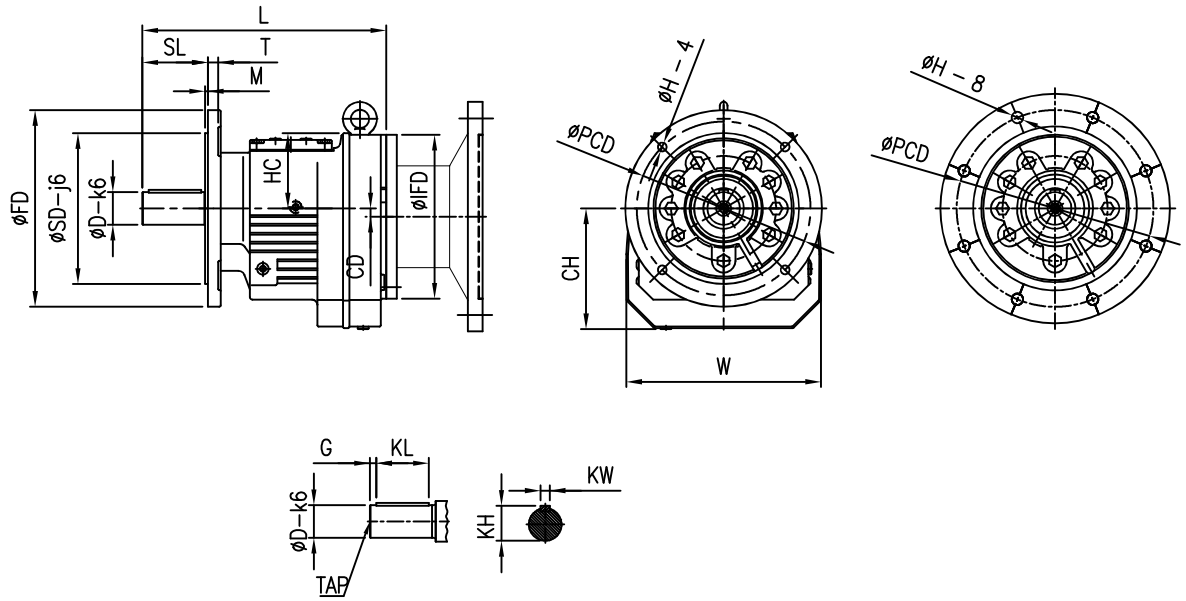
TRF



TR & TRF INPUT HOLLOW CONE DETAILS

MOTOR FRAME	TR & TRF SERIES	L2	T	P	M	N	QTY. - ØS
63 - B5	27	70	4	140	115	95	4 - Ø10
	37						
	47						
	57						
	67						
	77						
71 - B5	27	68	4	160	130	110	4 - Ø10
	37						
	47	84					
	57						
	67						
	77						
80 - B5 & 90 - B5	27	78.5	4	200	165	130	4 - Ø12
	37						
	47	85					
	57						
	67						
	77	95					
	87						
	97						
100 - B5 & 112 - B5	27	90	5	250	215	180	4 - Ø15
	37						
	47	91					
	57						
	67						
	77	95					
	87						
	97						
	107						
132 - B5	47	112	5	300	265	230	4 - Ø15
	57						
	67						
	77	117					
	87						
	97						
	107						
	137						
	147						
160 - B5 & 180 - B5	77	155	6	350	300	250	4 - Ø19
	87						
	97						
	107						
	137						
	147						
	167						
200 - B5	97	160	6	400	350	300	4 - Ø19
	107						
	137						
	147						
	167						
225 - B5 & 250 - B5	107	190	6	450	400	350	8 - Ø19
	137						
	147						
	167						
280 - B5	147	190	6	550	500	450	8 - Ø19
	167						
315 - B5	167	190	7	660	600	550	8 - Ø24

TRF

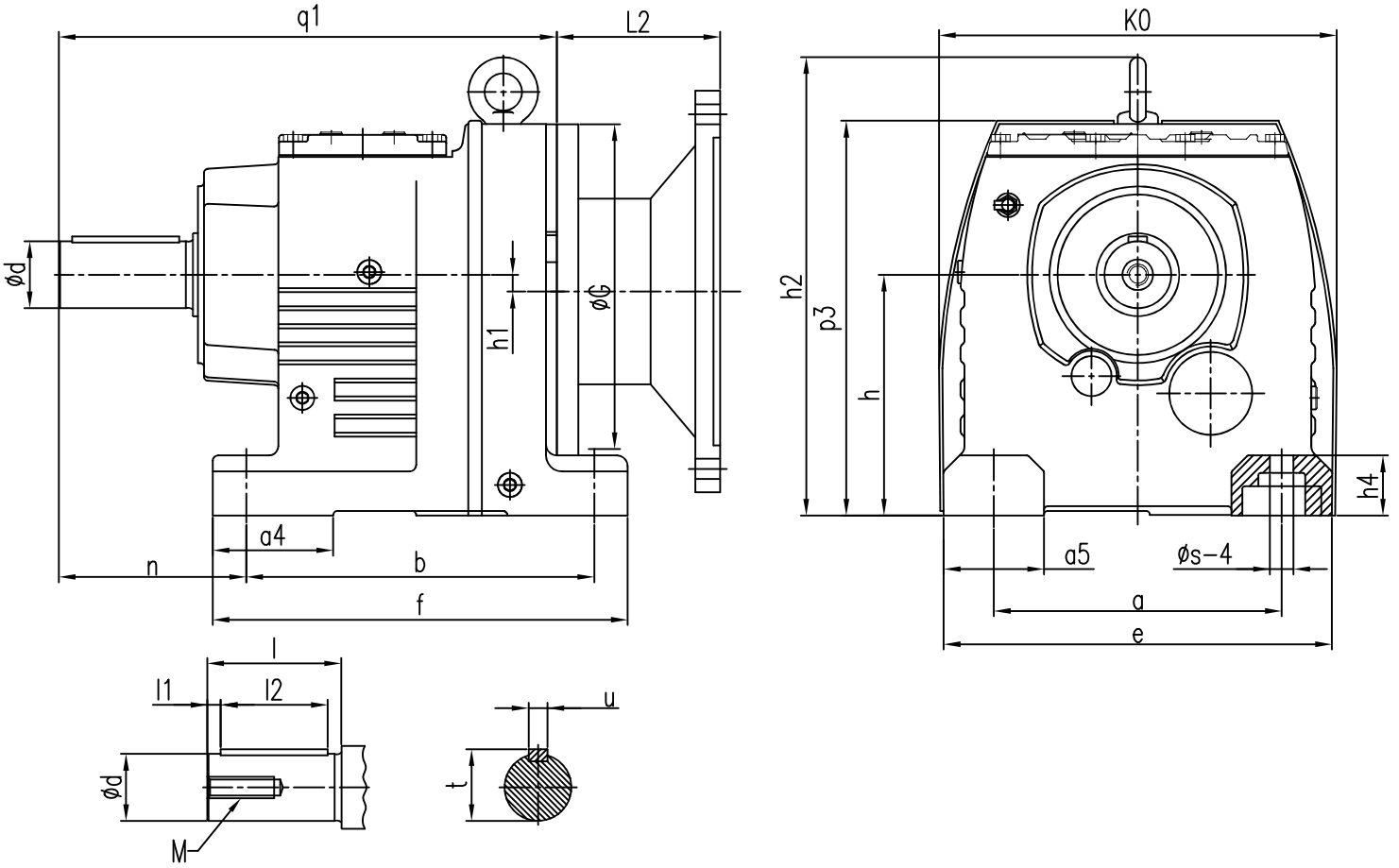


MODEL	L	W	CH	CD	HC	ØD	SL	TAP	KW	KH	KL	G	ØIFD
TRF-17	165	135	77	-	59	20-k6	40	M6	6	22.5	-	-	Ø120
TRF-27	199	142	92	3.4	-	25-k6	50	M10	8	28	40	3.5	Ø120
TRF-37	207	161	94	10.1	61	25-k6	50	M10	8	28	40	3.5	Ø120
TRF-47	235	178	118	14	72	30-k6	60	M10	8	33	50	3.5	Ø160
TRF-57	257	202	121	11.2	72	35-k6	70	M12	10	38	-	-	Ø160
TRF-67	280	215	134	20.7	82	35-k6	70	M12	10	38	56	7	Ø160
TRF-77	300	235	144	15.9	88	40-k6	80	M16	12	43	70	5	Ø200
TRF-87	372	297	184	12.6	115	50-k6	100	M16	14	53.5	80	10	Ø250
TRF-97	440	348	230	10.2	144	60-m6	120	M20	18	64	110	5	Ø300
TRF-107	495	409	255	20.4	130	70-m6	140	M20	20	74.5	125	7.5	Ø350
TRF-137	589	456	320	25.1	180	90-m6	170	M24	25	95	160	5	Ø400
TRF-147	695	540	355	33.4	210	110-m6	210	M24	28	116	180	15	Ø450
TRF-167	790	670	430	59.9	250	120-m6	210	M24	32	127	200	5	Ø550

OUTPUT FLANGE DETAILS

ØFD	MODEL	ØSD	T	M	ØPCD	ØH-QTY.
120	TRF-17	80-j6	8	3	100	8.5 - 4
	TRF-27					6.5 - 4
	TRF-27					6.6 - 4
140	TRF-17	95-j6	9	3	115	8.5 - 4
	TRF-27					
	TRF-47		10			9 - 4
160	TRF-27	110-j6	10	3.5	130	8.5 - 4
	TRF-37					9 - 4
	TRF-47					
200	TRF-37	130-j6	12	3.5	165	11 - 4
	TRF-47					
	TRF-57					
	TRF-67					
250	TRF-57	180-j6	12	3.5	215	13.5 - 4
	TRF-67		15	4		
	TRF-77					
300	TRF-77	230-j6	16	4	265	13.5 - 4
	TRF-87					
350	TRF-87	250-j6	18	5	300	17.5 - 4
	TRF-97					
	TRF-107		20			
450	TRF-97	350-j6	22	5	400	17.5 - 8
	TRF-107					
	TRF-137					
	TRF-147					
550	TRF-137	450-j6	25	5	500	17.5 - 8
	TRF-147		28			
	TRF-167		25			
660	TRF-167	550-j6	28	6	600	22 - 8

TR



MODEL	q1	Ø d	n	a4	b	f	h1	p3	h	a5	a	Ø G
	e	Ø s	h4	K0	l	l1	l2	M	u	t	h2	
TR-17	162	Ø20 k6	58	28	110	131	0	134	75 -0.5	25	110	Ø120
	135	Ø9	12	140	40	4	32	M6	6	22.5	-	
TR-27	193	Ø25 k6	75	27	130	152	3.4	147	90 -0.5	32	110	Ø120
	145	Ø9	18	151	50	3.5	40	M10	8	28	-	
TR-37	201	Ø25 k6	75	40	130	160	10.1	151	90 -0.5	35	110	Ø120
	145	Ø9	18	161	50	3.5	40	M10	8	28	-	
TR-47	235	Ø30 k6	90	50	165	195	14	187	115 -0.5	42	135	Ø160
	170	Ø13.5	24	178	60	3.5	50	M10	8	33	-	
TR-57	257	Ø35 k6	100	60	165	200	11.2	187	115 -0.5	55	135	Ø160
	190	Ø13.5	24	202	70	7	56	M12	10	38	-	
TR-67	280	Ø35 k6	100	60	195	235	20.7	212	130 -0.5	60	150	Ø160
	210	Ø14	30	215	70	7	56	M12	10	38	243	
TR-77	300	Ø40 k6	115	60	205	245	15.9	228	140 -0.5	60	170	Ø200
	230	Ø17.5	30	235	80	5	70	M16	12	43	269	
TR-87	372	Ø50 k6	140	90	260	310	12.6	295	180 -0.5	75	215	Ø250
	290	Ø17.5	45	297	100	10	80	M16	14	53.5	345	
TR-97	440	Ø60 m6	160	100	310	365	10.2	368	225 -0.5	90	250	Ø300
	340	Ø22	55	348	120	5	110	M20	18	64	418	
TR-107	495	Ø70 m6	185	125	370	440	20.4	408	250 -0.5	110	290	Ø350
	400	Ø26	65	409	140	7.5	125	M20	20	74.5	475	
TR-137	589	Ø90 m6	220	130	410	490	25.1	495	315 -0.5	110	340	Ø400
	450	Ø33	70	458	170	5	160	M24	25	95	562	
TR-147	695	Ø110 m6	260	150	500	590	33.4	565	355 -0.5	150	380	Ø450
	530	Ø39	80	540	210	15	180	M24	28	116	637	
TR-167	790	Ø120 m6	270	160	580	670	59.9	675	425 -0.5	160	500	Ø550
	660	Ø39	100	670	210	5	200	M24	32	127	749	