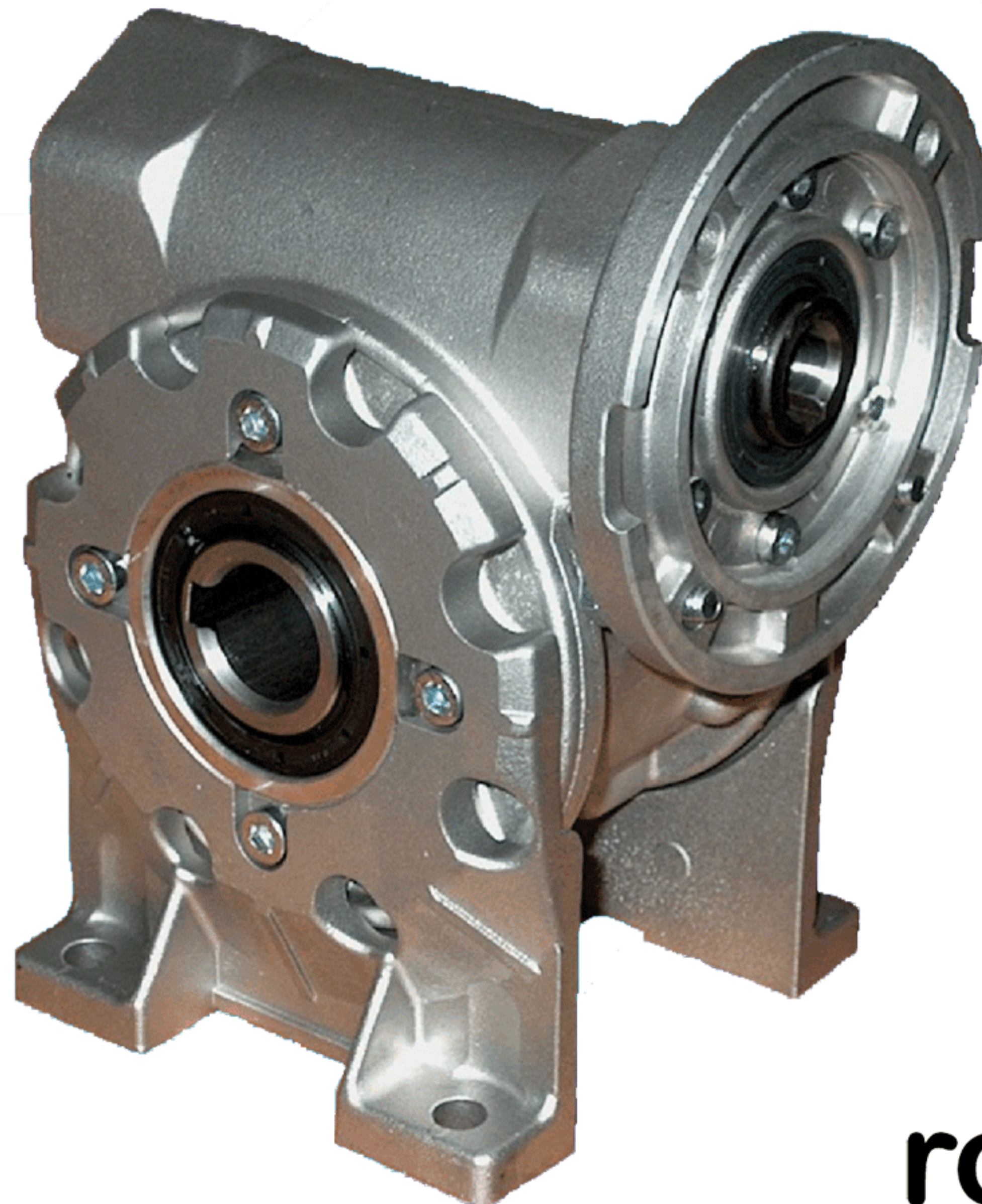




**NOTTINGHAM**  
**ELECTRICAL**  
**TRANSMISSIONS**

**rotor**

## **WORM GEAR REDUCERS**



**rotor ni<sup>®</sup>**

**Nottingham Electrical Transmissions**  
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# rotor ni<sup>®</sup> WORM GEAR REDUCERS

**RT..** Worm reducers with input shaft

**MRT..** Motor ready worm reducers (2 or 3 input flanges available with each gear reducer to accommodate various sizes of electric motors with B5, B14A and B14B flanges)

**MRP..** Motor-ready worm gear reducers equipped with 3:1 in-line primary reducer on the input side

**MRP..-P** Combinations of worm reducers with 3:1 in-line primary reducer on the input side and planetary 3.75:1 gearboxes on the output side (Not specified in this catalogue - for more details please contact your local stockist)

**MRT..-RT..** Combinations of two worm reducers to achieve higher gear ratios (Not specified in this catalogue - for more details please contact your local stockist)

- The worm gear assembly consists of single or multi-flight worm and worm gear.
- Selection of ratios from  $i = 5 \div 100$
- Low noise operation
- High torque utilisation
- Self-locking gears
- Low weight
- Easy integration in driven equipment

SIZE	M A T E R I A L						Detachable Feet interchangeable with Output Flange
	Housing	Worm	Worm Gear	Input Shaft (MRT-hollow/RT-solid)	Hollow Output Shaft		
(M)RT 30	Aluminium	Steel	Bronze	Steel	Steel	Stainless Steel*	◆
(M)RT 40	Aluminium	Steel	Bronze	Steel	Steel	Stainless Steel*	◆
(M)RT 50	Aluminium	Steel	Bronze	Steel	Steel	Stainless Steel*	◆
(M)RT 60	Aluminium	Steel	Bronze	Steel	Steel	Stainless Steel*	◆
(M)RT 70	Aluminium	Steel	Bronze	Steel	Steel	Stainless Steel*	◆
(M)RT 80	Aluminium	Steel	Bronze	Steel	Steel	Stainless Steel*	◆
(M)RT 100	Cast iron	Steel	Bronze	Steel	Steel	Stainless Steel*	
(M)RT 120	Cast iron	Steel	Bronze	Steel	Steel	Stainless Steel*	
(M)RT 150	Cast iron	Steel	Bronze	Steel	Steel	Stainless Steel*	
(M)RT 180	Cast iron	Steel	Bronze	Steel	Steel	Stainless Steel*	

\*Optional - not a stock item

## COMPATIBLE MOTOR-GEARBOX FLANGES Recommended combinations are highlighted.

Motor flanges: B14A, B14B, B5 Gearbox flanges: FxxS, FxxM, FxxL

GEARBOX	Motor 56 frame	Motor 63 frame	Motor 71 frame	Motor 80 frame	Motor 90 frame	Motor 100 frame	Motor 112 frame	Motor 132 frame	Motor 160 frame
(M)RT 30	B14A F30S	B14A F30M							
(M)RT 40		B14A F40S B14B F40L	B14A F40M						
(M)RT 50		B14A F50S B14B F50L	B14A F50M	B14A F50L					
(M)RT 60			B14B F60M B5 F60L	B14A F60S B14B F60L	B14A F60M B14B F60L				
(M)RT 70			B14B F70M B5 F70L	B14A F70S B14B F70L	B14A F70M B14B F70L				
(M)RT 80				B14B F80M B5 F80L	B14A F80S B14B F80M B5 F80L	B14A F80M B14B F80L			
(M)RT 100				B5 F100M	B14B F100S B5 F100M	B14A F100S B14B F100M B5 F100L	B14A F100S B14B F100M B5 F100L		
(M)RT 120					B14B F120S B5 F120M	B14A F120S B14B F120M B5 F120L	B14A F120S B14B F120M B5 F120L		
(M)RT 150						B14B F150S B5 F150M	B14B F150S B5 F150M	B14A F150S B5 F150L	
(M)RT 180						B5 F180S	B5 F180S	B5 F180M	B5 F180L



# GEARBOX SELECTION

The table below provides nominal data for each gearbox and ratio. Selection based on motor output and Service Factor must be carried out using the Exico Gearbox Selection software. Additional Gearbox Selection Table can be provided upon request as PDF computer file or as a hard copy.

2 pole Motors				
SIZE	Ratio	Output Torque	Input Power	Efficiency
MRT 30	5	13 Nm	0.87 kW	88%
MRT 30	7.5	13 Nm	0.60 kW	85%
MRT 30	10	14 Nm	0.48 kW	85%
MRT 30	12.5	14 Nm	0.42 kW	79%
MRT 30	15	14 Nm	0.35 kW	79%
MRT 30	20	14 Nm	0.28 kW	74%
MRT 30	25	16 Nm	0.28 kW	68%
MRT 30	30	18 Nm	0.27 kW	64%
MRT 30	40	16 Nm	0.20 kW	59%
MRT 30	50	14 Nm	0.15 kW	55%
MRT 30	60	13 Nm	0.14 kW	46%
MRT 30	70	12 Nm	0.11 kW	45%
MRT 30	80	9 Nm	0.07 kW	44%
MRT 30	100	8 Nm	0.06 kW	40%
MRT 40	5	30 Nm	2.00 kW	88%
MRT 40	7.5	31 Nm	1.38 kW	88%
MRT 40	10	34 Nm	1.16 kW	86%
MRT 40	12.5	33 Nm	0.91 kW	85%
MRT 40	15	34 Nm	0.79 kW	84%
MRT 40	20	33 Nm	0.60 kW	80%
MRT 40	25	30 Nm	0.45 kW	78%
MRT 40	30	36 Nm	0.49 kW	72%
MRT 40	40	34 Nm	0.38 kW	66%
MRT 40	50	33 Nm	0.31 kW	63%
MRT 40	60	30 Nm	0.25 kW	58%
MRT 40	70	29 Nm	0.23 kW	52%
MRT 40	80	25 Nm	0.19 kW	48%
MRT 40	100	24 Nm	0.15 kW	47%
MRT 50	5	55 Nm	3.54 kW	91%
MRT 50	7.5	56 Nm	2.49 kW	88%
MRT 50	10	60 Nm	2.00 kW	88%
MRT 50	12.5	57 Nm	1.54 kW	87%
MRT 50	15	64 Nm	1.45 kW	86%
MRT 50	20	62 Nm	1.08 kW	84%
MRT 50	25	54 Nm	0.80 kW	79%
MRT 50	30	67 Nm	0.87 kW	75%
MRT 50	40	65 Nm	0.65 kW	73%
MRT 50	50	58 Nm	0.52 kW	66%
MRT 50	60	56 Nm	0.45 kW	61%
MRT 50	70	54 Nm	0.38 kW	59%
MRT 50	80	50 Nm	0.31 kW	59%
MRT 50	100	48 Nm	0.27 kW	53%
MRT 60	5	93 Nm	5.99 kW	91%
MRT 60	7.5	101 Nm	4.39 kW	90%
MRT 60	10	94 Nm	3.06 kW	90%
MRT 60	12.5	93 Nm	2.48 kW	88%
MRT 60	15	101 Nm	2.27 kW	87%
MRT 60	20	94 Nm	1.64 kW	84%
MRT 60	25	106 Nm	1.55 kW	80%
MRT 60	30	117 Nm	1.49 kW	77%
MRT 60	40	110 Nm	1.12 kW	72%
MRT 60	50	103 Nm	0.93 kW	65%
MRT 60	60	96 Nm	0.74 kW	63%
MRT 60	70	92 Nm	0.62 kW	62%
MRT 60	80	87 Nm	0.51 kW	63%
MRT 60	100	81 Nm	0.41 kW	58%
MRT 70	5	124 Nm	7.90 kW	92%
MRT 70	7.5	129 Nm	5.54 kW	91%
MRT 70	10	139 Nm	4.43 kW	92%
MRT 70	12.5	150 Nm	3.91 kW	90%
MRT 70	15	153 Nm	3.40 kW	88%
MRT 70	20	143 Nm	2.44 kW	86%
MRT 70	25	136 Nm	1.92 kW	83%
MRT 70	30	162 Nm	2.03 kW	78%
MRT 70	40	149 Nm	1.48 kW	74%
MRT 70	50	151 Nm	1.25 kW	71%
MRT 70	60	140 Nm	1.07 kW	64%
MRT 70	70	128 Nm	0.92 kW	58%
MRT 70	80	110 Nm	0.73 kW	55%
MRT 70	100	108 Nm	0.65 kW	49%
MRT 80	5	160 Nm	9.98 kW	94%
MRT 80	7.5	164 Nm	6.89 kW	93%
MRT 80	10	160 Nm	5.10 kW	92%
MRT 80	12.5	185 Nm	4.82 kW	90%
MRT 80	15	210 Nm	4.72 kW	87%
MRT 80	20	198 Nm	3.34 kW	87%
MRT 80	25	189 Nm	2.64 kW	84%
MRT 80	30	241 Nm	3.10 kW	76%
MRT 80	40	227 Nm	2.25 kW	74%
MRT 80	50	209 Nm	1.70 kW	72%
MRT 80	60	188 Nm	1.41 kW	65%
MRT 80	70	188 Nm	1.31 kW	60%
MRT 80	80	180 Nm	1.12 kW	59%
MRT 80	100	159 Nm	0.82 kW	57%

4 pole Motors				
SIZE	Ratio	Output Torque	Input Power	Efficiency
MRT 30	5	16 Nm	0.54 kW	87%
MRT 30	7.5	16 Nm	0.37 kW	84%
MRT 30	10	17 Nm	0.30 kW	84%
MRT 30	12.5	17 Nm	0.26 kW	78%
MRT 30	15	17 Nm	0.21 kW	78%
MRT 30	20	17 Nm	0.17 kW	73%
MRT 30	25	19 Nm	0.17 kW	67%
MRT 30	30	21 Nm	0.16 kW	63%
MRT 30	40	19 Nm	0.12 kW	58%
MRT 30	50	17 Nm	0.09 kW	54%
MRT 30	60	16 Nm	0.09 kW	45%
MRT 30	70	14 Nm	0.07 kW	43%
MRT 30	80	11 Nm	0.05 kW	42%
MRT 30	100	9 Nm	0.03 kW	38%
MRT 40	5	36 Nm	1.21 kW	87%
MRT 40	7.5	37 Nm	0.83 kW	87%
MRT 40	10	41 Nm	0.71 kW	85%
MRT 40	12.5	39 Nm	0.54 kW	84%
MRT 40	15	40 Nm	0.47 kW	83%
MRT 40	20	39 Nm	0.36 kW	79%
MRT 40	25	36 Nm	0.27 kW	77%
MRT 40	30	43 Nm	0.30 kW	71%
MRT 40	40	41 Nm	0.23 kW	65%
MRT 40	50	39 Nm	0.18 kW	62%
MRT 40	60	36 Nm	0.15 kW	57%
MRT 40	70	34 Nm	0.14 kW	51%
MRT 40	80	30 Nm	0.12 kW	46%
MRT 40	100	28 Nm	0.09 kW	45%
MRT 50	5	65 Nm	2.12 kW	90%
MRT 50	7.5	67 Nm	1.51 kW	87%
MRT 50	10	71 Nm	1.20 kW	87%
MRT 50	12.5	68 Nm	0.93 kW	86%
MRT 50	15	76 Nm	0.87 kW	85%
MRT 50	20	74 Nm	0.65 kW	83%
MRT 50	25	64 Nm	0.48 kW	78%
MRT 50	30	80 Nm	0.53 kW	74%
MRT 50	40	77 Nm	0.39 kW	72%
MRT 50	50	69 Nm	0.31 kW	65%
MRT 50	60	67 Nm	0.27 kW	60%
MRT 50	70	64 Nm	0.23 kW	58%
MRT 50	80	60 Nm	0.19 kW	57%
MRT 50	100	57 Nm	0.16 kW	51%
MRT 60	5	110 Nm	3.58 kW	90%
MRT 60	7.5	120 Nm	2.64 kW	89%
MRT 60	10	112 Nm	1.84 kW	89%
MRT 60	12.5	110 Nm	1.48 kW	87%
MRT 60	15	120 Nm	1.36 kW	86%
MRT 60	20	112 Nm	0.99 kW	83%
MRT 60	25	126 Nm	0.94 kW	79%
MRT 60	30	139 Nm	0.89 kW	76%
MRT 60	40	131 Nm	0.68 kW	71%
MRT 60	50	122 Nm	0.56 kW	64%
MRT 60	60	114 Nm	0.45 kW	62%
MRT 60	70	109 Nm	0.37 kW	61%
MRT 60	80	104 Nm	0.31 kW	61%
MRT 60	100	96 Nm	0.25 kW	56%
MRT 70	5	147 Nm	4.74 kW	91%
MRT 70	7.5	153 Nm	3.32 kW	90%
MRT 70	10	165 Nm	2.66 kW	91%
MRT 70	12.5	178 Nm	2.35 kW	89%
MRT 70	15	182 Nm	2.04 kW	87%
MRT 70	20	170 Nm	1.47 kW	85%
MRT 70	25	162 Nm	1.16 kW	82%
MRT 70	30	193 Nm	1.22 kW	77%
MRT 70	40	177 Nm	0.89 kW	73%
MRT 70	50	180 Nm	0.75 kW	70%
MRT 70	60	166 Nm	0.64 kW	63%
MRT 70	70	152 Nm	0.56 kW	57%
MRT 70	80	131 Nm	0.45 kW	53%
MRT 70	100	128 Nm	0.40 kW	47%
MRT 80	5	190 Nm	5.99 kW	93%
MRT 80	7.5	195 Nm	4.14 kW	92%
MRT 80	10	190 Nm	3.06 kW	91%
MRT 80	12.5	220 Nm	2.90 kW	89%
MRT 80	15	250 Nm	2.84 kW	86%
MRT 80	20	236 Nm	2.01 kW	86%
MRT 80	25	225 Nm	1.59 kW	83%
MRT 80	30	286 Nm	1.86 kW	75%
MRT 80	40	270 Nm	1.36 kW	73%
MRT 80	50	249 Nm	1.03 kW	71%
MRT 80	60	223 Nm	0.85 kW	64%
MRT 80	70	224 Nm	0.80 kW	59%
MRT 80	80	214 Nm	0.69 kW	57%
MRT 80	100	189 Nm	0.50 kW	55%

6 pole Motors				
SIZE	Ratio	Output Torque	Input Power	Efficiency
MRT 30	5	18 Nm	0.39 kW	86%
MRT 30	7.5	18 Nm	0.27 kW	83%
MRT 30	10	19 Nm	0.22 kW	83%
MRT 30	12.5	19 Nm	0.19 kW	77%
MRT 30	15	19 Nm	0.16 kW	77%
MRT 30	20	19 Nm	0.12 kW	72%
MRT 30	25	21 Nm	0.12 kW	66%
MRT 30	30	23 Nm	0.12 kW	62%
MRT 30	40	21 Nm	0.09 kW	57%
MRT 30	50	19 Nm	0.07 kW	53%
MRT 30	60	18 Nm	0.06 kW	44%
MRT 30	70	16 Nm	0.05 kW	41%
MRT 30	80	12 Nm	0.04 kW	40%
MRT 30	100	10 Nm	0.03 kW	36%
MRT 40	5	40 Nm	0.88 kW	86%
MRT 40	7.5	41 Nm	0.60 kW	86%
MRT 40	10	46 Nm	0.52 kW	84%
MRT 40	12.5	44 Nm	0.40 kW	83%
MRT 40	15	45 Nm	0.34 kW	82%
MRT 40	20	44 Nm	0.27 kW	78%
MRT 40	25	40 Nm	0.20 kW	76%
MRT 40	30	48 Nm	0.22 kW	70%
MRT 40	40	46 Nm	0.17 kW	64%
MRT 40	50	44 Nm	0.14 kW	61%
MRT 40	60	40 Nm	0.11 kW	56%
MRT 40	70	38 Nm	0.10 kW	50%
MRT 40	80	34 Nm	0.09 kW	44%
MRT 40	100	31 Nm	0.07 kW	43%
MRT 50	5	73 Nm	1.55 kW	89%
MRT 50	7.5	75 Nm	1.10 kW	86%
MRT 50	10	79 Nm	0.87 kW	86%
MRT 50	12.5	76 Nm	0.67 kW	85%
MRT 50	15	85 Nm	0.64 kW	84%
MRT 50	20	83 Nm	0.48 kW	82%
MRT 50	25	71 Nm	0.35 kW	77%
MRT 50	30	89 Nm	0.38 kW	73%
MRT 50	40	86 Nm	0.29 kW	71%
MRT 50	50	77 Nm	0.23 kW	64%
MRT 50	60	75 Nm	0.20 kW	59%
MRT 50	70	71 Nm	0.17 kW	57%
MRT 50	80	67 Nm	0.14 kW	55%
MRT 50	100	64 Nm	0.12 kW	49%
MRT 60	5	123 Nm	2.60 kW	89%
MRT 60	7.5	134 Nm	1.91 kW	88%
MRT 60	10	125 Nm	1.34 kW	88%
MRT 60	12.5	123 Nm	1.08 kW	86%
MRT 60	15	134 Nm	0.99 kW	85%
MRT 60	20	125 Nm	0.72 kW	82%
MRT 60	25	141 Nm	0.68 kW	78%
MRT 60	30	155 Nm	0.65 kW	75%
MRT 60	40	146 Nm	0.49 kW	70%
MRT 60	50	136 Nm	0.41 kW	63%
MRT 60	60	127 Nm	0.33 kW	61%
MRT 60	70	122 Nm	0.27 kW	60%
MRT 60	80	116 Nm	0.23 kW	59%
MRT 60	100	107 Nm	0.19 kW	54%
MRT 70	5	164 Nm	3.43 kW	90%
MRT 70	7.5	171 Nm	2.41 kW	89%
MRT 70	10	184 Nm	1.93 kW	90%
MRT 70	12.5	199 Nm	1.70 kW	88%
MRT 70	15	203 Nm	1.48 kW	86%
MRT 70	20	190 Nm	1.07 kW	84%
MRT 70	25	181 Nm	0.84 kW	81%
MRT 70	30	216 Nm	0.89 kW	76%
MRT 70	40	198 Nm	0.65 kW	72%
MRT 70	50	201 Nm	0.55 kW	69%
MRT 70	60	185 Nm	0.47 kW	62%
MRT 70	70	170 Nm	0.41 kW	56%
MRT 70	80	146 Nm	0.34 kW	51%
MRT 70	100	143 Nm	0.30 kW	45%
MRT 80	5	212 Nm	4.34 kW	92%
MRT 80	7.5	218 Nm	3.01 kW	91%
MRT 80	10	212 Nm	2.22 kW	90%
MRT 80	12.5	246 Nm	2.11 kW	88%
MRT 80	15	279 Nm	2.06 kW	85%
MRT 80	20	264 Nm	1.46 kW	85%
MRT 80	25	251 Nm	1.15 kW	82%
MRT 80	30	319 Nm	1.35 kW	74%
MRT 80	40	302 Nm	0.99 kW	72%
MRT 80	50	278 Nm	0.75 kW	70%
MRT 80	60	249 Nm	0.62 kW	63%
MRT 80	70	250 Nm	0.58 kW	58%
MRT 80	80	239 Nm	0.51 kW	55%
MRT 80	100	211 Nm	0.38 kW	53%



2 pole Motors				
SIZE	Ratio	Output Torque	Input Power	Efficiency
MRT 100	7.5	269 Nm	11.43 kW	92%
MRT 100	10	294 Nm	9.58 kW	90%
MRT 100	12.5	370 Nm	9.54 kW	91%
MRT 100	15	391 Nm	8.59 kW	89%
MRT 100	20	345 Nm	5.95 kW	85%
MRT 100	25	336 Nm	4.81 kW	82%
MRT 100	30	421 Nm	5.21 kW	79%
MRT 100	40	404 Nm	4.00 kW	74%
MRT 100	50	387 Nm	3.24 kW	70%
MRT 100	60	370 Nm	2.78 kW	65%
MRT 100	80	320 Nm	1.83 kW	64%
MRT 100	100	286 Nm	1.55 kW	54%
MRT 120	7.5	454 Nm	18.88 kW	94%
MRT 120	10	538 Nm	16.96 kW	93%
MRT 120	12.5	580 Nm	14.79 kW	92%
MRT 120	15	606 Nm	13.16 kW	90%
MRT 120	20	530 Nm	9.03 kW	86%
MRT 120	25	530 Nm	7.31 kW	85%
MRT 120	30	681 Nm	8.22 kW	81%
MRT 120	40	639 Nm	6.25 kW	75%
MRT 120	50	589 Nm	4.73 kW	73%
MRT 120	60	572 Nm	4.24 kW	66%
MRT 120	80	538 Nm	2.86 kW	69%
MRT 120	100	454 Nm	2.08 kW	64%
MRT 150	7.5	900 Nm	37.43 kW	94%
MRT 150	10	942 Nm	30.02 kW	92%
MRT 150	12.5	1034 Nm	26.36 kW	92%
MRT 150	15	1026 Nm	22.28 kW	90%
MRT 150	20	1018 Nm	16.58 kW	90%
MRT 150	25	900 Nm	12.57 kW	84%
MRT 150	30	1245 Nm	14.31 kW	85%
MRT 150	40	1295 Nm	11.87 kW	80%
MRT 150	50	1127 Nm	8.37 kW	79%
MRT 150	60	1060 Nm	7.10 kW	73%
MRT 150	80	1051 Nm	5.84 kW	66%
MRT 150	100	967 Nm	4.30 kW	66%
MRT 180	7.5	1421 Nm	59.10 kW	94%
MRT 180	10	1564 Nm	49.84 kW	92%
MRT 180	12.5	1590 Nm	40.98 kW	91%
MRT 180	15	1665 Nm	36.98 kW	88%
MRT 180	20	1716 Nm	28.27 kW	89%
MRT 180	25	1531 Nm	21.12 kW	85%
MRT 180	30	1909 Nm	22.75 kW	82%
MRT 180	40	1867 Nm	17.32 kW	79%
MRT 180	50	1783 Nm	14.13 kW	74%
MRT 180	60	1766 Nm	12.51 kW	69%
MRT 180	80	1598 Nm	8.87 kW	66%
MRT 180	100	1581 Nm	7.13 kW	65%

4 pole Motors				
SIZE	Ratio	Output Torque	Input Power	Efficiency
MRT 100	7.5	320 Nm	6.87 kW	91%
MRT 100	10	350 Nm	5.77 kW	89%
MRT 100	12.5	440 Nm	5.73 kW	90%
MRT 100	15	465 Nm	5.16 kW	88%
MRT 100	20	410 Nm	3.58 kW	84%
MRT 100	25	400 Nm	2.90 kW	81%
MRT 100	30	500 Nm	3.13 kW	78%
MRT 100	40	480 Nm	2.41 kW	73%
MRT 100	50	460 Nm	1.95 kW	69%
MRT 100	60	440 Nm	1.68 kW	64%
MRT 100	80	380 Nm	1.11 kW	63%
MRT 100	100	340 Nm	0.96 kW	52%
MRT 120	7.5	540 Nm	11.35 kW	93%
MRT 120	10	640 Nm	10.20 kW	92%
MRT 120	12.5	690 Nm	8.89 kW	91%
MRT 120	15	720 Nm	7.91 kW	89%
MRT 120	20	630 Nm	5.43 kW	85%
MRT 120	25	630 Nm	4.40 kW	84%
MRT 120	30	810 Nm	4.95 kW	80%
MRT 120	40	760 Nm	3.76 kW	74%
MRT 120	50	700 Nm	2.85 kW	72%
MRT 120	60	680 Nm	2.56 kW	65%
MRT 120	80	640 Nm	1.72 kW	68%
MRT 120	100	540 Nm	1.28 kW	62%
MRT 150	7.5	1070 Nm	22.49 kW	93%
MRT 150	10	1120 Nm	18.04 kW	91%
MRT 150	12.5	1230 Nm	15.85 kW	91%
MRT 150	15	1220 Nm	13.40 kW	89%
MRT 150	20	1210 Nm	9.97 kW	89%
MRT 150	25	1070 Nm	7.56 kW	83%
MRT 150	30	1480 Nm	8.61 kW	84%
MRT 150	40	1540 Nm	7.14 kW	79%
MRT 150	50	1340 Nm	5.04 kW	78%
MRT 150	60	1260 Nm	4.28 kW	72%
MRT 150	80	1250 Nm	3.52 kW	65%
MRT 150	100	1150 Nm	2.63 kW	64%
MRT 180	7.5	1690 Nm	35.52 kW	93%
MRT 180	10	1860 Nm	29.96 kW	91%
MRT 180	12.5	1890 Nm	24.63 kW	90%
MRT 180	15	1980 Nm	22.24 kW	87%
MRT 180	20	2040 Nm	16.99 kW	88%
MRT 180	25	1820 Nm	12.71 kW	84%
MRT 180	30	2270 Nm	13.69 kW	81%
MRT 180	40	2220 Nm	10.43 kW	78%
MRT 180	50	2120 Nm	8.51 kW	73%
MRT 180	60	2100 Nm	7.55 kW	68%
MRT 180	80	1900 Nm	5.36 kW	65%
MRT 180	100	1880 Nm	4.31 kW	64%

6 pole Motors				
SIZE	Ratio	Output Torque	Input Power	Efficiency
MRT 100	7.5	357 Nm	4.98 kW	90%
MRT 100	10	391 Nm	4.19 kW	88%
MRT 100	12.5	491 Nm	4.16 kW	89%
MRT 100	15	519 Nm	3.75 kW	87%
MRT 100	20	458 Nm	2.60 kW	83%
MRT 100	25	447 Nm	2.11 kW	80%
MRT 100	30	559 Nm	2.28 kW	77%
MRT 100	40	536 Nm	1.75 kW	72%
MRT 100	50	514 Nm	1.42 kW	68%
MRT 100	60	491 Nm	1.22 kW	63%
MRT 100	80	424 Nm	0.81 kW	62%
MRT 100	100	380 Nm	0.72 kW	50%
MRT 120	7.5	603 Nm	8.24 kW	92%
MRT 120	10	715 Nm	7.40 kW	91%
MRT 120	12.5	771 Nm	6.46 kW	90%
MRT 120	15	804 Nm	5.74 kW	88%
MRT 120	20	704 Nm	3.95 kW	84%
MRT 120	25	704 Nm	3.20 kW	83%
MRT 120	30	905 Nm	3.60 kW	79%
MRT 120	40	849 Nm	2.74 kW	73%
MRT 120	50	782 Nm	2.08 kW	71%
MRT 120	60	760 Nm	1.87 kW	64%
MRT 120	80	715 Nm	1.26 kW	67%
MRT 120	100	603 Nm	0.95 kW	60%
MRT 150	7.5	1195 Nm	16.32 kW	92%
MRT 150	10	1251 Nm	13.10 kW	90%
MRT 150	12.5	1374 Nm	11.51 kW	90%
MRT 150	15	1363 Nm	9.73 kW	88%
MRT 150	20	1352 Nm	7.24 kW	88%
MRT 150	25	1195 Nm	5.49 kW	82%
MRT 150	30	1653 Nm	6.26 kW	83%
MRT 150	40	1720 Nm	5.20 kW	78%
MRT 150	50	1497 Nm	3.66 kW	77%
MRT 150	60	1407 Nm	3.11 kW	71%
MRT 150	80	1396 Nm	2.57 kW	64%
MRT 150	100	1285 Nm	1.95 kW	62%
MRT 180	7.5	1888 Nm	25.79 kW	92%
MRT 180	10	2078 Nm	21.76 kW	90%
MRT 180	12.5	2111 Nm	17.88 kW	89%
MRT 180	15	2212 Nm	16.16 kW	86%
MRT 180	20	2279 Nm	12.34 kW	87%
MRT 180	25	2033 Nm	9.23 kW	83%
MRT 180	30	2536 Nm	9.96 kW	80%
MRT 180	40	2480 Nm	7.59 kW	77%
MRT 180	50	2368 Nm	6.20 kW	72%
MRT 180	60	2346 Nm	5.50 kW	67%
MRT 180	80	2122 Nm	3.91 kW	64%
MRT 180	100	2100 Nm	3.14 kW	63%

### SERVICE FACTORS

APPLICATION	Number of starts per hour	Daily operation [hours]			
		<2	2+8	9+16	17+24
Shock-free operation, low inertia (fans, gear pumps, assembly lines, transportation screws and augers, liquid blenders, filling and wrapping machines)	<10	0.8	1	1.2	1.3
Light jolts at starting, irregular operation, medium inertia (conveyor belts, hoists, lifts, winches, kneading and mixing machines, woodworking machines, printing machines, textile machines)	<10	1.0	1.3	1.5	1.6
	10+50	1.2	1.4	1.7	1.9
	50+100	1.3	1.6	2.0	2.1
Heavy shock irregular operation, high inertia (concrete mixers, suction pumps, compressors, rams, steel rollers, heavy goods conveyor belts, bending and stamping machines, machines with irregular load and motion)	<10	1.2	1.5	1.8	2.0
	10+50	1.4	1.7	2.1	2.2
	50+100	1.6	2.0	2.3	2.5
	100+200	1.8	2.3	2.7	2.9

### LUBRICATION

RT & MRT gear reducers, MRP (with 3:1 primary reducer on the input side)

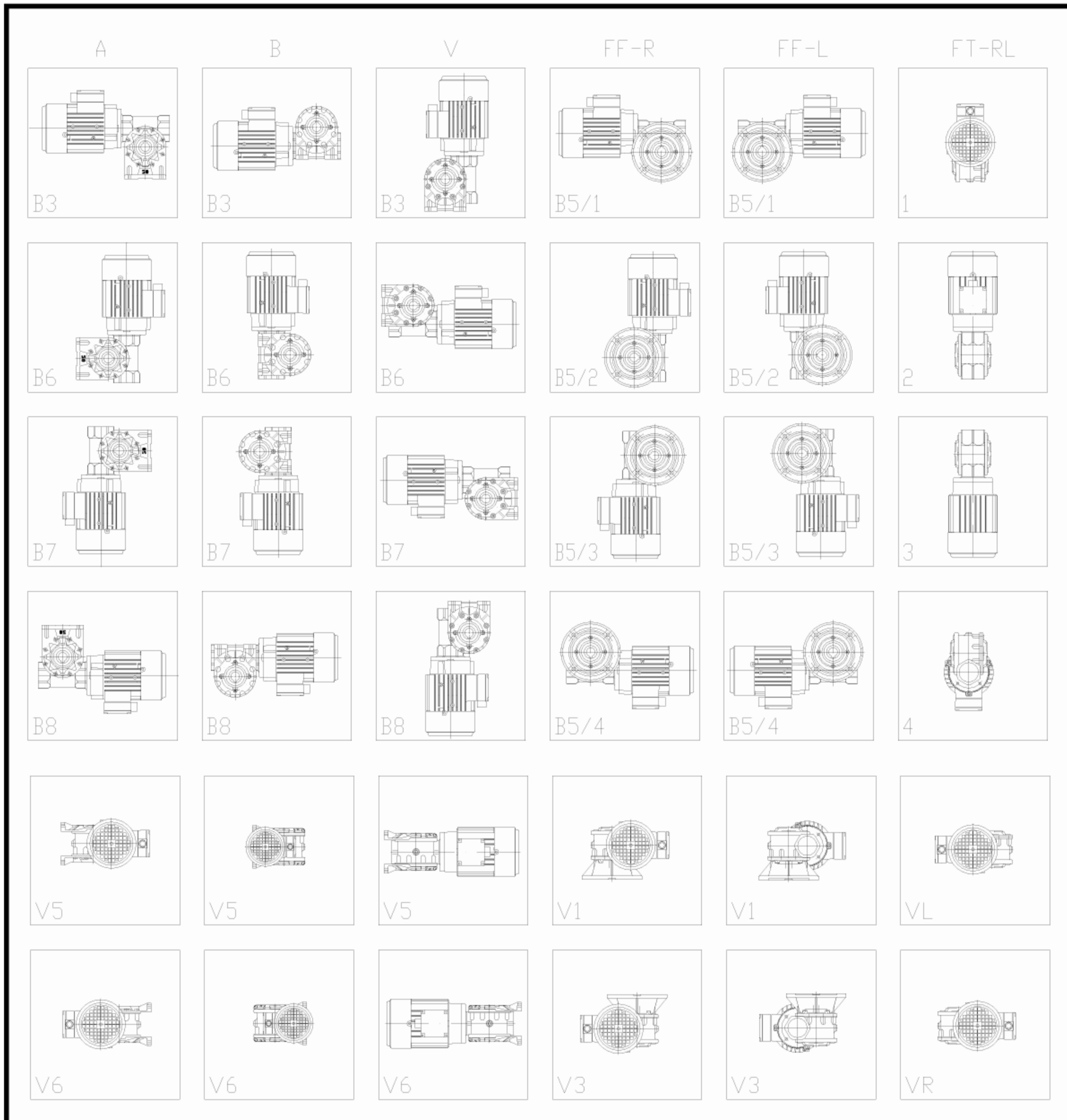
All gearboxes are delivered filled with oil as standard. The oil filling is suitable for all mounting positions.

SIZE	Oil fill
(M)RT 30	0.07 kg
(M)RT 40	0.13 kg
(M)RT 50	0.21 kg
(M)RT 60	0.36 kg
(M)RT 70	0.46 kg
(M)RT 80	0.70 kg
(M)RT 100	1.60 kg
(M)RT 120	2.20 kg
(M)RT 150	3.90 kg
(M)RT 180	7.00 kg
MRP 40	0.13+0.05 kg
MRP 50	0.21+0.05 kg
MRP 60	0.36+0.15 kg
MRP 70	0.46+0.20 kg
MRP 80	0.70+0.20 kg
MRP 100	1.60+0.30 kg
MRP 120	2.20+0.40 kg
MRP 150	3.90+0.30 kg
MRP 180	7.00+0.30 kg

AMBIENT TEMPERATURE	-10°C - +50°C		-30°C - +100°C	-40°C - +120°C	-10°C - +60°C
LUBRICANT	Mineral Oil		Synthetic Oil		Synthetic Grease
Operation Duty	normal	heavy	normal and heavy		normal and heavy
Agip	Blasia 320	Blasia 460	Blasia S	-	-
Aral	Degol BG 320	Degol BG 460	Degol GS 220	Degol PAS 230	Aralub BAB EP
Castrol	Alpha SP 320	Alpha SP 460	Alpha SH 220	-	Alphagel
ESSO	Spartan EP 320	Spartan EP 460	-	-	Grease S420
Kluber	Lamora 320	Lamora 460	Syntheso HT220	Syntheso HT220	Strugtovis P Liquid
Mobil	Mobilgear 632	Mobilgear 634	Glycoil 30	-	Glycoil Grease 00
Shell	Omala EP 320	Omala EP 460	Tivela Oil WB	Omala HD 320	Tivela GL 00
OMV	Öle HST 320 EP	Öle HST 460 EP	Öle PG 460 EP	-	Duraplex EP 00
Optimol	Optigear BM 320	Optigear BM 460	Optiflex A 220	-	Longtime PD 00
Total	Carter EP 320	Carter EP 460	-	-	-
Paramo	Paramol CLP 320	Paramol CLP 460	-	-	-



# MOUNTING POSITIONS & PERMISSIBLE SHAFT LOAD



Permissible Axial ( $F_{ax}$ ) and Radial ( $F_{rad}$ ) Load applicable on input and output shafts - Gearboxes with Ball Bearings (Standard)

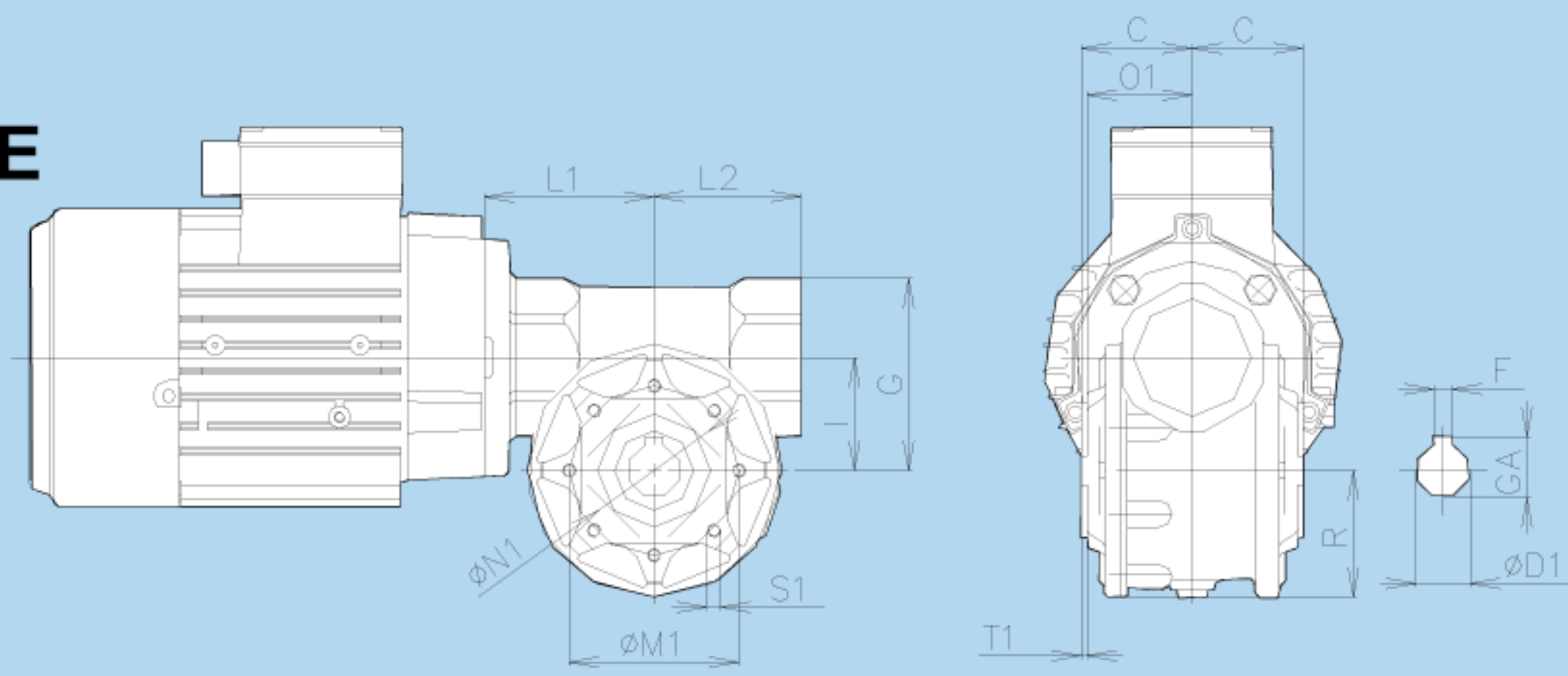
	Ratio $i$	SPEED	(M)RT 30A		(M)RT 40A		(M)RT 50A		(M)RT 60A		(M)RT 70A		(M)RT 80A		(M)RT 100		(M)RT 120		(M)RT 150		(M)RT 180	
			$F_{ax}$	$F_{rad}$	$F_{ax}$	$F_{rad}$	$F_{ax}$	$F_{rad}$	$F_{ax}$	$F_{rad}$	$F_{ax}$	$F_{rad}$	$F_{ax}$	$F_{rad}$	$F_{ax}$	$F_{rad}$	$F_{ax}$	$F_{rad}$	$F_{ax}$	$F_{rad}$	$F_{ax}$	$F_{rad}$
Input Shaft		1400 rpm	20 N	100 N	40 N	200 N	60 N	300 N	70 N	340 N	70 N	360 N	90 N	450 N	130 N	650 N	170 N	850 N	260 N	1300 N	500 N	1550 N
Output Shaft	5	280 rpm	110 N	600 N	150 N	780 N	200 N	980 N	300 N	1490 N	380 N	1880 N	450 N	2180 N								
	7.5	187 rpm	130 N	660 N	170 N	870 N	220 N	1100 N	330 N	1650 N	420 N	2090 N	500 N	2490 N	580 N	2880 N	810 N	4050 N	1100 N	5480 N	1190 N	5950 N
	10	140 rpm	150 N	730 N	190 N	960 N	240 N	1220 N	360 N	1810 N	460 N	2300 N	550 N	2740 N	630 N	3170 N	890 N	4460 N	1210 N	6040 N	1310 N	6550 N
	12.5	112 rpm	160 N	790 N	210 N	1030 N	260 N	1310 N	390 N	1950 N	490 N	2470 N	590 N	2950 N	680 N	3410 N	960 N	4800 N	1300 N	6510 N	1410 N	7060 N
	15	93 rpm	170 N	840 N	220 N	1090 N	280 N	1390 N	420 N	2080 N	530 N	2630 N	630 N	3140 N	730 N	3630 N	1020 N	5110 N	1380 N	6920 N	1500 N	7510 N
	20	70 rpm	180 N	920 N	240 N	1200 N	310 N	1530 N	460 N	2280 N	580 N	2890 N	690 N	3450 N	800 N	3990 N	1120 N	5610 N	1520 N	7610 N	1650 N	8260 N
	25	56 rpm	200 N	990 N	260 N	1300 N	330 N	1650 N	490 N	2460 N	620 N	3120 N	740 N	3720 N	860 N	4300 N	1210 N	6050 N	1640 N	8200 N	1780 N	8890 N
	30	47 rpm	210 N	1050 N	270 N	1370 N	350 N	1750 N	520 N	2610 N	660 N	3300 N	790 N	3940 N	910 N	4560 N	1280 N	6410 N	1740 N	8690 N	1890 N	9430 N
	40	35 rpm	230 N	1160 N	300 N	1520 N	390 N	1930 N	580 N	2880 N	730 N	3650 N	870 N	4350 N	1010 N	5030 N	1410 N	7070 N	1920 N	9590 N	2080 N	10400 N
	50	28 rpm	250 N	1250 N	330 N	1630 N	420 N	2080 N	620 N	3100 N	790 N	3930 N	940 N	4680 N	1080 N	5420 N	1520 N	7620 N	2070 N	10330 N	2240 N	11210 N
60	23 rpm	270 N	1330 N	350 N	1740 N	440 N	2220 N	660 N	3310 N	840 N	4190 N	1000 N	5000 N	1160 N	5790 N	1630 N	8140 N	2210 N	11030 N	2390 N	11960 N	
70	20 rpm	280 N	1380 N	360 N	1830 N	460 N	2320 N	680 N	3480 N	880 N	4360 N	1050 N	5240 N									
80	17.5 rpm	290 N	1460 N	380 N	1910 N	490 N	2430 N	720 N	3620 N	920 N	4590 N	1100 N	5480 N	1270 N	6340 N	1780 N	8910 N	2420 N	12080 N	2620 N	13110 N	
100	14 rpm	310 N	1570 N	410 N	2060 N	520 N	2620 N	780 N	3900 N	990 N	4950 N	1180 N	5900 N	1370 N	6830 N	1920 N	9600 N	2600 N	13010 N	2820 N	14120 N	

Permissible Axial ( $F_{ax}$ ) and Radial ( $F_{rad}$ ) Load applicable on input and output shafts - Gearboxes with Tapered Bearings (Special Execution)

	Ratio $i$	SPEED	(M)RT 30A		(M)RT 40A		(M)RT 50A		(M)RT 60A		(M)RT 70A		(M)RT 80A		(M)RT 100		(M)RT 120		(M)RT 150		(M)RT 180	
			$F_{ax}$	$F_{rad}$	$F_{ax}$	$F_{rad}$	$F_{ax}$	$F_{rad}$	$F_{ax}$	$F_{rad}$	$F_{ax}$	$F_{rad}$	$F_{ax}$	$F_{rad}$	$F_{ax}$	$F_{rad}$	$F_{ax}$	$F_{rad}$	$F_{ax}$	$F_{rad}$	$F_{ax}$	$F_{rad}$
Input Shaft		1400 rpm	20 N	100 N	40 N	200 N	60 N	300 N	70 N	340 N	70 N	360 N	90 N	450 N	130 N	650 N	170 N	850 N	260 N	1300 N	500 N	1550 N
Output Shaft	5	280 rpm	150 N	720 N	340 N	1690 N	430 N	2130 N	750 N	3620 N	830 N	4200 N	860 N	4410 N								
	7.5	187 rpm	160 N	790 N	370 N	1850 N	470 N	2350 N	820 N	4090 N	920 N	4620 N	960 N	4800 N	1310 N	6550 N	1760 N	8780 N	1870 N	9330 N	1930 N	9650 N
	10	140 rpm	170 N	860 N	400 N	2010 N	510 N	2570 N	890 N	4460 N	1010 N	5040 N	1050 N	5230 N	1430 N	7150 N	1910 N	9570 N	2040 N	10180 N	2100 N	10520 N
	12.5	112 rpm	180 N	920 N	430 N	2150 N	550 N	2750 N	950 N	4770 N	1080 N	5390 N	1120 N	5590 N	1530 N	7640 N	2050 N	10240 N	2180 N	10880 N	2250 N	11250 N
	15	93 rpm	200 N	980 N	460 N	2280 N	580 N	2900 N	1010 N	5040 N	1140 N	5700 N	1180 N	5920 N	1620 N	8080 N	2160 N	10820 N	2300 N	11510 N	2380 N	11900 N
	20	70 rpm	210 N	1060 N	500 N	2480 N	630 N	3160 N	1100 N	5490 N	1240 N	6210 N	1290 N	6440 N	1760 N	8800 N	2360 N	11790 N	2510 N	12530 N	2590 N	12960 N
	25	56 rpm	230 N	1140 N	530 N	2650 N	680 N	3380 N	1170 N	5870 N	1330 N	6640 N	1380 N	6890 N	1880 N	9410 N	2520 N	12600 N	2680 N	13400 N	2770 N	13850 N
	30	47 rpm	240 N	1200 N	560 N	2790 N	710 N	3560 N	1240 N	6190 N	1400 N	7000 N	1450 N	7260 N	1980 N	9910 N	2660 N	13280 N	2820 N	14120 N	2920 N	14600 N
	40	35 rpm	260 N	1310 N	610 N	3050 N	780 N	3890 N	1350 N	6760 N	1530 N	7640 N	1590 N	7930 N	2170 N	10830 N	2900 N	14510 N	3090 N	15430 N	3190 N	15950 N
	50	28 rpm	280 N	1400 N	650 N	3260 N	830 N	4160 N	1450 N	7230 N	1630 N	8170 N	1700 N	8480 N	2320 N	11580 N	3100 N	15510 N	3300 N	16490 N	3410 N	17050 N
60	23 rpm	300 N	1490 N	690 N	3460 N	880 N	4420 N	1530 N	7670 N	1730 N	8670 N	1800 N	9000 N	2460 N	12280 N	3290 N	16460 N	3500 N	17500 N	3620 N	18090 N	
70	20 rpm	310 N	1550 N	720 N	3610 N	910 N	4610 N	1600 N	8020 N	1810 N	9030 N	1870 N	9370 N									
80	17.5 rpm	320 N	1610 N	750 N	3760 N	960 N	4790 N	1660 N	8320 N	1880 N	9410 N	1950 N	9760 N	2670 N	13330 N	3570 N	17860 N	3800 N	18990 N	3930 N	19640 N	
100	14 rpm	350 N	1730 N	800 N	4020 N	1030 N	5130 N	1780 N	8900 N	2010 N	10060 N	2090 N	10440 N	2850 N	14260 N	3820 N	19100 N	4060 N	20310 N	4200 N	21000 N	

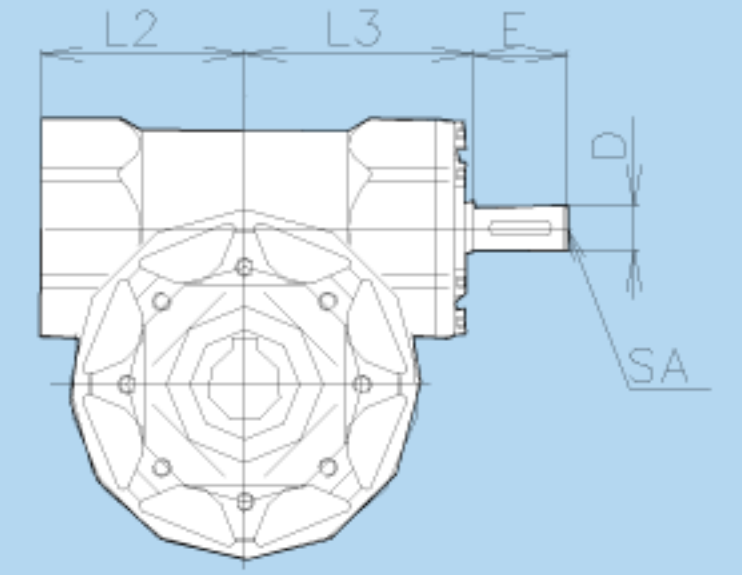
# MRT..-FT

## SMALL FLANGE



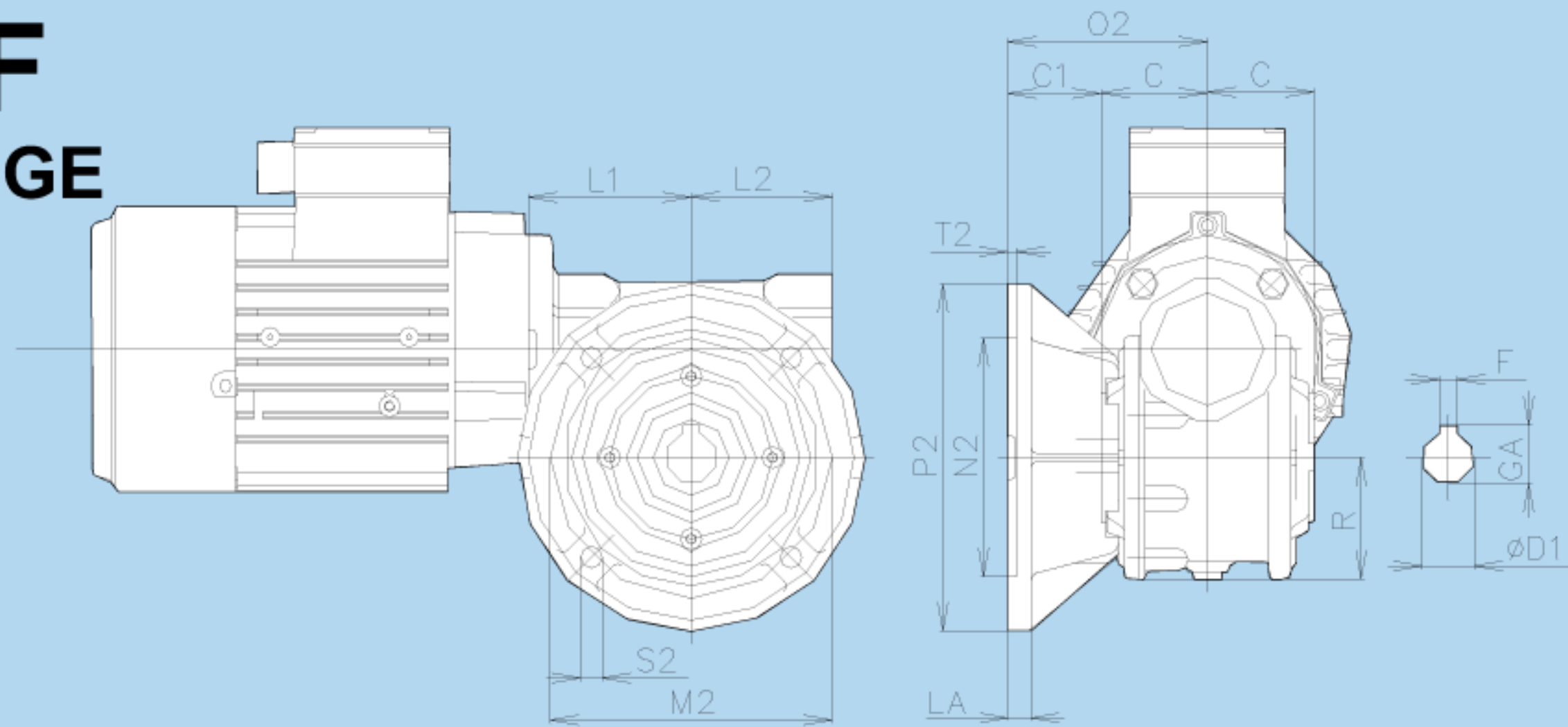
# INPUT SHAFT

## RT..-FT

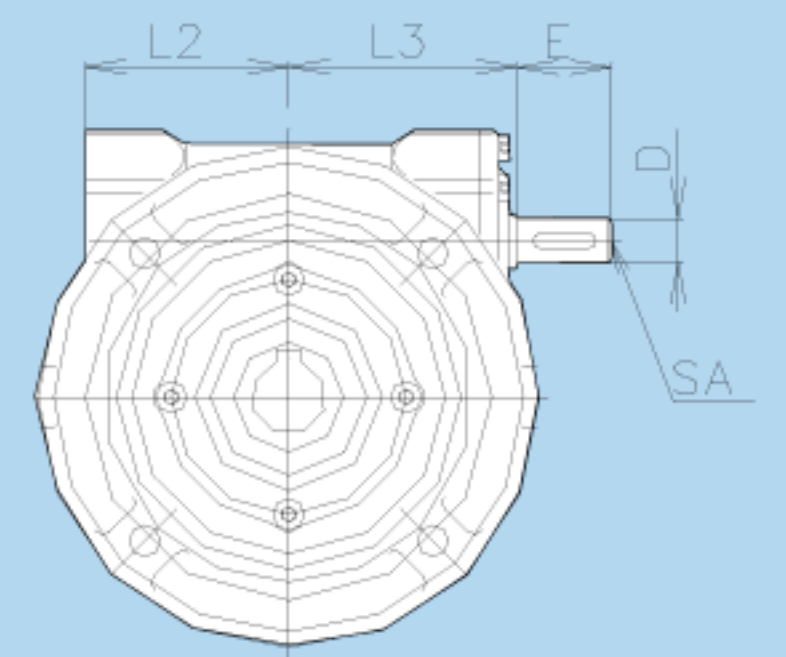


# MRT..-FF

## LARGE FLANGE

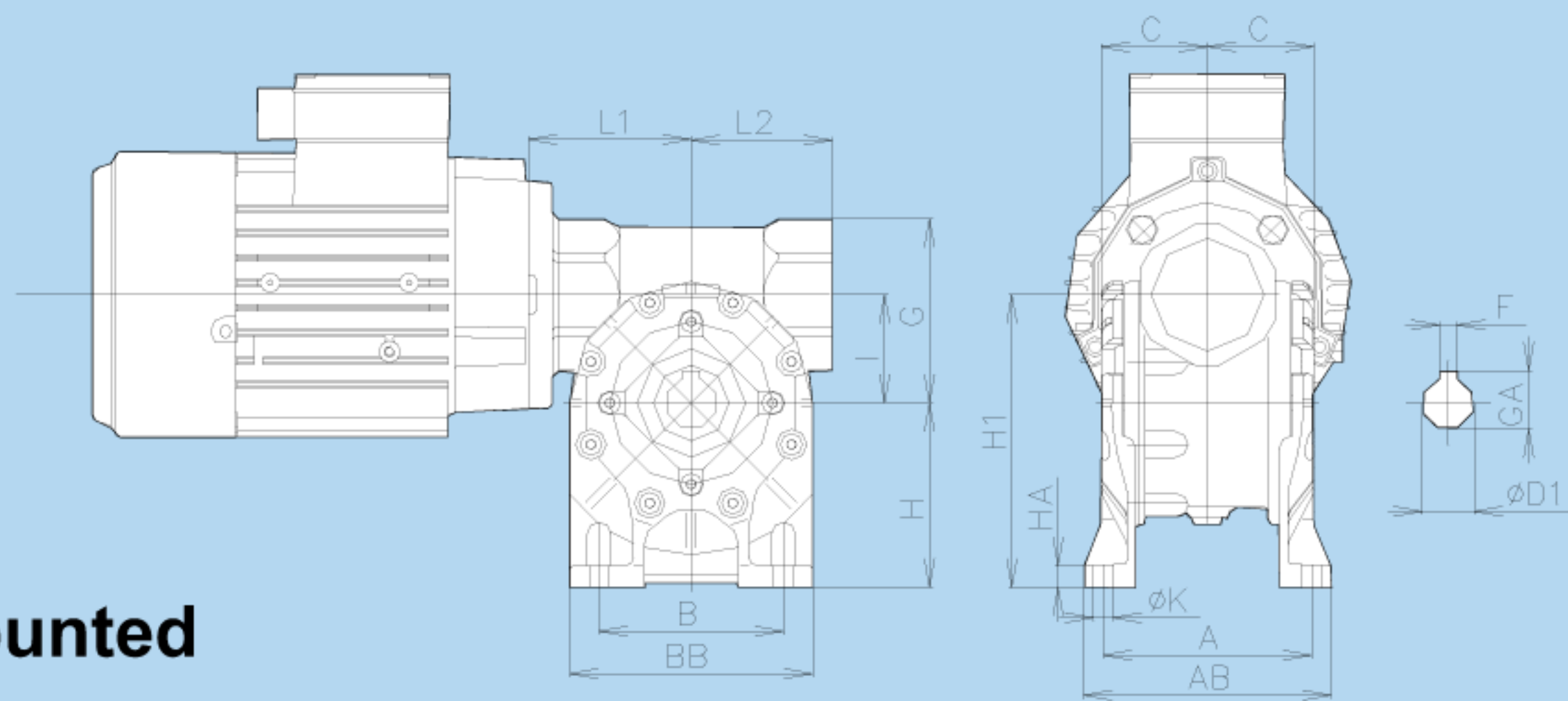


## RT..-FF

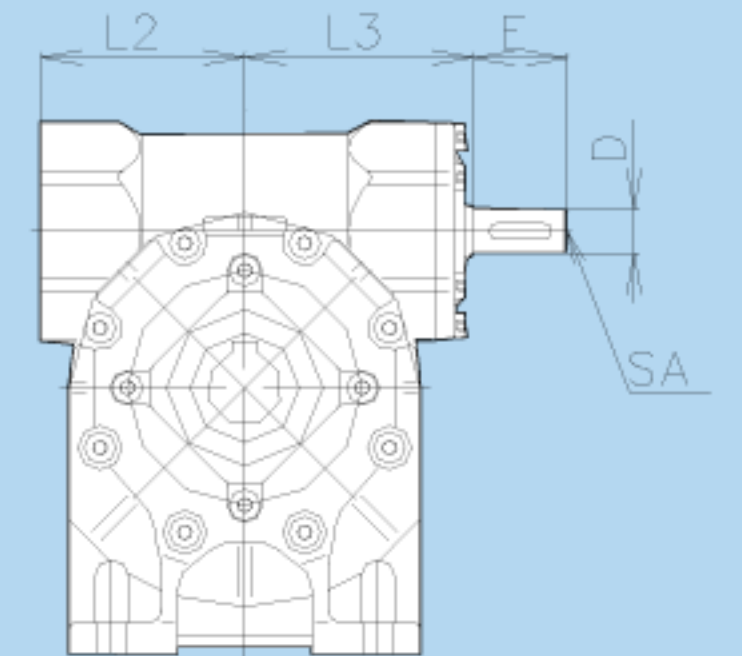


# MRT..-A

## FEET



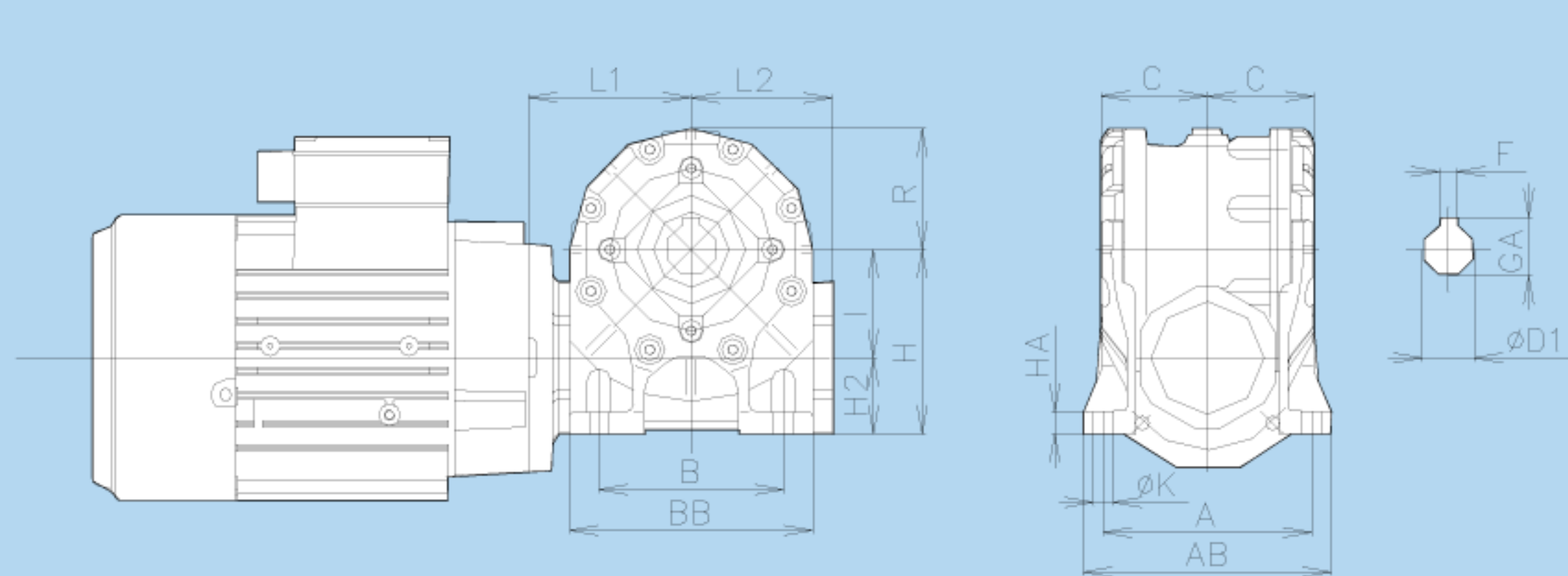
## RT..-A



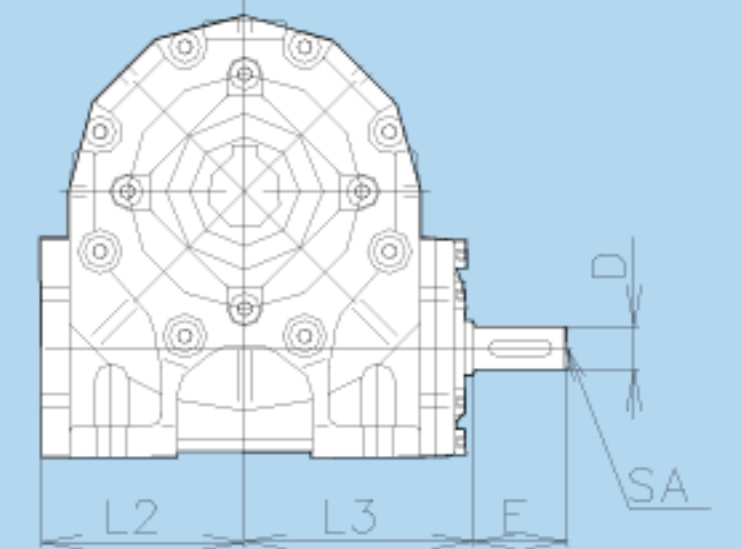
Motor top mounted

# MRT..-B

## FEET



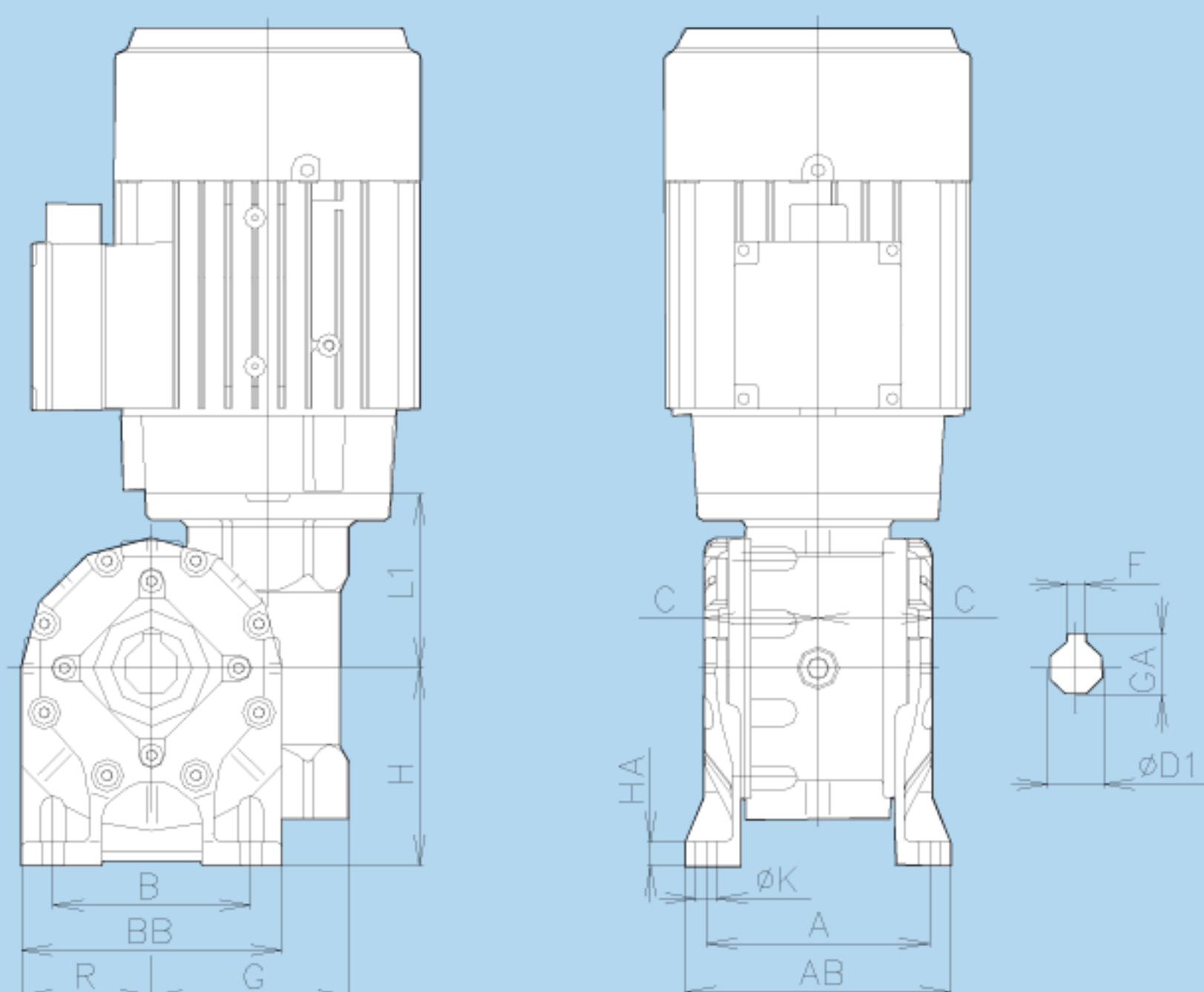
## RT..-B



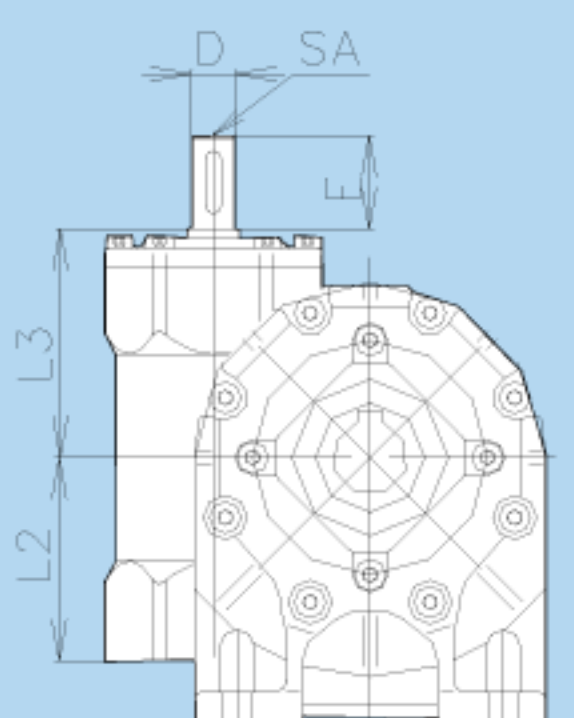
Motor bottom mounted

# MRT..-V

## FEET



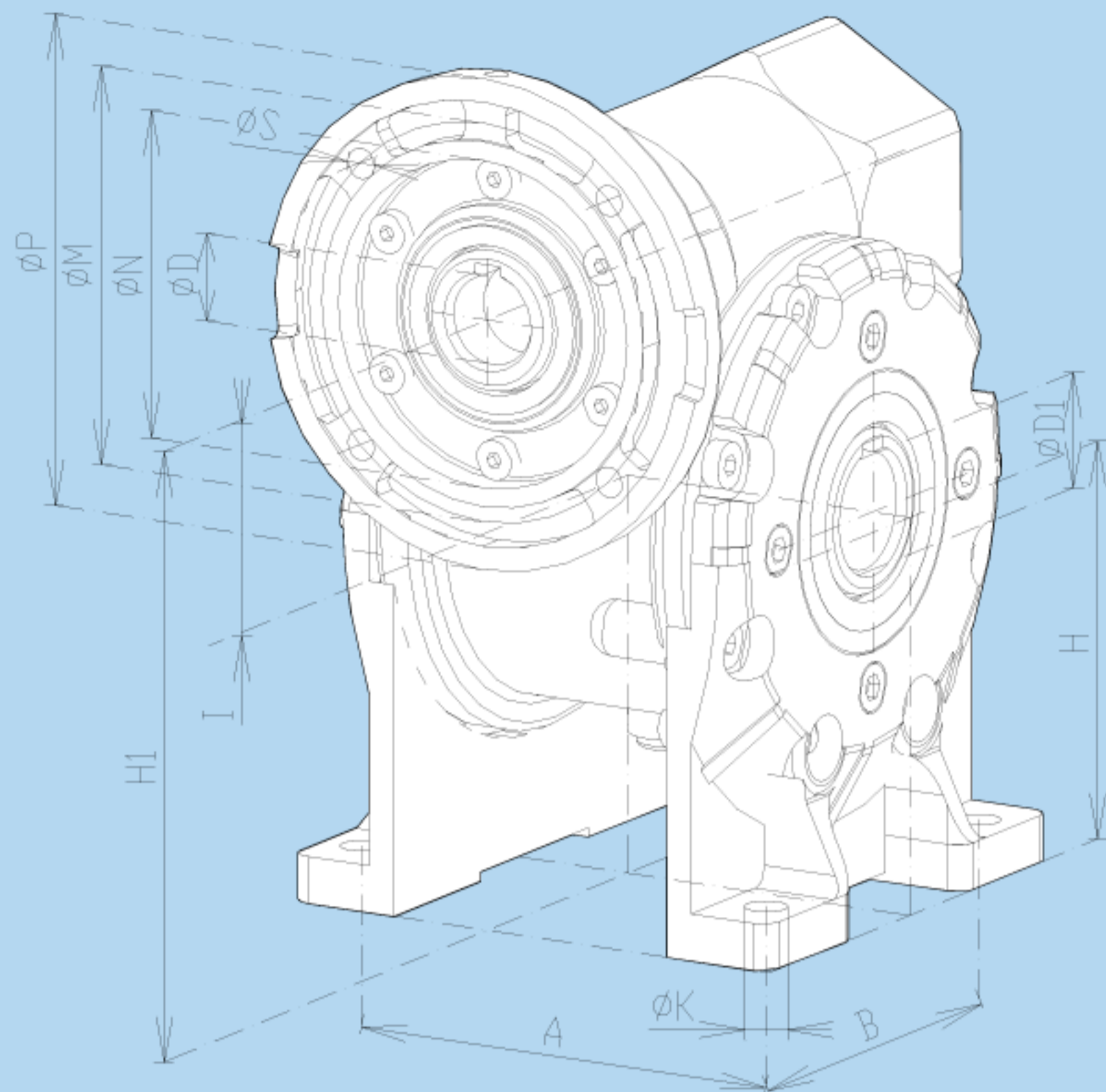
## RT..-V



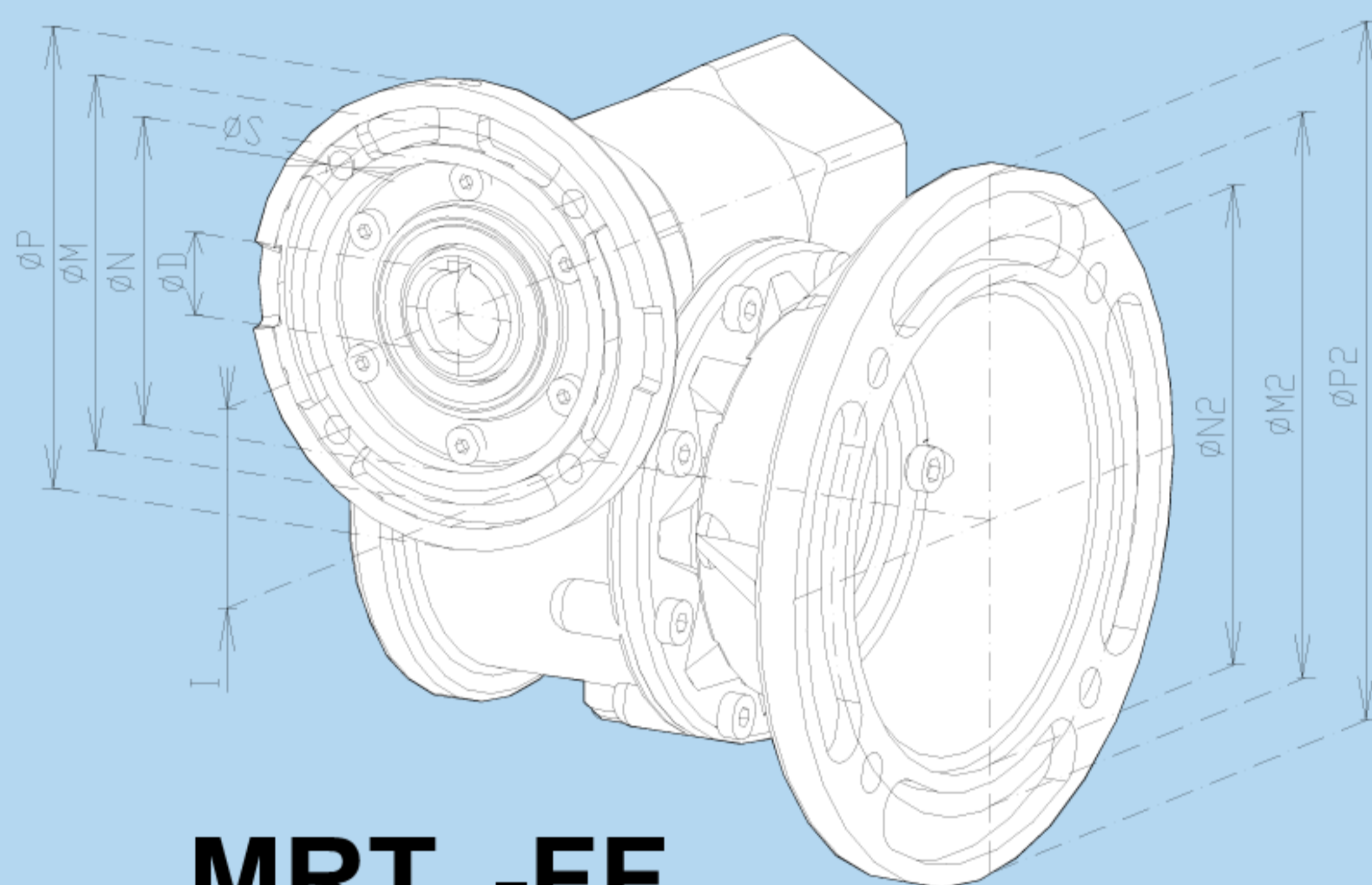
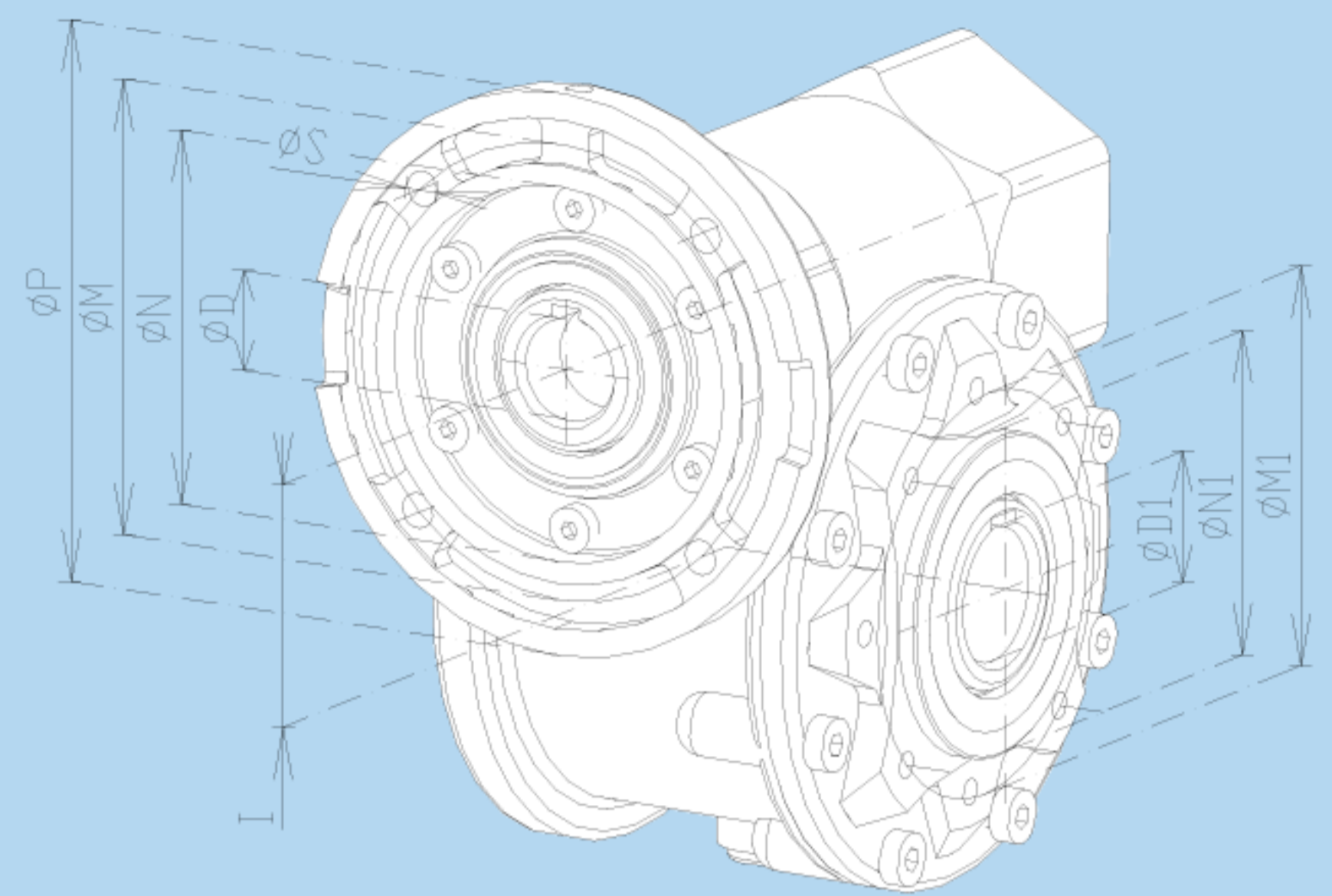
Motor vertically mounted



# MRT.-A

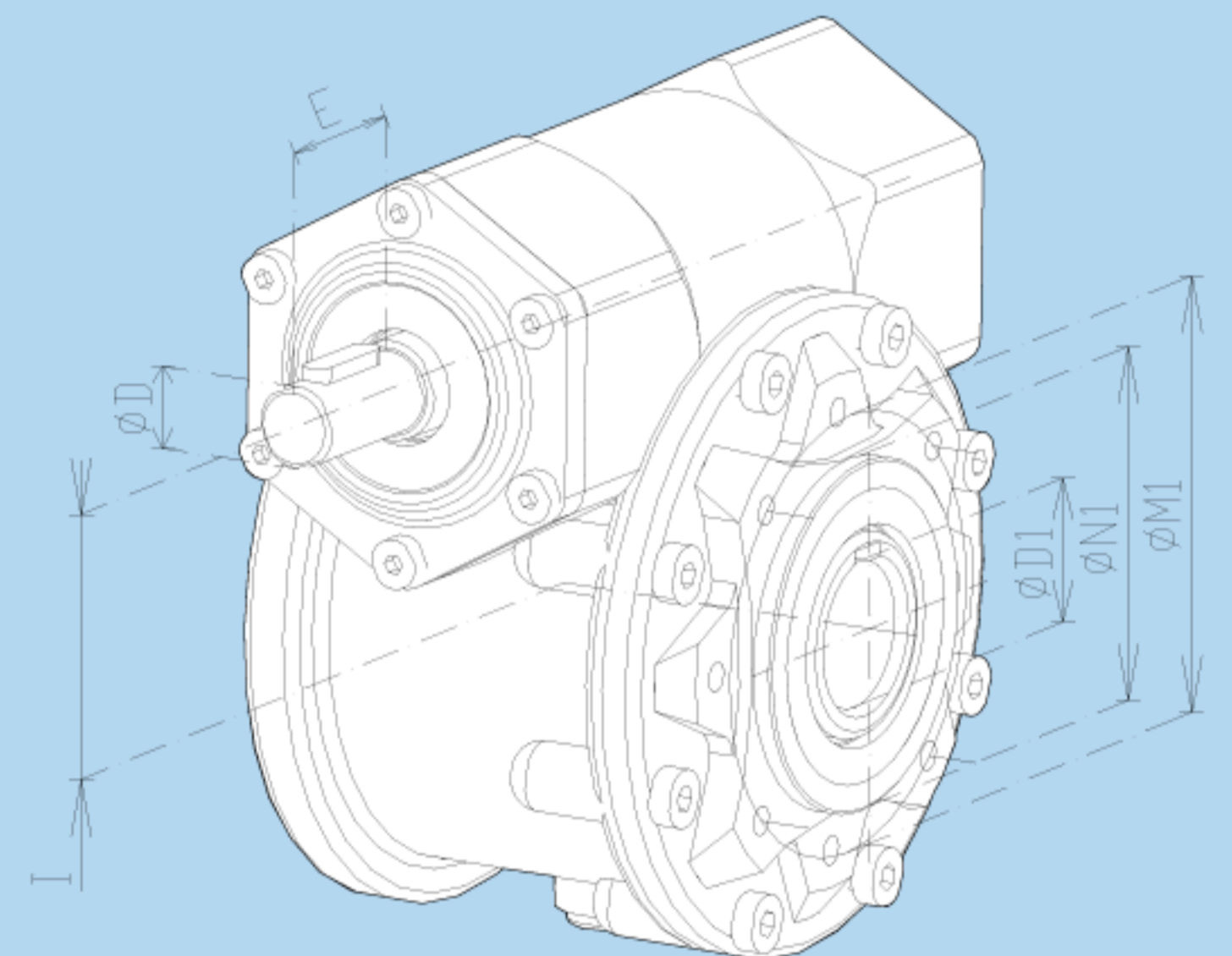


# MRT.-FT



# MRT.-FF

# INPUT SHAFT



# RT.-FT

## DIMENSIONS - STANDARD EXECUTIONS

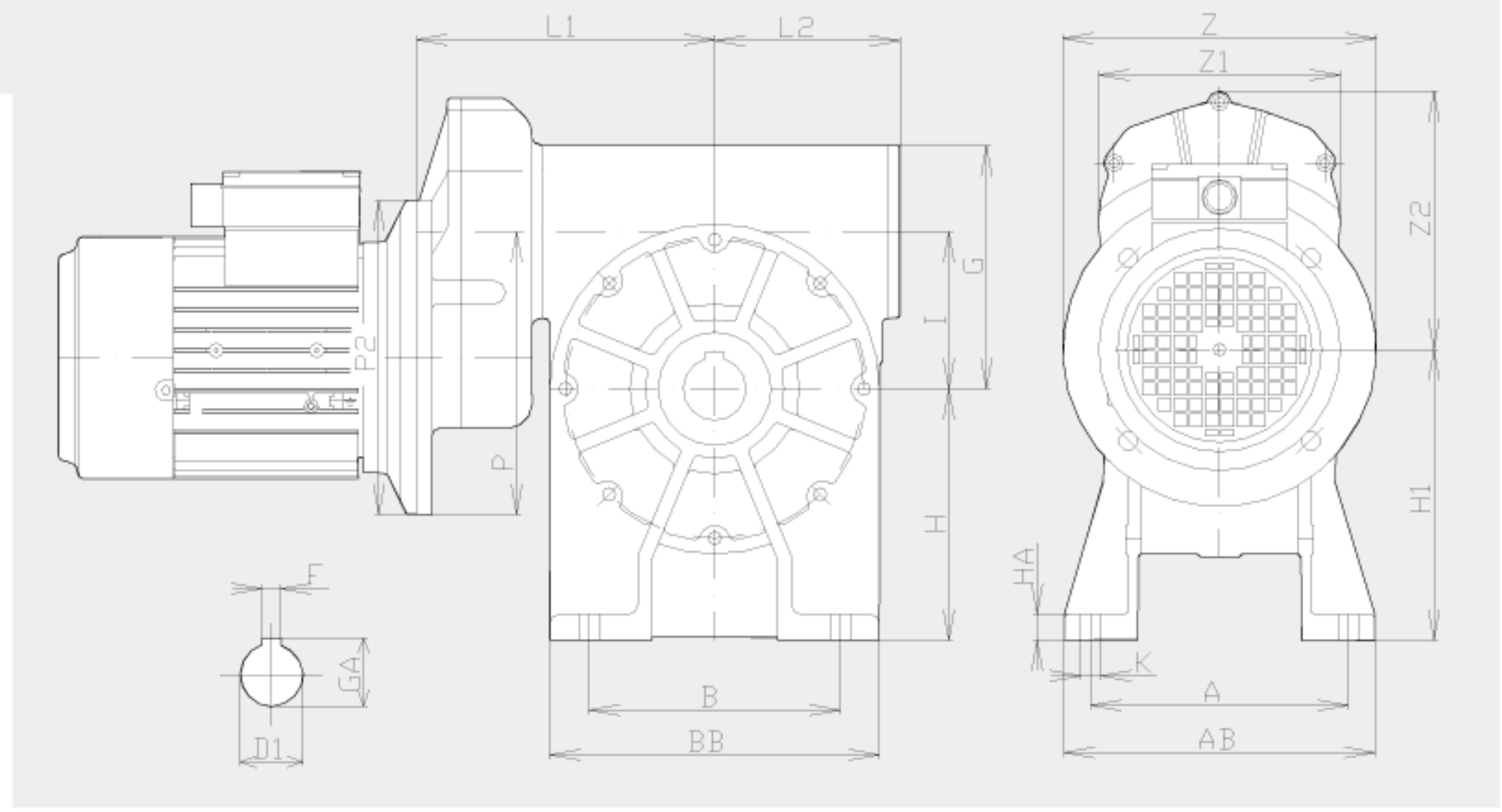
SIZE	A	AB	B	BB	C	D1H7	Dk6	E	F	GA	G	H	H1	H2	HA	I	K	R
(M)RT 30	66	80	50+55	82	31.5	14	9	20	5	16.3	51	52	82	22	6	30	7	42
(M)RT 40	84	100	70	96	41	19	11	23	6	21.8	70	71	111	31	8	40	7	48
(M)RT 50	96	114	85	112	49	24	14	30	8	27.3	84	85	135	35	10	50	9	56
(M)RT 60	111	137	95	140	60	25	19	40	8	28.3	99	100	160	40	12	60	11	70
(M)RT 70	115	141	120	156	60.5	28	19	40	8	31.3	109	115	185	45	12	70	11	76
(M)RT 80	147	180	140	180	70	35	24	50	10	38.3	128	142	222	62	13	80	11	90
(M)RT 100	164	198	160	210	76	40	28	60	12	43.3	147	160	260	60	16.5	100	13	107
(M)RT 120	180	216	200	250	86	45	38	80	14	48.8	175	185	305	65	18	120	15	128
(M)RT 150	220	260	270	340	110	55	42	110	16	59	219	230	380	80	20	150	19	160
(M)RT 180	264	318	300	370	132	60	48	110	18	65.2	264	280	460	100	22	180	22	189

SIZE	C1	L1	L2	L3	LA	SA	M1	N1	O1	S1	T1	M2	N2	P2	O2	S2	T2
(M)RT 30	18.5	55	46	48	6	M3x9	65	55	29	M6x7	2.5	65	50	80	50	6.5	4
(M)RT 40	41	65	57	63	11	M4x10	65	50	38.5	M6x12	2.5	115	95	140	79	9	4
(M)RT 50	43	75	65	73	11	M5x12	75	60	46.5	M6x12	2.5	130	110	160	92	10	4
(M)RT 60	42	93	75	91	12	M6x16	85	70	57.5	M6x12	2.5	165	130	200	102	11	4
(M)RT 70	51	101	81	99	12	M6x16	100	80	57	M8x16	3.5	165	130	200	111.5	11	5
(M)RT 80	50	110	95	108	12	M8x19	130	110	66.5	M10x16	3.5	165	130	200	120	11	5
(M)RT 100	76	130	117	122	15	M8x19	130	110	72.5	M10x20	3.5	215	180	250	135	13	5
(M)RT 120	86	152	138	144	15	M10x22	165	130	80.5	M12x25	3.5	215	180	250	145	13	5
(M)RT 150	110	188	171	179	20	M12x25	215	180	106	M14x25	4	300	250	350	208	17	6
(M)RT 180	132	223	202	218	20	M16x25	265	230	129	M16x25	4	350	300	400	220	18	5



# MRP Gear Reducers

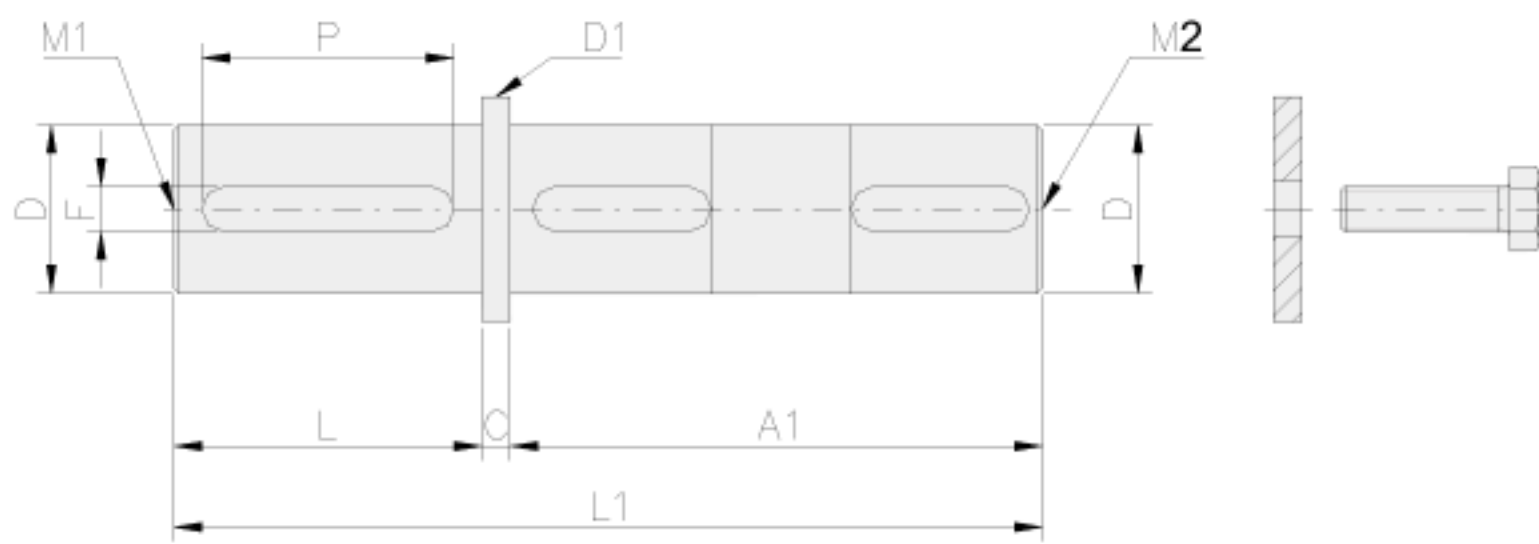
Motor-ready Gear Reducers with in-line 3:1 Primary Reducer on the input side.



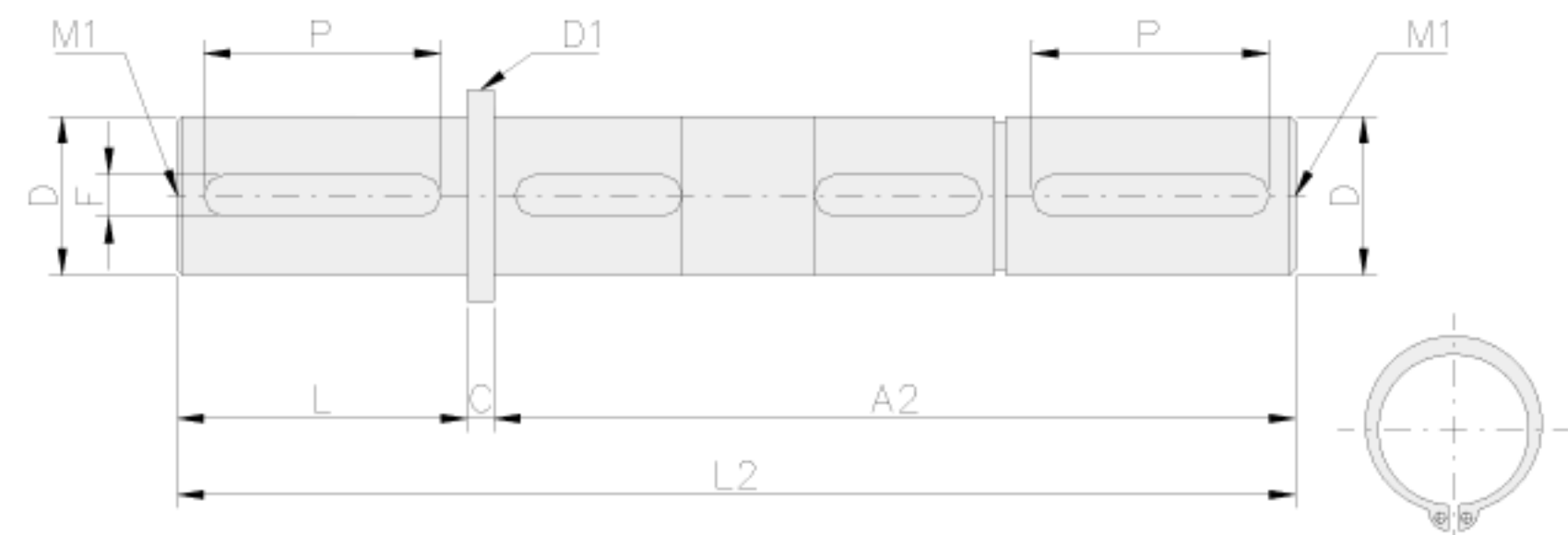
SIZE	A	AB	B	BB	K	HA	H	H1	P	P2	L1	L2	I	G	Z	Z1	Z2	D1H7	F	GA
MRP 40A	84	100	70	96	7	8	71	75	96	120	103	57	40	70	120	73	75.5	19	6	21.8
MRP 50A	96	114	85	112	9	10	85	99	96	120	113	65	50	84	120	73	75.5	25	8	27.3
MRP 60A	111	137	95	140	11	12	100	98	132	140	130	75	60	99	140	120	129	25	8	28.3
MRP 70A	115	141	120	156	11	12	115	119	146	160	156	81	70	109	160	128	137	28	8	31.3
MRP 80A	147	180	140	180	11	13	142	156	146	160	165	95	80	128	160	128	137	35	10	38.3
MRP 100	164	198	160	210	13	16.5	160	180	180	200	190	117	100	147	200	154	165	40	12	43.3
MRP 120	180	216	200	250	15	18	185	225	180	200	220	138	120	175	200	154	165	45	14	48.8
MRP 150	220	260	270	340	19	20	230	280	225	250	275	171	150	219	250	210	217	55	16	59
MRP 180	264	318	300	370	22	22	280	360	225	250	305	202	180	264	250	210	217	60	18	65.2

## ACCESSORIES

Output Shaft - single sided

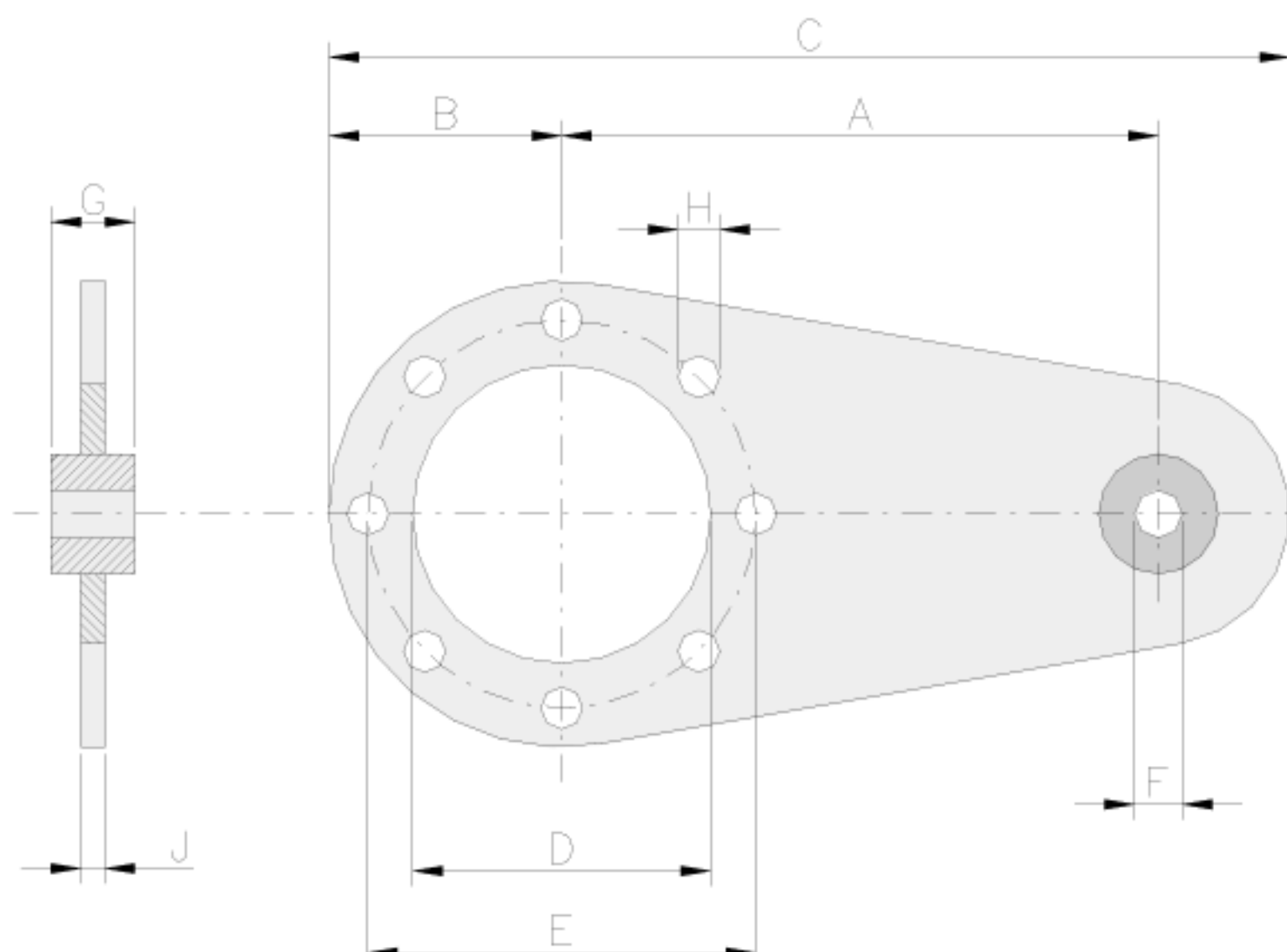


Output Shaft - double sided



SIZE	A1	A2	C	Dh7	D1	L	L1	L2	F	P	M1	M2	Weight	
											DIN 332		I	II
(M)RT 30	62	95.5	2.5	14	20	30	94.5	128	5	20	M5	M5	0.12kg	0.16kg
(M)RT 40	80	132	5	19	23	40	125	177	6	32	M6	M6	0.30kg	0.40kg
(M)RT 50	97	158	5	25	28	50	152	213	8	40	M8	M8	0.55kg	0.75kg
(M)RT 60	118	185	5	25	30	60	183	250	8	50	M10	M8	0.70kg	0.90kg
(M)RT 70	120	191	5	28	35	60	185	256	8	50	M10	M8	0.90kg	1.25kg
(M)RT 80	138	205	5	35	40	60	203	270	10	50	M12	M8	1.50kg	2.00kg
(M)RT 100	150	234	10	40	46	80	240	324	12	70	M16	M12	2.40kg	3.20kg
(M)RT 120	170	264	10	45	51	90	270	364	14	80	M16	M12	3.40kg	4.60kg
(M)RT 150	218	323	10	55	62	100	328	433	16	90	M20	M16	6.10kg	8.10kg
(M)RT 180	262	377	10	60	68	110	382	497	18	100	M20	M16	8.90kg	12.00kg

Reaction Arm

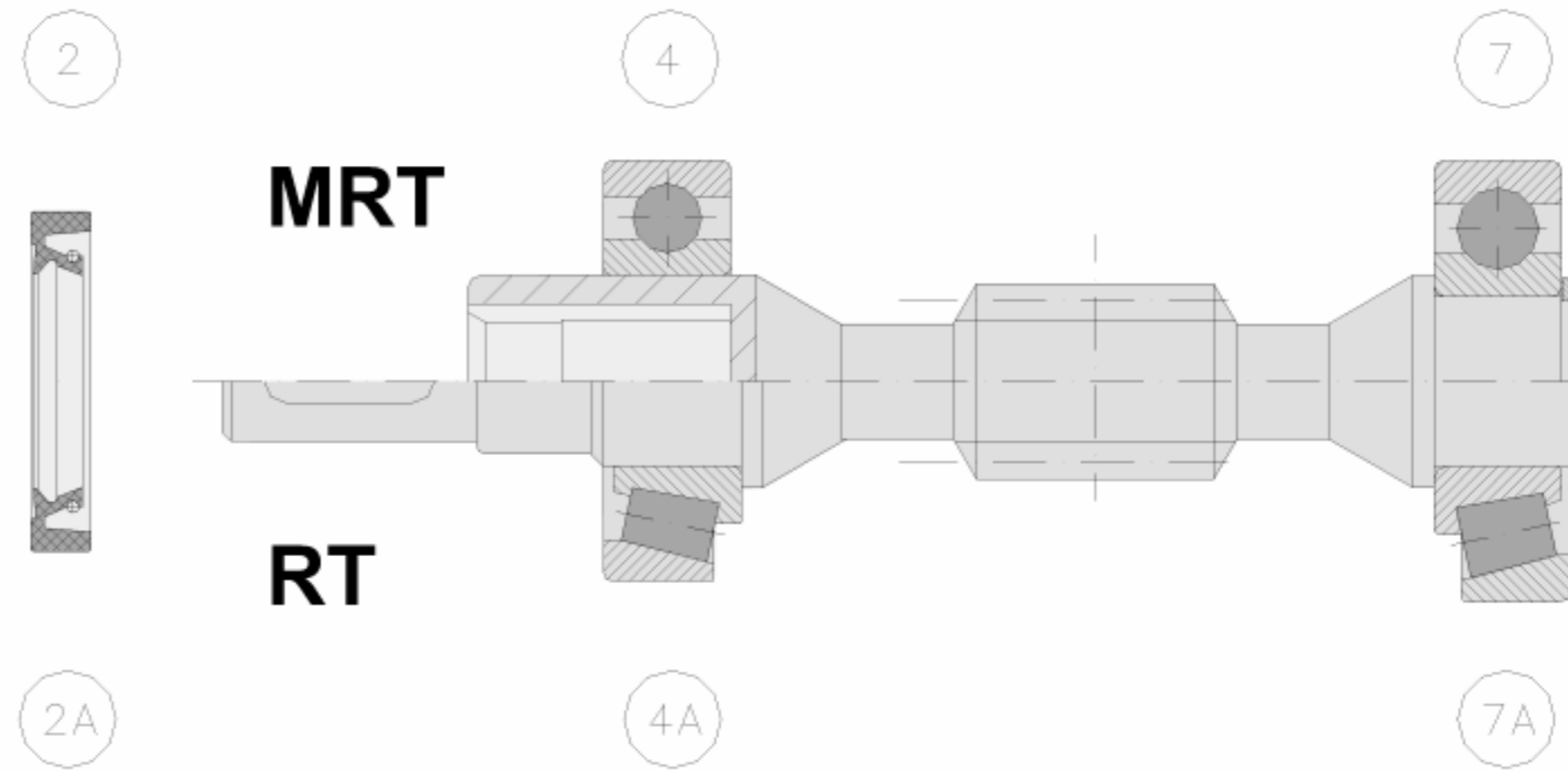


SIZE	A	B	C	D	E	F	G	H	J	Weight
(M)RT 30	85	40	143	55	65	8	14	7	4	0.22kg
(M)RT 40	100	39	161	50	65	8	14	7	4	0.25kg
(M)RT 50	100	44	170	60	75	10	20	7	4	0.30kg
(M)RT 60	150	53	233	70	85	10	20	9	5	0.57kg
(M)RT 70	200	62.5	295	80	100	14	24	9	6	1.10kg
(M)RT 80	200	77.5	315	110	130	14	24	11	6	1.25kg
(M)RT 100	230	77.5	345	110	130	14	24	11	6	1.35kg
(M)RT 120	260	95	395	130	165	16	26	13	8	2.45kg
(M)RT 150	300	125	480	180	215	16	26	15	8	3.70kg
(M)RT 180	350	150	545	230	265	25	30	17	8	4.00kg



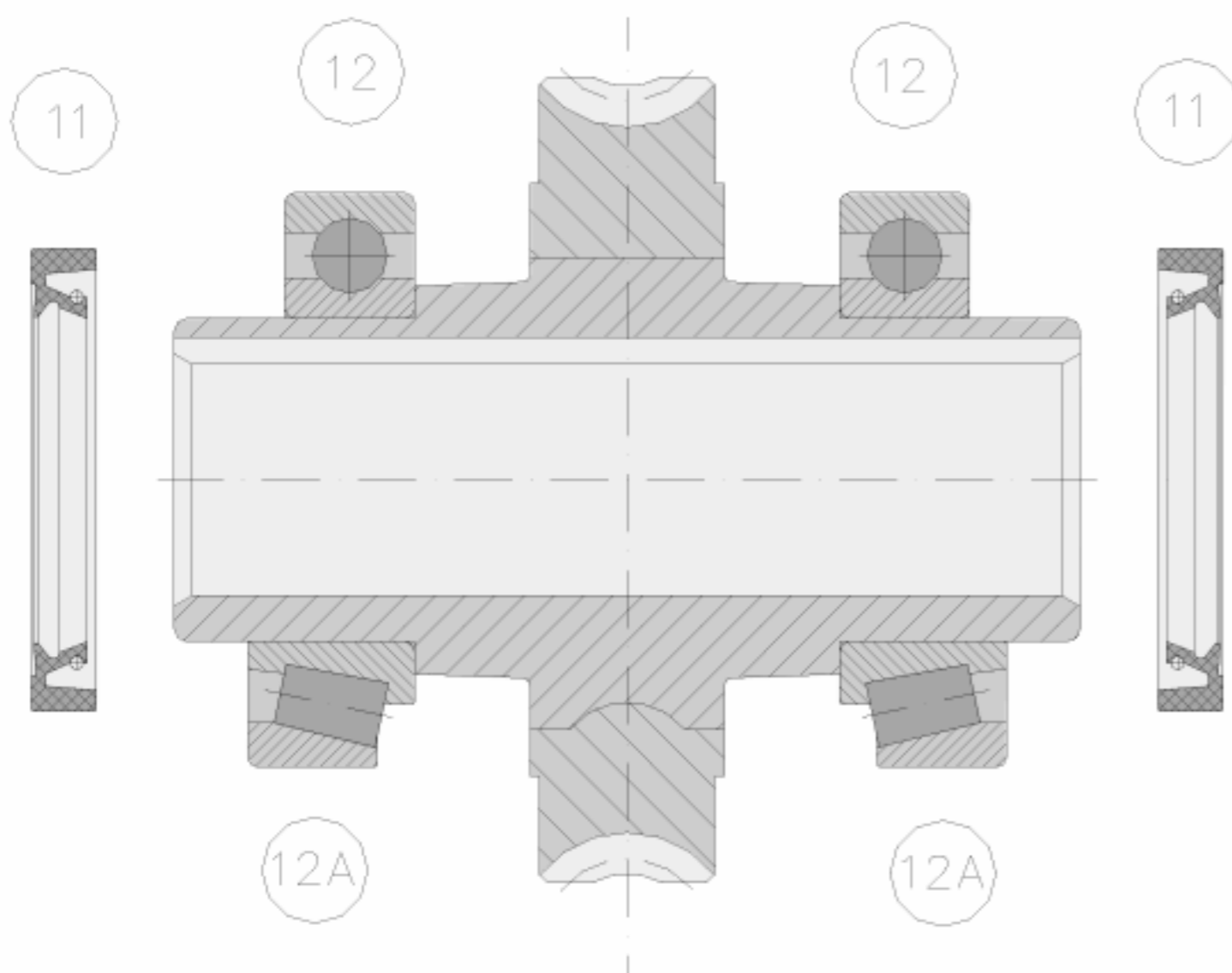
# BEARINGS & OIL SEALS

## WORM SHAFT



SIZE	MOTOR FRAME	MRT (motor-ready)			RT (with input shaft)		
		Bearing (pos.4)	Bearing (pos.7)	Oil seal (pos.2)	Bearing (pos.4a)	Bearing (pos.7a)	Oil seal (pos.2a)
(M)RT 30	56; 63	HK 2016 20x26x16	6300 10x35x11	20x28x7	6201 12x32x10	6300 10x35x11	12x32x7
(M)RT 40	63	6004 20x42x12	6302 15x42x13	20x35x7	6302 15x42x13	6302 15x42x13	15x26x7
	71	61905 25x42x9	6302 15x42x13	25x35x7			
(M)RT 50	63; 71	6205 25x52x15	6304 20x52x15	25x40x7	30304 20x52x15	30304 20x52x15	17x35x7
	80	61906 30x47x9	6304 20x52x15	30x40x7			
(M)RT 60	71; 80	32006 30x55x17	30205 25x52x16,25	30x47x7	32006 30x55x17	30205 25x52x16,25	28x40x7
	90	61907 35x55x10	6304 25x52x15	35x47x7			
(M)RT 70	71; 80	32006 30x55x17	30205 25x52x16,25	30x47x7	32006 30x55x17	30205 25x52x16,25	28x40x7
	90	61907 35x55x10	6304 25x52x15	35x47x7			
(M)RT 80	80; 90	30207 35x72x17	30306 30x72x19	35x55x7	30206 30x62x16	30205 25x52x13	30x55x7
	100	32008 40x68x19	30306 30x72x19	40x55x7			
(M)RT 100	80; 90; 100; 112	32208 40x80x24,75	31307 35x80x22,75	40x62x12	32208 40x80x24,75	31307 35x80x22,75	40x62x8
(M)RT 120	80; 90; 100; 112	32208 40x80x24,75	31307 35x80x22,75	40x62x12	32208 40x80x24,75	31307 35x80x22,75	40x62x8
(M)RT 150	100; 112; 132	32211 55x100x22,75	31309 45x100x27,75	55x80x10	31309 45x100x27,75	31309 45x100x27,75	45x75x8
(M)RT 180	112; 132; 160	31312 60x130x33,5	31312 60x130x33,5	60x80x10	31312 60x130x33,5	31312 60x130x33,5	60x75x9

## WORM WHEEL



SIZE	Bearing (pos.12)	Bearing (pos.12a)	Oil seal (pos.11)
(M)RT 30	6005 25x47x12	7005 25x47x12	25x40x7
(M)RT 40	6006 30x55x13	32006 30x55x17	30x47x7
(M)RT 50	6007 35x62x14	32007 35x62x18	35x50x7
(M)RT 60	6008 40x68x15	32008 40x68x19	40x55x7
(M)RT 70	6009 45x75x16	32009 45x75x20	45x60x8
(M)RT 80	6010 50x80x16	32010 50x80x20	50x65x8
(M)RT 100	6011 55x90x18	32011 55x90x23	55x72x10
(M)RT 120	6013 65x100x18	32013 65x100x23	65x85x12
(M)RT 150	6216 80x140x26	30216 80x140x28.25	80x100x10
(M)RT 180	6218 90x160x30	32218 90x160x42.5	90x110x12



# WORM GEAR PARAMETERS & REVERSIBILITY

SIZE	Ratio:	5	7.5	10	12.5	15	20	25	30	40	50	60	70	80	100
(M)RT 30	$m_n$	1.3	1.35	1.4	1.1	1.35	1.1	1.66	1.4	1.02	0.85	0.72	0.62	0.55	0.45
		25°23'	18°4'	13°21'	10°17'	8°51'	7°37'	5°13'	4°31'	3°6'	2°48'	2°29'	2°9'	1°59'	1°44'
	$z_1$	6	4	3	3	2	2	1	1	1	1	1	1	1	1
(M)RT 40	$m_n$	2	1.84	2	1.62	2.06	1.62	1.25	2.06	1.62	1.25	1.1	0.95	0.8	0.65
		30°0'	27°43'	18°43'	15°59'	12°42'	12°17'	9°26'	6°41'	6°18'	4°13'	4°38'	4°6'	2°52'	2°33'
	$z_1$	5	4	3	3	2	2	2	1	1	1	1	1	1	1
(M)RT 50	$m_n$	2.15	2.25	2.55	2	2.5	2	1.55	2.55	2	1.6	1.36	1.15	1.02	0.82
		37°45'	21°19'	20°55'	17°27'	13°56'	12°9'	9°12'	6°23'	5°53'	4°46'	4°18'	3°27'	3°13'	2°38'
	$z_1$	6	4	3	3	2	2	2	1	1	1	1	1	1	1
(M)RT 60	$m_n$	3	2.75	3	2.43	3.125	2.43	1.97	3.125	2.43	1.97	1.65	1.43	1.25	1
		30°20'	25°28'	19°28'	19°2'	13°37'	12°25'	10°23'	7°6'	6°14'	5°23'	4°35'	4°11'	3°41'	2°56'
	$z_1$	5	4	3	3	2	2	2	1	1	1	1	1	1	1
(M)RT 70	$m_n$	3.5	3.2	3.5	2.8	3.6	2.8	2.25	3.6	2.75	2.25	1.85	1.6	1.4	1.15
		32°31'	25°11'	19°49'	16°56'	12°50'	11°21'	9°21'	6°36'	5°28'	4°46'	3°45'	3°20'	2°56'	2°40'
	$z_1$	5	4	3	3	2	2	2	1	1	1	1	1	1	1
(M)RT 80	$m_n$	4	3.65	4	3.2	4	3.2	2.58	4	3.2	2.58	2.2	1.85	1.65	1.35
		30°0'	24°54'	18°37'	17°27'	11°12'	11°32'	9°21'	5°55'	5°59'	4°51'	4°35'	3°31'	3°26'	3°6'
	$z_1$	5	4	3	3	2	2	2	1	1	1	1	1	1	1
(M)RT 100	$m_n$		4.5	4.5	4	5	3.75	3	5	3.75	3	2.5		2	1.5
			17°55'	13°20'	17°15'	12°1'	8°59'	7°6'	5°59'	4°29'	3°33'	2°54'		2°54'	1°44'
	$z_1$		4	3	3	2	2	2	1	1	1	1		1	1
(M)RT 120	$m_n$		5.5	6	5	6	4.5	3.75	6	4.5	3.75	3		2.5	2
			20°44'	19°28'	19°28'	12°50'	8°56'	8°18'	6°23'	4°27'	4°8'	2°53'		3°38'	2°54'
	$z_1$		4	3	3	2	2	2	1	1	1	1		1	1
(M)RT 150	$m_n$		7	7	6	7.5	6	4.5	8	6	5	4		3	2.5
			23°34'	15°37'	15°7'	13°8'	13°5'	7°8'	8°0'	5°56'	5°59'	3°53'		2°53'	2°54'
	$z_1$		4	3	3	2	2	2	1	1	1	1		1	1
(M)RT 180	$m_n$		8	8	7	8	7	5.5	9	7	5.5	4.5		3.5	3
			17°55'	13°20'	12°22'	8°49'	10°46'	7°39'	5°51'	5°7'	3°44'	2°53'		2°32'	2°46'
	$z_1$		4	3	3	2	2	2	1	1	1	1		1	1

$m_n$  gear module

helix angle (for  $>23^\circ$  left helix is used for technological reasons)

$z_1$  number of flights

Worm gear reducers are often non-reversible. The driven machine is then not able to drive the input shaft back through the output shaft. The non-reversibility depends on the efficiency and the helix angle. It therefore happens at the higher transmission ratios. The above table shows the important parameters: module  $m_n$ , the helix angle, and the number of flights  $z_1$ .

## Static non-reversibility

The worm gear reducer cannot be reversed if stationary. This non-reversibility can still be overcome by shocks or vibrations.

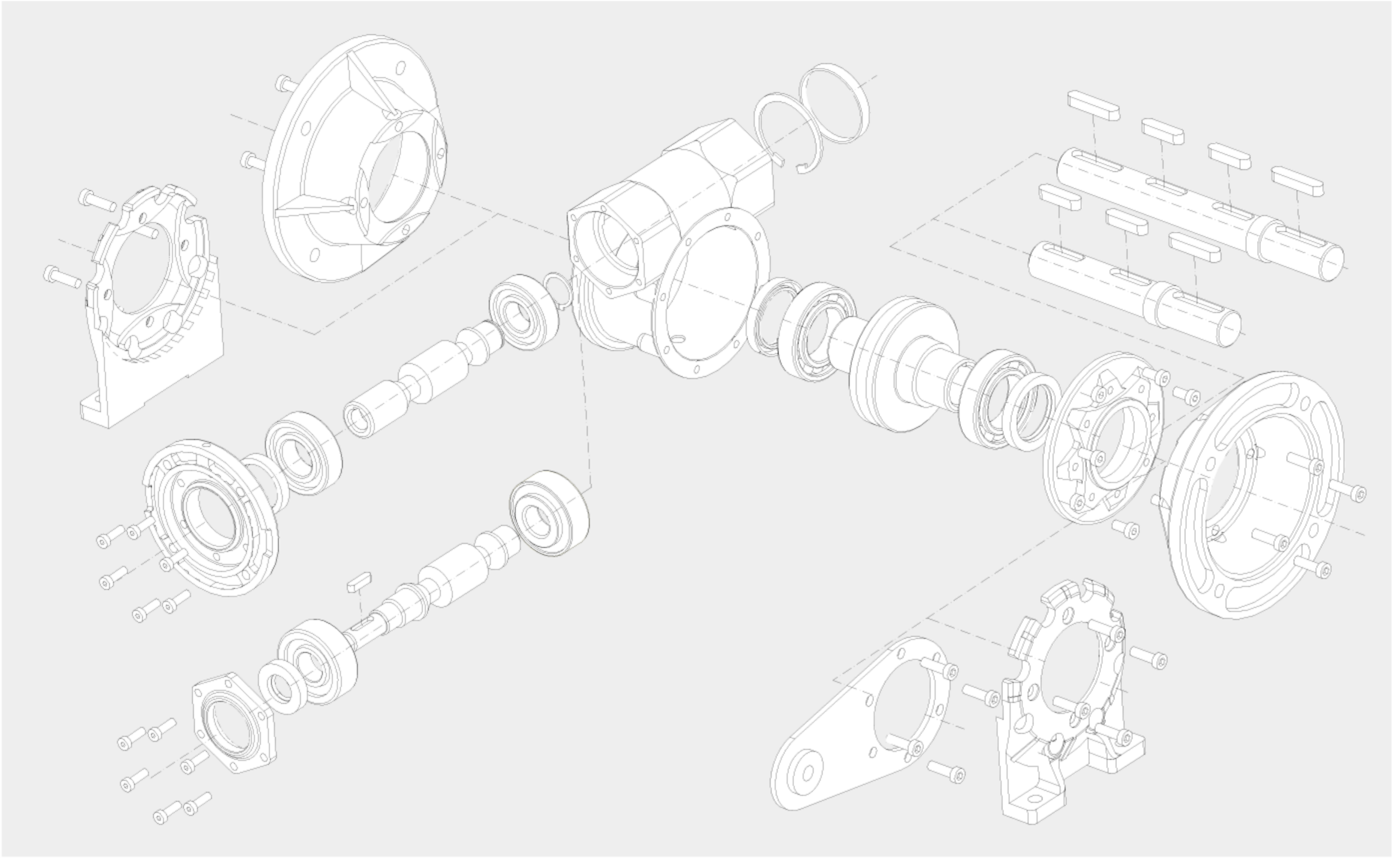
## Dynamic non-reversibility

Dynamic non-reversibility causes the gear reducer output shaft to stop when the input shaft stops revolving. This non-reversibility depends on the reducer's size, its efficiency, its transmission ratio, precision of the gear machining, the lubricant used and the input speed. If non-reversibility is to be guaranteed use of a brake motor is recommended.

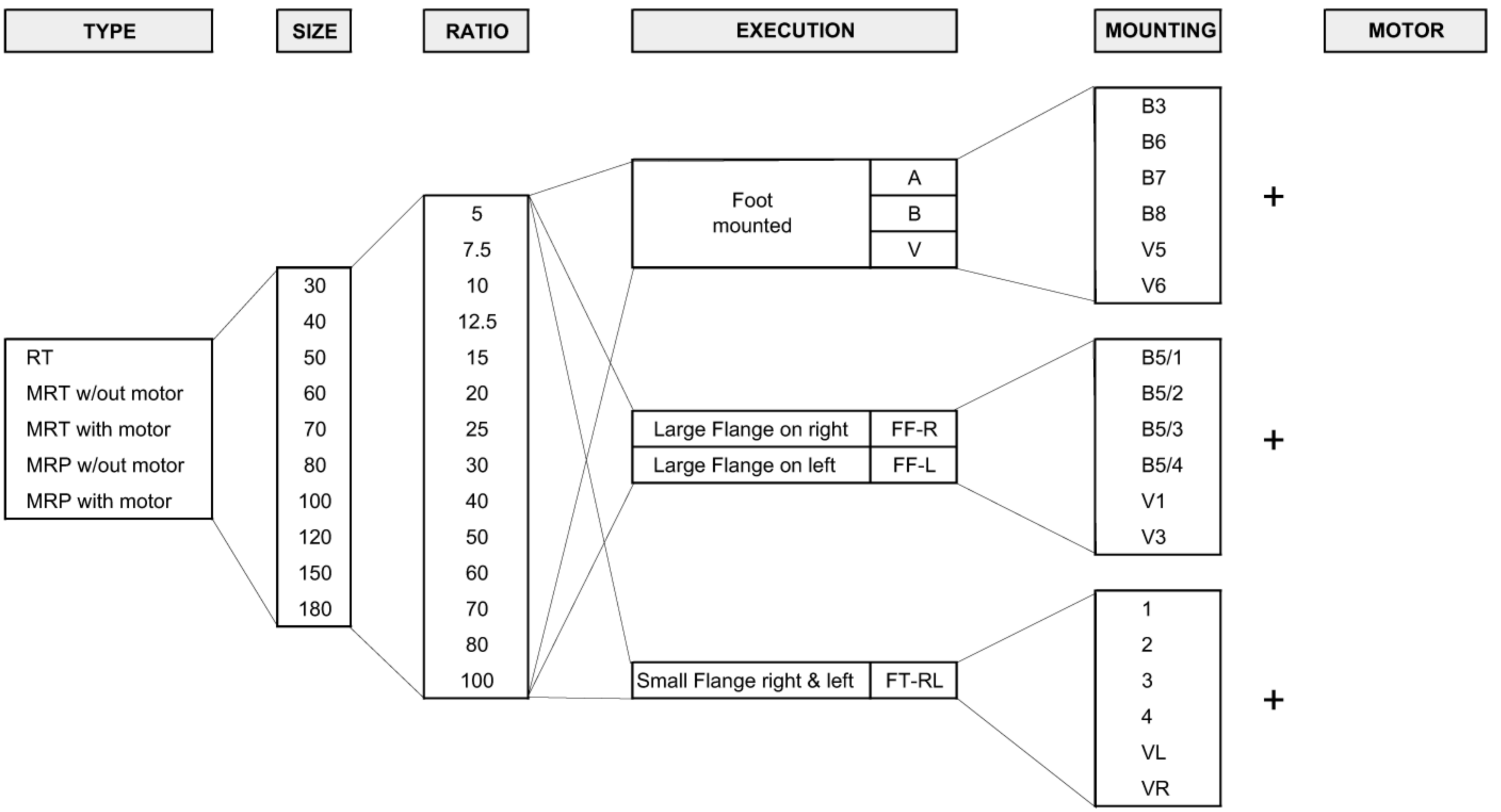
	REVERSIBILITY STATUS
$>25^\circ$	reversible
$12^\circ - 25^\circ$	static reversibility
	revolutions increase quickly
	dynamic reversibility
$8^\circ - 12^\circ$	moderate static non-reversibility
	revolutions rise quickly at vibrations
	dynamic reversibility
$5^\circ - 8^\circ$	static non-reversibility
	revolutions rise at vibrations
	moderate dynamic non-reversibility
$3^\circ - 5^\circ$	static non-reversibility
	revolutions rise slowly at vibrations
	moderate dynamic non-reversibility
$1^\circ - 3^\circ$	moderate dynamic non-reversibility at vibrations
	static non-reversibility
	may revolve at vibrations
	dynamic non-reversibility
	moderate dynamic non-reversibility at vibrations



# EXPLODED VIEW



# ORDERING



**SAMPLE ORDER**

MRT with motor	50	30	A	B3	71-4p 0.25kW
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Sample Order Summary: MRT 50A B3 ratio 30:1 with motor 71frame 4pole 0.25kW