



RATIOS		
1-Stage	2-Stage	3-Stage
*2:1	*9:1	64:1
4:1	12:1	72:1
5:1	16:1	81:1
6:1	18:1	100:1
8:1	21:1	130:1
	25:1	144:1
	29:1	176:1
	32:1	200:1
	36:1	225:1
	42:1	256:1
	50:1	288:1
	64:1	333:1
		400:1
		512:1

* Type Standard only

Actual ratios are rounded to the nearest integer

TECHNICAL DATA		1-STAGE	2-STAGE	3-STAGE
Gearbox weight	kg	0.475	0.600	0.725
Dimension L1	mm	69.5	84	98.5
Dimension L2	mm	45.5	60	74.5

PARAMETER		1-STAGE	2-STAGE	3-STAGE
Rated Torque in Nm (S1)	Type Standard	3	15	38
Rated Torque in Nm (S1)	Type R Reduced	3	15	38
Emergency Stop torque in Nm		6	30	75
Rated Torque in Nm (S5)	Type S Low Backlash	6	30	38
Rated Torque in Nm (S5)	Type V Heavy Duty	6	30	-
Emergency Stop torque in Nm		12	38	75
Efficiency at full load	%	96	90	85
Average mass inertia at drive	kgcm ²	0.060	0.055	0.050
No-Load backlash Type Standard	arcmin ≤	20	35	50
No-load backlash Type V Heavy Duty	arcmin ≤	20	35	-
No-load backlash Type R Reduced	arcmin ≤	10	20	30
No-load backlash Type S Low Backlash	arcmin ≤	6	10	15
Torsional stiffness	Nm/arcmin	1.2	1.3	1.35
Rated speed at drive	min ¹ ≤	5,000	5,000	5,000
Max. rated speed at drive	min ¹ ≤	8,000	8,000	8,000
Temperature range	°C	-30 to +90	-30 to +90	-30 to +90
Protection class	IP	54	54	54
Service life	h	~10,000	~10,000	~10,000