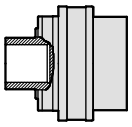
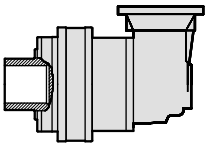
Size 170 - 215000 Nm

ST-170 Technical data



Stages	Ratio	$T_{2N(1.2M)}$ (1)	$T_{2N(6M)}$ (1)	T_{2Peak} (2)	n_{1N} (3)	n_{1Max} (4)	P_t (5)	η
	i	(Nm)	(Nm)	(Nm)	(rpm)	(rpm)	(kW)	(%)
1	3.68	215000	170000	322500	100	200	83	98
	4.94	169000	140000	253500	100	200	83	98
2	14.5	215000	170000	322500	800	1200	67	96
	19.5	169000	140000	253500	800	1200	67	96
	25.0	169000	140000	253500	800	1200	67	96
	29.6	169000	140000	253500	800	1200	67	96
3	51.7	215000	170000	322500	1200	2000	47	94
	62.3	215000	170000	322500	1200	2000	47	94
	69.4	169000	140000	253500	1200	2000	47	94
	88.9	169000	140000	253500	1200	2000	47	94
	107.2	169000	140000	253500	1200	2000	47	94
	127.0	169000	140000	253500	1200	2000	47	94
	140.1	169000	140000	253500	1200	2000	47	94
	168.8	169000	140000	253500	1200	2000	47	94
	200.1	169000	140000	253500	1200	2000	47	94
4	256.9	215000	170000	322500	1500	2800	37	92
	321.8	215000	170000	322500	1500	2800	37	92
	366.8	169000	140000	253500	1500	2800	37	92
	404.8	169000	140000	253500	1500	2800	37	92
	497.6	169000	140000	253500	1500	2800	37	92
	533.5	169000	140000	253500	1500	2800	37	92
	577.7	169000	140000	253500	1500	2800	37	92
	627.1	169000	140000	253500	1500	2800	37	92
	684.7	169000	140000	253500	1500	2800	37	92
	723.6	169000	140000	253500	1500	2800	37	92
	792.2	169000	140000	253500	1500	2800	37	92
	840.3	169000	140000	253500	1500	2800	37	92
	920.8	169000	140000	253500	1500	2800	37	92
	1012.9	169000	140000	253500	1500	2800	37	92
	1200.4	169000	140000	253500	1500	2800	37	92
	1450.5	169000	140000	322500	1500	2800	37	92
5	1588.3	215000	170000	322500	1500	2800	27	90
	1633.5	169000	140000	253500	1500	2800	27	90
	1734.3	215000	170000	322500	1500	2800	27	90
	1802.2	215000	170000	322500	1500	2800	27	90
	1862.8	169000	140000	253500	1500	2800	27	90
	1936.0	169000	140000	253500	1500	2800	27	90
	2007.4	169000	140000	253500	1500	2800	27	90
	2056.0	169000	140000	253500	1500	2800	27	90
	2172.3	215000	170000	322500	1500	2800	27	90
	2267.1	169000	140000	253500	1500	2800	27	90
	2311.7	169000	140000	253500	1500	2800	27	90
	2372.5	169000	140000	253500	1500	2800	27	90
	2419.6	169000	140000	253500	1500	2800	27	90
	2475.9	169000	140000	253500	1500	2800	27	90
	2572.7	169000	140000	253500	1500	2800	27	90
	2687.4	169000	140000	253500	1500	2800	27	90
	3161.6	169000	140000	253500	1500	2800	27	90
	4232.6	169000	140000	253500	1500	2800	27	90
	6215.4	169000	140000	253500	1500	2800	27	90
	8261.1	169000	140000	253500	1500	2800	27	90
	9790.9	169000	140000	253500	1500	2800	27	90

SX-170 Technical data



Stages	Ratio	$T_{2N(1.2M)}$ (1)	$T_{2N(6M)}$ (1)	T_{2Peak} (2)	n_{1N} (3)	n_{1Max} (4)	P_t (5)	η
	i	(Nm)	(Nm)	(Nm)	(rpm)	(rpm)	(kW)	(%)
4	173.2	215000	170000	322500	1500	2500	35	92
	247.2	169000	140000	253500	1500	2500	35	92
	297.3	215000	170000	322500	1500	2500	35	92
	358.3	215000	170000	322500	1500	2500	35	92
	381.0	215000	170000	322500	1500	2500	35	92
	468.2	169000	140000	253500	1500	2500	35	92
	564.4	169000	140000	253500	1500	2500	35	92
	600.1	169000	140000	253500	1500	2500	35	92
	723.4	169000	140000	253500	1500	2500	35	92
	857.3	169000	140000	253500	1500	2500	35	92
5	931.1	169000	140000	253500	1500	2800	25	90
	999.9	169000	140000	253500	1500	2800	25	90
	1103.6	169000	140000	253500	1500	2800	25	90
	1233.1	169000	140000	253500	1500	2800	25	90
	1369.6	169000	140000	253500	1500	2800	25	90
	1495.4	169000	140000	253500	1500	2800	25	90
	1580.4	169000	140000	253500	1500	2800	25	90
	1650.5	169000	140000	253500	1500	2800	25	90
	1786.9	169000	140000	253500	1500	2800	25	90
	1869.0	169000	140000	253500	1500	2800	25	90
	1987.3	169000	140000	253500	1500	2800	25	90
	2085.3	169000	140000	253500	1500	2800	25	90
	2175.2	169000	140000	253500	1500	2800	25	90
	2255.4	169000	140000	253500	1500	2800	25	90
	2395.4	169000	140000	253500	1500	2800	25	90
	2489.1	169000	140000	253500	1500	2800	25	90
	2672.6	169000	140000	253500	1500	2800	25	90
	2761.0	169000	140000	253500	1500	2800	25	90
	2839.0	169000	140000	253500	1500	2800	25	90
	2950.1	169000	140000	253500	1500	2800	25	90
	3484.2	169000	140000	253500	1500	2800	25	90
	4210.1	169000	140000	253500	1500	2800	25	90
	4989.8	169000	140000	253500	1500	2800	25	90

(1) T_{2N} values are calculated at $n_1=n_{1n}$, continuous duty cycle, uniform operation and KA=1 according to ISO 6336. $T_{2N(1.2M)}$ has been calculated for 1200000 of revolutions at the output shaft, and $T_{2N(6M)}$ has been calculated for 6000000 of revolutions at the output shaft. The application factor f_s must be considered for each duty cycle and machine type.

(2) T_{2Peak} is the maximum output torque the gearbox can tolerate during startups, inversions or other peaks. This value should never be used for continuous operation or for intermittent operation with frequent accelerations.

(3) n_{1n} is the rated input speed for continuous operation

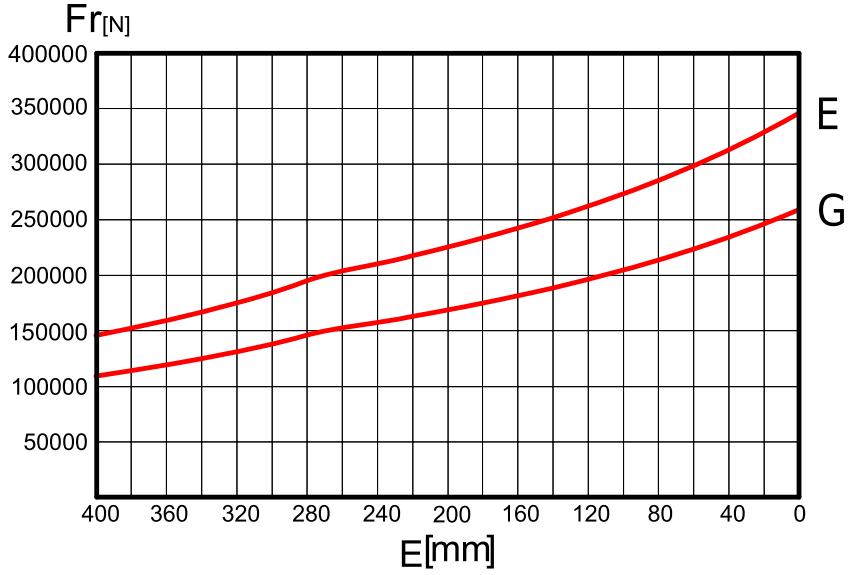
(4) n_{1max} is the maximum input speed for intermittent service. For continuous operation at speeds over n1n please inquire.

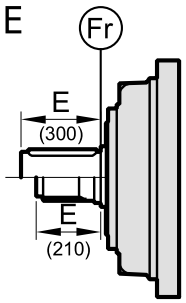
(5) Pt is the thermal power rating, that is the power in kW that, at 20°C, the gearbox can transmit during continuous operation, at $n_1=n_{1n}$ and lubricated with ISO-VG-220 oil without it exceeding 90°C. It depends on ambient temperature.

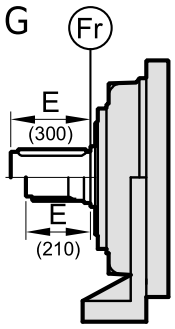
Output Shaft Radial Load Capacity

Radial Load Capacity is only given for gearboxes with solid shafts (Smooth Solid Shaft with Key (P) and DIN 5480 Splined Shaft (W)) for a design life of 6 million revolutions of the output shaft ($6 \cdot 10^6$). These values can be adjusted for other number of revolutions of the output shaft applying the Output Bearing Lifetime Factor (f_{obl})

Radial Load capacity depends on gearbox version and application point. Find the value for your machine using this chart.







Output Shaft Axial Load Capacity

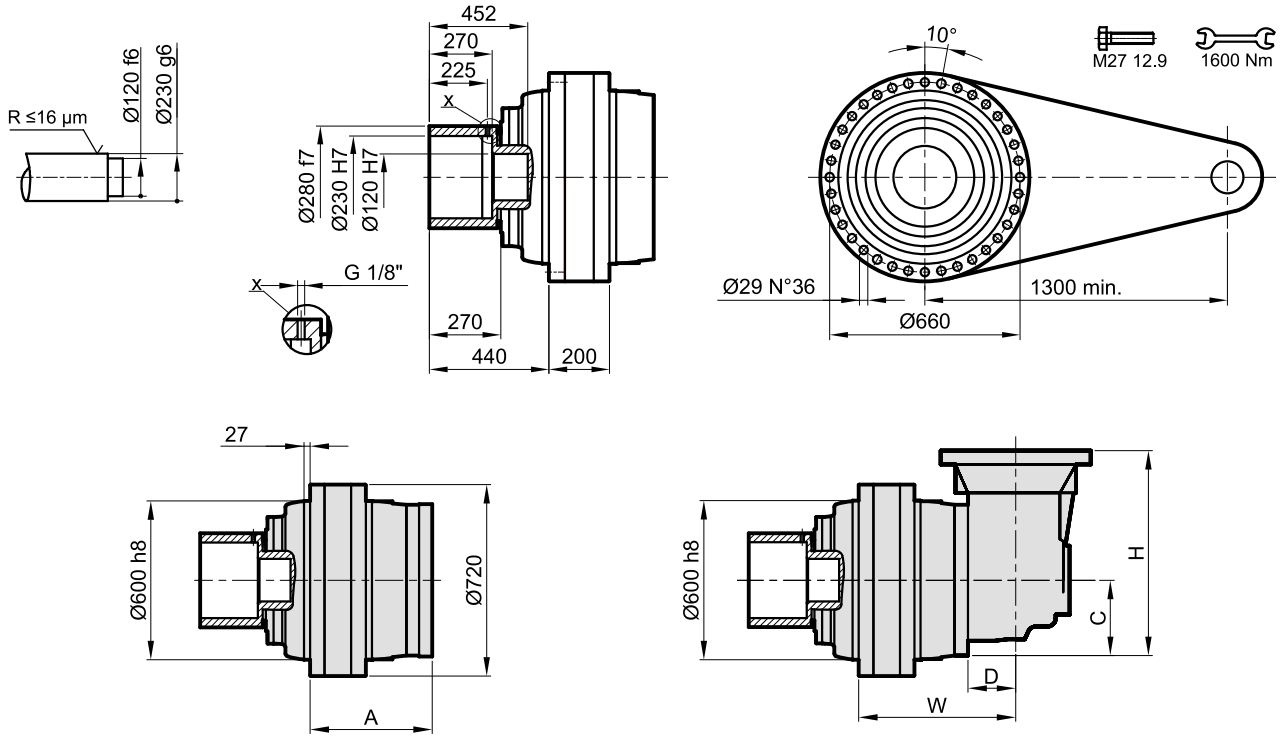
Axial Load Capacity is only given for gearboxes with solid shafts (Smooth Solid Shaft with Key (P) and DIN 5480 Splined Shaft (W)) for a design life of 6 million revolutions of the output shaft ($6 \cdot 10^6$). These values can be adjusted for other number of revolutions of the output shaft applying the Output Bearing Lifetime Factor (f_{obl})

Axial Load Capacity depends on the direction of the load:

	Push	Pull
F_a	75000 N	45000 N

Dimensions

S□-E-170-□□-H230×452

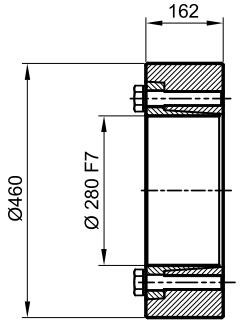


Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
1	336	-	-	-	-	762	-
2	564	-	-	-	-	961	-
3	671	-	-	-	-	1011	-
4	743	743	121	172,5	457	1028	1070
5	804	808	103	122	319	1037	1053

(1) Mass in kg for gearboxes without input modules (solid input shaft, motor flange, etc) or accessories. To obtain actual mass, add the mass for your chosen input module, please inquire.

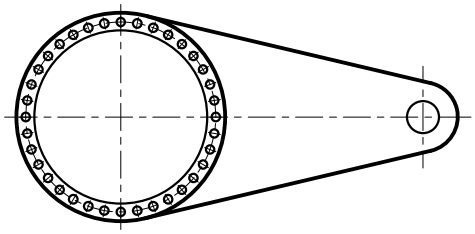
Accessories

SA-H-280



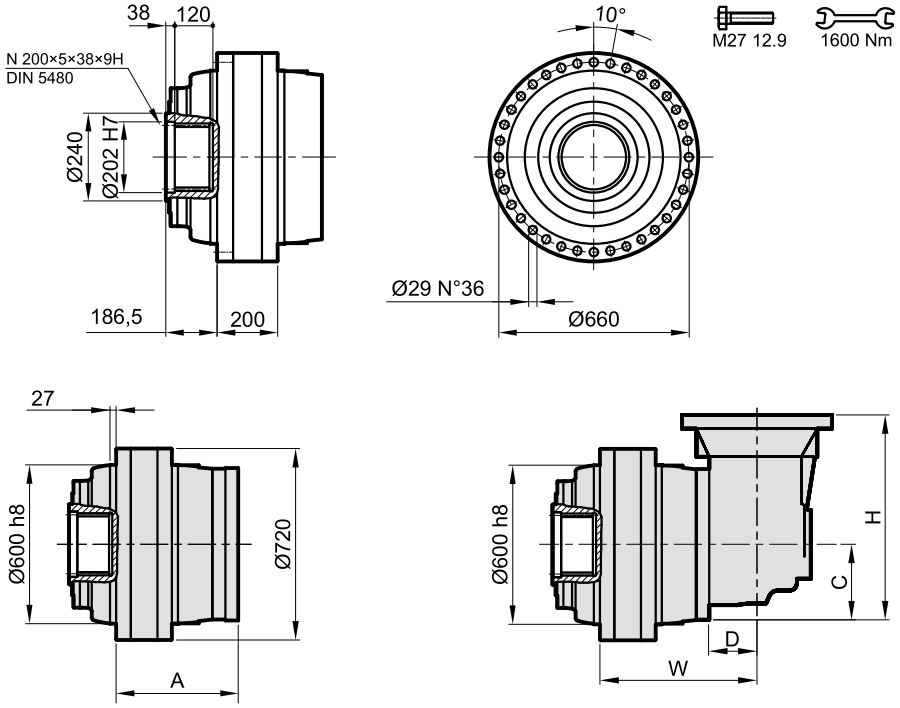
Max. Torque: 355 kNm
Screw Tightening Torque: 1087 Nm

SA-T-□-600-660-36×29-□-□



See the chapter on Torque Arms

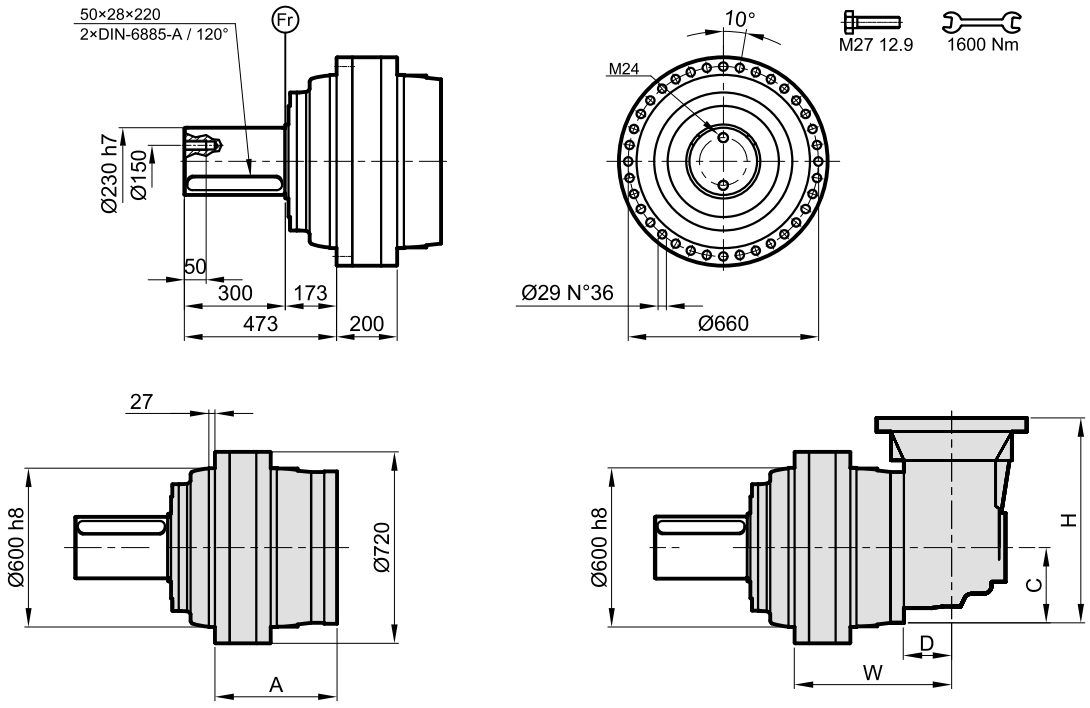
S□-E-170-□□-N200×158



Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
1	336	-	-	-	-	693	-
2	564	-	-	-	-	892	-
3	671	-	-	-	-	942	-
4	743	743	121	172,5	457	959	1001
5	804	808	103	122	319	968	984

(1) Mass in kg for gearboxes without input modules (solid input shaft, motor flange, etc) or accessories. To obtain actual mass, add the mass for your chosen input module, please inquire.

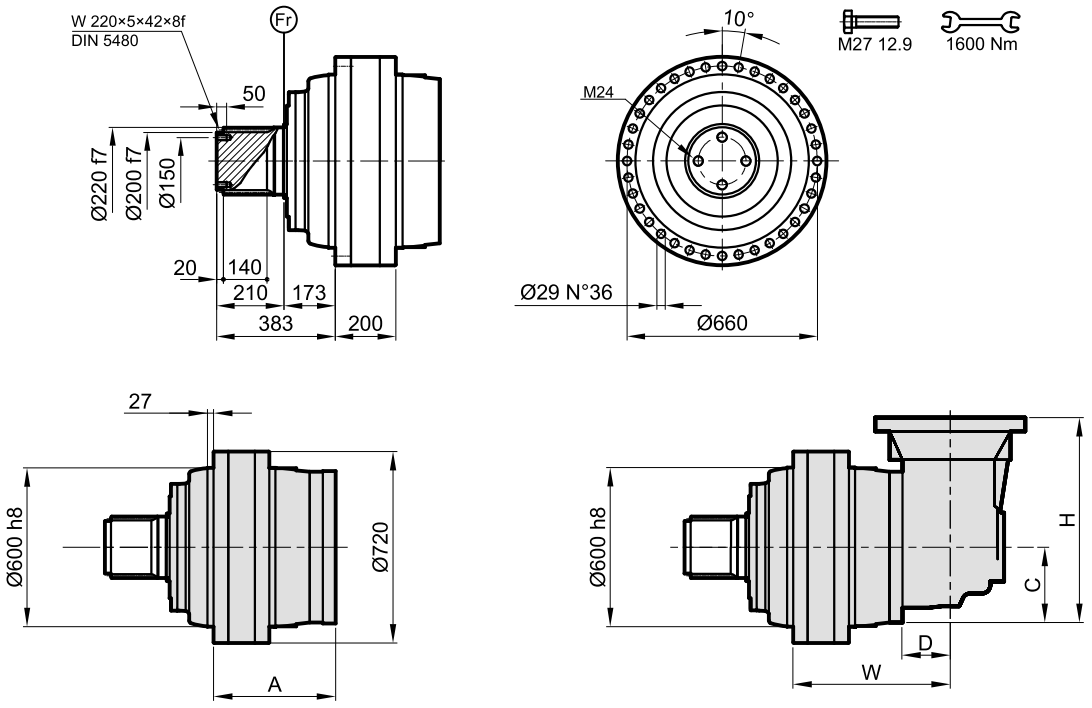
S□-E-170-□□-P230×300



Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
1	336	-	-	-	-	830	-
2	564	-	-	-	-	1029	-
3	671	-	-	-	-	1079	-
4	743	743	121	172,5	457	1096	1138
5	804	808	103	122	319	1105	1121

(1) Mass in kg for gearboxes without input modules (solid input shaft, motor flange, etc) or accessories. To obtain actual mass, add the mass for your chosen input module, please inquire.

S□-E-170-□□-W220×210

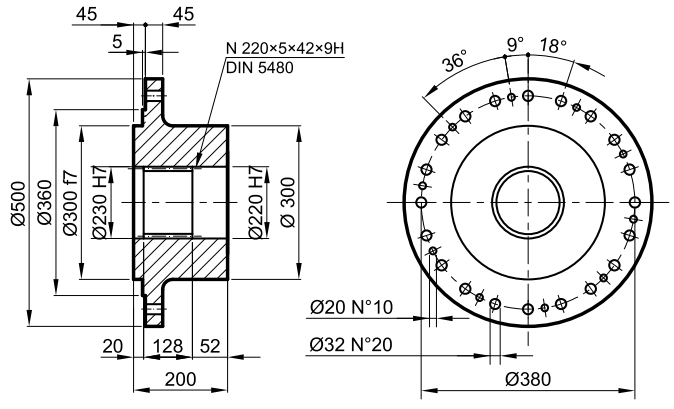


Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
1	336	-	-	-	-	830	-
2	564	-	-	-	-	1029	-
3	671	-	-	-	-	1079	-
4	743	743	121	172,5	457	1096	1138
5	804	808	103	122	319	1105	1121

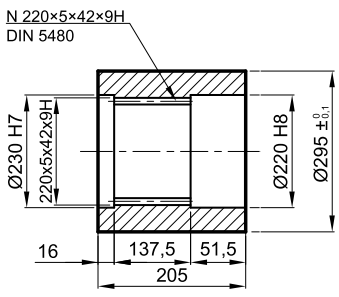
(1) Mass in kg for gearboxes without input modules (solid input shaft, motor flange, etc) or accessories. To obtain actual mass, add the mass for your chosen input module, please inquire.

Accessories

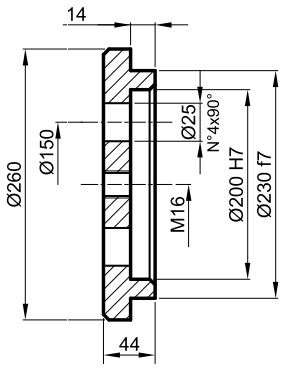
SA-F-220×5×42-S



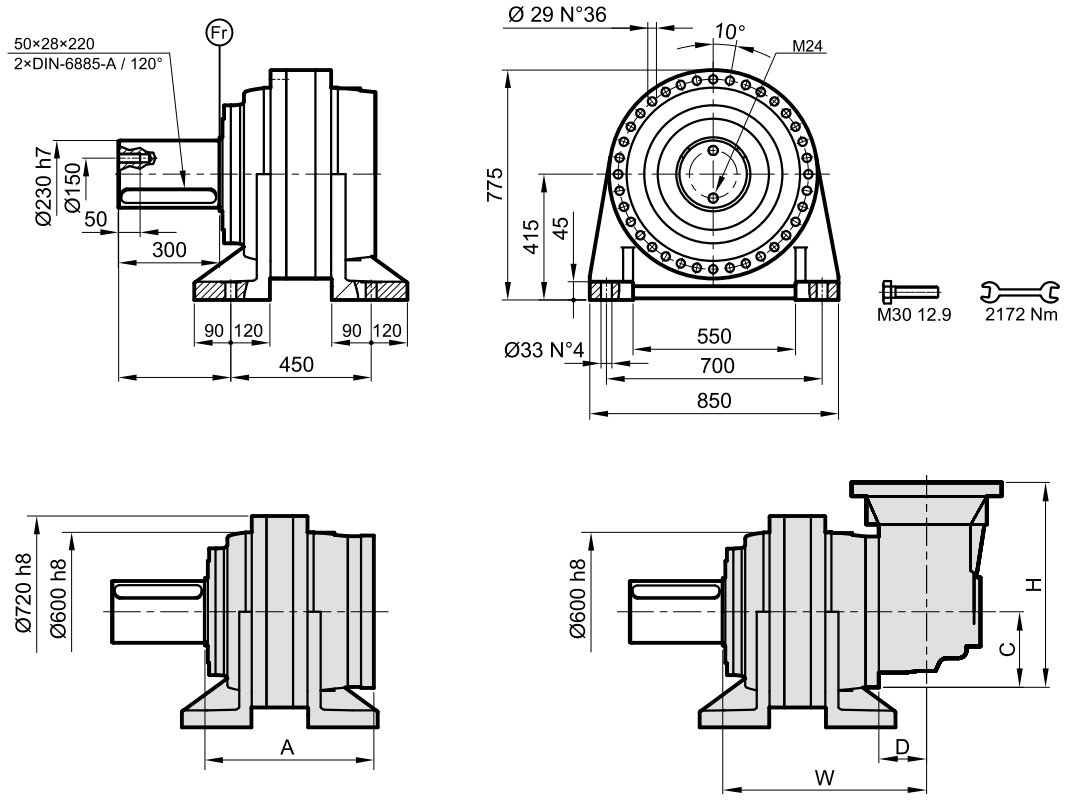
SA-B-220×5×42-S



SA-P-230



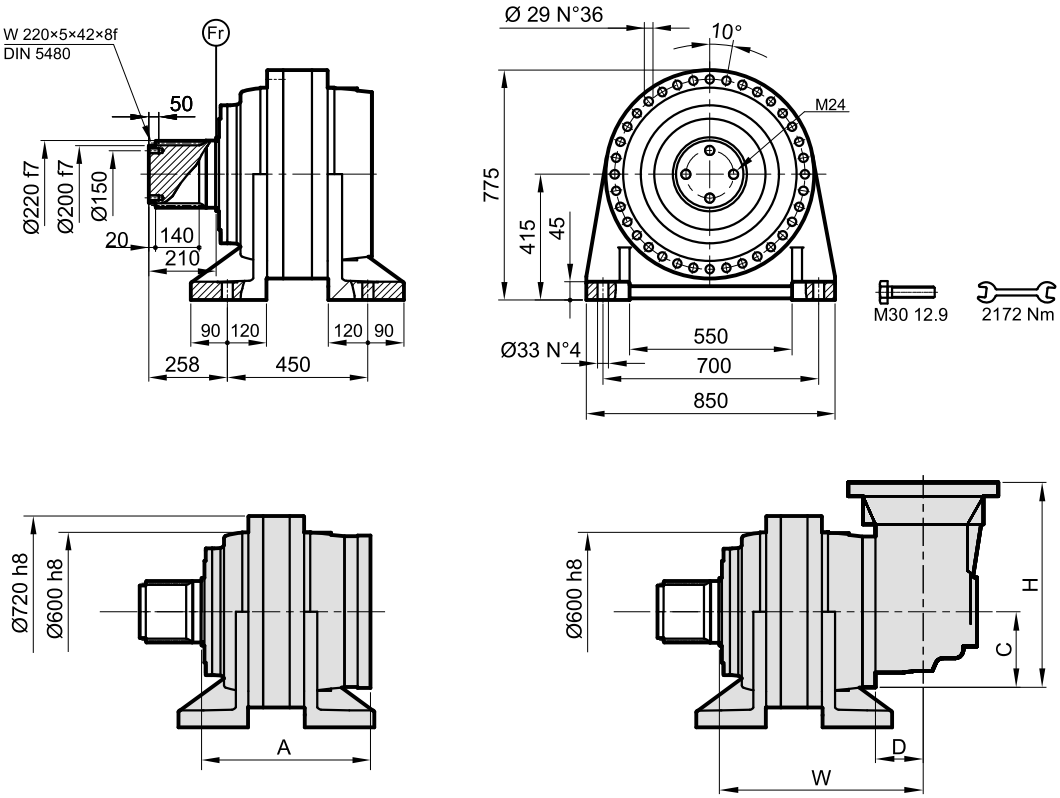
S□-G-170-□□-P230×300



Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
1	474	-	-	-	-	969	-
2	702	-	-	-	-	1168	-
3	809	-	-	-	-	1218	-
4	881	881	121	172,5	457	1235	1277
5	942	946	103	122	319	1244	1260

(1) Mass in kg for gearboxes without input modules (solid input shaft, motor flange, etc) or accessories. To obtain actual mass, add the mass for your chosen input module, please inquire.

S□-G-170-□□-W230×210

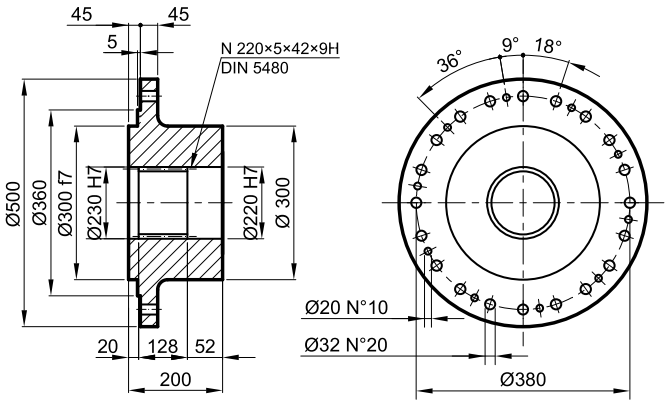


Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
1	474	-	-	-	-	969	-
2	702	-	-	-	-	1168	-
3	809	-	-	-	-	1218	-
4	881	881	121	172,5	457	1235	1277
5	942	946	103	122	319	1244	1260

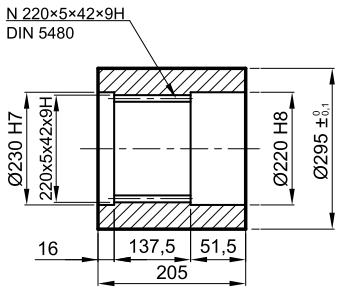
(1) Mass in kg for gearboxes without input modules (solid input shaft, motor flange, etc) or accessories. To obtain actual mass, add the mass for your chosen input module, please inquire.

Accessories

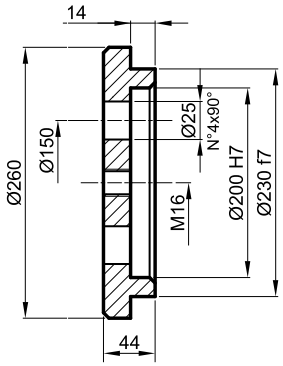
SA-F-220×5×42-S



SA-B-220×5×42-S

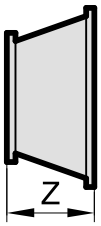


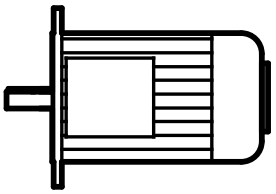
SA-P-230



Inputs

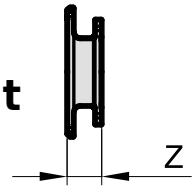
IEC Motor Input

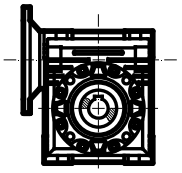




IEC	100	112	132	160	180	200	225	250	280	315
Stages	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z
1	-	-	-	120.5	120.5	148.5	148.5	183.5	183.5	233
2	-	-	-	120.5	120.5	148.5	148.5	183.5	183.5	233
3	-	-	-	120.5	120.5	148.5	148.5	183.5	183.5	-
4	71	71	104	120.5	120.5	148.5	148.5	-	-	-
5	71	71	104	120.5	120.5	148.5	148.5	-	-	-

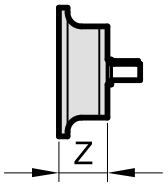
Worm Gearbox Input





Stages	SVS-050 SQS-050	SVS-063 SQS-063	SVS-075 SQS-075	SVS-090 SQS-090	SVS-110 SQS-110
	Z	Z	Z	Z	Z
1	-	-	-	-	-
2	-	-	-	-	-
3	-	-	-	-	95
4	80	80	57	57	57
5	80	80	57	57	57

Solid Shaft Input



Stages	E25×50 E28×50	E35×50 E42×82	E48×82.5 E65×105	E70×120 E80×130	E90×140 E100×140
	Z		Z	Z	Z
1	-		-	-	-
2	-		-	-	-
3	-		-	185	211
4	-		-	185	-
5	122		159	-	-