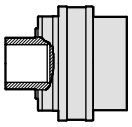
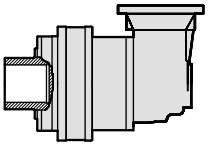
Size 190 - 339000 Nm

ST-190 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	4.00	339900	312170	441870	100	200	110	98
	4.57	282600	268600	367380	100	200	110	98
2	15.3	339900	312170	441870	500	750	80	96
	17.6	339900	312170	441870	500	750	80	96
	20.1	282600	268600	367380	500	750	80	96
3	60.6	339900	312170	441870	1000	1500	71	94
	77.6	339900	312170	441870	1000	1500	71	94
	92.0	339900	312170	441870	1000	1500	71	94
	105.6	339900	312170	441870	1000	1500	71	94
4	215.4	339900	312170	441870	1500	2800	50	92
	297.9	339900	312170	441870	1500	2800	50	92
	389.3	339900	312170	441870	1500	2800	50	92
	434.7	339900	312170	441870	1500	2800	50	92
	499.0	339900	312170	441870	1500	2800	50	92
	591.4	339900	312170	441870	1500	2800	50	92
	672.8	339900	312170	441870	1500	2800	50	92
	772.2	339900	312170	441870	1500	2800	50	92
	915.2	339900	312170	441870	1500	2800	50	92
5	813.5	339900	312170	441870	1500	2800	37	90
	1042.7	339900	312170	441870	1500	2800	37	90
	1196.8	339900	312170	441870	1500	2800	37	90
	1281.3	339900	312170	441870	1500	2800	37	90
	1340.9	339900	312170	441870	1500	2800	37	90
	1489.3	339900	312170	441870	1500	2800	37	90
	1642.2	339900	312170	441870	1500	2800	37	90
	1709.4	339900	312170	441870	1500	2800	37	90
	1885.0	339900	312170	441870	1500	2800	37	90
	2011.4	339900	312170	441870	1500	2800	37	90
	2234.0	339900	312170	441870	1500	2800	37	90
	2337.9	339900	312170	441870	1500	2800	37	90
	2439.4	339900	312170	441870	1500	2800	37	90
	2541.5	339900	312170	441870	1500	2800	37	90
	2661.9	339900	312170	441870	1500	2800	37	90
	2768.0	339900	312170	441870	1500	2800	37	90
	2940.3	339900	312170	441870	1500	2800	37	90
	3185.3	339900	312170	441870	1500	2800	37	90
	3289.0	339900	312170	441870	1500	2800	37	90
	3457.4	339900	312170	441870	1500	2800	37	90
	3775.2	339900	312170	441870	1500	2800	37	90
	4119.5	339900	312170	441870	1500	2800	37	90
	4360.3	339900	312170	441870	1500	2800	37	90
	4728.5	339900	312170	441870	1500	2800	37	90
	5167.8	339900	312170	441870	1500	2800	37	90
	5780.7	339900	312170	441870	1500	2800	37	90

SX-190 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	245.9	339900	312170	441870	1500	2800	45	92
	282.3	339900	312170	441870	1500	2800	45	92
	315.2	339900	312170	441870	1500	2800	45	92
	361.8	339900	312170	441870	1500	2800	45	92
	428.7	339900	312170	441870	1500	2800	45	92
5	721.5	339900	312170	441870	1500	2800	40	90
	924.7	339900	312170	441870	1500	2800	40	90
	1061.4	339900	312170	441870	1500	2800	40	90
	1182.7	339900	312170	441870	1500	2800	40	90
	1257.9	339900	312170	441870	1500	2800	40	90
	1456.6	339900	312170	441870	1500	2800	40	90
	1689.2	339900	312170	441870	1500	2800	40	90
	1870.2	339900	312170	441870	1500	2800	40	90
	2010.8	339900	312170	441870	1500	2800	40	90
	2245.2	339900	312170	441870	1500	2800	40	90
	2534.0	339900	312170	441870	1500	2800	40	90
	2661.0	339900	312170	441870	1500	2800	40	90
	3054.4	339900	312170	441870	1500	2800	40	90
	3416.6	339900	312170	441870	1500	2800	40	90
	3921.6	339900	312170	441870	1500	2800	40	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

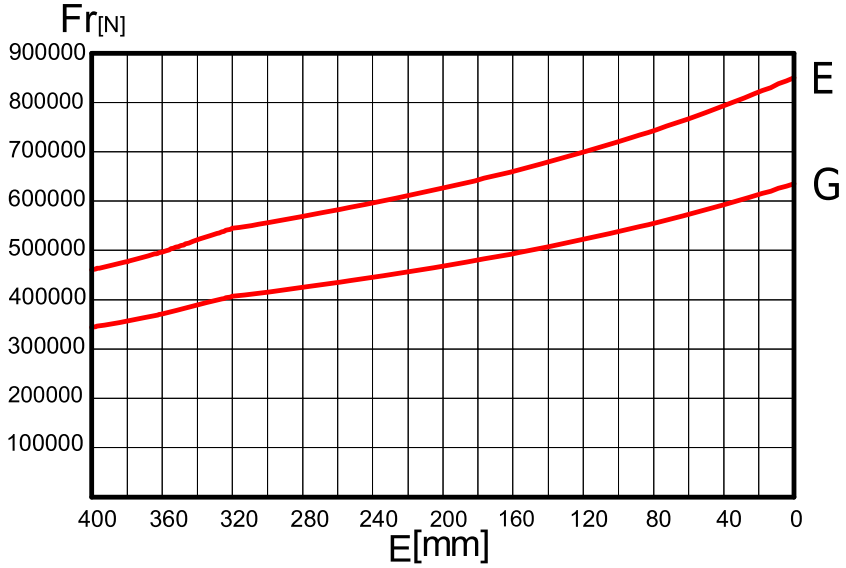
(4) n_{1max} is the maximum input speed for intermittent service. For continuous operation at speeds over n1n please inquire.

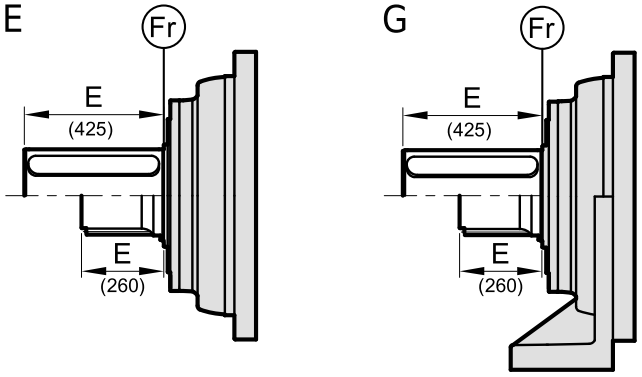
(5) Pt is the thermal power rating, that is the power in kW that, at 20°C, the gearbox can transmit during continuous operation, at $n_1=n_{1n}$ and lubricated with ISO-VG-220 oil without it exceeding 90°C. It depends on ambient temperature.

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

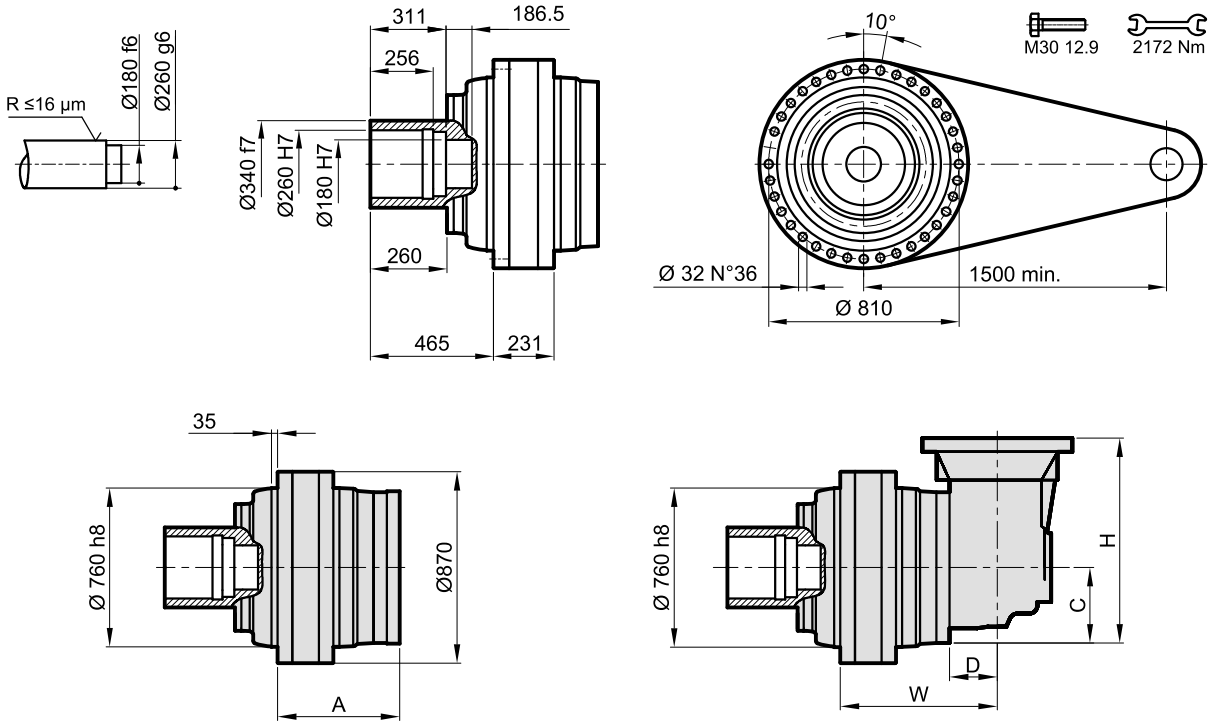
Axial Load Capacity is only given for gearboxes with solid shafts (Smooth Solid Shaft with Key (P) and DIN 5480 Splined Shaft (W)) for a design life of 6 million revolutions of the output shaft ($6 \cdot 10^6$). These values can be adjusted for other number of revolutions of the output shaft applying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

Axial Load Capacity depends on the direction of the load:

	Version	Push	Pull
F_a	E	110000 N	110000 N
	G	100000 N	80000 N

Dimensions

S□-E-190-□□-H260×497

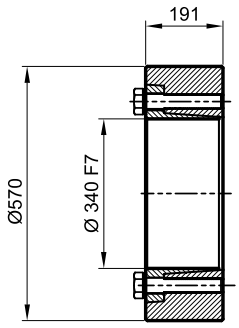


Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
1	416	-	-	-	-	1295	-
2	698	-	-	-	-	1615	-
3	926	-	-	-	-	1815	-
4	1033	1074	279.5	245	536.5	1865	1972
5	1105	1105	121	172.5	457	1883	1929

(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.

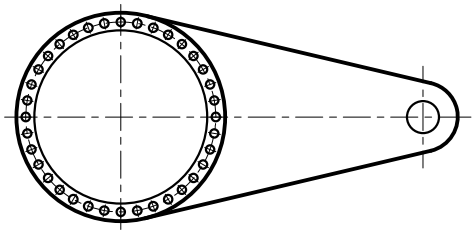
Accessories

SA-H-340



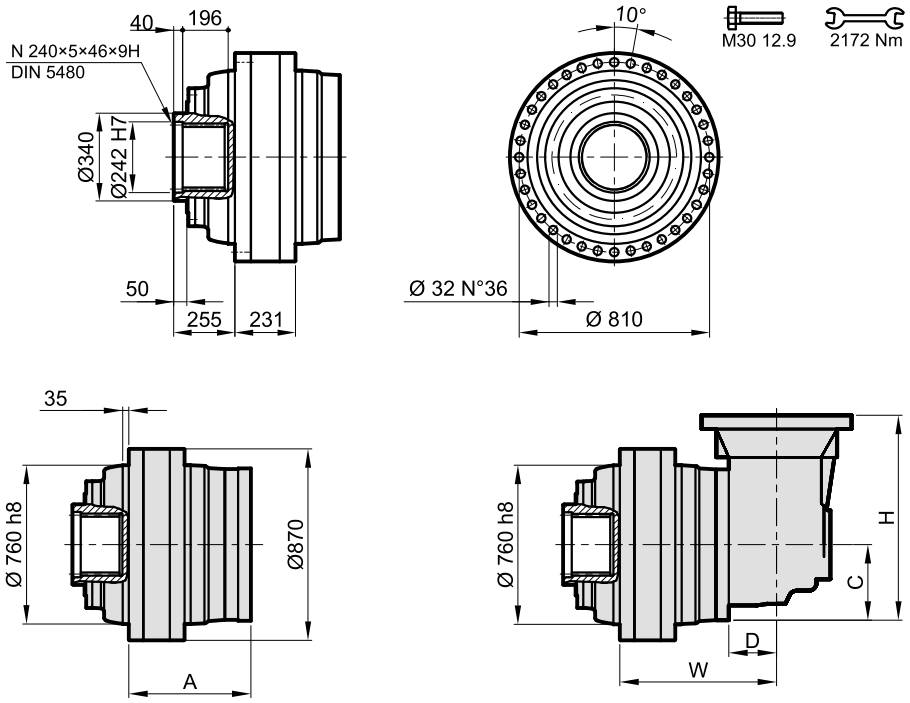
Max. Torque: 603 kNm
Screw Tightening Torque: 1600 Nm

SA-T-□-760-810-36×32-□-□



See the chapter on Torque Arms

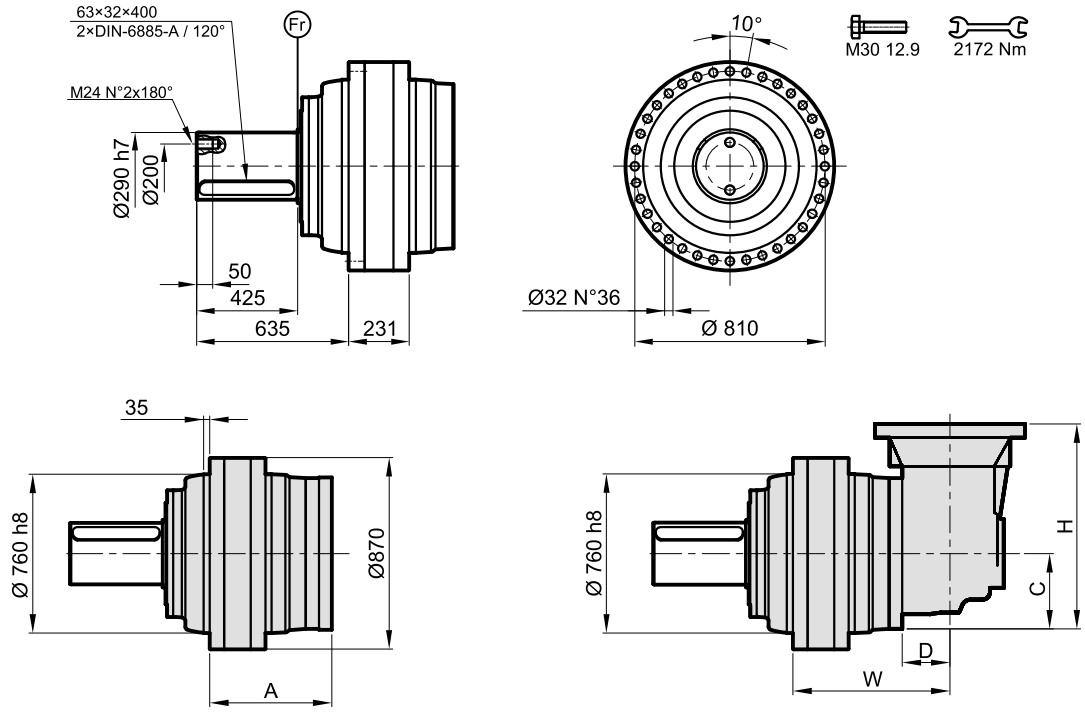
S□-E-190-□□-N240×236



Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
1	416	-	-	-	-	1209	-
2	698	-	-	-	-	1539	-
3	926	-	-	-	-	1739	-
4	1033	1074	279.5	245	536.5	1789	1896
5	1105	1105	121	172.5	457	1807	1853

(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.

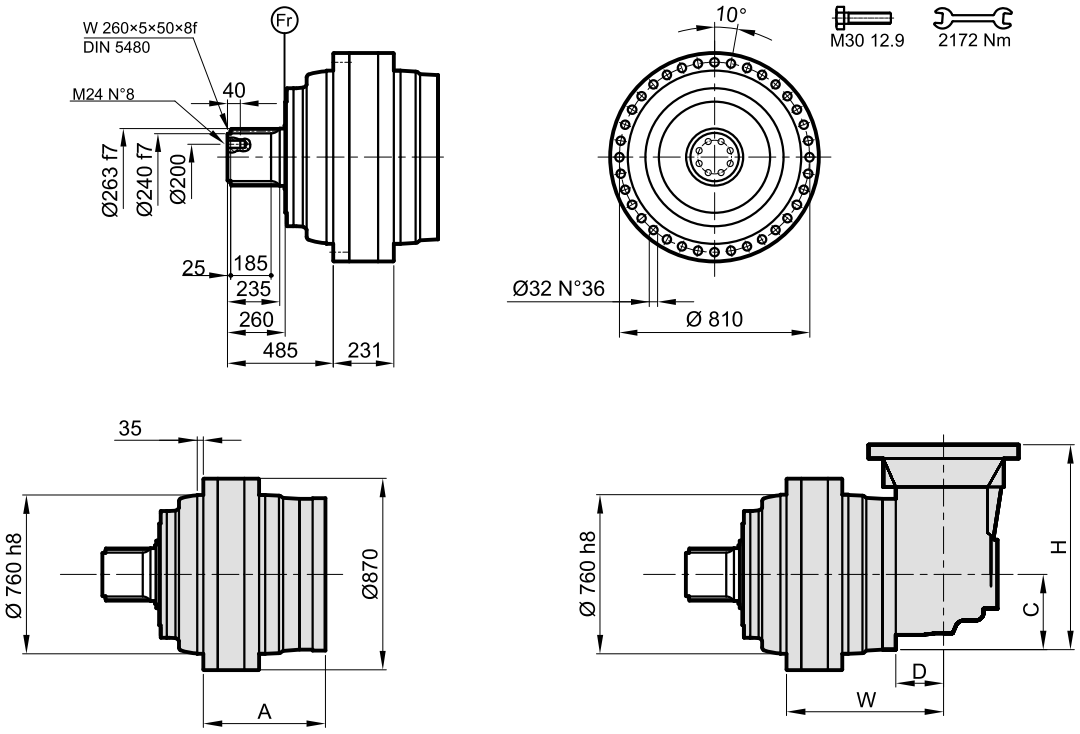
S□-E-190-□□-P290×425



Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
1	416	-	-	-	-	1295	-
2	698	-	-	-	-	1615	-
3	926	-	-	-	-	1815	-
4	1033	1074	279.5	245	536.5	1865	1972
5	1105	1105	121	172.5	457	1883	1929

(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-190-□□-W260×260

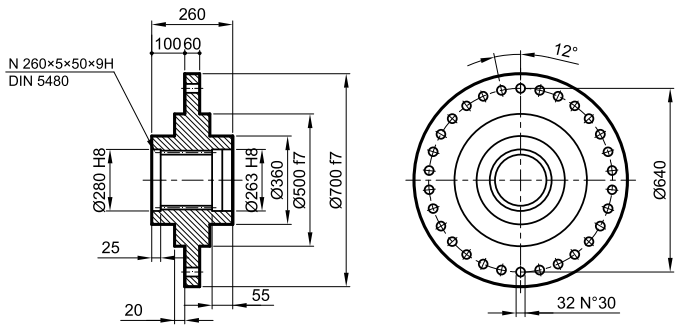


Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
1	416	-	-	-	-	1295	-
2	698	-	-	-	-	1615	-
3	926	-	-	-	-	1815	-
4	1033	1074	279.5	245	536.5	1865	1972
5	1105	1105	121	172.5	457	1883	1929

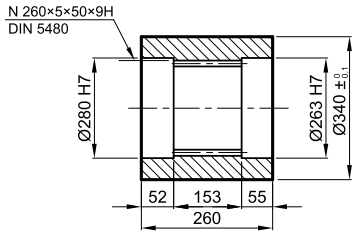
(1) Mass in kg for gearboxes without input modules (solid input shaft, motor flange, etc) or accessories. To obtain actual mass, add the mass for your chosen input module, please inquire.

Accessories

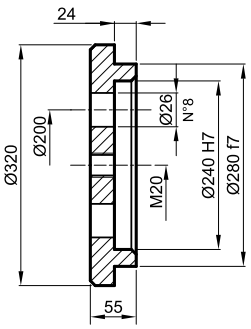
SA-F-260×5×50-S



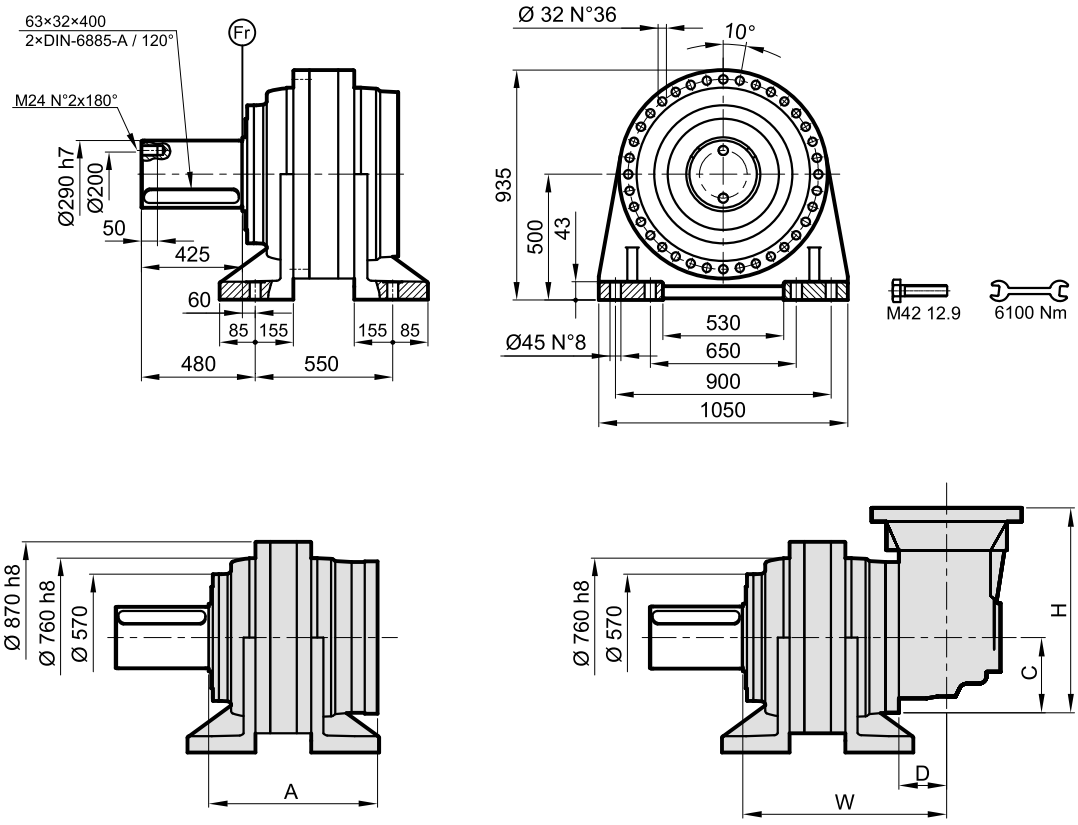
SA-B-260×5×50-S



SA-P-280



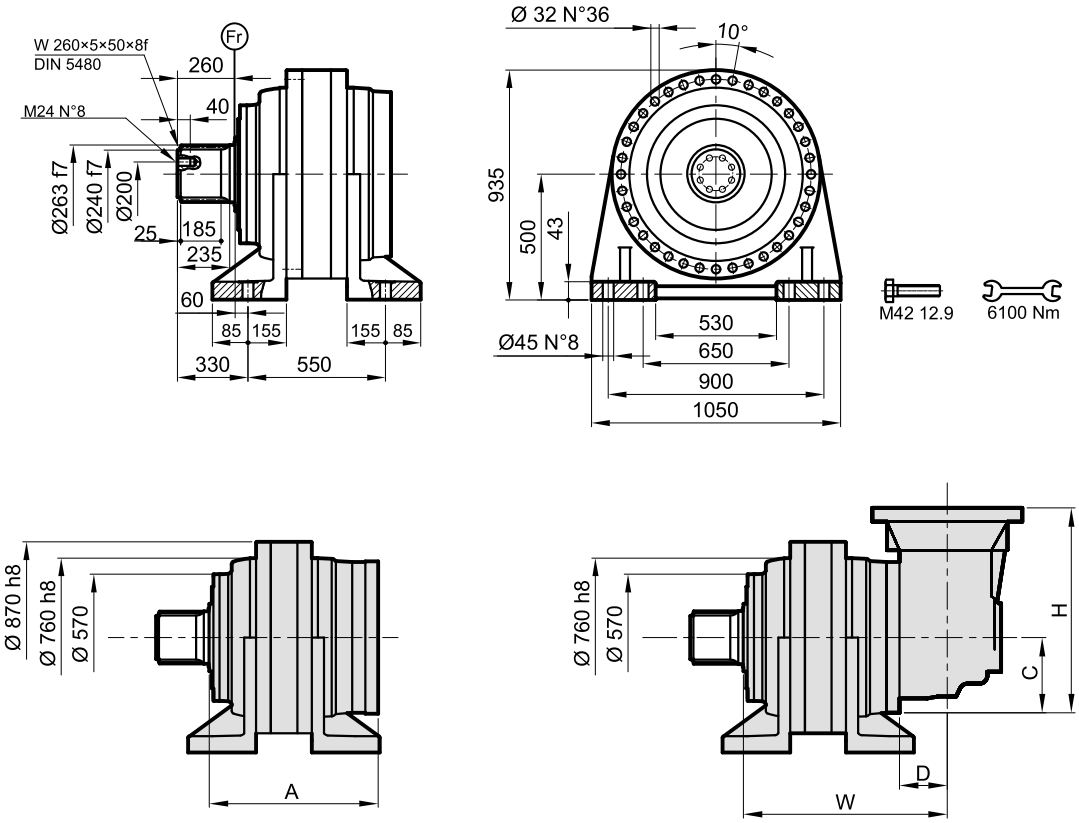
S□-G-190-□□-P290×425



Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
1	626	-	-	-	-	2919	-
2	908	-	-	-	-	2249	-
3	1136	-	-	-	-	2449	-
4	1243	1284	279.5	245	536.5	2499	2606
5	1315	1315	121	172.5	457	2517	2563

(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-190-□□-W260×260

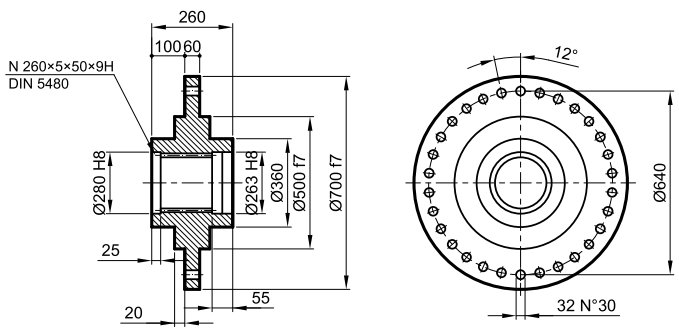


Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
1	626	-	-	-	-	2919	-
2	908	-	-	-	-	2249	-
3	1136	-	-	-	-	2449	-
4	1243	1284	279.5	245	536.5	2499	2606
5	1315	1315	121	172.5	457	2517	2563

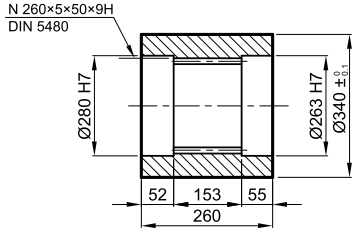
(1) Mass in kg for gearboxes without input modules (solid input shaft, motor flange, etc) or accessories. To obtain actual mass, add the mass for your chosen input module, please inquire.

Accessories

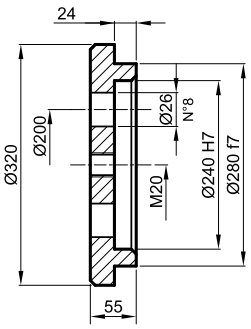
SA-F-260×5×50-S



SA-B-260×5×50-S

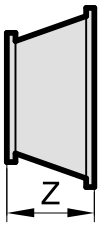


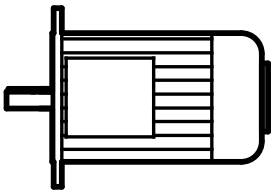
SA-P-280



Inputs

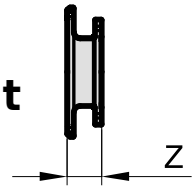
IEC Motor Input

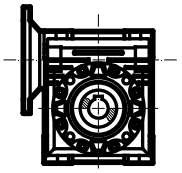




IEC	132	160	180	200	225	250	280	315
Stages	Z	Z	Z	Z	Z	Z	Z	Z
1	-	-	-	148.5	148.5	183.5	183.5	233
2	-	-	-	148.5	148.5	183.5	183.5	233
3	-	-	-	148.5	148.5	183.5	183.5	233
4	-	-	-	148.5	148.5	183.5	183.5	233
5	104	120.5	120.5	148.5	148.5	-	-	-

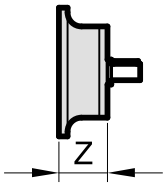
Worm Gearbox Input





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	-	-	-	-	-
4	-	-	-	-	95
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	-		-	-	211
4	-		-	185	211
5	112		159	185	-