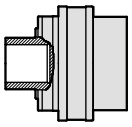
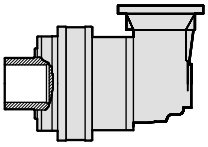
Size 150 - 140900 Nm

ST-150 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	3.83	140900	115000	211350	100	200	75	98
	4.40	130300	110000	195450	100	200	75	98
2	15.1	140900	115000	211350	1000	1500	60	96
	19.4	140900	115000	211350	1000	1500	60	96
	22.3	130300	110000	195450	1000	1500	60	96
	26.4	130300	110000	195450	1000	1500	60	96
3	53.8	140900	115000	211350	1200	2000	40	94
	64.9	140900	115000	211350	1200	2000	40	94
	74.5	130300	110000	195450	1200	2000	40	94
	84.8	140900	115000	211350	1200	2000	40	94
	97.3	130300	110000	195450	1200	2000	40	94
	113.1	130300	110000	195450	1200	2000	40	94
	131.0	140900	115000	211350	1200	2000	40	94
	150.4	130300	110000	195450	1200	2000	40	94
4	203.4	140900	115000	211350	1500	2800	30	92
	245.1	140900	115000	211350	1500	2800	30	92
	267.6	140900	115000	211350	1500	2800	30	92
	278.2	140900	115000	211350	1500	2800	30	92
	314.1	140900	115000	211350	1500	2800	30	92
	335.2	140900	115000	211350	1500	2800	30	92
	360.6	130300	110000	195450	1500	2800	30	92
	389.3	140900	115000	211350	1500	2800	30	92
	410.6	140900	115000	211350	1500	2800	30	92
	448.3	140900	115000	211350	1500	2800	30	92
	470.4	140900	115000	211350	1500	2800	30	92
	508.8	140900	115000	211350	1500	2800	30	92
	584.0	130300	110000	195450	1500	2800	30	92
	652.1	140900	115000	211350	1500	2800	30	92
	786.0	140900	115000	211350	1500	2800	30	92
	850.5	130300	110000	195450	1500	2800	30	92
	1069.2	130300	110000	195450	1500	2800	30	92
5	830.0	130300	110000	195450	1500	2800	21	90
	871.5	140900	115000	211350	1500	2800	21	90
	951.6	140900	115000	211350	1500	2800	21	90
	1000.3	130300	110000	195450	1500	2800	21	90
	1050.3	140900	115000	211350	1500	2800	21	90
	1139.0	140900	115000	211350	1500	2800	21	90
	1243.6	140900	115000	211350	1500	2800	21	90
	1346.1	140900	115000	211350	1500	2800	21	90
	1459.7	140900	115000	211350	1500	2800	21	90
	1593.9	140900	115000	211350	1500	2800	21	90
	1672.5	140900	115000	211350	1500	2800	21	90
	1759.5	140900	115000	211350	1500	2800	21	90
	1841.0	140900	115000	211350	1500	2800	21	90
	1920.9	140900	115000	211350	1500	2800	21	90
	2185.8	140900	115000	211350	1500	2800	21	90
	2318.4	140900	115000	211350	1500	2800	21	90
	2510.4	140900	115000	211350	1500	2800	21	90
	2627.7	140900	115000	211350	1500	2800	21	90
	2801.4	140900	115000	211350	1500	2800	21	90
	3175.2	140900	115000	211350	1500	2800	21	90
	3790.0	140900	115000	211350	1500	2800	21	90
	4069.4	140900	115000	211350	1500	2800	21	90
	5305.2	140900	115000	211350	1500	2800	21	90

SX-150 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	149.7	140900	115000	211350	1500	2500	28	92
	180.4	140900	115000	211350	1500	2500	28	92
	207.0	130300	110000	195450	1500	2500	28	92
	231.2	140900	115000	211350	1500	2500	28	92
	278.0	140900	115000	211350	1500	2500	28	92
	302.1	140900	115000	211350	1500	2500	28	92
	356.3	140900	115000	211350	1500	2500	28	92
	409.0	130300	110000	195450	1500	2500	28	92
	465.7	140900	115000	211350	1500	2500	28	92
	502.7	130300	110000	195450	1500	2500	28	92
	561.3	140900	115000	211350	1500	2500	28	92
	644.3	130300	110000	195450	1500	2500	28	92
5	722.5	140900	115000	211350	1500	2800	20	90
	771.0	140900	115000	211350	1500	2800	20	90
	804.5	140900	115000	211350	1500	2800	20	90
	843.2	140900	115000	211350	1500	2800	20	90
	896.7	140900	115000	211350	1500	2800	20	90
	920.7	140900	115000	211350	1500	2800	20	90
	988.2	140900	115000	211350	1500	2800	20	90
	1080.7	140900	115000	211350	1500	2800	20	90
	1170.2	140900	115000	211350	1500	2800	20	90
	1226.4	140900	115000	211350	1500	2800	20	90
	1317.2	130300	110000	195450	1500	2800	20	90
	1386.6	140900	115000	211350	1500	2800	20	90
	1424.2	140900	115000	211350	1500	2800	20	90
	1556.6	140900	115000	211350	1500	2800	20	90
	1618.2	140900	115000	211350	1500	2800	20	90
	1690.7	130300	110000	195450	1500	2800	20	90
	1720.9	140900	115000	211350	1500	2800	20	90
	1812.2	140900	115000	211350	1500	2800	20	90
	1931.5	140900	115000	211350	1500	2800	20	90
	2184.3	140900	115000	211350	1500	2800	20	90
	2243.1	140900	115000	211350	1500	2800	20	90
	2328.2	140900	115000	211350	1500	2800	20	90
	2465.2	130300	110000	195450	1500	2800	20	90
	2574.6	130300	110000	195450	1500	2800	20	90
	2627.6	130300	110000	195450	1500	2800	20	90
	2710.4	140900	115000	211350	1500	2800	20	90
	2925.8	130300	110000	195450	1500	2800	20	90
	3111.0	130300	110000	195450	1500	2800	20	90
	3266.9	140900	115000	211350	1500	2800	20	90
	3678.1	130300	110000	195450	1500	2800	20	90
	3749.9	130300	110000	195450	1500	2800	20	90
	4444.3	130300	110000	195450	1500	2800	20	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

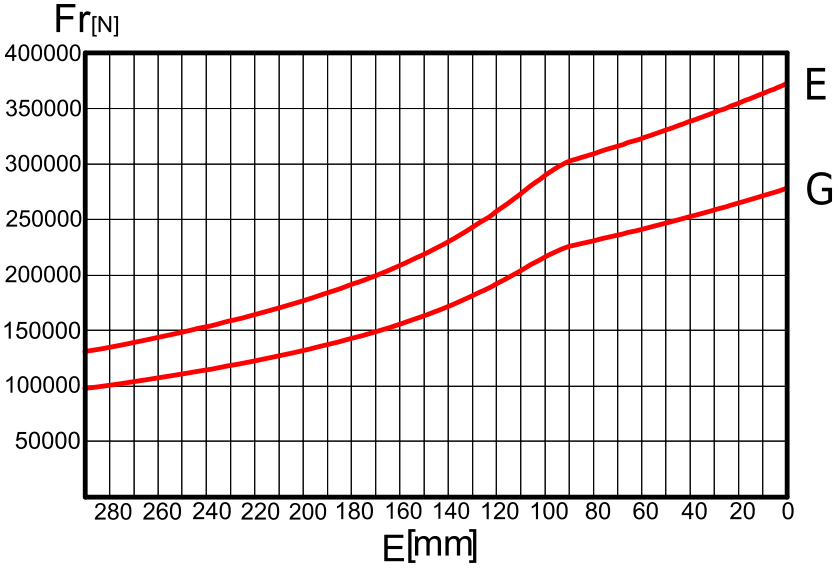
(4) n_{1max} is the maximum input speed for intermittent service. For continuous operation at speeds over n1n please inquire.

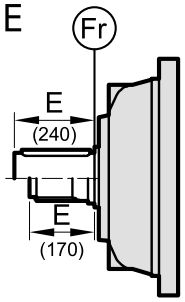
(5) Pt is the thermal power rating, that is the power in kW that, at 20°C, the gearbox can transmit during continuous operation, at $n_1=n_{1n}$ and lubricated with ISO-VG-220 oil without it exceeding 90°C. It depends on ambient temperature.

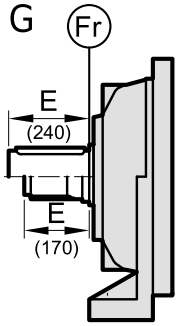
Output Shaft Radial Load Capacity

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

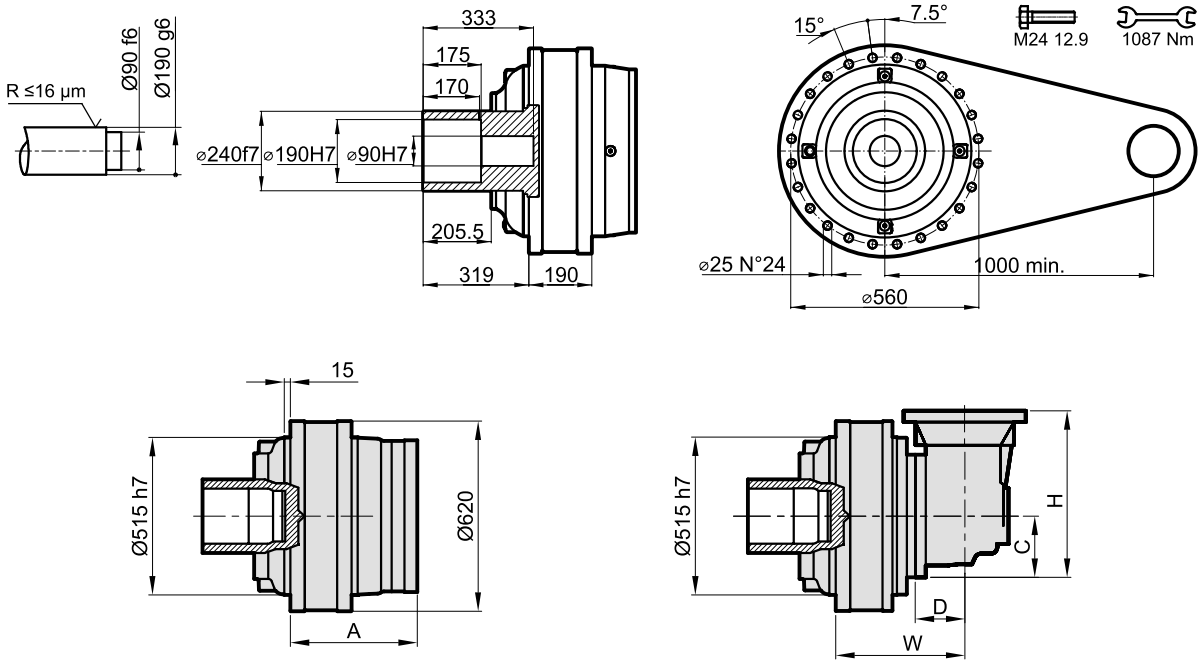
Axial Load Capacity is only given for gearboxes with solid shafts (Smooth Solid Shaft with Key (P) and DIN 5480 Splined Shaft (W)) for a design life of 6 million revolutions of the output shaft ($6 \cdot 10^6$). These values can be adjusted for other number of revolutions of the output shaft applying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

Axial Load Capacity depends on the direction of the load:

	Push	Pull
F_a	70000 N	40000 N

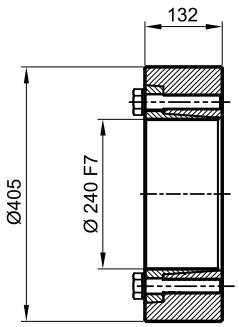
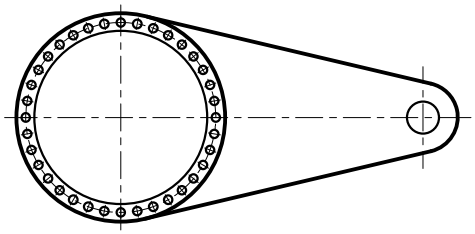
Dimensions

S□-E-150-□□-H190×333

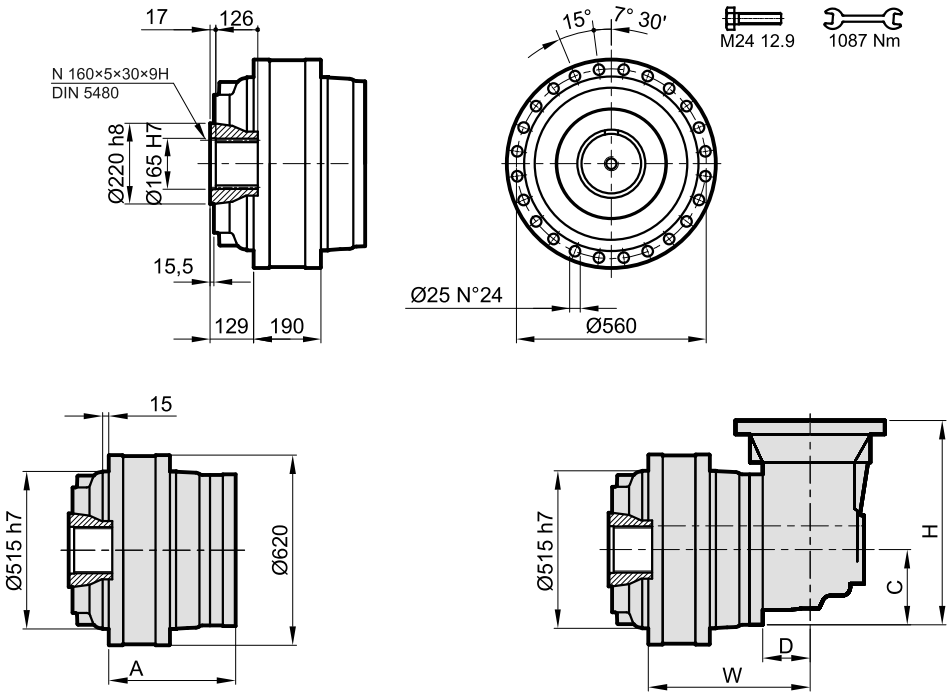


Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
1	336	-	-	-	-	762	-
2	564	-	-	-	-	961	-
3	671	-	-	-	-	1011	-
4	743	743	121	172,5	457	1028	1070
5	804	808	103	122	319	1037	1053

(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-240	**SA-T-□-515-560-24×25-□-□**
 Max. Torque: 190 kNm Screw Tightening Torque: 630 Nm	 See the chapter on Torque Arms

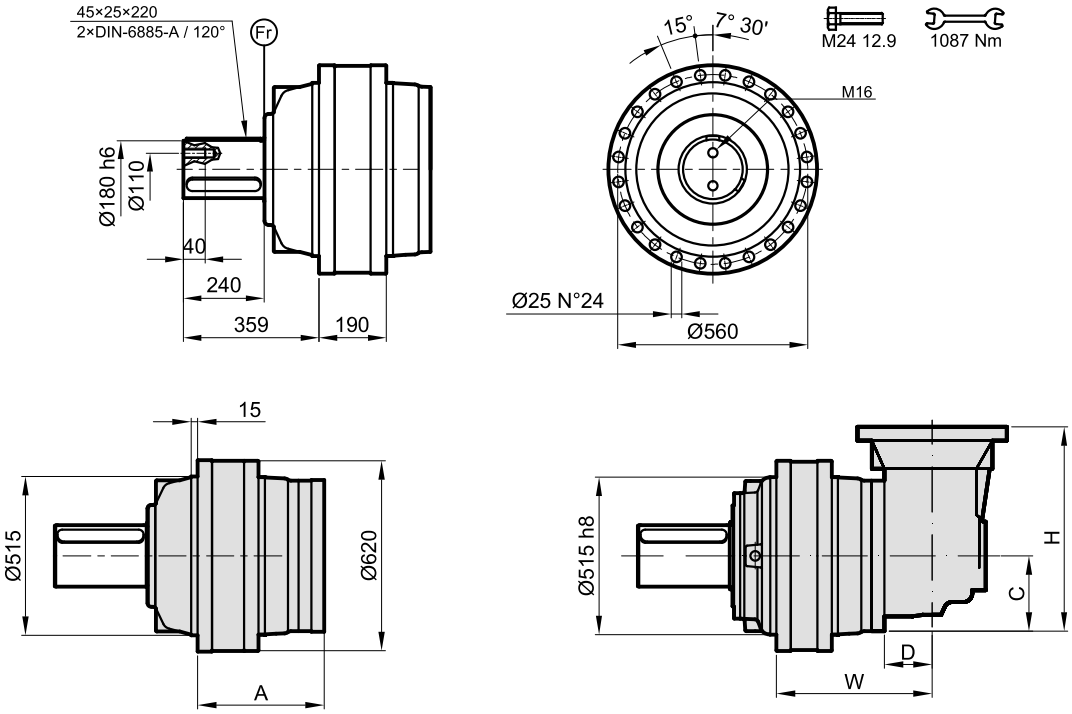
S□-E-150-□□-N160×143



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.

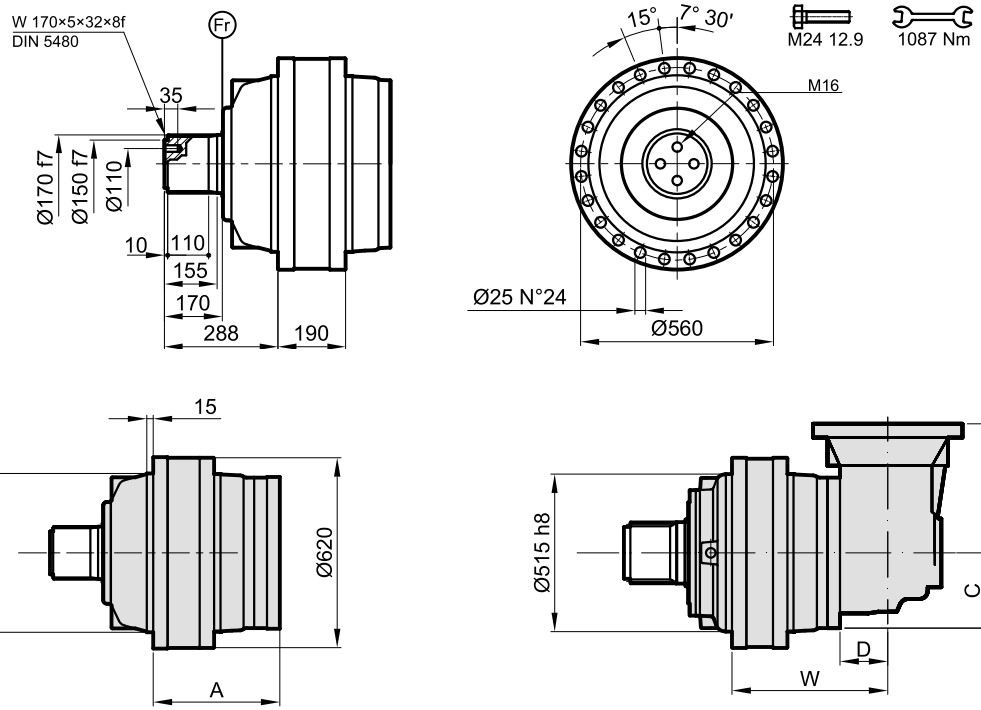
S□-E-150-□□-P180×240



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-150-□□-W170×170

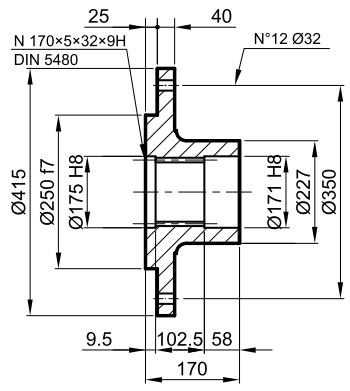


Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
1	336	-	-	-	-	830	-
2	564	-	-	-	-	1029	-
3	671	-	-	-	-	1079	-
4	743	743	121	172,5	457	1096	1138
5	804	808	103	122	319	1105	1121

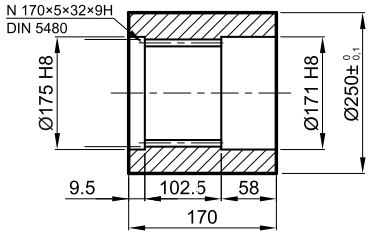
(1) Mass in kg for gearboxes without input modules (solid input shaft, motor flange, etc) or accessories. To obtain actual mass, add the mass for your chosen input module, please inquire.

Accessories

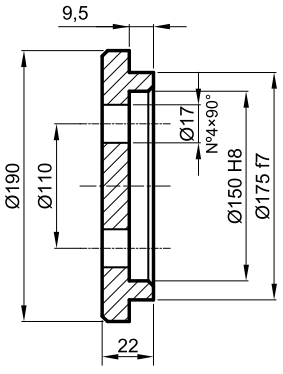
SA-F-170×5×32-S



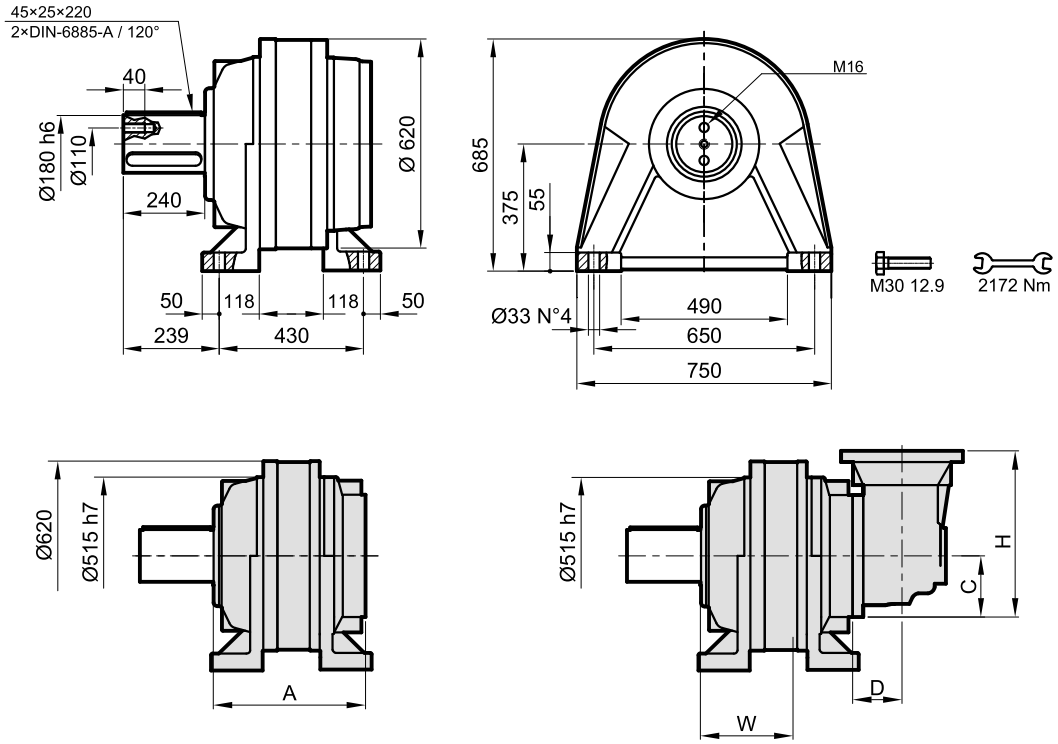
SA-B-170×5×32-S



SA-P-171



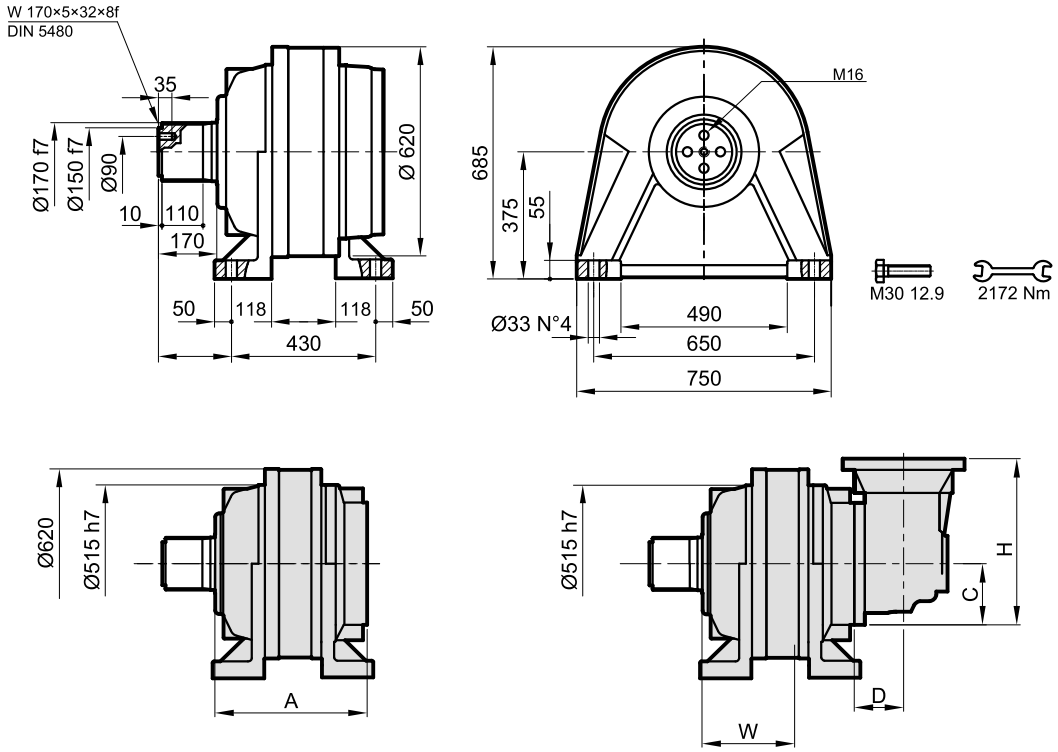
S□-G-150-□□-P180×240



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-150-□□-W170×170

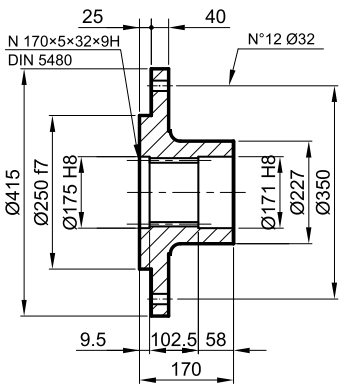


Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
1	474	-	-	-	-	969	-
2	702	-	-	-	-	1168	-
3	809	-	-	-	-	1218	-
4	881	881	121	172,5	457	1235	1277
5	942	946	103	122	319	1244	1260

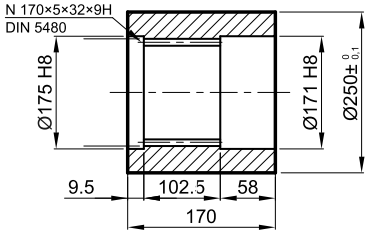
(1) Mass in kg for gearboxes without input modules (solid input shaft, motor flange, etc) or accessories. To obtain actual mass, add the mass for your chosen input module, please inquire.

Accessories

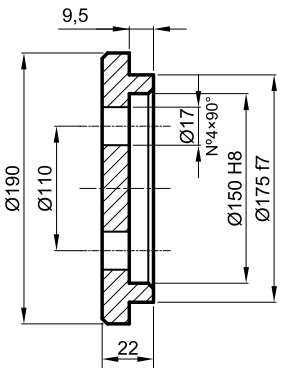
SA-F-170×5×32-S



SA-B-170×5×32-S

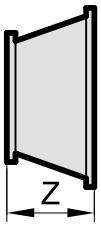


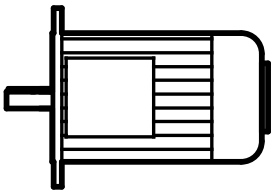
SA-P-171



Inputs

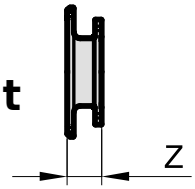
IEC Motor Input

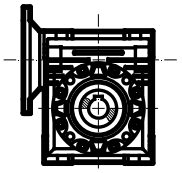




IEC	100	112	132	160	180	200	225	250	280	315
Stages	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z
1	-	-	-	120.5	120.5	148.5	148.5	183.5	183.5	233
2	-	-	-	120.5	120.5	148.5	148.5	183.5	183.5	233
3	-	-	-	120.5	120.5	148.5	148.5	183.5	183.5	-
4	71	71	104	120.5	120.5	148.5	148.5	-	-	-
5	71	71	104	120.5	120.5	148.5	148.5	-	-	-

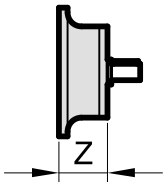
Worm Gearbox Input





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	-		-	-	211
3	-		-	185	211
4	122		159		-
5	122		-	-	-