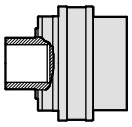
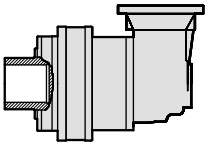
Size 140 - 99000 Nm

ST-140 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	4.09	99000	74570	198000	500	750	80	98
	5.25	78630	59230	157260	500	750	80	98
2	16.4	99000	74570	198000	1000	1500	65	96
	21.0	78630	59230	157260	1000	1500	65	96
	27.3	78630	59230	157260	1000	1500	65	96
	32.8	78630	59230	157260	1000	1500	65	96
3	60.0	99000	74570	198000	1500	2500	45	94
	72.5	99000	74570	198000	1500	2500	45	94
	77.0	78630	59230	157260	1500	2500	45	94
	93.0	78630	59230	157260	1500	2500	45	94
	105.0	78630	59230	157260	1500	2500	45	94
	120.9	78630	59230	157260	1500	2500	45	94
	136.5	78630	59230	157260	1500	2500	45	94
	158.3	78630	59230	157260	1500	2500	45	94
	164.1	78630	59230	157260	1500	2500	45	94
	190.3	78630	59230	157260	1500	2500	45	94
	229.7	78630	59230	157260	1500	2500	45	94
4	247.4	99000	74570	198000	1500	2800	30	92
	273.7	99000	74570	198000	1500	2800	30	92
	298.9	99000	74570	198000	1500	2800	30	92
	309.9	99000	74570	198000	1500	2800	30	92
	359.9	99000	74570	198000	1500	2800	30	92
	397.8	78630	59230	157260	1500	2800	30	92
	434.9	99000	74570	198000	1500	2800	30	92
	460.1	78630	59230	157260	1500	2800	30	92
	502.4	78630	59230	157260	1500	2800	30	92
	525.3	99000	74570	198000	1500	2800	30	92
	555.3	78630	59230	157260	1500	2800	30	92
	598.2	78630	59230	157260	1500	2800	30	92
	630.0	78630	59230	157260	1500	2800	30	92
	674.3	78630	59230	157260	1500	2800	30	92
	705.3	78630	59230	157260	1500	2800	30	92
	750.8	78630	59230	157260	1500	2800	30	92
	788.3	78630	59230	157260	1500	2800	30	92
	819.0	78630	59230	157260	1500	2800	30	92
	883.1	78630	59230	157260	1500	2800	30	92
	950.0	78630	59230	157260	1500	2800	30	92
	1065.8	78630	59230	157260	1500	2800	30	92
	1148.0	78630	59230	157260	1500	2800	30	92
	1385.5	78630	59230	157260	1500	2800	30	92
	1665.2	78630	59230	157260	1500	2800	30	92

SX-140 Technical data



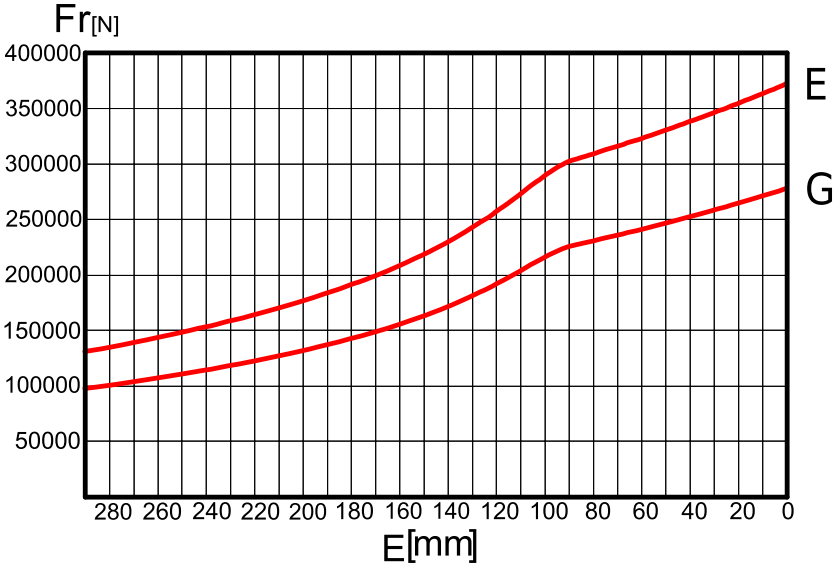
Stages	Ratio	$T_{2N(1.2M)}$ (1)	$T_{2N(6M)}$ (1)	T_{2Peak} (2)	n_{1N} (3)	n_{1Max} (4)	P_t (5)	η
	i	(Nm)	(Nm)	(Nm)	(rpm)	(rpm)	(kW)	(%)
3	57.9	99000	74570	198000	1500	2500	45	94
	75.7	99000	74570	198000	1500	2500	45	94
	96.6	78630	59230	157260	1500	2500	45	94
	116.2	78630	59230	157260	1500	2500	45	94
	126.3	78630	59230	157260	1500	2500	45	94
	151.8	78630	59230	157260	1500	2500	45	94
4	185.4	99000	74570	198000	1500	2800	30	92
	201.6	99000	74570	198000	1500	2800	30	92
	223.9	99000	74570	198000	1500	2800	30	92
	243.4	99000	74570	198000	1500	2800	30	92
	277.4	99000	74570	198000	1500	2800	30	92
	309.3	78630	59230	157260	1500	2800	30	92
	335.1	99000	74570	198000	1500	2800	30	92
	373.6	78630	59230	157260	1500	2800	30	92
	406.2	78630	59230	157260	1500	2800	30	92
	449.0	78630	59230	157260	1500	2800	30	92
	488.3	78630	59230	157260	1500	2800	30	92
	559.2	78630	59230	157260	1500	2800	30	92
	672.1	78630	59230	157260	1500	2800	30	92

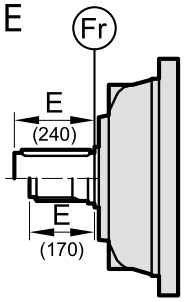
(1) T_{2N} values are calculated at $n_1=n_{1n}$, continuous duty cycle, uniform operation and KA=1 according to ISO 6336. $T_{2N(1.2M)}$ has been calculated for 1200000 of revolutions at the output shaft, and $T_{2N(6M)}$ has been calculated for 6000000 of revolutions at the output shaft. The application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

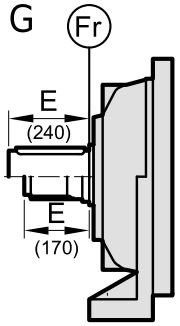
Output Shaft Radial Load Capacity

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

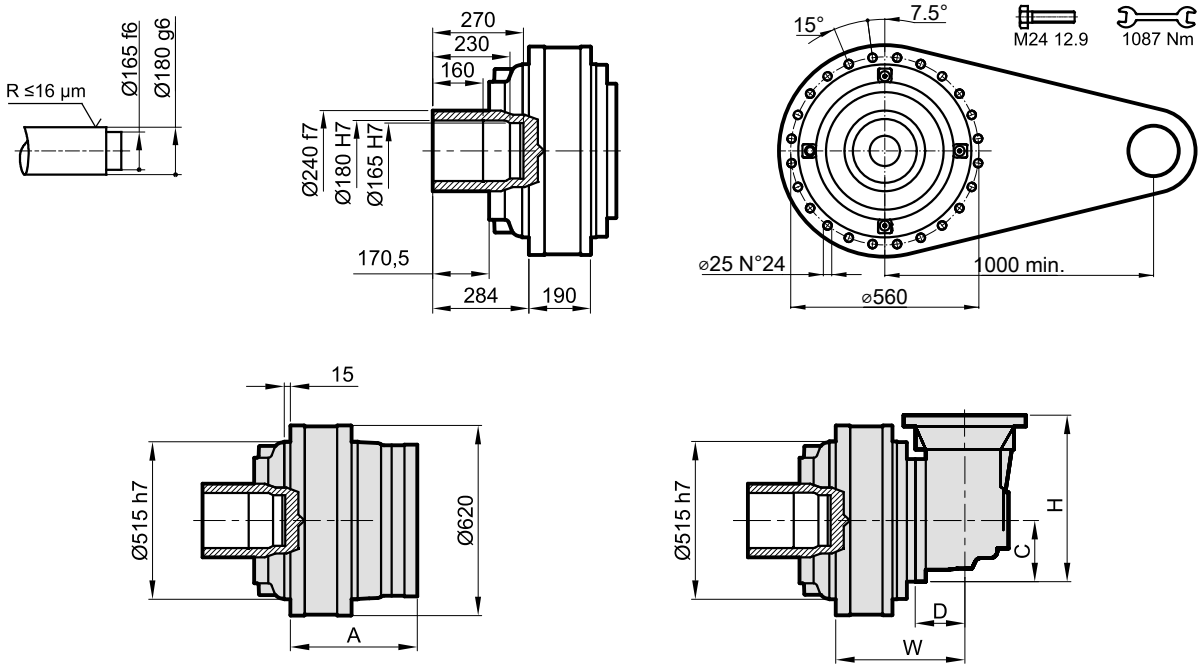
Axial Load Capacity is only given for gearboxes with solid shafts (Smooth Solid Shaft with Key (P) and DIN 5480 Splined Shaft (W)) for a design life of 6 million revolutions of the output shaft ($6 \cdot 10^6$). These values can be adjusted for other number of revolutions of the output shaft applying 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-140-□□-H180×270

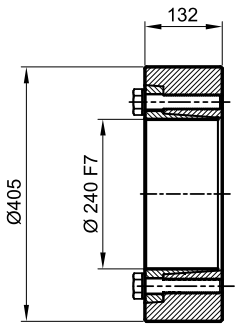


Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
1	308	-	-	-	-	460	-
2	491	-	-	-	-	580	-
3	584	613	225	205	569	606	695
4	644	647.5	118.5	140	390	619	657

(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.

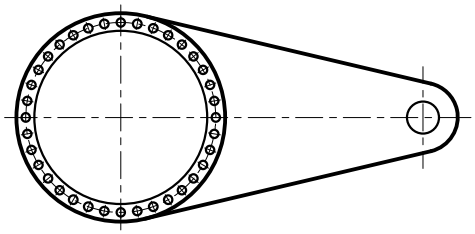
Accessories

SA-H-240



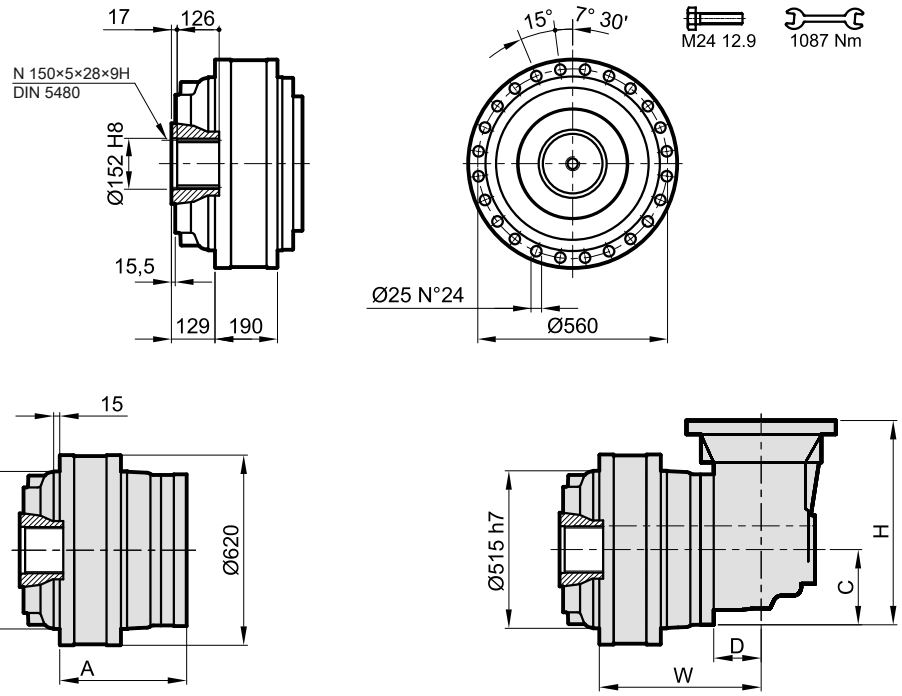
Max. Torque: 190 kNm
Screw Tightening Torque: 630 Nm

SA-T-□-515-560-24×25-□-□



See the chapter on Torque Arms

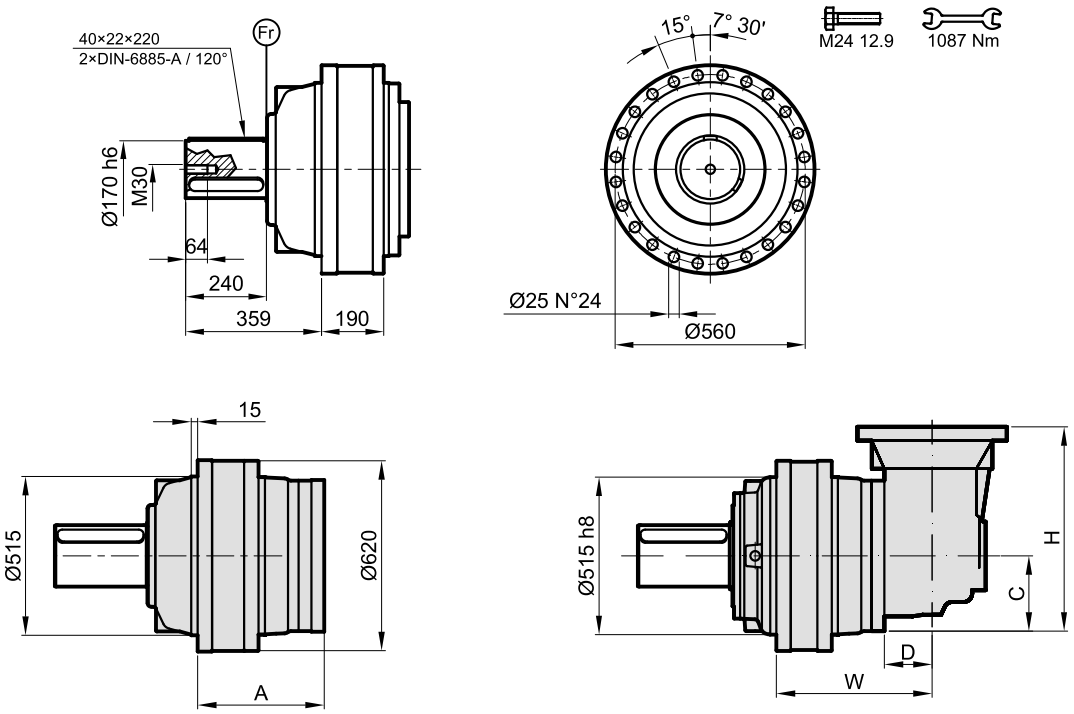
S□-E-140-□□-N150×126



Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
1	308	-	-	-	-	440	-
2	491	-	-	-	-	560	-
3	584	613	225	205	569	586	676
4	644	647.5	118.5	140	390	599	637

(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.

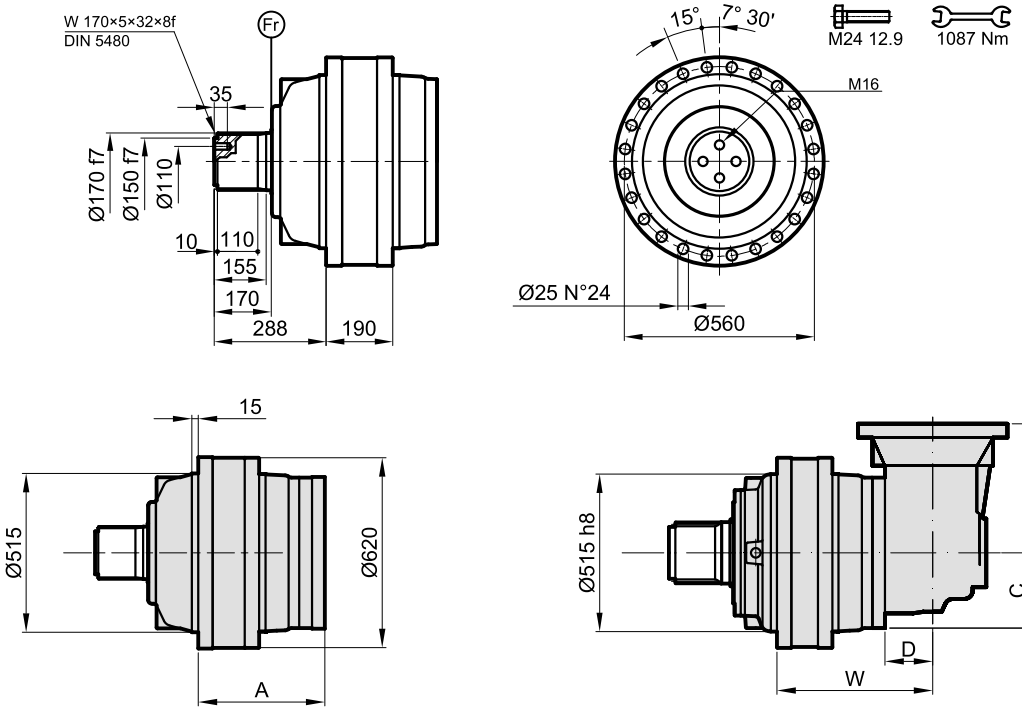
S□-E-140-□□-P170×240



Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
1	368	-	-	-	-	501	-
2	489	-	-	-	-	621	-
3	584	613	225	205	569	647	737
4	644	647.5	118.5	140	390	660	698

(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-140-□□-W170×170

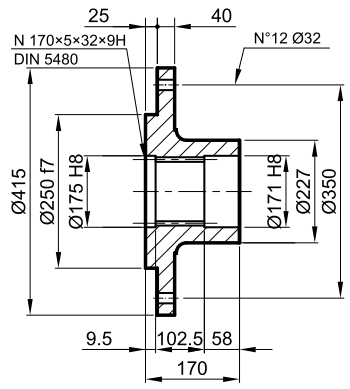


Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
1	308	-	-	-	-	501	-
2	491	-	-	-	-	621	-
3	584	613	225	205	569	647	737
4	644	647.5	118.5	140	390	660	698

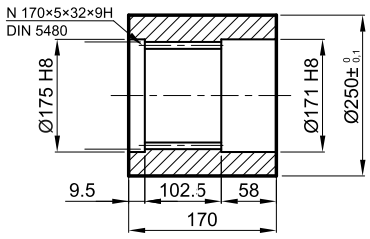
(1) Mass in kg for gearboxes without input modules (solid input shaft, motor flange, etc) or accessories. To obtain actual mass, add the mass for your chosen input module, please inquire.

Accessories

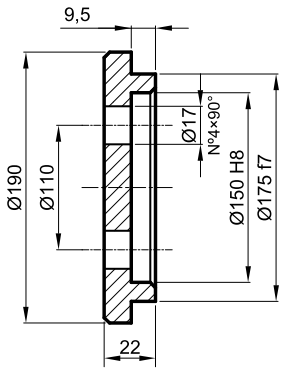
SA-F-170×5×32-S



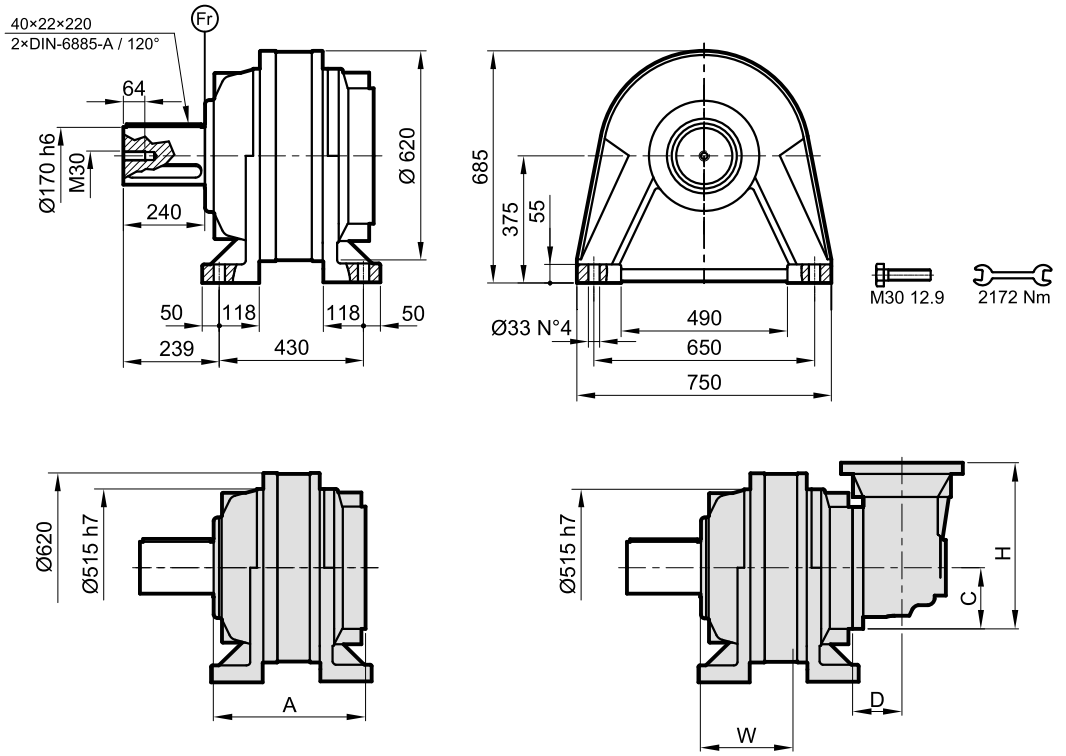
SA-B-170×5×32-S



SA-P-171



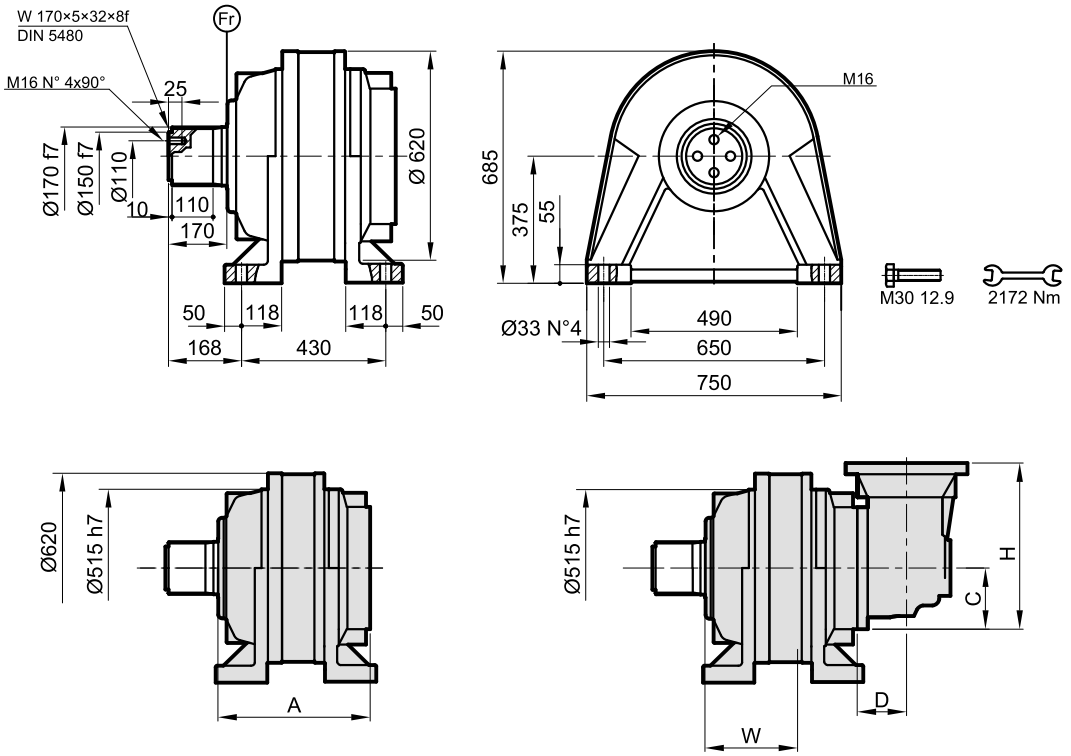
S□-G-140-□□-P170×240



Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
1	427	-	-	-	-	635	-
2	610	-	-	-	-	755	-
3	703	732	225	205	569	781	871
4	763	766.5	118.5	140	390	794	832

(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-140-□□-W170×170

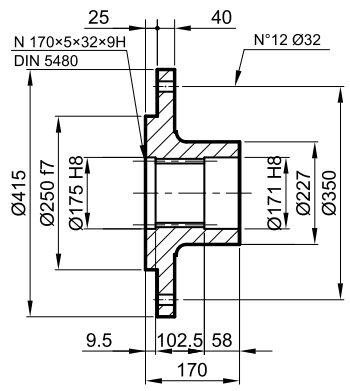


Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
1	427	-	-	-	-	635	-
2	610	-	-	-	-	755	-
3	703	732	225	205	569	781	871
4	763	766.5	118.5	140	390	794	832

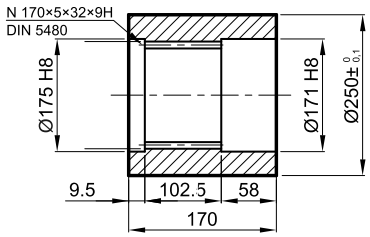
(1) Mass in kg for gearboxes without input modules (solid input shaft, motor flange, etc) or accessories. To obtain actual mass, add the mass for your chosen input module, please inquire.

Accessories

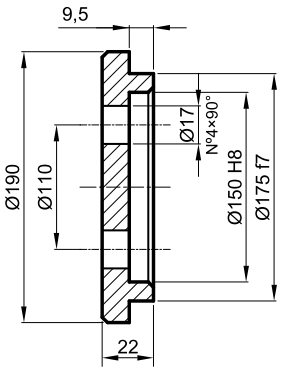
SA-F-170×5×32-S



SA-B-170×5×32-S

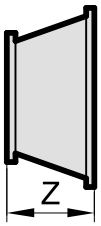


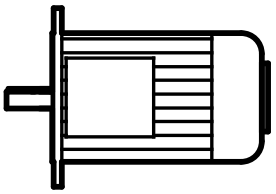
SA-P-171



Inputs

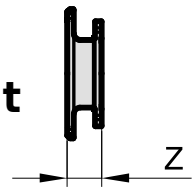
IEC Motor Input

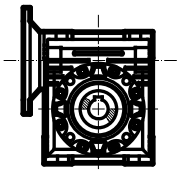




IEC	100	112	132	160	180	200	225	250	280	315
Stages	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z
1	-	-	-	120.5	120.5	148.5	148.5	183.5	183.5	233
2	-	-	-	120.5	120.5	148.5	148.5	183.5	183.5	233
3	-	-	-	120.5	120.5	148.5	148.5	183.5	183.5	-
4	71	71	104	120.5	120.5	148.5	148.5	-	-	-

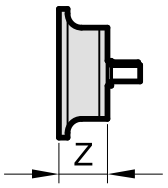
Worm Gearbox Input





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

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	-		-	185	-
3	-		159	-	-
4	122		159	-	-