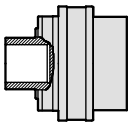
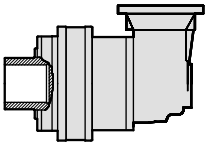
Size 100 - 30700 Nm

ST-100 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)	(%)
2	14.2	30760	23170	61520	1200	2000	34	96
	17.1	30760	23170	61520	1200	2000	34	96
	22.4	30760	23170	61520	1200	2000	34	96
	29.1	23780	17910	47560	1200	2000	34	96
	35.1	23780	17910	47560	1200	2000	34	96
3	53.7	30760	23170	61520	1500	2800	23	94
	64.7	30760	23170	61520	1500	2800	23	94
	70.7	30760	23170	61520	1500	2800	23	94
	73.5	30760	23170	61520	1500	2800	23	94
	88.6	30760	23170	61520	1500	2800	23	94
	92.4	30760	23170	61520	1500	2800	23	94
	102.9	30760	23170	61520	1500	2800	23	94
	115.7	30760	23170	61520	1500	2800	23	94
	124.3	30760	23170	61520	1500	2800	23	94
	134.4	30760	23170	61520	1500	2800	23	94
	162.4	30760	23170	61520	1500	2800	23	94
	174.7	23780	17910	47560	1500	2800	23	94
	181.3	23780	17910	47560	1500	2800	23	94
4	191.0	30760	23170	61520	1500	2800	17	92
	208.6	30760	23170	61520	1500	2800	17	92
	251.4	30760	23170	61520	1500	2800	17	92
	277.5	30760	23170	61520	1500	2800	17	92
	300.9	30760	23170	61520	1500	2800	17	92
	314.9	30760	23170	61520	1500	2800	17	92
	328.5	30760	23170	61520	1500	2800	17	92
	362.6	30760	23170	61520	1500	2800	17	92
	379.5	30760	23170	61520	1500	2800	17	92
	396.0	30760	23170	61520	1500	2800	17	92
	437.1	30760	23170	61520	1500	2800	17	92
	477.3	30760	23170	61520	1500	2800	17	92
	495.9	30760	23170	61520	1500	2800	17	92
	517.4	30760	23170	61520	1500	2800	17	92
	532.5	30760	23170	61520	1500	2800	17	92
	576.0	30760	23170	61520	1500	2800	17	92
	597.8	30760	23170	61520	1500	2800	17	92
	623.7	30760	23170	61520	1500	2800	17	92
	694.2	30760	23170	61520	1500	2800	17	92
	752.6	30760	23170	61520	1500	2800	17	92
	781.2	30760	23170	61520	1500	2800	17	92
	838.8	30760	23170	61520	1500	2800	17	92
	1015.5	23780	17910	47560	1500	2800	17	92
	1164.8	30760	23170	61520	1500	2800	17	92
	1254.8	23780	17910	47560	1500	2800	17	92
	1425.0	23780	17910	47560	1500	2800	17	92

SX-100 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	39.5	30760	23170	61520	1500	2800	23	94
	47.7	30760	23170	61520	1500	2800	23	94
	51.4	23780	17910	47560	1500	2800	23	94
	60.9	30760	23170	61520	1500	2800	23	94
	73.4	30760	23170	61520	1500	2800	23	94
	81.0	23780	17910	47560	1500	2800	23	94
	96.0	30760	23170	61520	1500	2800	23	94
	124.8	23780	17910	47560	1500	2800	23	94
	150.4	23780	17910	47560	1500	2800	23	94
4	123.6	30760	23170	61520	1500	2800	17	92
	134.9	30760	23170	61520	1500	2800	17	92
	169.0	30760	23170	61520	1500	2800	17	92
	196.3	30760	23170	61520	1500	2800	17	92
	237.2	30760	23170	61520	1500	2800	17	92
	252.8	30760	23170	61520	1500	2800	17	92
	293.5	30760	23170	61520	1500	2800	17	92
	304.6	30760	23170	61520	1500	2800	17	92
	317.9	30760	23170	61520	1500	2800	17	92
	353.8	30760	23170	61520	1500	2800	17	92
	398.1	30760	23170	61520	1500	2800	17	92
	427.5	30760	23170	61520	1500	2800	17	92
	462.3	30760	23170	61520	1500	2800	17	92
	498.1	23780	17910	47560	1500	2800	17	92
	517.6	23780	17910	47560	1500	2800	17	92
	558.7	30760	23170	61520	1500	2800	17	92
	601.0	23780	17910	47560	1500	2800	17	92
	623.8	23780	17910	47560	1500	2800	17	92
	724.5	23780	17910	47560	1500	2800	17	92
	875.4	23780	17910	47560	1500	2800	17	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

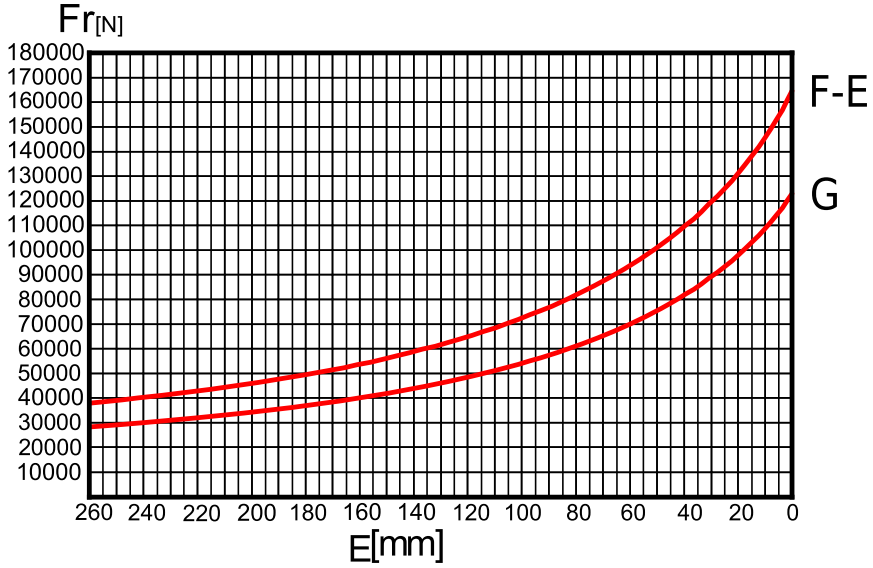
(4) n_{1max} is the maximum input speed for intermittent service. For continuous operation at speeds over n1n please inquire.

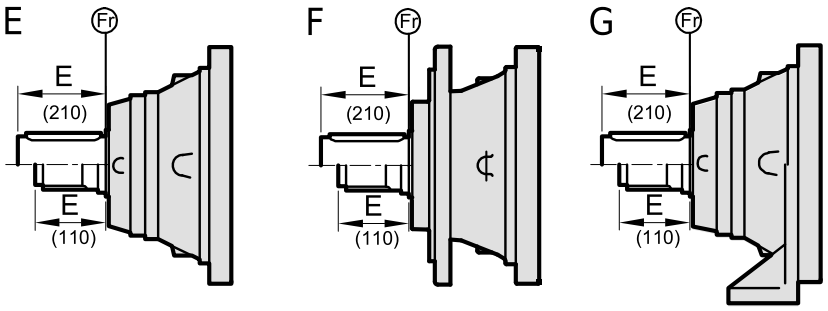
(5) Pt is the thermal power rating, that is the power in kW that, at 20°C, the gearbox can transmit during continuous operation, at $n_1=n_{1n}$ and lubricated with ISO-VG-220 oil without it exceeding 90°C. It depends on ambient temperature.

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

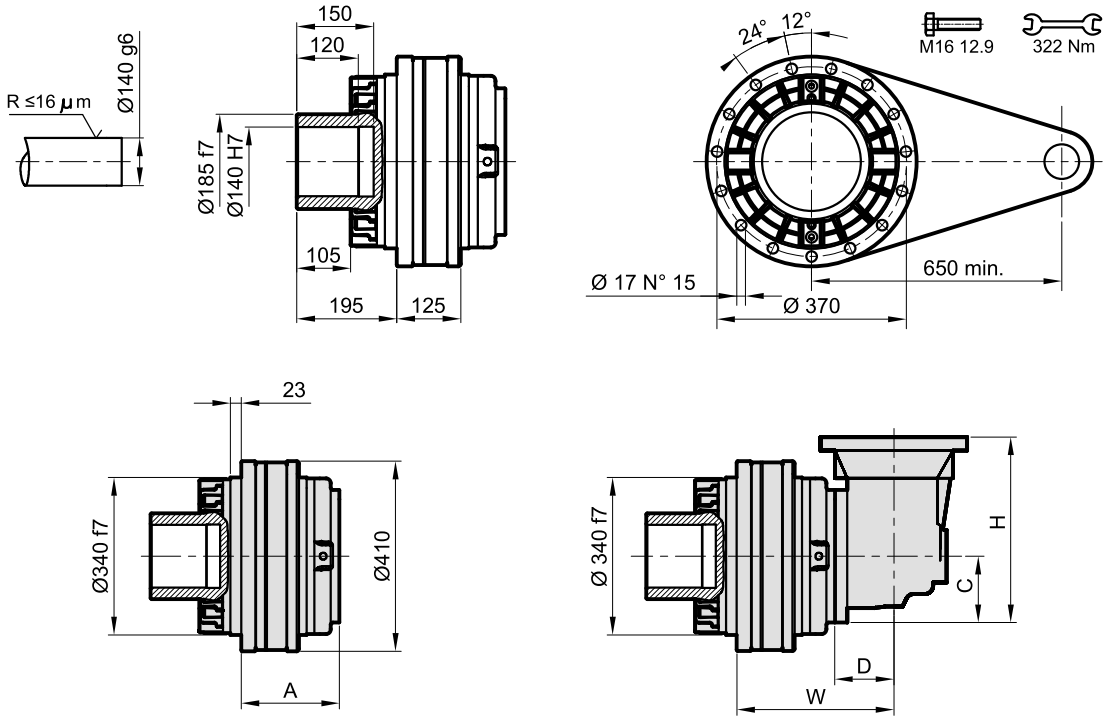
Axial Load Capacity is only given for gearboxes with solid shafts (Smooth Solid Shaft with Key (P) and DIN 5480 Splined Shaft (W)) for a design life of 6 million revolutions of the output shaft ($6 \cdot 10^6$). These values can be adjusted for other number of revolutions of the output shaft applying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

Axial Load Capacity depends on the direction of the load:

	Push	Pull
F_a	95000 N	75000 N

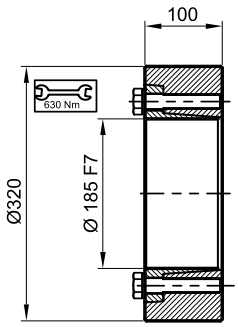
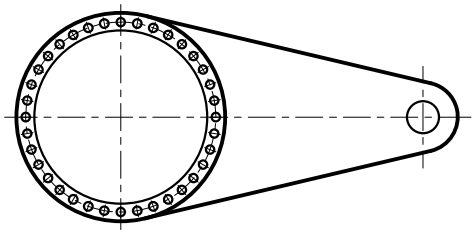
Dimensions

S□-E-100-□□-H140×150

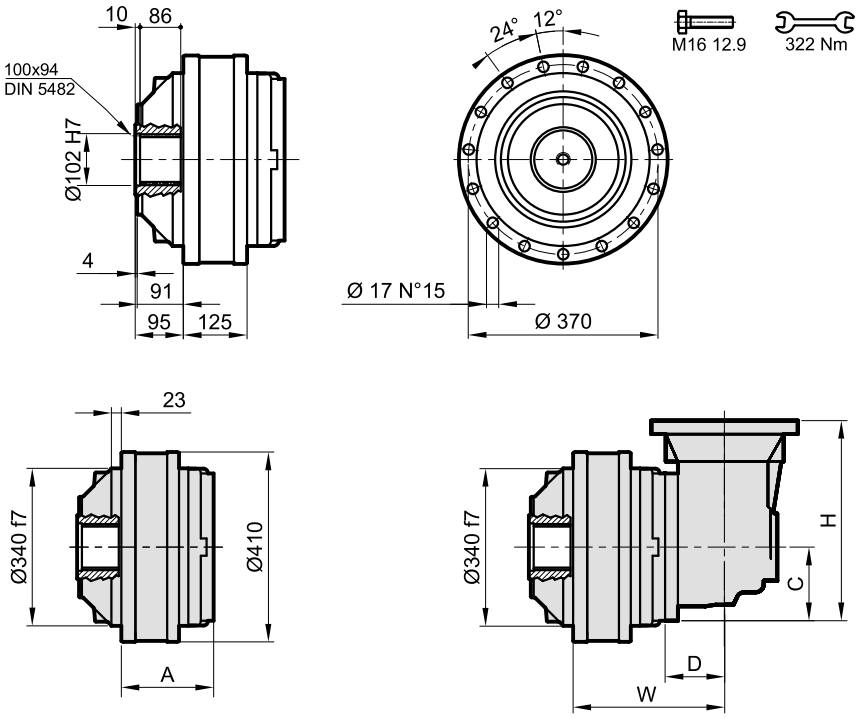


Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
2	309	-	-	-	-	207	-
3	381	381	121	172.5	457	224	270
4	442	446	103	122	319	232	253

(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-185	**SA-T-□-340-370-15×17-□-□**
 Max. Torque: 81 kNm Screw Tightening Torque: 630 Nm	 See the chapter on Torque Arms

S□-E-100-□□-N100×96

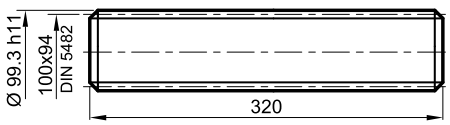


Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
2	309	-	-	-	-	188	-
3	381	381	121	172.5	457	204	251
4	442	446	103	122	319	212	233

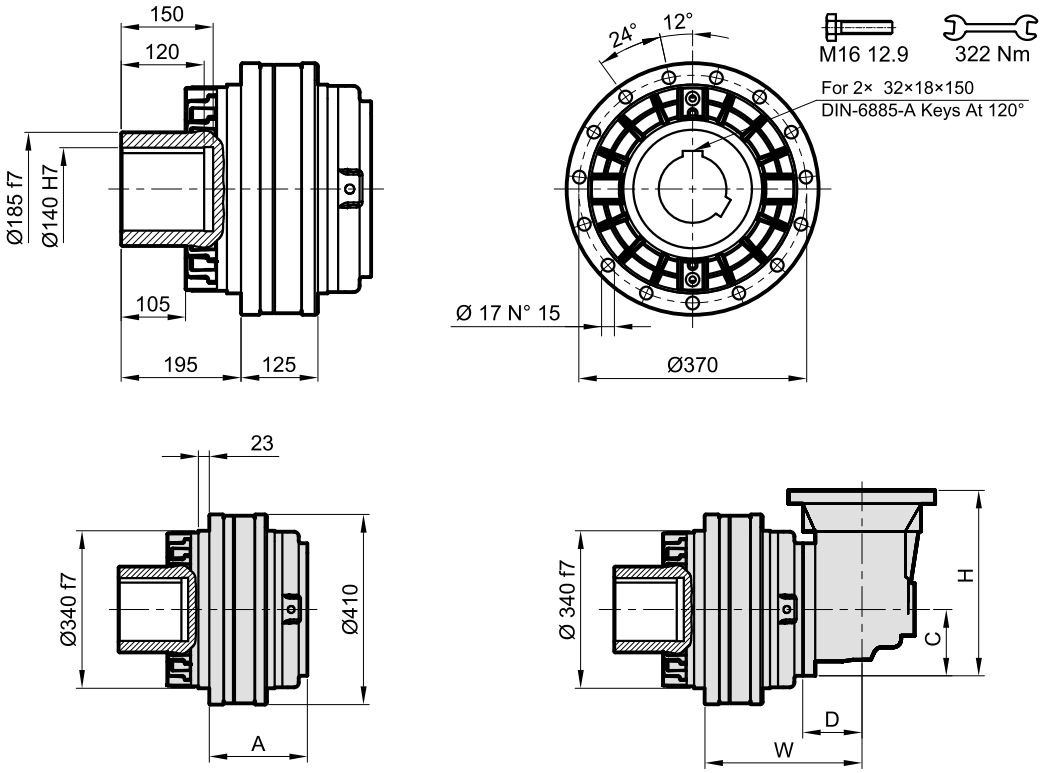
(1) Mass in kg for gearboxes without input modules (solid input shaft, motor flange, etc) or accessories. To obtain actual mass, add the mass for your chosen input module, please inquire.

Accessories

SA-S-100×94



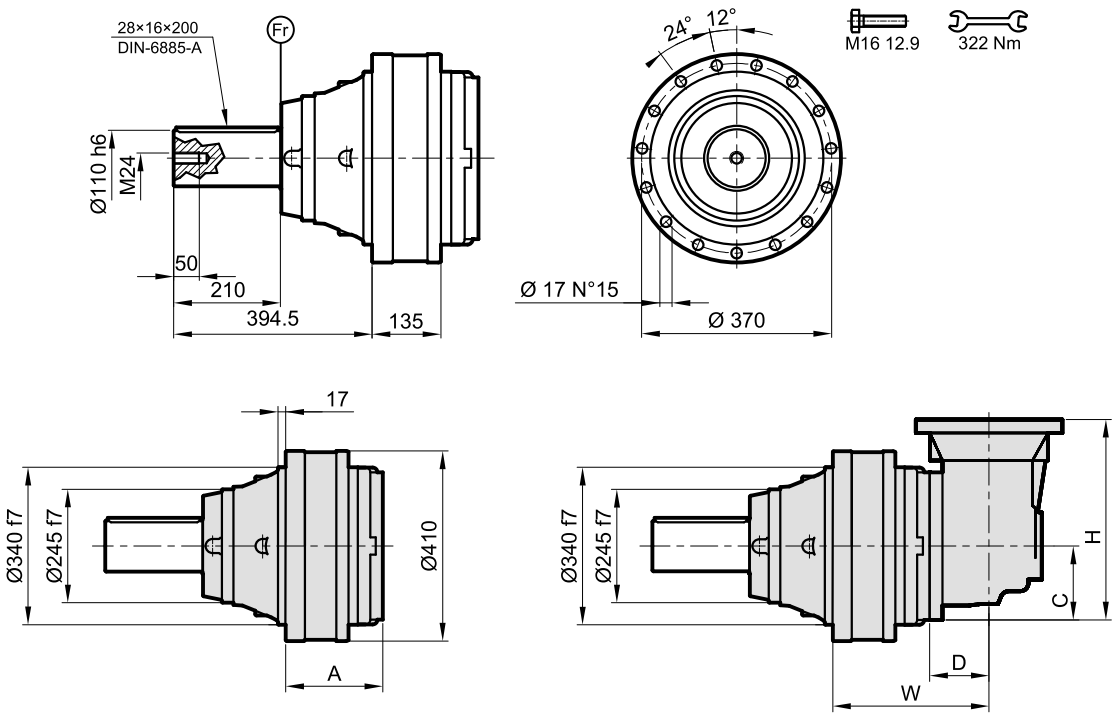
S□-E-100-□□-K140×150



Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
2	309	-	-	-	-	226	-
3	381	381	121	172.5	457	242	289
4	442	446	103	122	319	251	271

(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.

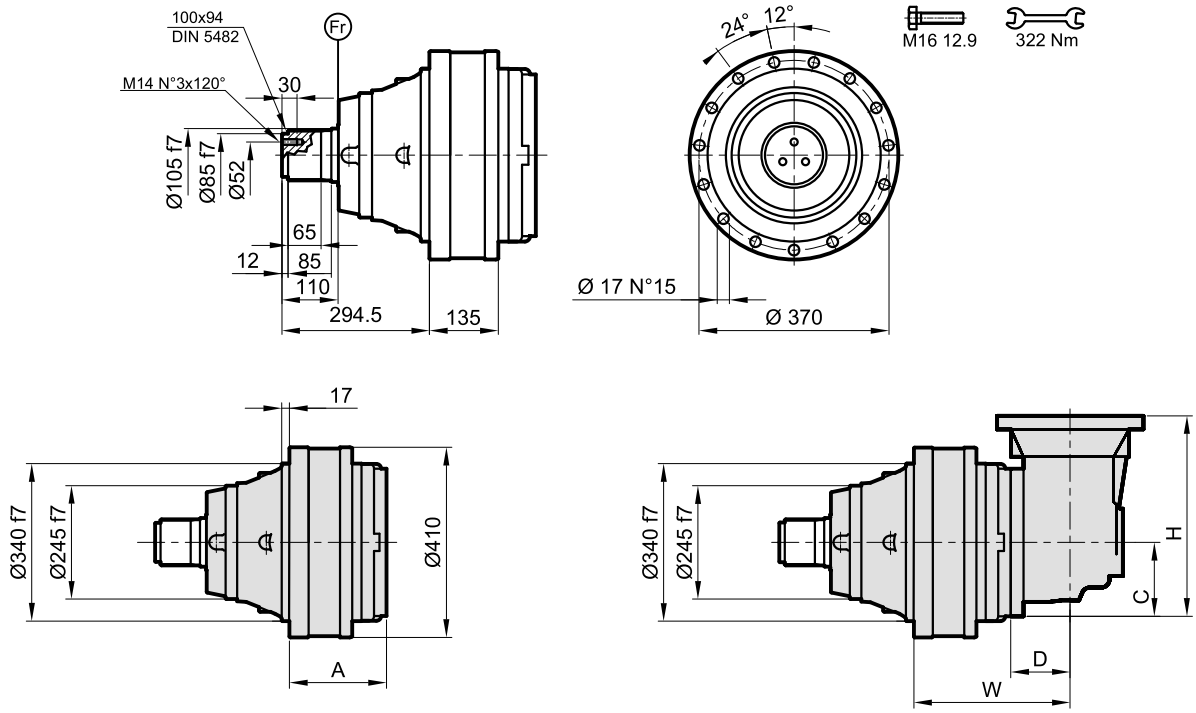
S□-E-100-□□-P110×210



Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
2	319	-	-	-	-	237	-
3	391	391	121	172.5	457	253	300
4	452	456	103	122	319	261	282

(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-100-□□-W100×110

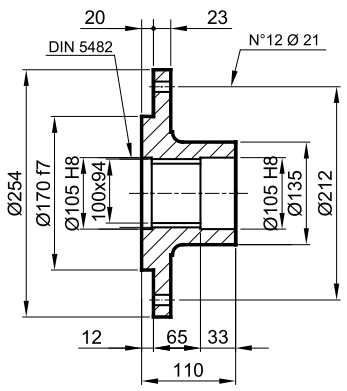


Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
2	319	-	-	-	-	237	-
3	391	391	121	172.5	457	253	300
4	452	456	103	122	319	261	282

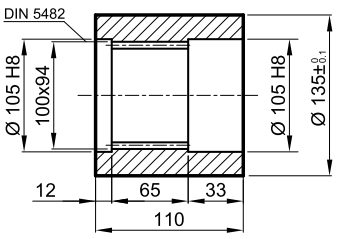
(1) Mass in kg for gearboxes without input modules (solid input shaft, motor flange, etc) or accessories. To obtain actual mass, add the mass for your chosen input module, please inquire.

Accessories

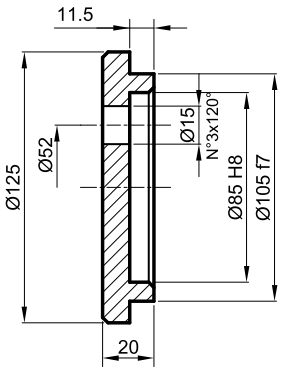
SA-F-100×94-S



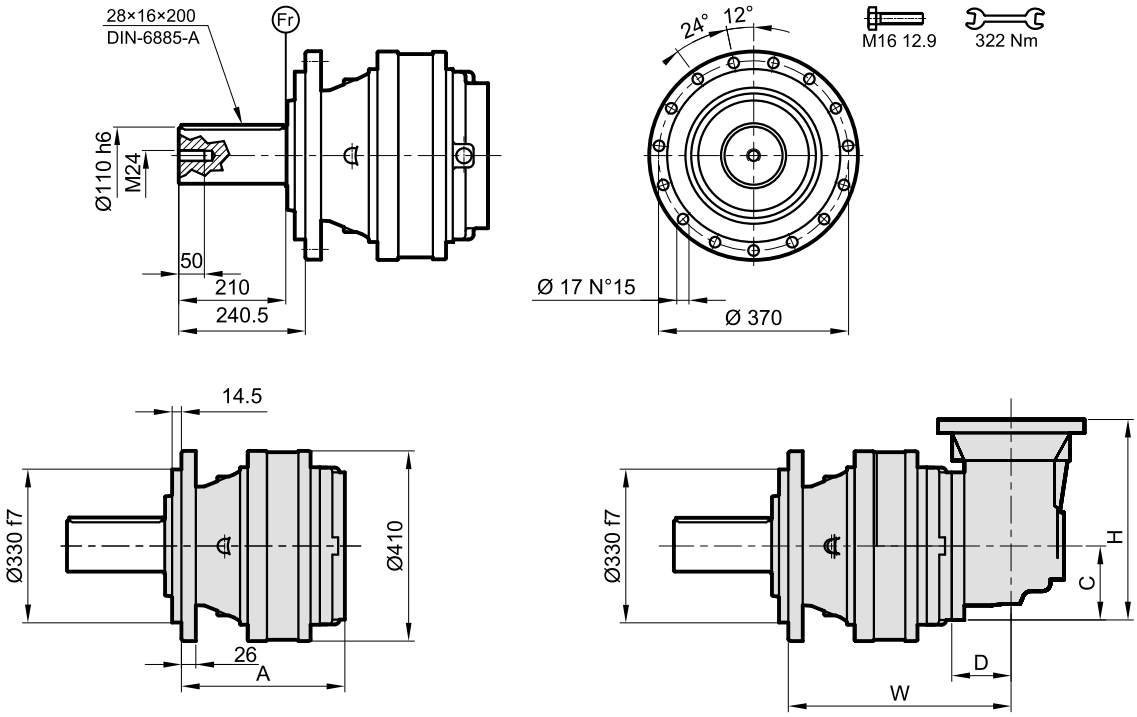
SA-B-100×94-S



SA-P-105



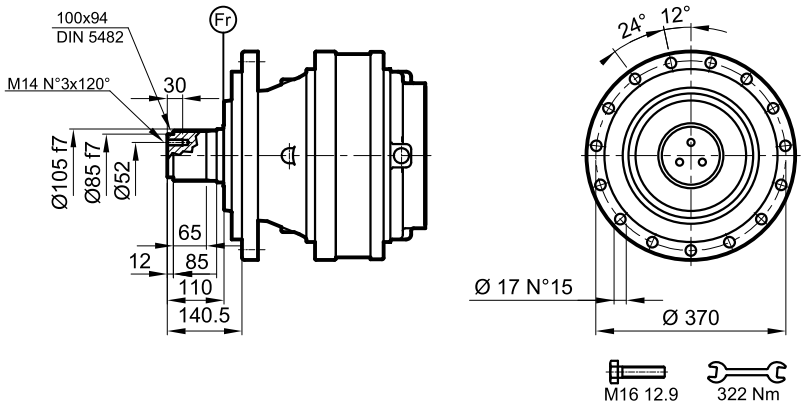
S□-F-100-□□-P110×210

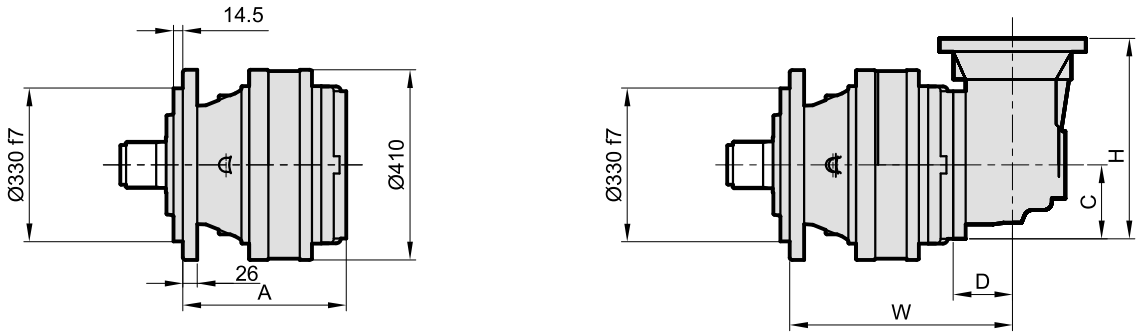


Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
2	473	-	-	-	-	260	-
3	545	545	121	172.5	457	276	323
4	606	610	103	122	319	284	305

(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□-F-100-□□-W100×110



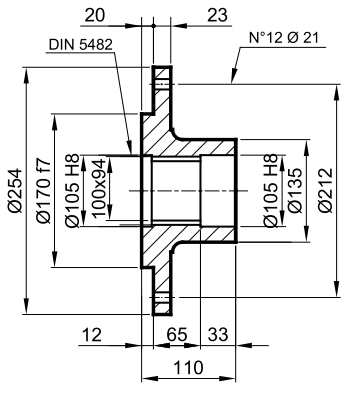


Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
2	473	-	-	-	-	260	-
3	545	545	121	172.5	457	276	323
4	606	610	103	122	319	284	305

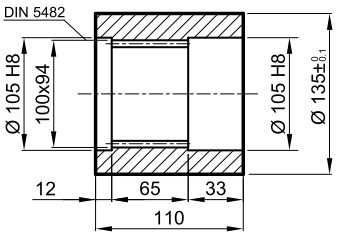
(1) Mass in kg for gearboxes without input modules (solid input shaft, motor flange, etc) or accessories. To obtain actual mass, add the mass for your chosen input module, please inquire.

Accessories

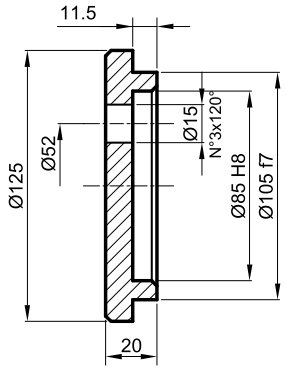
SA-F-100×94-S



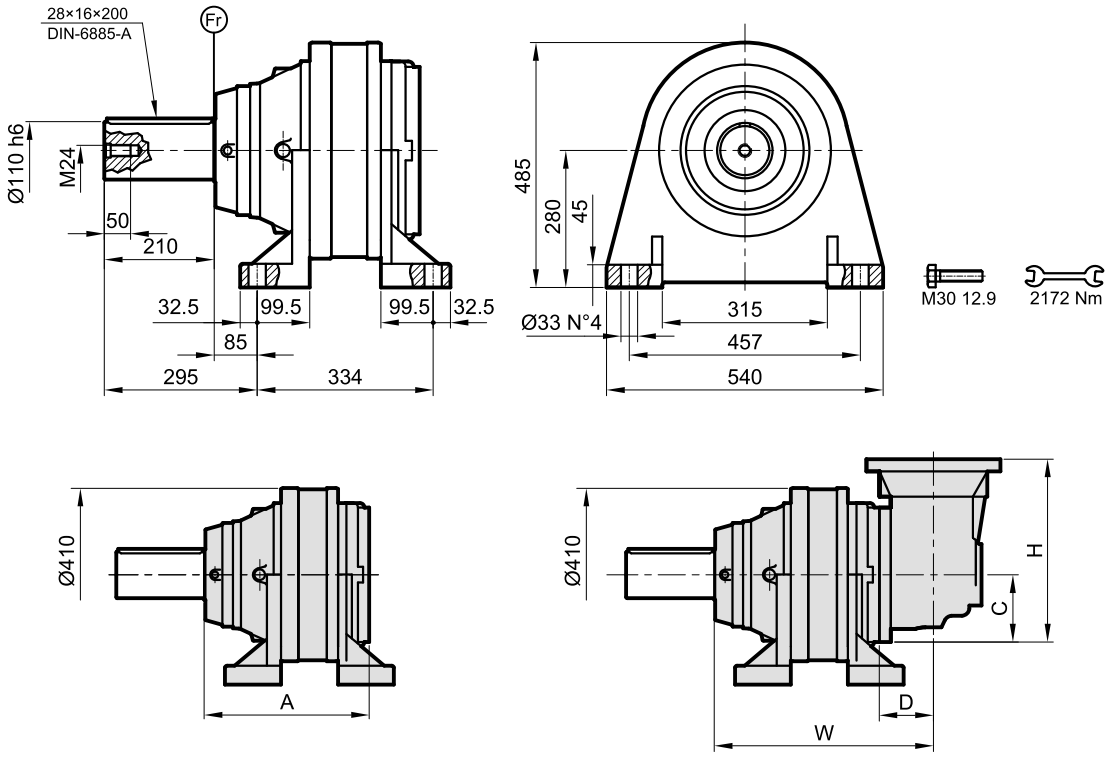
SA-B-100×94-S



SA-P-105



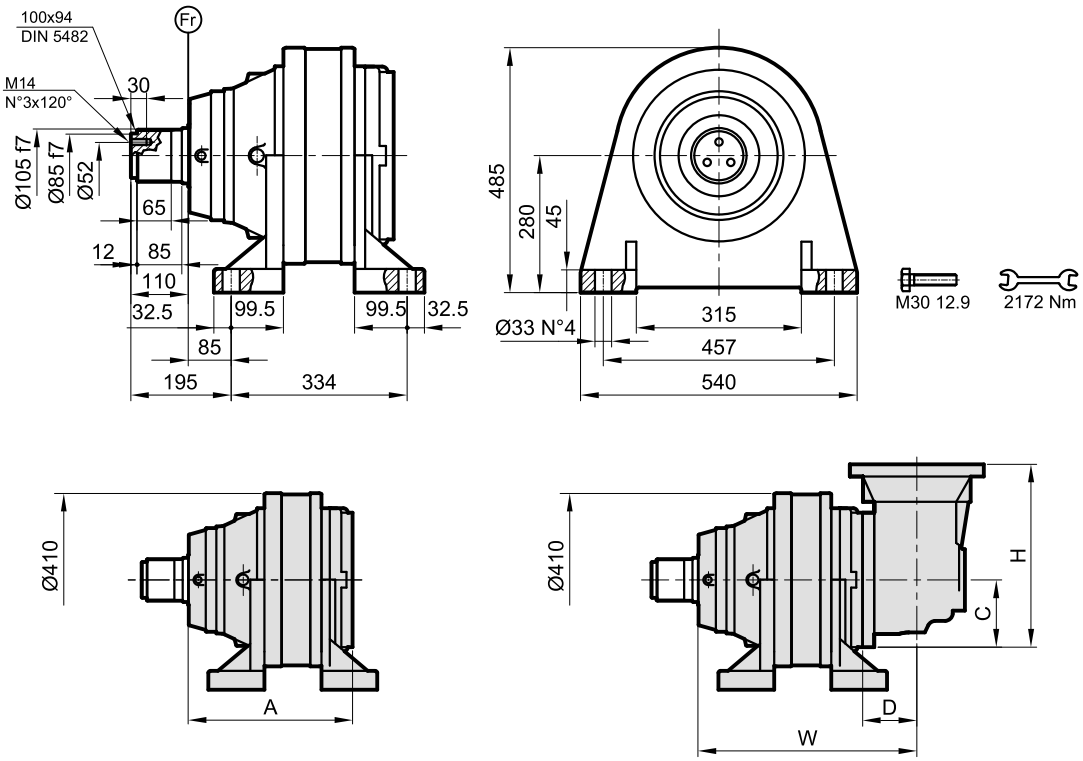
S□-G-100-□□-P110×210



Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
2	503.5	-	-	-	-	296	-
3	575.5	575.5	121	172.5	457	313	359
4	636.5	640.5	103	122	319	251	342

(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-100-□□-W100×110

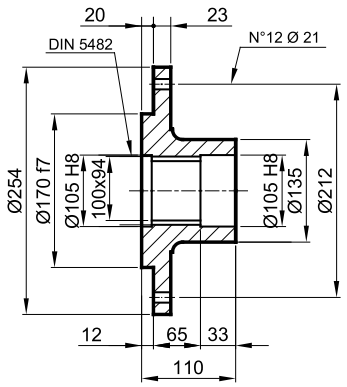


Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
2	503.5	-	-	-	-	296	-
3	575.5	575.5	121	172.5	457	313	359
4	636.5	640.5	103	122	319	251	342

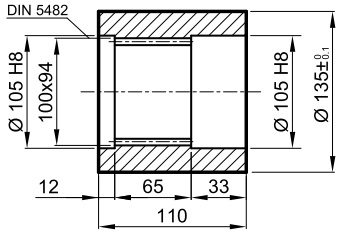
(1) Mass in kg for gearboxes without input modules (solid input shaft, motor flange, etc) or accessories. To obtain actual mass, add the mass for your chosen input module, please inquire.

Accessories

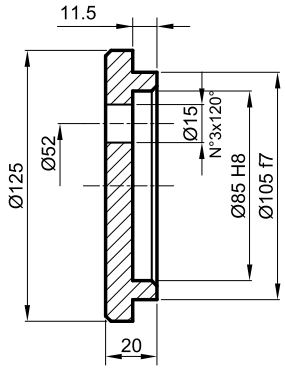
SA-F-100×94-S



SA-B-100×94-S

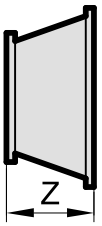


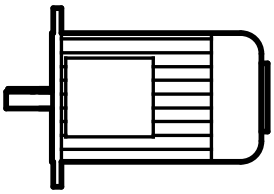
SA-P-105



Inputs

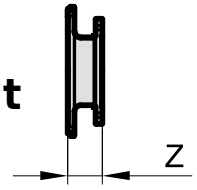
IEC Motor Input

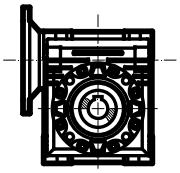




IEC	71	80	90	100	112	132	160	180	200	225	250	280
Stages	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z
2	-	-	-	-	-		120.5	120.5	148.5	148.5	183.5	183.5
3	35.5	61.5	61.5	71	71	104	120.5	120.5			-	-
4	35.5	61.5	61.5	71	71	104	120.5	120.5	-	-	-	-

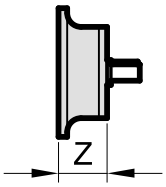
Worm Gearbox Input





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
2	-	-	-	-	95
3	80	80	57	57	57
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
2	-		159	185	-
3	112		159	-	-
4	112		159	-	-