Size 070 - 18000 Nm

ST-070 Technical data
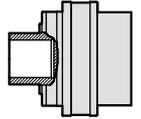
Stages	Ratio	$T_{2N(1.2M)}$ [1]	$T_{2N(6M)}$ [1]	T_{2Peak} [2]	n_{1N} [3]	n_{1Max} [4]	P_t [5]	η
	i	(Nm)	(Nm)	(Nm)	(rpm)	(rpm)	(kW)	(%)
1	3.55	18020	13570	36040	1200	2000	40	98
	4.28	15700	11830	31400	1200	2000	40	98
	5.60	12010	9050	24020	1200	2000	40	98
	6.75	9130	6880	18260	1200	2000	40	98
	8.67	6615	4980	13230	1200	2000	40	98
2	13.4	18020	13570	36040	1500	2800	23	96
	16.2	15700	11830	31400	1500	2800	23	96
	22.1	15700	11830	31400	1500	2800	23	96
	28.9	12010	9050	24020	1500	2800	23	96
	33.6	12010	9050	24020	1500	2800	23	96
	40.5	9130	6880	18260	1500	2800	23	96
	48.9	9130	6880	18260	1500	2800	23	96
3	57.6	18020	13570	36040	1500	2800	15	94
	69.4	15700	11830	31400	1500	2800	15	94
	75.7	15700	11830	31400	1500	2800	15	94
	94.9	15700	11830	31400	1500	2800	15	94
	109.3	15700	11830	31400	1500	2800	15	94
	118.5	12010	9050	24020	1500	2800	15	94
	124.0	15700	11830	31400	1500	2800	15	94
	129.4	12010	9050	24020	1500	2800	15	94
	142.8	12010	9050	24020	1500	2800	15	94
	155.9	12010	9050	24020	1500	2800	15	94
	188.2	12010	9050	24020	1500	2800	15	94
	195.3	12010	9050	24020	1500	2800	15	94
	200.2	12010	9050	24020	1500	2800	15	94
	226.8	12010	9050	24020	1500	2800	15	94
	235.4	9130	6880	18260	1500	2800	15	94
	274.1	12010	9050	24020	1500	2800	15	94
	330.3	9130	6880	18260	1500	2800	15	94
	351.9	12010	9050	24020	1500	2800	15	94
4	246.6	18020	13570	36040	1500	2800	11	92
	388.5	18020	13570	36040	1500	2800	11	92
	413.9	18020	13570	36040	1500	2800	11	92
	468.2	15700	11830	31400	1500	2800	11	92
	498.8	18020	13570	36040	1500	2800	11	92
	507.7	15700	11830	31400	1500	2800	11	92
	531.3	15700	11830	31400	1500	2800	11	92
	554.3	15700	11830	31400	1500	2800	11	92
	601.2	15700	11830	31400	1500	2800	11	92
	611.9	15700	11830	31400	1500	2800	11	92
	640.4	15700	11830	31400	1500	2800	11	92
	724.4	12010	9050	24020	1500	2800	11	92
	805.4	15700	11830	31400	1500	2800	11	92
	907.3	12010	9050	24020	1500	2800	11	92
	1008.7	15700	11830	31400	1500	2800	11	92
	1093.6	12010	9050	24020	1500	2800	11	92
	1270.1	12010	9050	24020	1500	2800	11	92
	1530.9	12010	9050	24020	1500	2800	11	92
	1849.8	12010	9050	24020	1500	2800	11	92
	2229.7	9130	6880	18260	1500	2800	11	92

SX-070 Technical data
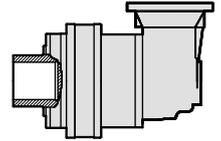
Stages	Ratio	$T_{2N(1.2M)}$ [1]	$T_{2N(6M)}$ [1]	T_{2Peak} [2]	n_{1N} [3]	n_{1Max} [4]	P_t [5]	η
	i	(Nm)	(Nm)	(Nm)	(rpm)	(rpm)	(kW)	(%)
2	9.9	18020	13570	36040	1500	2800	23	96
	11.9	15700	11830	31400	1500	2800	23	96
	15.6	12010	9050	24020	1500	2800	23	96
	18.4	15700	11830	31400	1500	2800	23	96
	24.0	12010	9050	24020	1500	2800	23	96
	28.9	9130	6880	18260	1500	2800	23	96
3	30.9	18020	13570	36040	1500	2800	15	94
	37.2	15700	11830	31400	1500	2800	15	94
	46.2	18020	13570	36040	1500	2800	15	94
	50.9	15700	11830	31400	1500	2800	15	94
	55.7	15700	11830	31400	1500	2800	15	94
	60.8	15700	11830	31400	1500	2800	15	94
	66.6	12010	9050	24020	1500	2800	15	94
	76.2	15700	11830	31400	1500	2800	15	94
	80.2	9130	6880	18260	1500	2800	15	94
	87.7	9130	6880	18260	1500	2800	15	94
	93.4	12010	9050	24020	1500	2800	15	94
	115.6	12010	9050	24020	1500	2800	15	94
	120.0	9130	6880	18260	1500	2800	15	94
	139.7	12010	9050	24020	1500	2800	15	94
	168.4	9130	6880	18260	1500	2800	15	94
4	139.9	18020	13570	36040	1500	2800	11	92
	168.6	18020	13570	36040	1500	2800	11	92
	203.2	15700	11830	31400	1500	2800	11	92
	221.9	15700	11830	31400	1500	2800	11	92
	265.6	15700	11830	31400	1500	2800	11	92
	290.0	15700	11830	31400	1500	2800	11	92
	320.2	15700	11830	31400	1500	2800	11	92
	349.6	15700	11830	31400	1500	2800	11	92
	379.0	12010	9050	24020	1500	2800	11	92
	418.4	12010	9050	24020	1500	2800	11	92
	437.9	15700	11830	31400	1500	2800	11	92
	456.9	12010	9050	24020	1500	2800	11	92
	474.7	12010	9050	24020	1500	2800	11	92
	537.2	12010	9050	24020	1500	2800	11	92
	551.3	12010	9050	24020	1500	2800	11	92
	664.5	12010	9050	24020	1500	2800	11	92
	803.0	12010	9050	24020	1500	2800	11	92
	967.9	9130	6880	18260	1500	2800	11	92
	1031.0	12010	9050	24020	1500	2800	11	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.

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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.
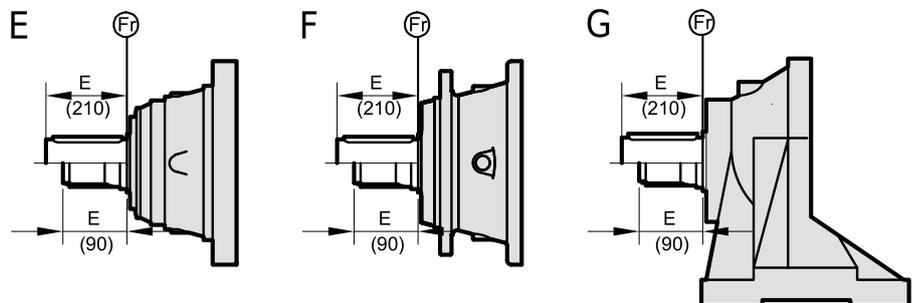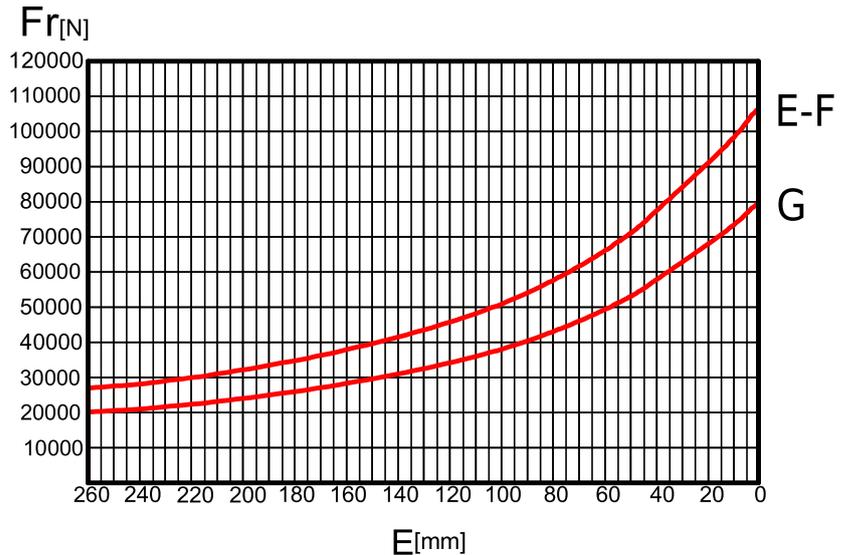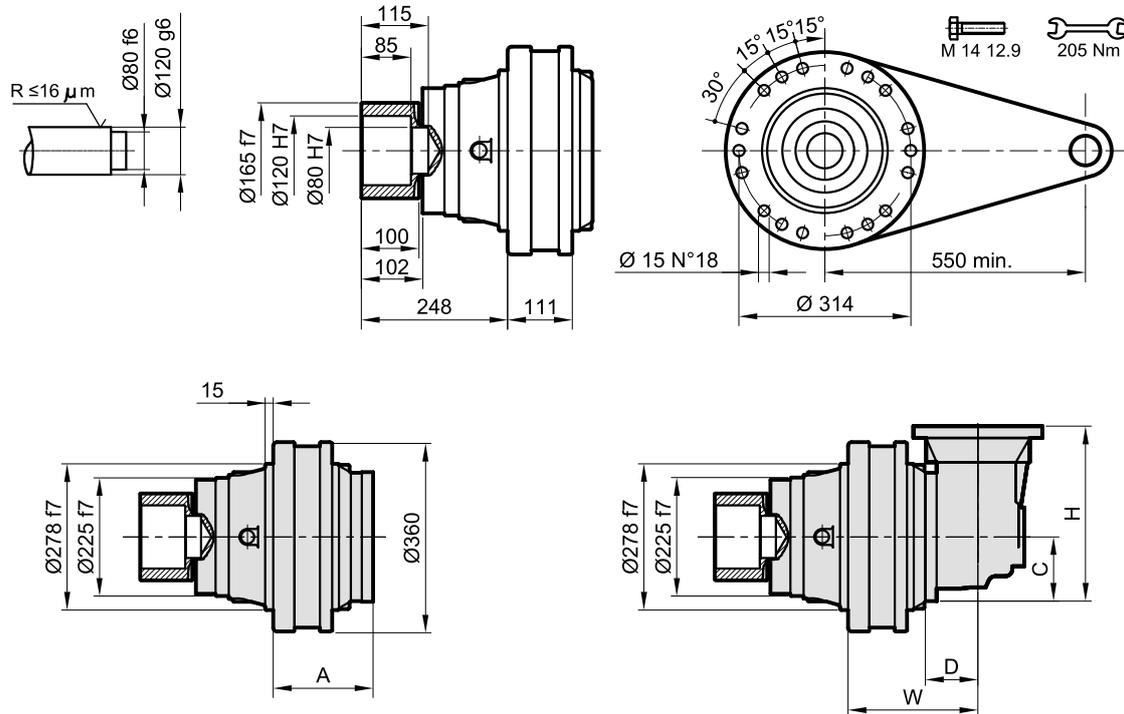

Output Shaft Axial Load Capacity

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	65000 N	45000 N

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Dimensions

S☐-E-070-☐☐-H120×115

Stages	A	W	D	C	H	ST Mass [1]	SX Mass [1]
1	142	-	-	-	-	104	-
2	214	214	121	172.5	457	120	165
3	275	279	103	122	319	128	148
4	323	350	75	95.5	253.5	35	146

(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.
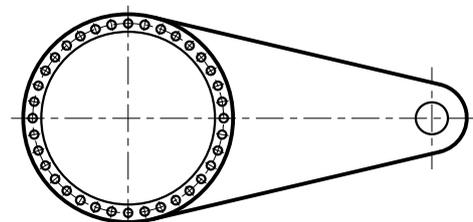
Accessories	
SA-H-165	**SA-T-☐-278-314-18×15-☐-☐**
Max. Torque: 44 kNm Screw Tightening Torque: 322 Nm	See the chapter on Torque Arms
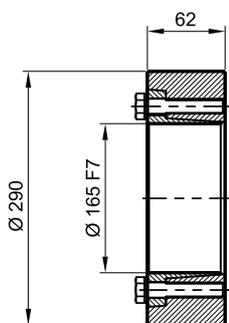
S□-E-070-□□-N80×75

Specifications

15 60
80x74 DIN 5482
Ø85 H8
8.5
67.5 101

15° 15° 15°
30°
M 14 12.9   205 Nm
Ø15 N°18   Ø 314

9,5
Ø278 f7   Ø360
A

Ø278 f7   H D C W

Stages	A	W	D	C	H	ST Mass [1]	SX Mass [1]
1	132	-	-	-	-	104	-
2	204	204	121	172.5	457	120	165
3	265	269	103	122	319	128	148
4	313	340	75	92.5	253.5	135	146

(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-80×74
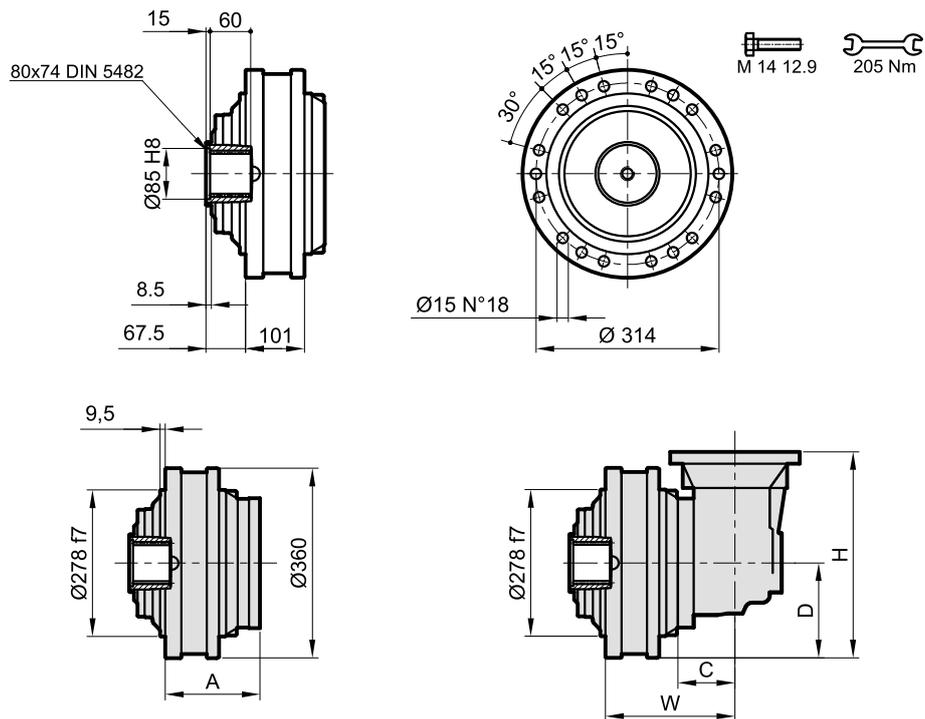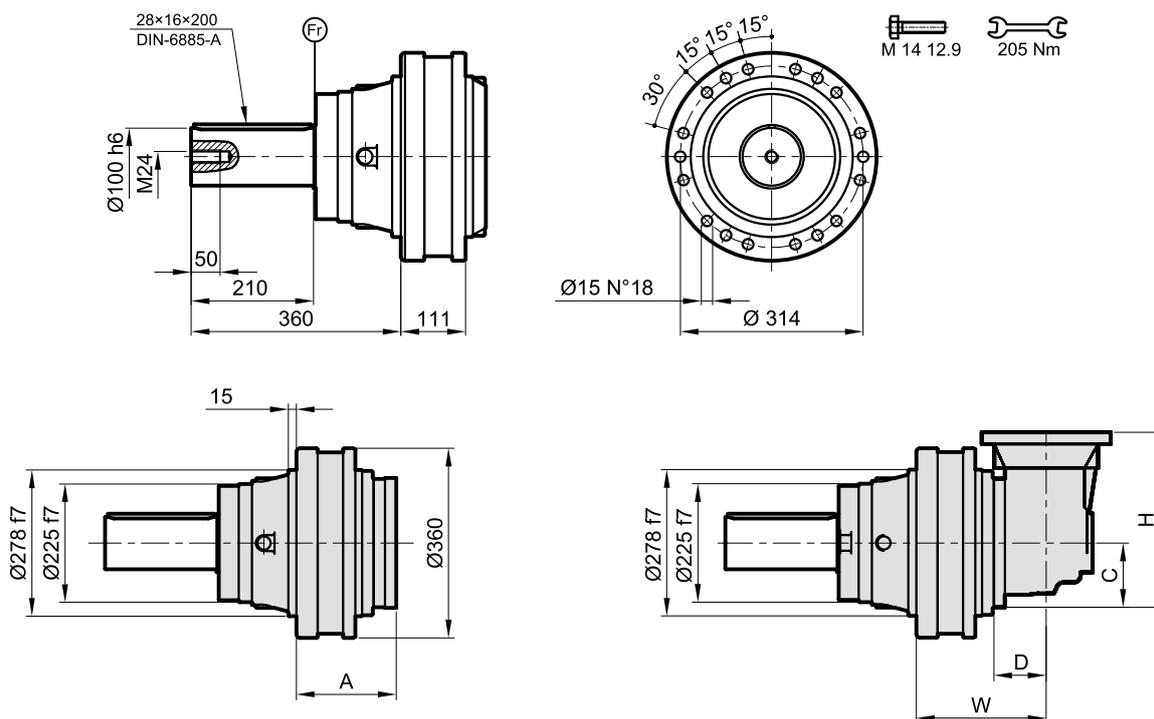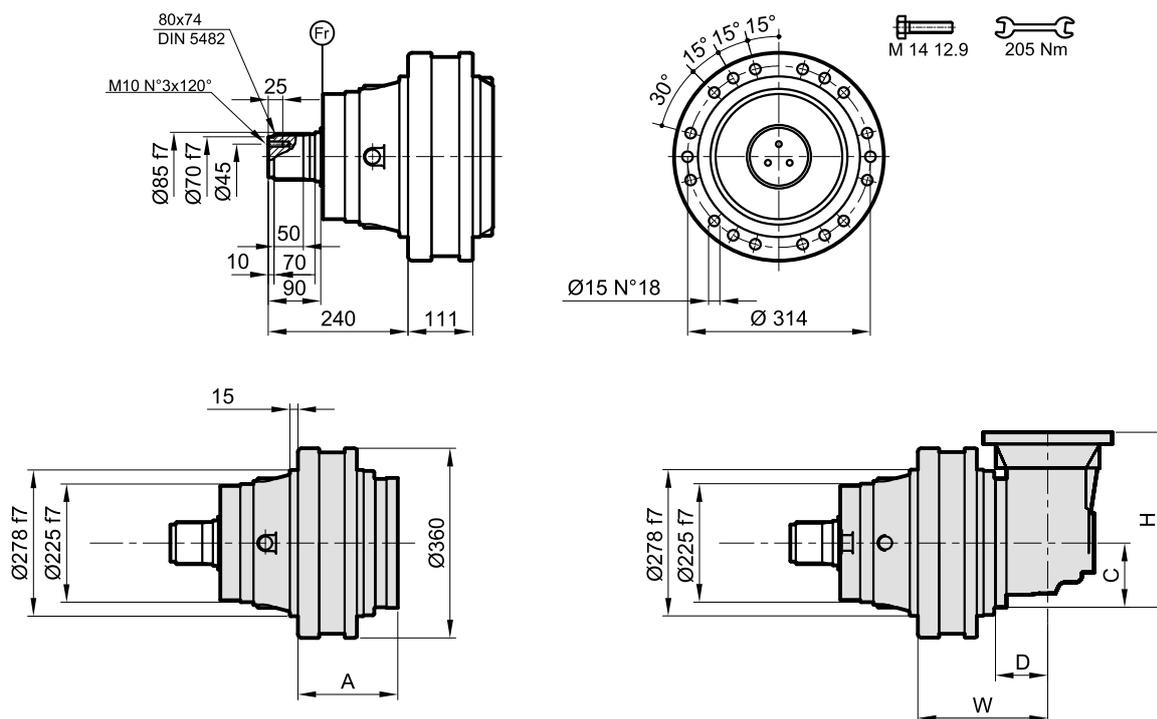
270
Ø79.3 h11
80x74 DIN 5482
Ø60   Ø60
10   10

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S 20240718-1340

S□-E-070-□□-P100×210

28×16×200
DIN-6885-A

Fr

Ø100 h6
M24

50
210
360
111

15° 15° 15°
30°

M 14 12.9
205 Nm

Ø15 N°18
Ø 314

15

Ø278 f7
Ø225 f7

Ø360

A

Ø278 f7
Ø225 f7

H
C
D
W

Stages	A	W	D	C	H	ST Mass [1]	SX Mass [1]
1	142	-	-	-	-	109	-
2	214	214	121	172.5	457	125	170
3	275	279	103	122	319	133	153
4	323	350	75	92.5	253.5	140	151

(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.

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S☐-E-070-☐☐-W80×90

Stages	A	W	D	C	H	ST Mass [1]	SX Mass [1]
1	142	-	-	-	-	109	-
2	214	214	121	172.5	457	125	170
3	275	279	103	122	319	133	153
4	323	350	75	92.5	253.5	140	151

(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.
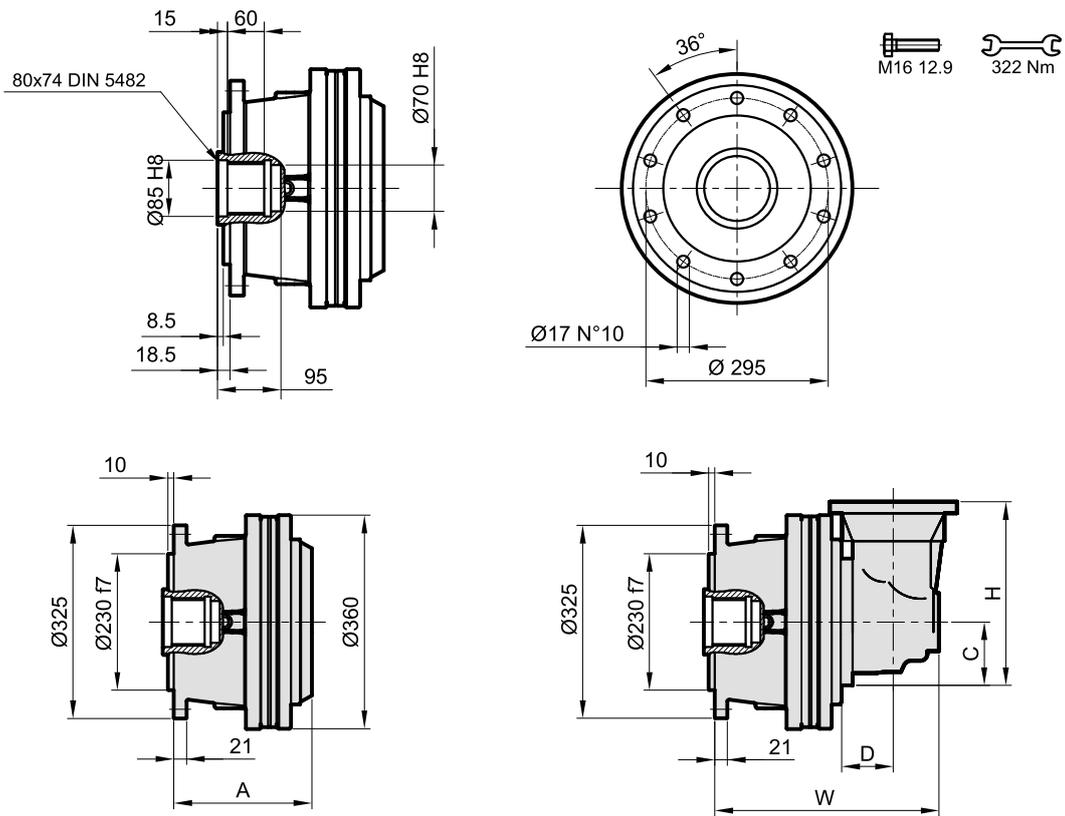
Accessories		
SA-F-80×74-S	SA-B-80×74-S	SA-P-82

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S☐-F-070-☐☐-N80×95

Stages	A	W	D	C	H	ST Mass [1]	SX Mass [1]
1	246.5	-	-	-	-	92	-
2	318.5	318.5	121	172.5	457	108	153
3	379.5	383.5	103	122	319	116	136
4	427.5	455	75	95.5	427.5	123	134

(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-80×74

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S 20240718-1340

S□-F-070-□□-K100×115

115
100
Ø148
Ø100 H7
50
165.5

36°
M16 12.9   322 Nm
For 28×16×90
DIN-6885-A Key
Ø17 N°10
Ø295

10
Ø325
Ø230 f7
Ø360
20
A

Ø325
Ø230 f7
H
C
D
W
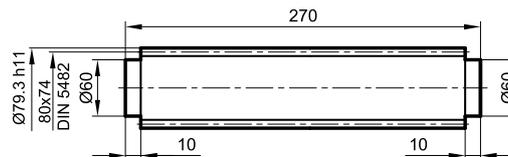
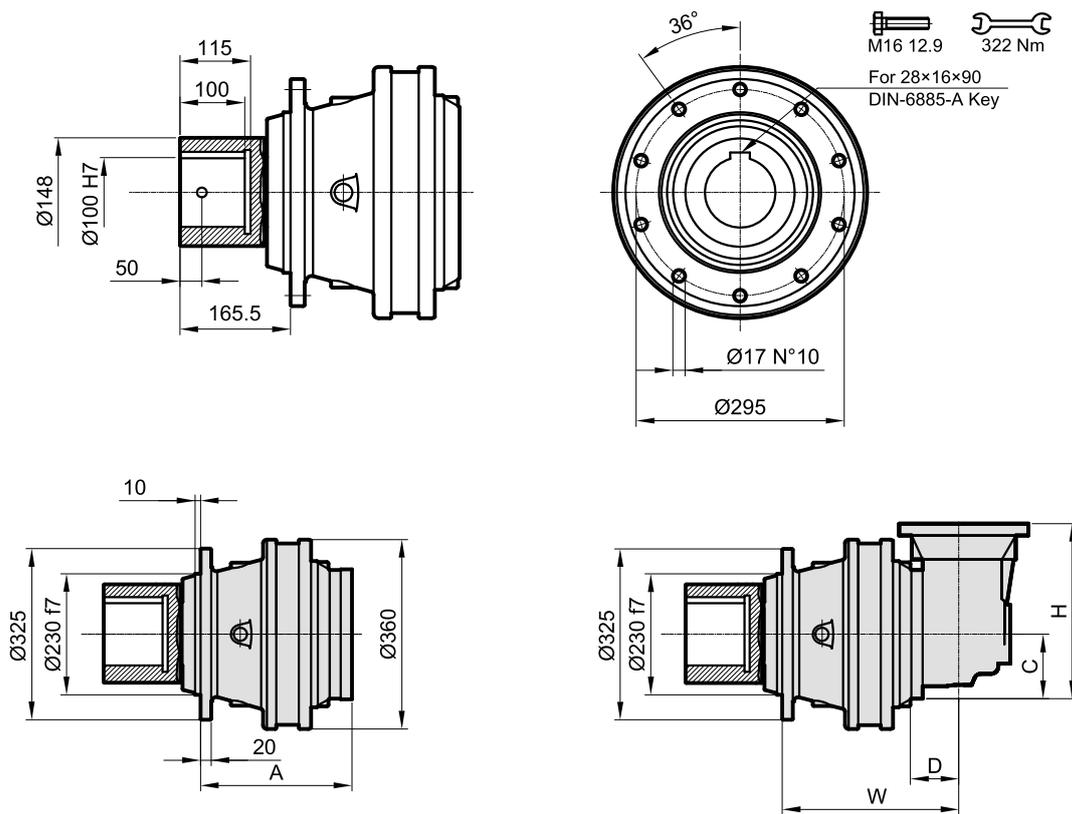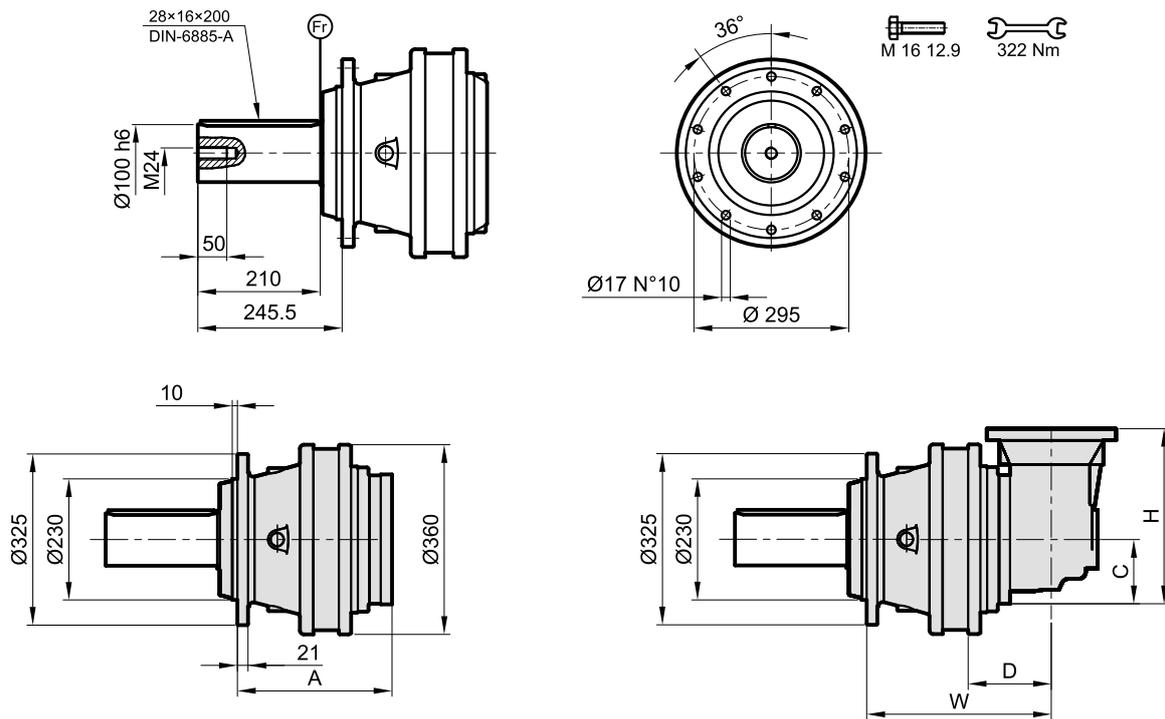| Stages	A	W	D	C	H	ST Mass [1]	SX Mass [1]
1	246	-	-	-	-	105	-
2	318	318	121	172.5	457	121	167
3	379	383	103	122	319	129	149
4	427	454	75	92.5	253.5	136	147

(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.

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S 20240718-1340

S□-F-070-□□-P100×210

28×16×200
DIN-6885-A

Fr

Ø100 h6
M24

50

210

245.5

36°

M 16 12.9   322 Nm

Ø17 N°10   Ø 295

10

Ø325
Ø230
Ø360

21

A

Ø325
Ø230

H

C

D

W

Stages	A	W	D	C	H	ST Mass [1]	SX Mass [1]
1	246	-	-	-	-	108	-
2	318	318	121	172.5	457	124	170
3	379	383	103	122	319	132	152
4	427	454	75	92.5	253.5	139	150

(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.
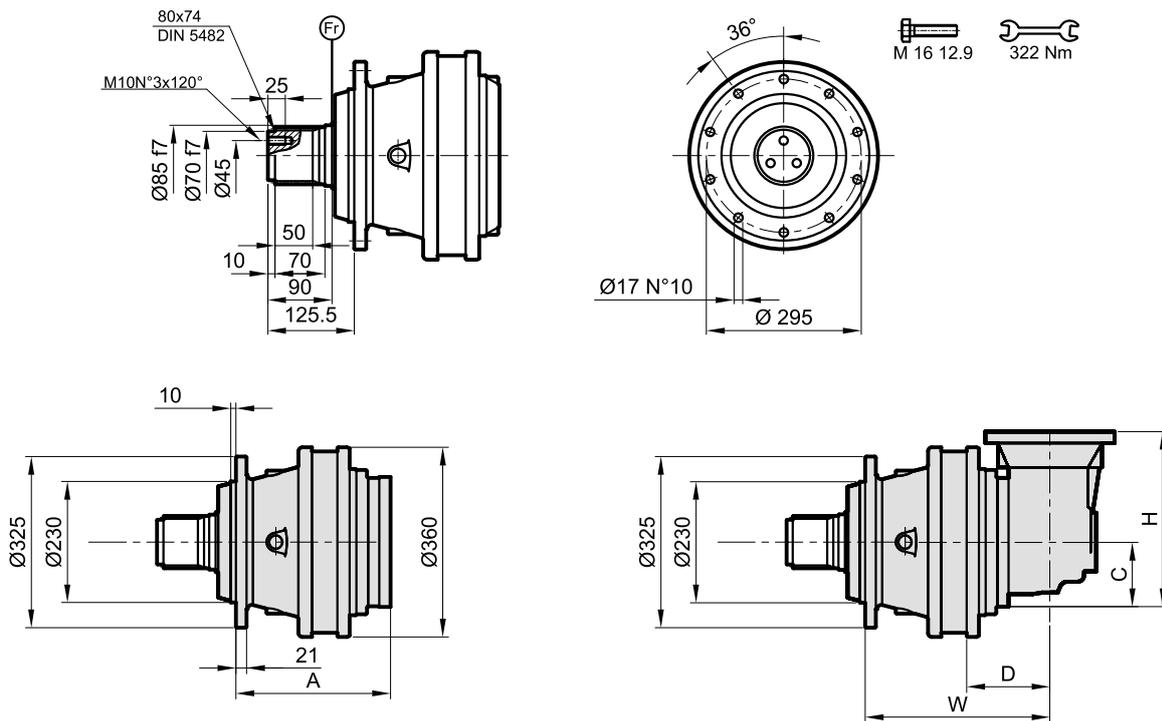
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S 20240718-1340

S□-F-070-□□-W80×90

Stages	A	W	D	C	H	ST Mass [1]	SX Mass [1]
1	246	-	-	-	-	108	-
2	318	318	121	172.5	457	124	170
3	379	383	103	122	319	132	152
4	427	454	75	92.5	253.5	139	150

(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.
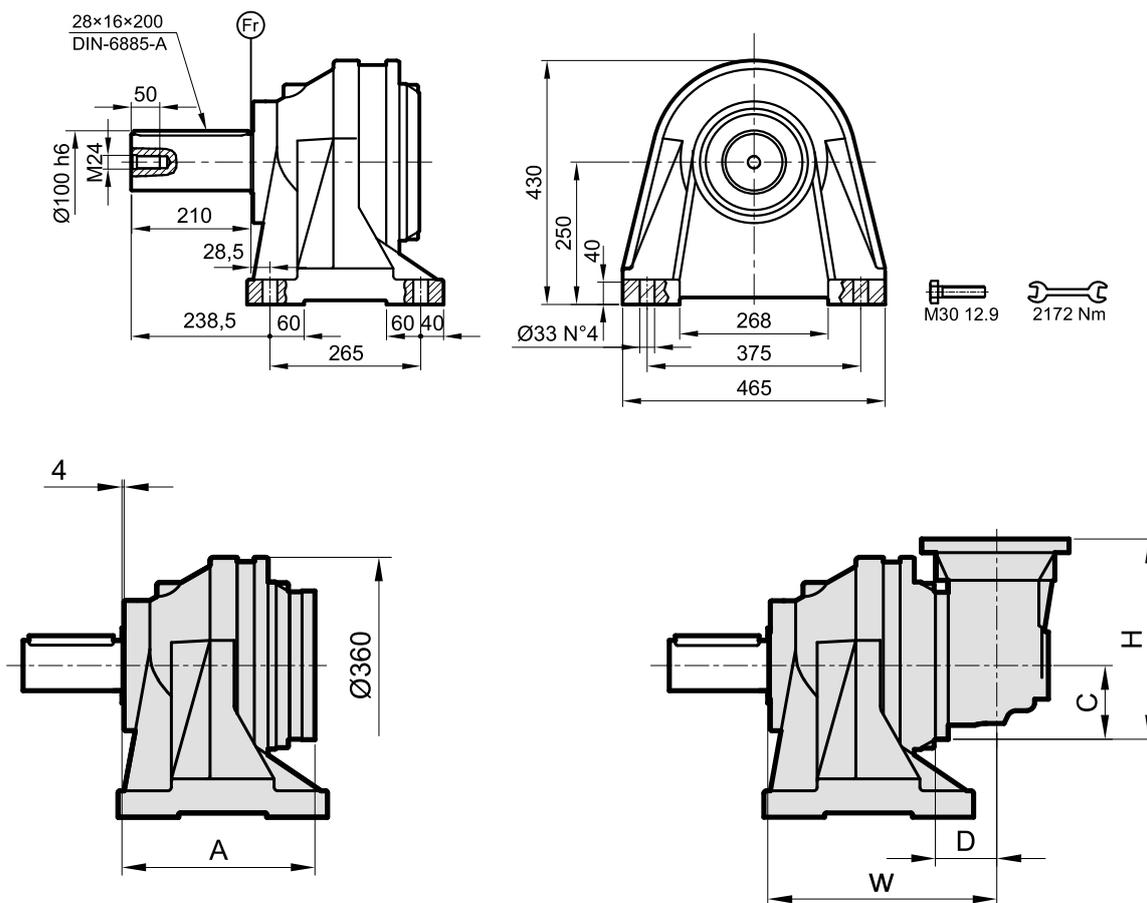
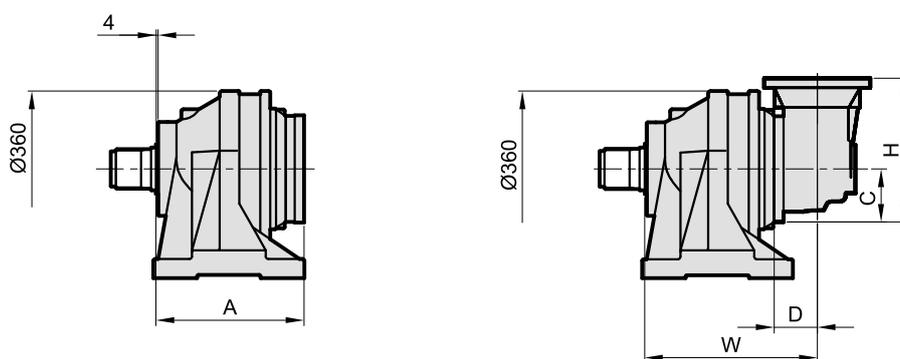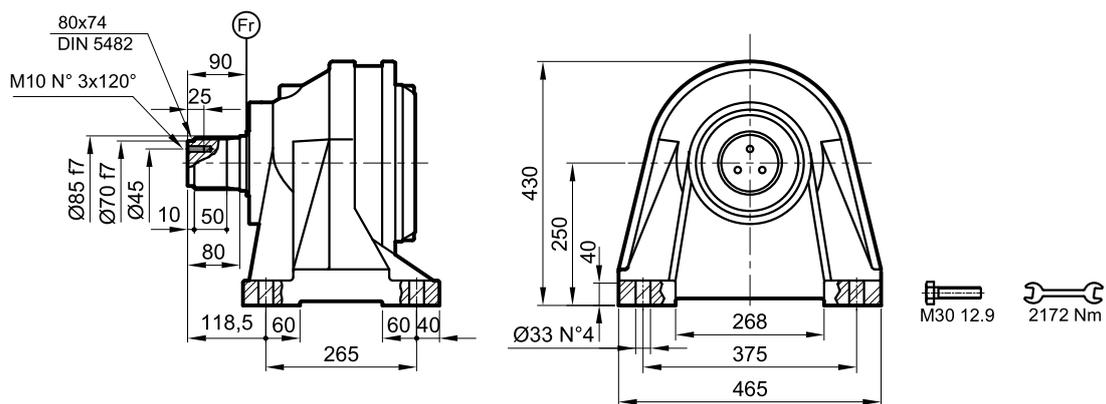| Accessories		
SA-F-80×74-S	**SA-B-80×74-S**	**SA-P-82**

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S□-G-070-□□-P100×210

Stages	A	W	D	C	H	ST Mass [1]	SX Mass [1]
1	297	-	-	-	-	167	-
2	369	369	121	172.5	457	183	229
3	430	434	103	122	319	191	211
4	478	505	75	92.5	253.5	198	209

(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.

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S☐-G-070-☐☐-W80×90

80x74
DIN 5482
(Fr)
M10 N° 3x120°
90
25
Ø85 f7
Ø70 f7
Ø45
10
50
80
118,5 60 60 40
265

430
250
40
Ø33 N°4
268
375
465
M30 12.9
2172 Nm

4
Ø360
A

Ø360
H
C
D
W

Stages	A	W	D	C	H	ST Mass [1]	SX Mass [1]
1	297	-	-	-	-	167	-
2	369	369	121	172.5	457	183	229
3	430	434	103	122	319	191	211
4	478	505	75	92.5	253.5	198	209

(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.
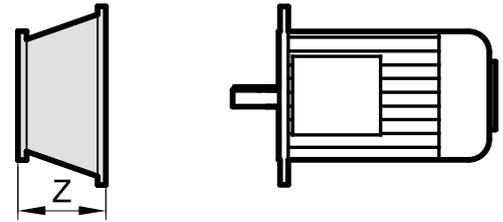
Accessories		
SA-F-80×74-S	**SA-B-80×74-S**	**SA-P-82**

SA-F-80×74-S
15 20
DIN 5482
n°12 Ø 19
Ø 210
Ø 125 f7
Ø 82 H8
80x74
Ø 85 H8
Ø 105
Ø 175
10.5 48.5 31
90

SA-B-80×74-S
DIN 5482
Ø 82 H8
80x74
Ø 85 H8
Ø 108 +0.1
10.5 48.5 31
90

SA-P-82
9,5
45°
Ø92
Ø45
Ø11
N°3x120°
Ø70 H8
Ø82 f7
18

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S 20240718-1340

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
1	-	-	-	-	-	-	120.5	120.5	148.5	148.5	183.5	183.5
2	35.5	61.5	61.5	71	71	104	120.5	120.5	148.5	148.5	-	-
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
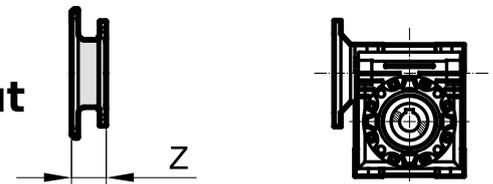
Stages	SVS-050 SQS-050	SVS-063 SQS-063	SVS-075 SQS-075	SVS-090 SQS-090	SVS-110 SQS-110
	Z	Z	Z	Z	Z
1	-	-	-	-	95
2	80	80	57	57	57
3	80	80	57	57	57
4	80	80	57	57	57

Solid Shaft Input
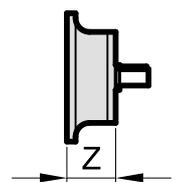
Stages	E25×50 E28×50	E35×50 E42×82	E48×82.5 E65×105	E70×120 E80×130	E90×140 E100×140
	Z		Z	Z	Z
1	-		159	185	-
2	112		159	-	-
3	112		-	-	-
4	112		-	-	-

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