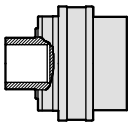
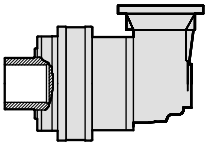
Size 040 - 5100 Nm

ST-040 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	3.77	5110	3850	10220	1500	2800	20	98
	4.12	4660	3510	9320	1500	2800	20	98
	5.16	3810	2870	7620	1500	2800	20	98
	6.00	3340	2520	6680	1500	2800	20	98
	7.25	2610	1970	5220	1500	2800	20	98
2	13.4	5110	3850	10220	1500	2800	15	96
	16.2	5110	3850	10220	1500	2800	15	96
	18.4	3810	2870	7620	1500	2800	15	96
	23.1	4660	3510	9320	1500	2800	15	96
	28.9	3810	2870	7620	1500	2800	15	96
	34.9	3810	2870	7620	1500	2800	15	96
	40.5	3340	2520	6680	1500	2800	15	96
	48.9	2610	1970	5220	1500	2800	15	96
	62.8	2610	1970	5220	1500	2800	15	96
3	52.2	4660	3510	9320	1500	2800	10	94
	57.6	5110	3850	10220	1500	2800	10	94
	62.9	4660	3510	9320	1500	2800	10	94
	75.2	5110	3850	10220	1500	2800	10	94
	82.1	4660	3510	9320	1500	2800	10	94
	90.6	5110	3850	10220	1500	2800	10	94
	99.0	4660	3510	9320	1500	2800	10	94
	119.3	4660	3510	9320	1500	2800	10	94
	129.4	4660	3510	9320	1500	2800	10	94
	149.4	3810	2870	7620	1500	2800	10	94
	155.9	4660	3510	9320	1500	2800	10	94
	162.0	3810	2870	7620	1500	2800	10	94
	173.5	3340	2520	6680	1500	2800	10	94
	195.3	3810	2870	7620	1500	2800	10	94
	235.4	3810	2870	7620	1500	2800	10	94
	273.4	3340	2520	6680	1500	2800	10	94
	302.3	3810	2870	7620	1500	2800	10	94
	330.3	2610	1970	5220	1500	2800	10	94
	424.1	2610	1970	5220	1500	2800	10	94
4	351.9	4660	3510	9320	1500	2800	6	92
	365.8	3810	2870	7620	1500	2800	6	92
	388.5	5110	3850	10220	1500	2800	6	92
	413.9	5110	3850	10220	1500	2800	6	92
	424.2	4660	3510	9320	1500	2800	6	92
	468.2	5110	3850	10220	1500	2800	6	92
	511.3	4660	3510	9320	1500	2800	6	92
	554.3	4660	3510	9320	1500	2800	6	92
	611.9	5110	3850	10220	1500	2800	6	92
	668.3	4660	3510	9320	1500	2800	6	92
	737.6	5110	3850	10220	1500	2800	6	92
	805.4	4660	3510	9320	1500	2800	6	92
	857.9	4660	3510	9320	1500	2800	6	92
	907.4	3810	2870	7620	1500	2800	6	92
	1052.5	4660	3510	9320	1500	2800	6	92
	1121.1	4660	3510	9320	1500	2800	6	92
	1318.3	3810	2870	7620	1500	2800	6	92
	1589.0	3810	2870	7620	1500	2800	6	92
	1845.3	3340	2520	6680	1500	2800	6	92
	2369.3	3340	2520	6680	1500	2800	6	92

SX-040 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	13.0	5110	3850	10220	1500	2800	15	96
	14.2	4660	3510	9320	1500	2800	15	96
	17.8	3810	2870	7620	1500	2800	15	96
	20.6	3340	2520	6680	1500	2800	15	96
3	39.4	5110	3850	10220	1500	2800	10	94
	47.4	5110	3850	10220	1500	2800	10	94
	53.8	3810	2870	7620	1500	2800	10	94
	67.7	4660	3510	9320	1500	2800	10	94
	75.3	3340	2520	6680	1500	2800	10	94
	84.8	3810	2870	7320	1500	2800	10	94
	91.0	2610	1970	5220	1500	2800	10	94
	102.2	3810	2870	7620	1500	2800	10	94
	118.7	3340	2520	6680	1500	2800	10	94
	143.4	2610	1970	5220	1500	2800	10	94
4	139.9	5110	3850	10220	1500	2800	6	92
	168.6	5110	3850	10220	1500	2800	6	92
	184.1	4660	3510	9320	1500	2800	6	92
	220.4	5110	3850	10220	1500	2800	6	92
	240.7	4660	3510	9320	1500	2800	6	92
	265.6	5110	3850	10220	1500	2800	6	92
	290.0	4660	3510	9320	1500	2800	6	92
	320.2	5110	3850	10220	1500	2800	6	92
	349.6	4660	3510	9320	1500	2800	6	92
	421.9	3340	2520	6680	1500	2800	6	92
	448.8	4660	3510	9320	1500	2800	6	92
	474.7	3810	2870	7620	1500	2800	6	92
	508.5	3340	2520	6680	1500	2800	6	92
	551.3	3340	2520	6680	1500	2800	6	92
	614.4	2610	1970	5220	1500	2800	6	92
	664.5	3340	2520	6680	1500	2800	6	92
	734.7	3810	2870	7620	1500	2800	6	92
	801.0	3340	2520	6680	1500	2800	6	92
	1242.7	2610	1970	5220	1500	2800	6	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

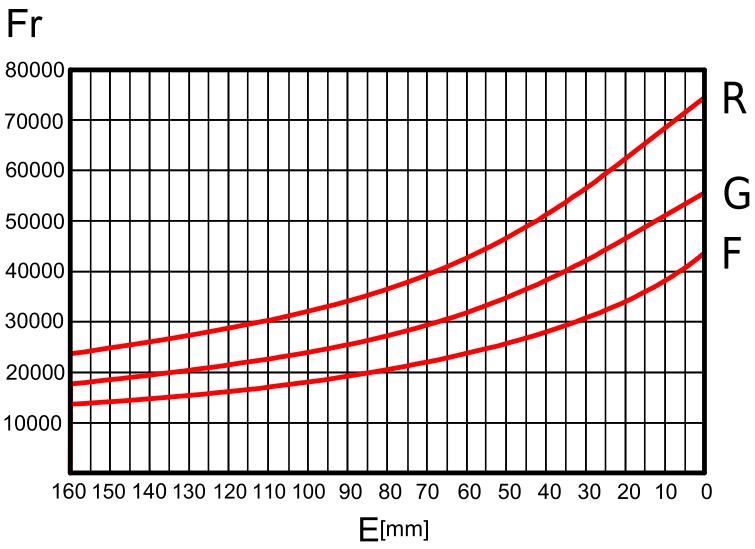
(4) n_{1max} is the maximum input speed for intermittent service. For continuous operation at speeds over n1n please inquire.

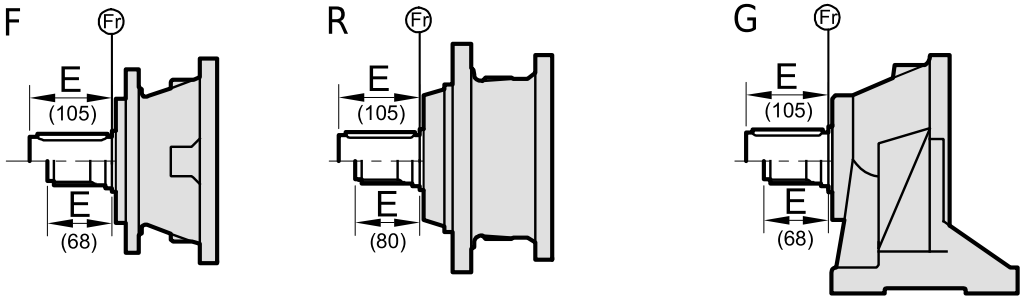
(5) Pt is the thermal power rating, that is the power in kW that, at 20°C, the gearbox can transmit during continuous operation, at $n_1=n_{1n}$ and lubricated with ISO-VG-220 oil without it exceeding 90°C. It depends on ambient temperature.

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

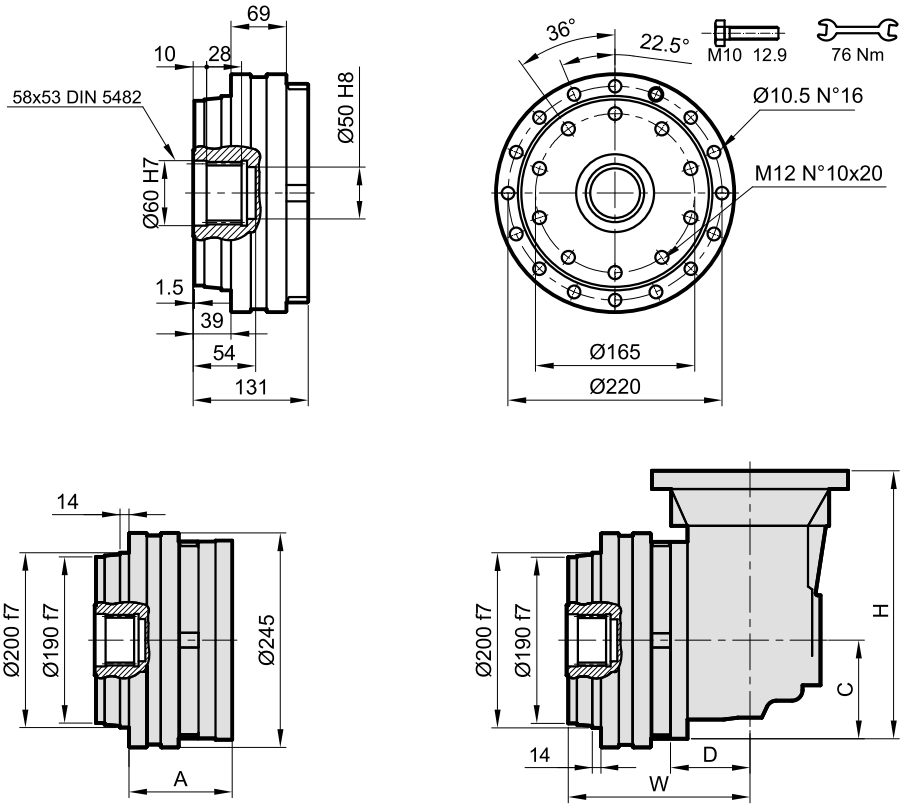
Axial Load Capacity is only given for gearboxes with solid shafts (Smooth Solid Shaft with Key (P) and DIN 5480 Splined Shaft (W)) for a design life of 6 million revolutions of the output shaft ($6 \cdot 10^6$). These values can be adjusted for other number of revolutions of the output shaft applying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

Axial Load Capacity depends on the direction of the load:

	Version	Push	Pull
F_a	F	32000 N	32000 N
	R, G	48000 N	32000 N

Dimensions

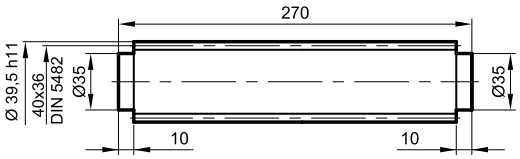
S□-E-040-□□-N58×54



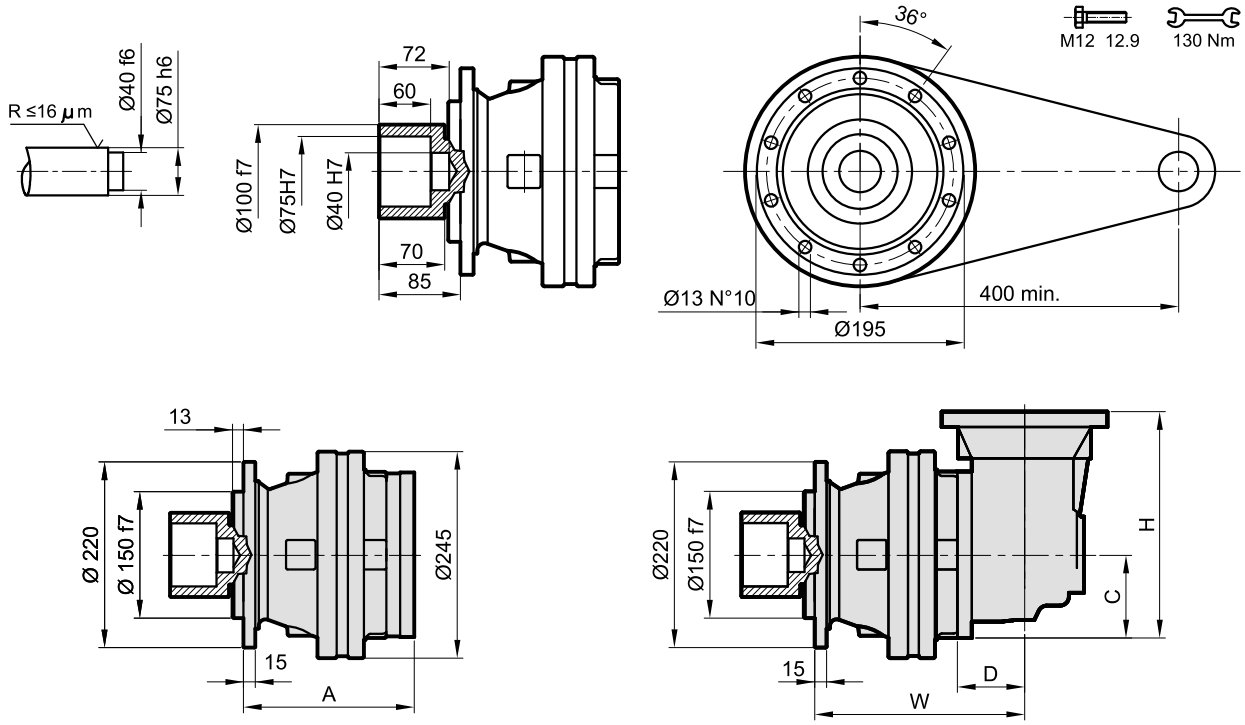
Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
1	129.5	-	-	-	-	21.9	-
2	190.5	194.5	103	122	319	26.2	50.6
3	238.5	266	75	92.5	253.5	36.3	47.3
4	286.5	34	75	92.5	253.5	43	54

(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-58×53



S□-F-040-□□-H75×72

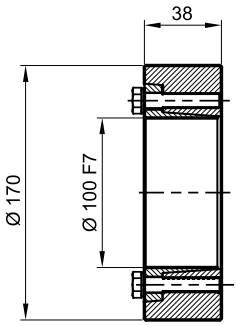


Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
1	179	-	-	-	-	35.7	-
2	240	244.5	103	122	319	40	64.4
3	288	315.5	75	92.5	253.5	50.1	61.1
4	336	363.5	75	92.5	253.5	56.8	67.8

(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.

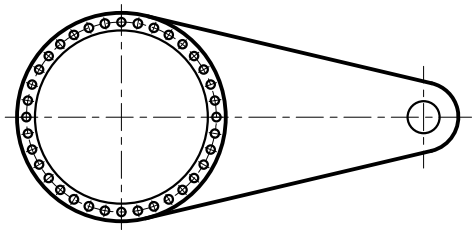
Accessories

SA-H-100



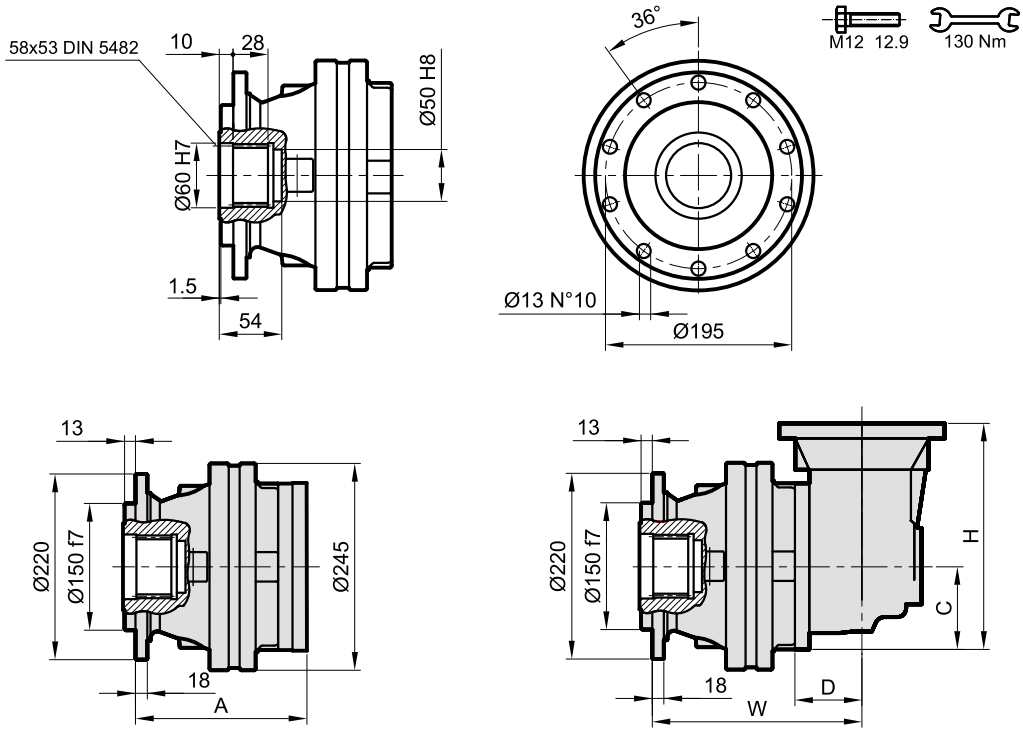
Max. Torque: 8.9 kNm
Screw Tightening Torque: 76 Nm

SA-T-□-150-195-10×13-□-□



See the chapter on Torque Arms

S□-F-040-□□-N58×54

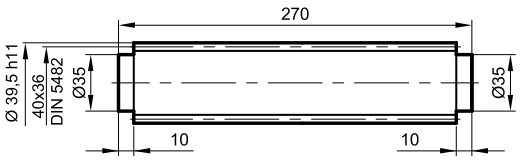


Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
1	179	-	-	-	-	32.6	-
2	240	244.5	103	122	319	36.9	61.3
3	288	315.5	75	92.5	253.5	47	58
4	336	363.5	75	92.5	253.5	53.7	64.7

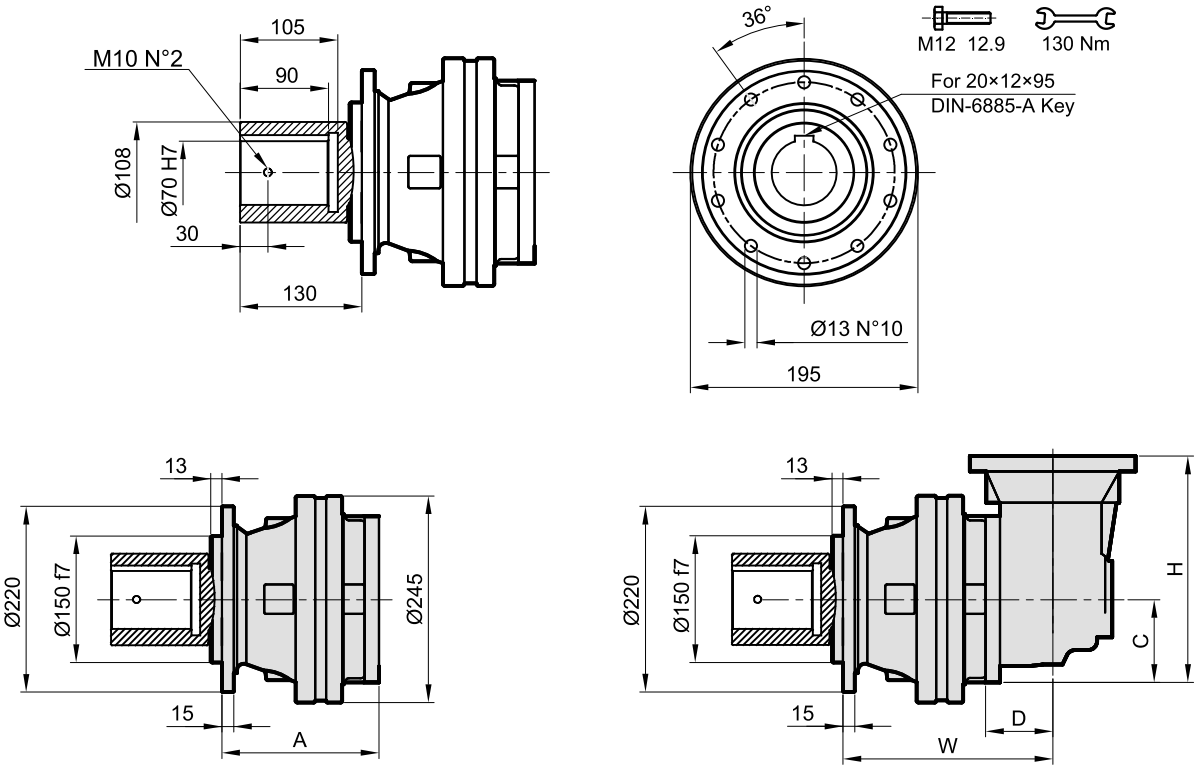
(1) Mass in kg for gearboxes without input modules (solid input shaft, motor flange, etc) or accessories. To obtain actual mass, add the mass for your chosen input module, please inquire.

Accessories

SA-S-58×53



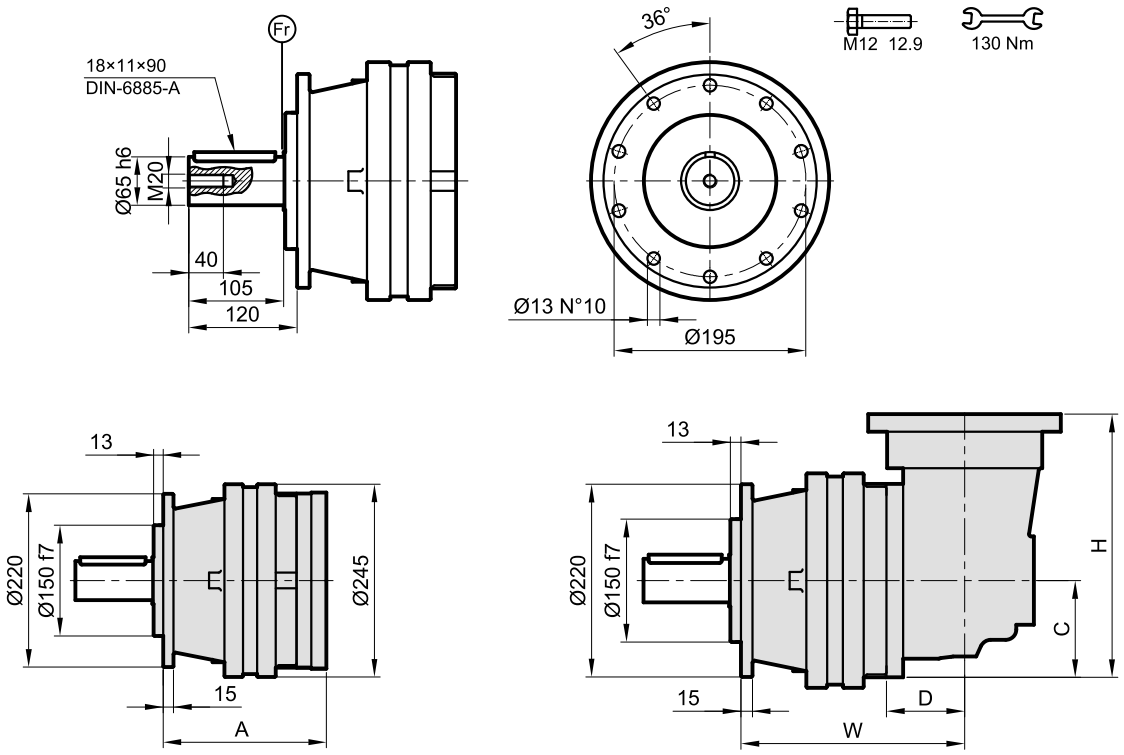
S□-F-040-□□-K70×105



Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
1	179	-	-	-	-	38.4	-
2	240	244.5	103	122	319	42.7	67.1
3	288	315.5	75	92.5	253.5	52.8	63.8
4	336	363.5	75	92.5	253.5	59.5	70.5

(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.

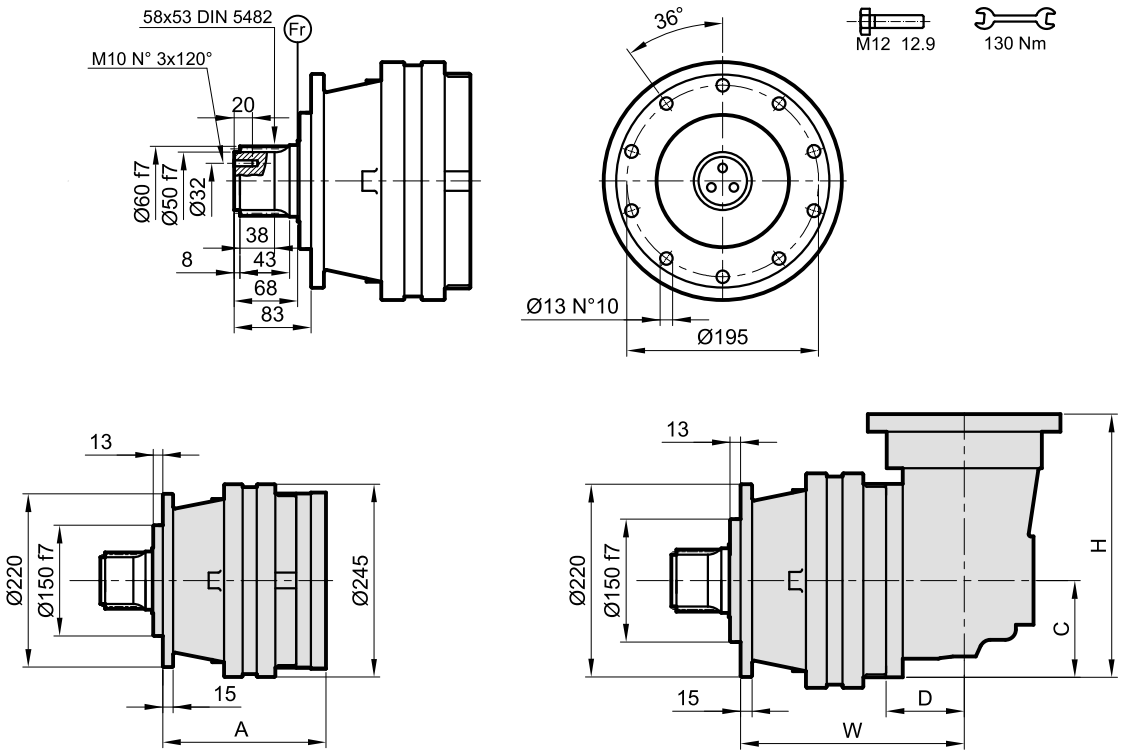
S□-F-040-□□-P65×105



Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
1	179	-	-	-	-	36.1	-
2	240	244.5	103	122	319	40.4	64.8
3	288	315.5	75	92.5	253.5	50.5	61.5
4	336	363.5	75	92.5	253.5	57.2	68.2

(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-040-□□-W58×68

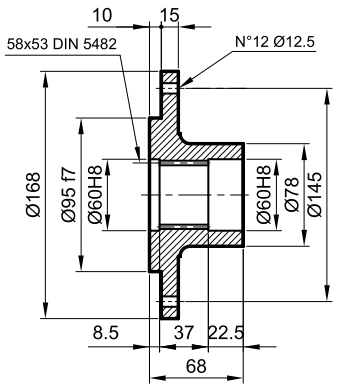


Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
1	179	-	-	-	-	36.1	-
2	240	244.5	103	122	319	40.4	64.8
3	288	315.5	75	92.5	253.5	50.5	61.5
4	336	363.5	75	92.5	253.5	57.2	68.2

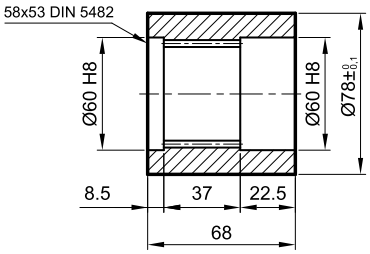
(1) Mass in kg for gearboxes without input modules (solid input shaft, motor flange, etc) or accessories. To obtain actual mass, add the mass for your chosen input module, please inquire.

Accessories

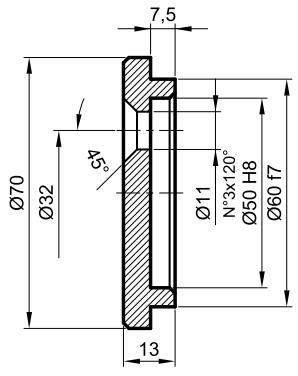
SA-F-58×53-S



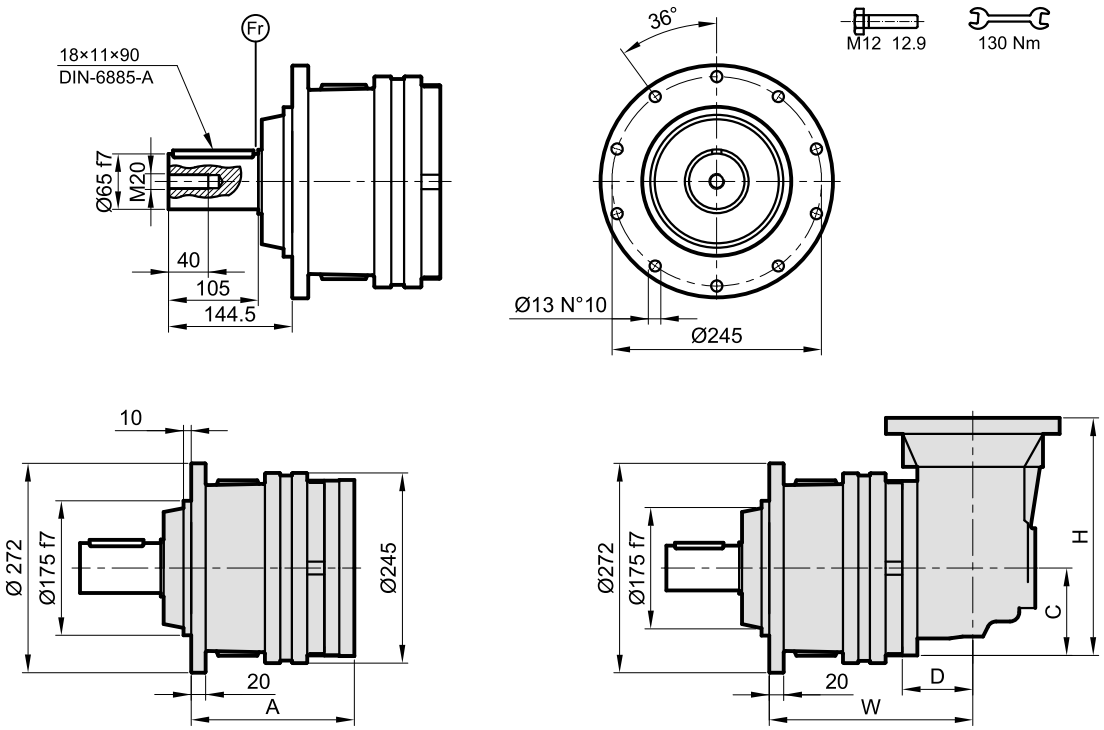
SA-B-58×53-S



SA-P-60



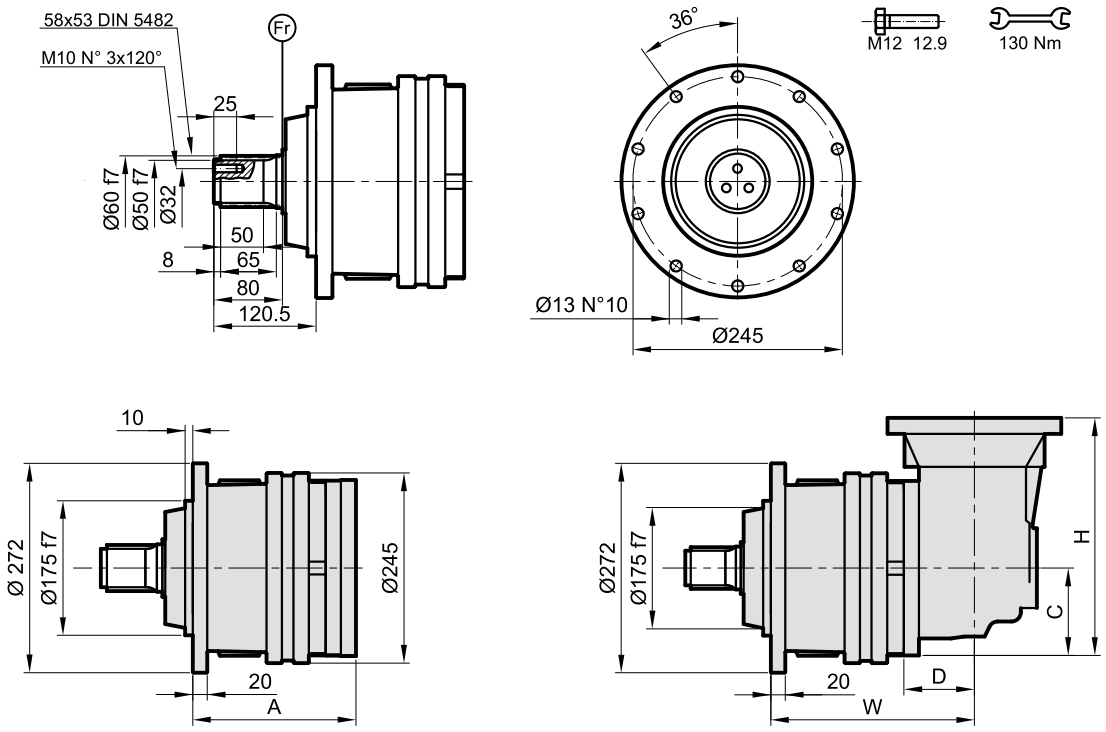
S□-R-040-□□-P65×105



Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
1	186	-	-	-	-	42.2	-
2	247	251	103	122	319	46.5	70.9
3	395	322	75	92.5	253.5	56.6	67.6
4	343	370	75	92.5	253.5	63.3	74.3

(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□-R-040-□□-W58×80

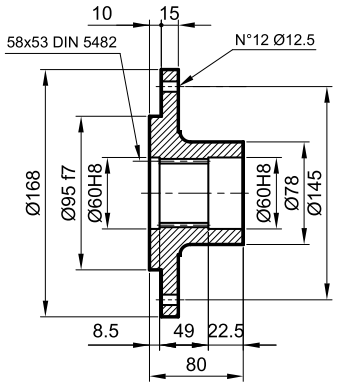


Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
1		-	-	-	-		-
2			103	122	319		
3			75	92.5	253.5		
4			75	92.5	253.5		

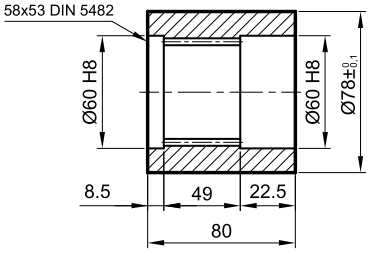
(1) Mass in kg for gearboxes without input modules (solid input shaft, motor flange, etc) or accessories. To obtain actual mass, add the mass for your chosen input module, please inquire.

Accessories

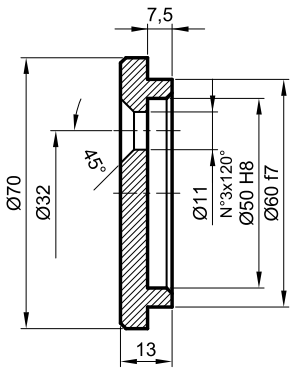
SA-F-58×53-R



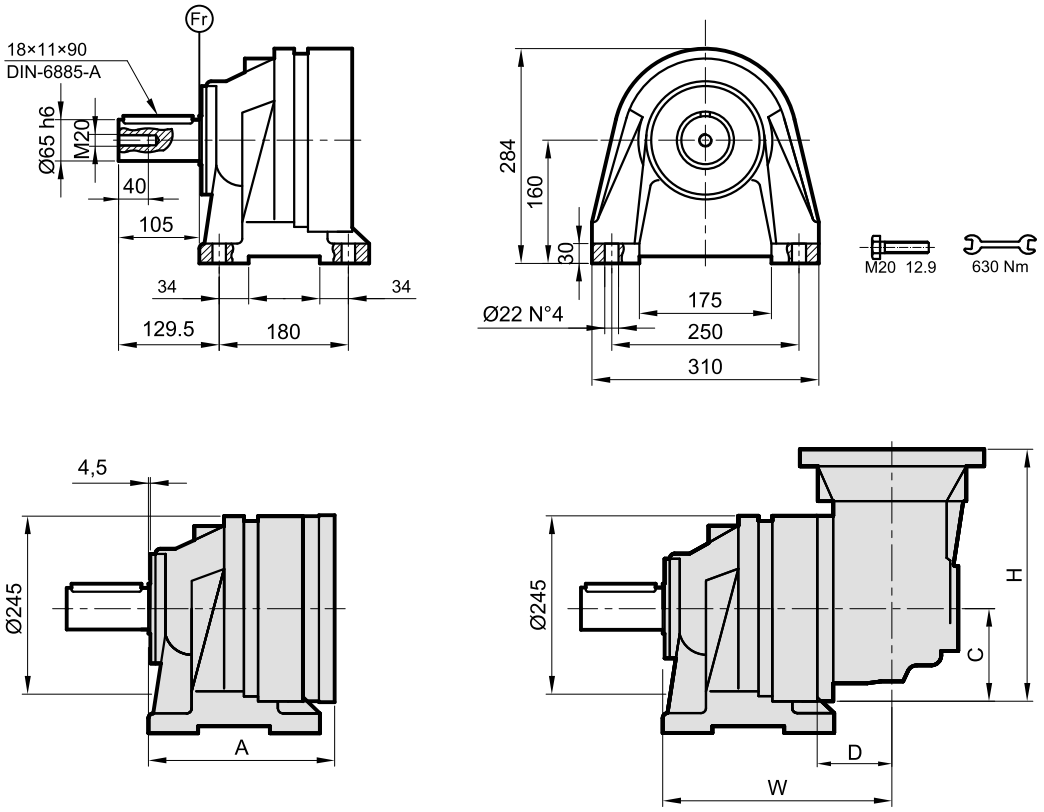
SA-B-58×53-R



SA-P-60



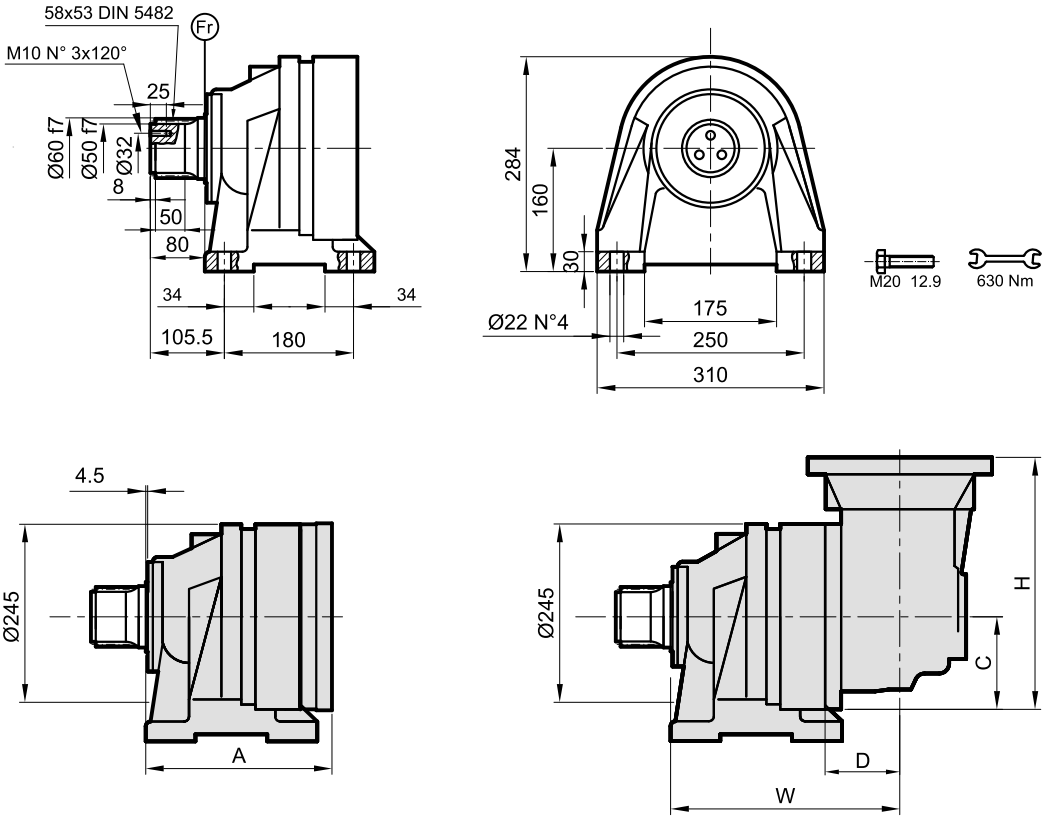
S□-G-040-□□-P65×105



Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
1	225	-	-	-	-	49.9	-
2	286	290.5	103	122	319	54.2	78.6
3	334	362	75	92.5	253.5	64.3	75.3
4	382	410	75	92.5	253.5	71	82

(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-040-□□-W58×80

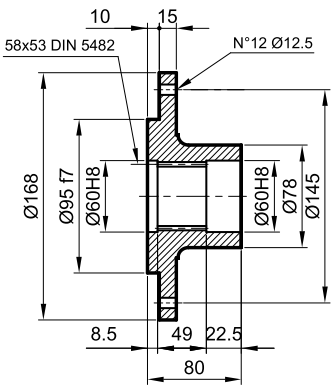


Stages	A	W	D	C	H	ST Mass (1)	SX Mass (1)
1	225	-	-	-	-	49.9	-
2	286	290.5	103	122	319	54.2	78.6
3	334	362	75	92.5	253.5	64.3	75.3
4	382	410	75	92.5	253.5	71	82

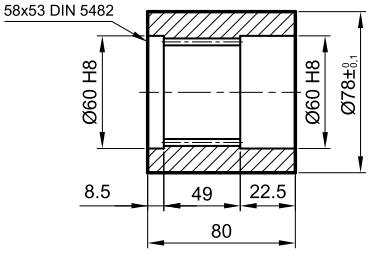
(1) Mass in kg for gearboxes without input modules (solid input shaft, motor flange, etc) or accessories. To obtain actual mass, add the mass for your chosen input module, please inquire.

Accessories

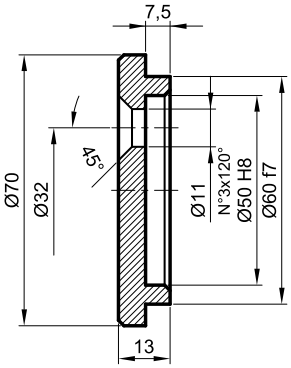
SA-F-58×53-R



SA-B-58×53-R

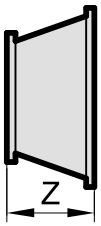


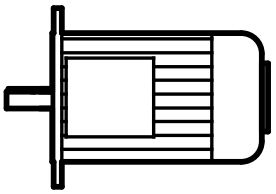
SA-P-60



Inputs

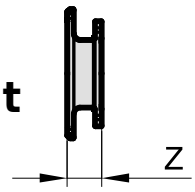
IEC Motor Input

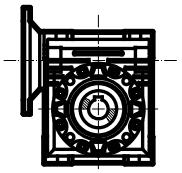




IEC	71	80	90	100	112	132	160	180
Stages	Z	Z	Z	Z	Z	Z	Z	Z
1	35.5	61.5	61.5	71	71	104	120.5	120.5
2	35.5	61.5	61.5	71	71	104	120.5	120.5
3	35.5	61.5	61.5	71	71	104	120.5	120.5
4	35.5	61.5	61.5	71	71	104	120.5	120.5

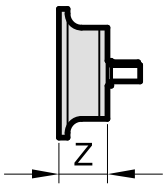
Worm Gearbox Input





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	80	80	57	57	57
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	122		159	-	-
2	122		-	-	-
3	122		-	-	-
4	122		-	-	-