

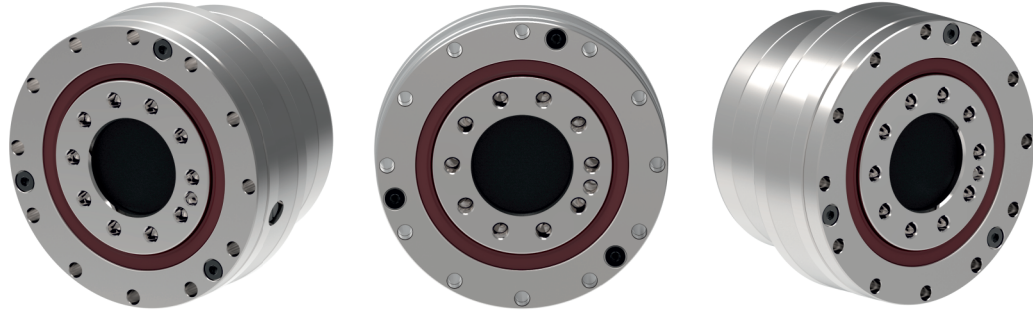


NEW SIZES & PRODUCTS





TS G - series



The new sizes of the high-precision G-series backlash-free gearboxes achieve very high positioning accuracy, high tilting and torsional rigidity. The new design has succeeded in improving internal friction, minimizing starting and reverse moments and vibrations.

G series rating table

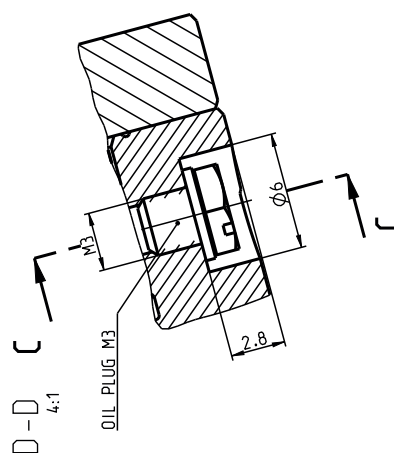
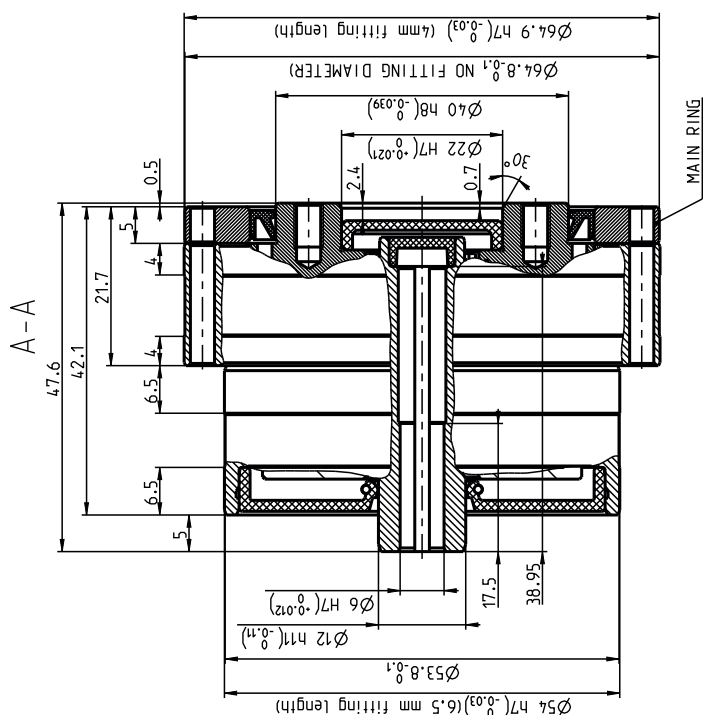
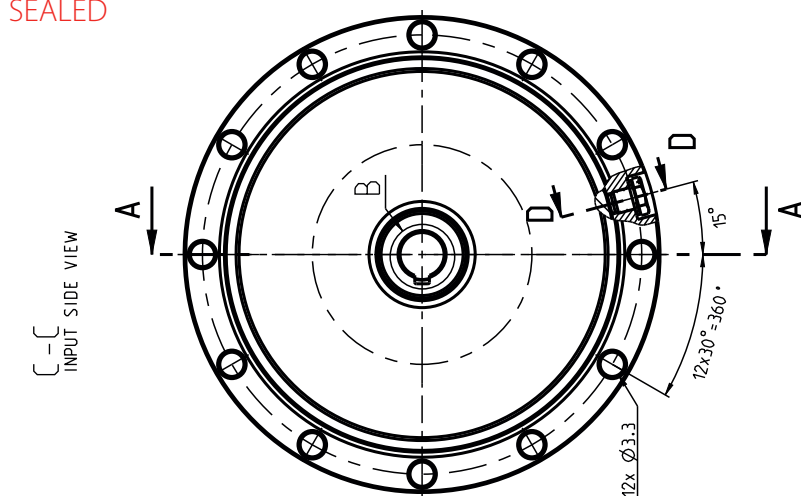
Size	Reduction ratio	Rated output torque	Max. acceleration / deceleration torque	Maximum permissible torque at emergency / E-stop	Rated input speed	Maximum input speed	Lost motion	Hysteresis	Angular Transmission Error	No-load starting torque (max.)
	i	T _R [Nm]	T _{acc} [Nm]	T _{em} [Nm]	n _R [rpm]	n _{max} [rpm]	LM [arcmin]	H [arcmin]	ATE [arcsec]	[Nm]
TS 65 G	35	31	62	155	2 000		< 1,5	< 1,5	72	
	47									
	63									
TS 75 G	41	35	70	175	2 000	4 800	< 1	< 1	72	0,15
	63					5 000				0,1
	75					5 400				0,1
TS 95 G	43	85	170	425	2 000	4 000	< 1	< 1	72	0,35
	73					4 500				0,3
	95					4 800				0,3

G series rating table - continue

Size	Reduction ratio	Max. Backdriving torque	Torsional stiffness	Moment / Tilting / Stiffness	Rated / Tilting / Moment	Allowable / Tilting / Moment	Allowable radial force	Allowable axial force	Input Inertia	Weight
	i	[Nm]	k _t [Nm/arcmin]	M _t [Nm/arcmin]	M _c [Nm]	[Nm]	F _r [kN]	F _a [kN]	I [10 ⁻⁴ kg.m ²]	[kg]
TS 65 G	35				68	136	1,7	5,3	0,007	0,714
	47									
	63									
TS 75 G	41	5	8,1	70	87	174	1,8	5,8	0,019	0,95
	63	8	8,2							
	75	10	8,4							
TS 95 G	43	20	15	120	205	410	3,5	11,1	0,14	1,9
	73	27	15,3							
	95	38	15,5							

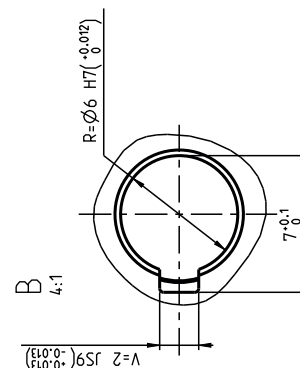
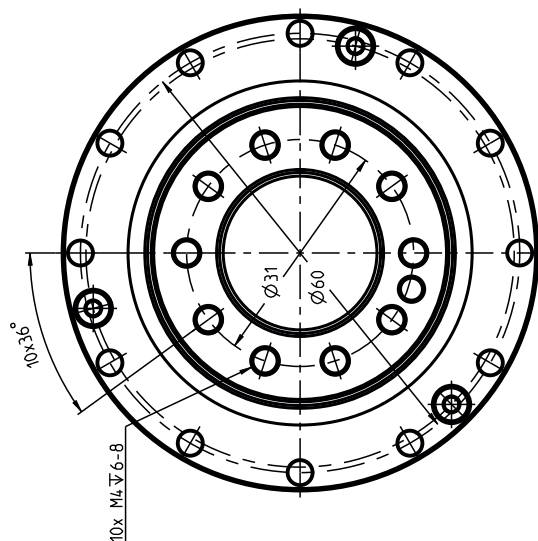
TS 65 - i - G - P6

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TS 65 - i - G - P6

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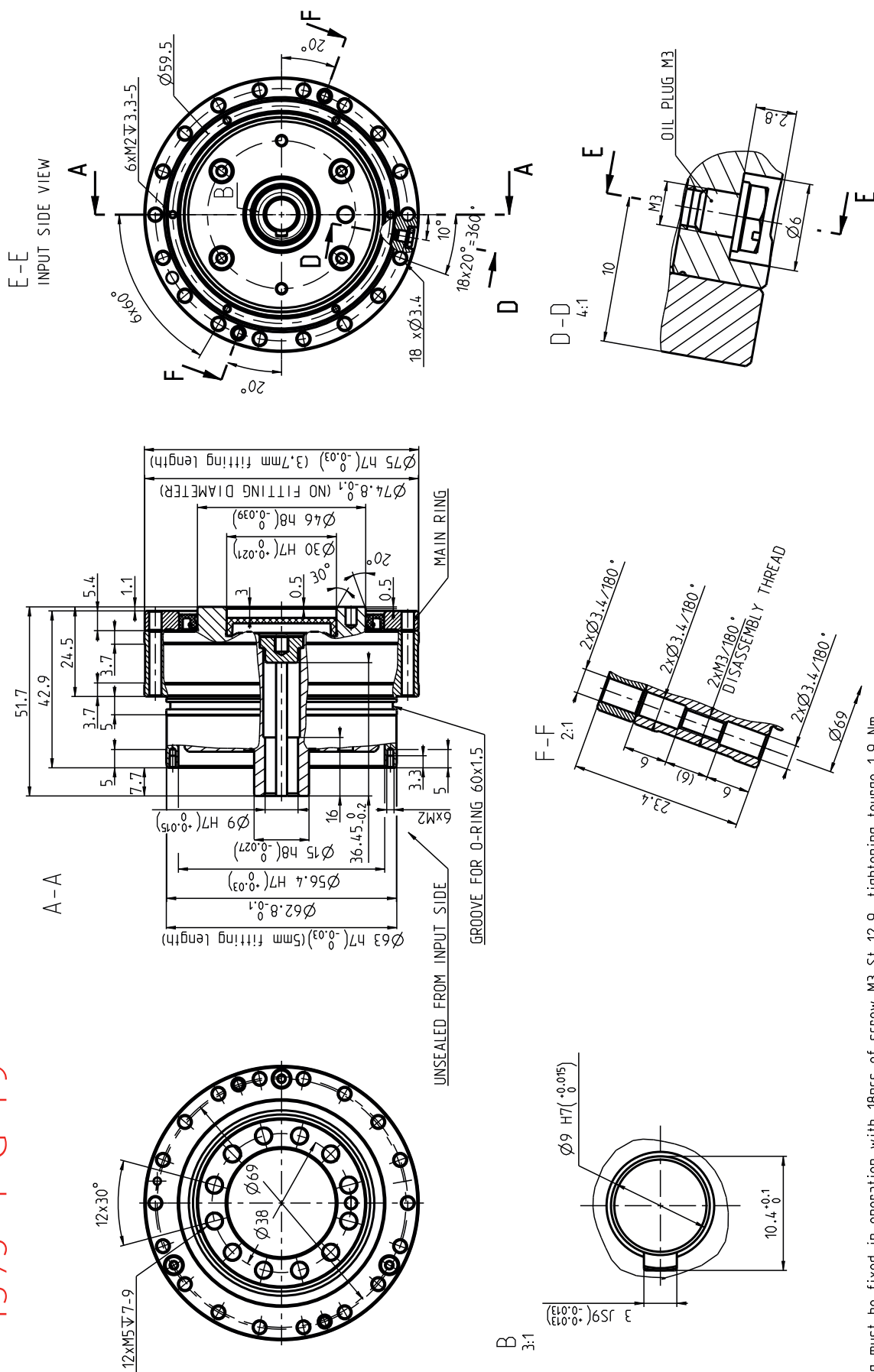


Note:

- Main ring must be fixed in operation with 12pcs of screw M3 St 12.9. tightening torque 1,9 Nm

TS 75 - i - G - P9

TS 75 - i - G - P9



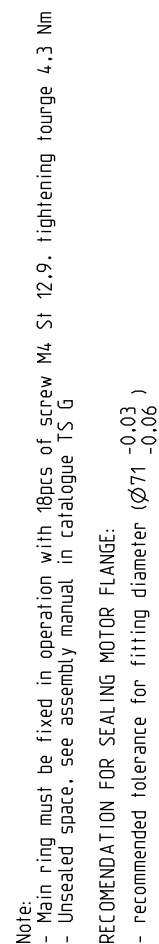
Note:

- Main ring must be fixed in operation with 18pcs of screw M3 St 12.9. Tightening torque 1.9 Nm
- Unsealed space, see assembly manual in catalogue TS G

RECOMMENDATION FOR SEALING MOTOR FLANGE:

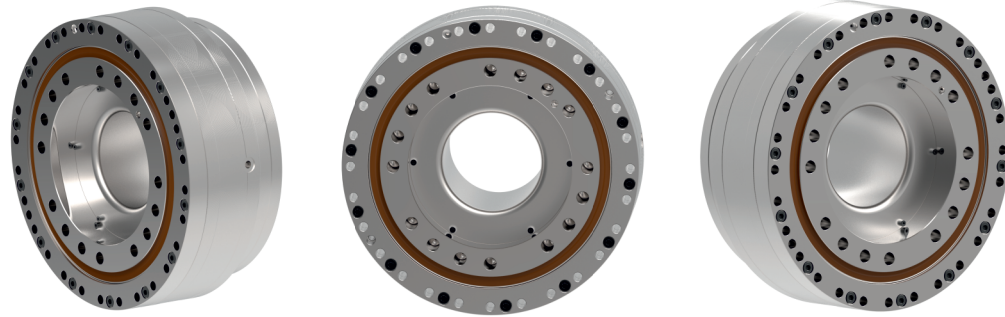
- recommended tolerance for fitting diameter ($\phi 56.4$ $\pm$ 0.03)

TS95-i-G-P14





TS GH - series



The new sizes of the high-precision GH series backlash-free gearboxes in Hollow Shaft design achieve very high positioning accuracy, high tilting and torsional stiffness. The new design has succeeded in improving internal friction, minimizing starting and reverse moments and vibrations.

GH series rating table

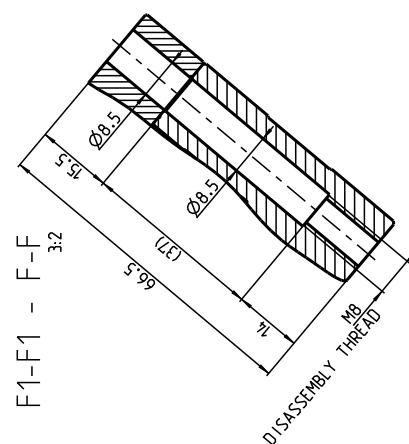
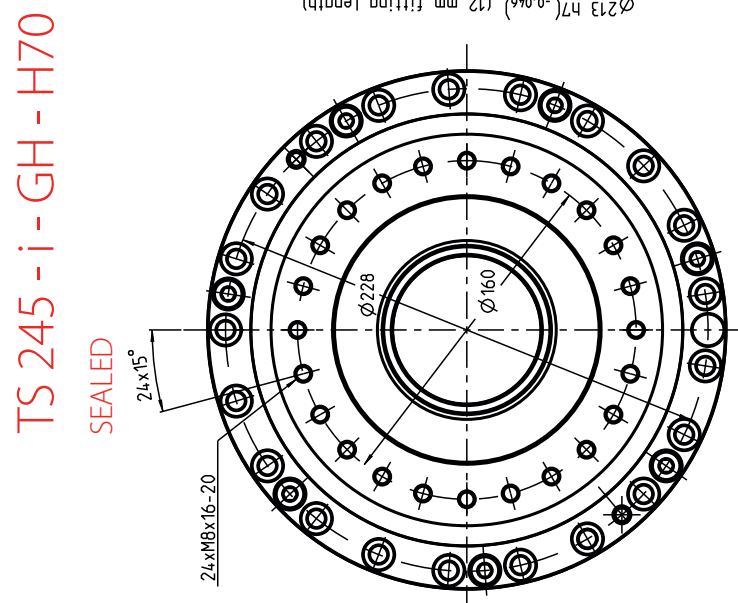
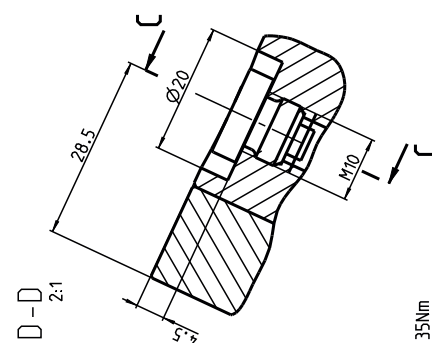
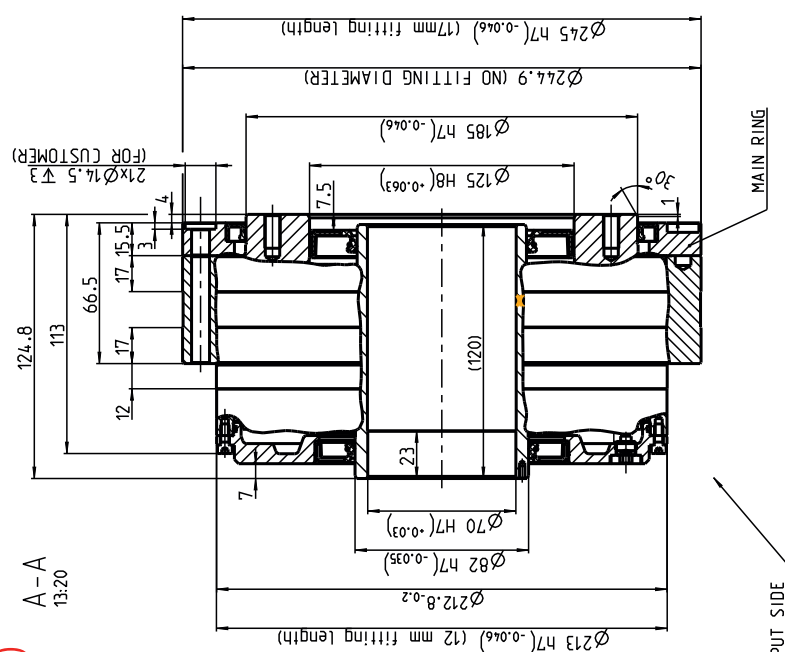
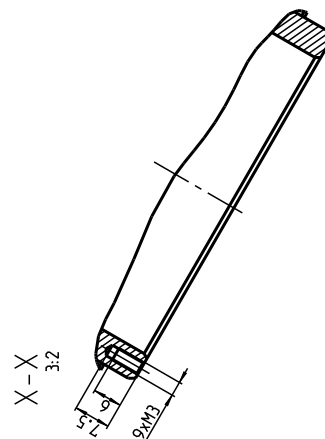
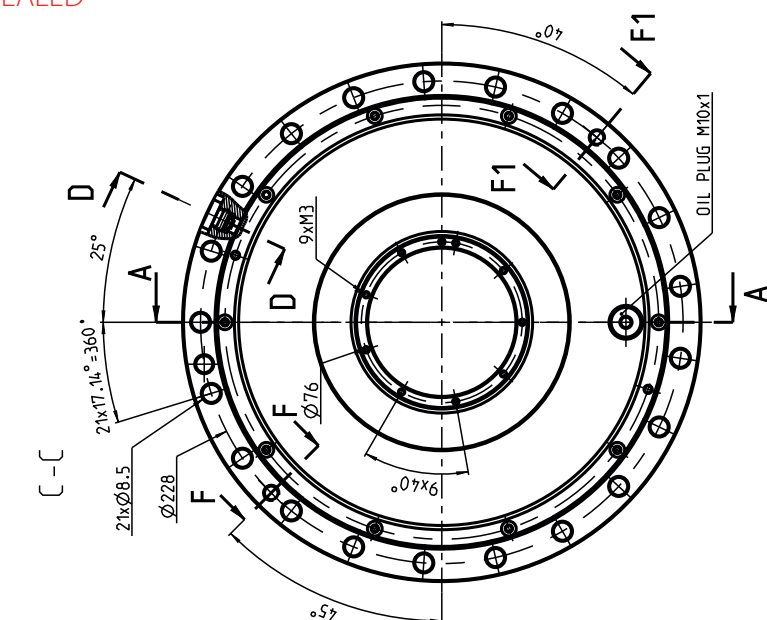
Size	Reduction ratio	Rated output torque	Max. acceleration / deceleration torque	Maximum permissible torque at emergency / E-stop	Rated input speed	Maximum input speed	Lost motion	Hysteresis	Angular Transmission Error	No-load starting torque (max.)
	i	T_R [Nm]	T_{acc} [Nm]	T_{em} [Nm]	n_R [rpm]	n_{max} [rpm]	LM [arcmin]	H [arcmin]	ATE [arcsec]	[Nm]
TS 245 GH	51	125	2 800	5 600	1 500	2 100	< 1	< 1	25	2,5
TS 285 GH	55	1 700	4 250	8 500	1 500	2 300	< 1	< 1	50	6,8
	125					2 500			50	5,8
TS 335 GH	69	3 100	7 750	15 500	1 500		< 1	< 1		

GH series rating table - continue

Size	Reduction ratio	Max. Backdriving torque	Torsional stiffness	Moment / Tilting / Stiffness	Rated / Tilting / Moment	Allowable / Tilting / Moment	Allowable radial force	Allowable axial force	Input Inertia	Weight
	i	[Nm]	k_t [Nm/arcmin]	M_t [Nm/arcmin]	M_c [Nm]	[Nm]	F_r [kN]	F_a [kN]	I [10^{-4} kg.m ²]	[kg]
TS 245 GH	35	160	285	4 000	2 600	5 200	16	50	26	25,8
	47									
	63									
TS 285 GH	41	360 1 200	405 460	6 500	5 670	11 300	30	93	80	35,5
	63									
	75									
TS 335 GH	43		690	13 000	7 400	14 800	34,2	106,3	113	61,4
	73									
	95									

TS 245 - i - GH - H70

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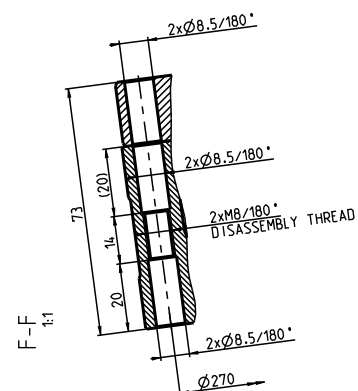
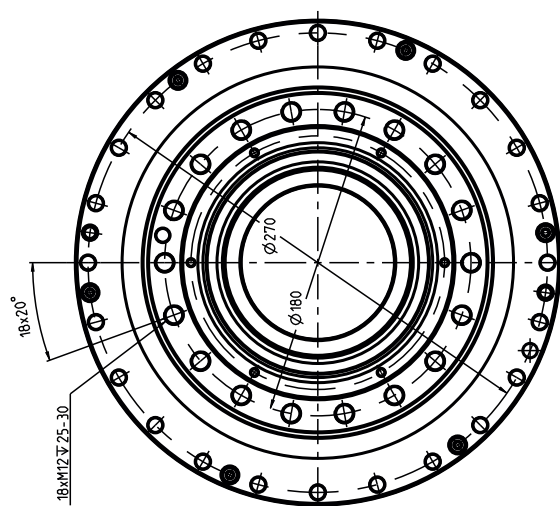
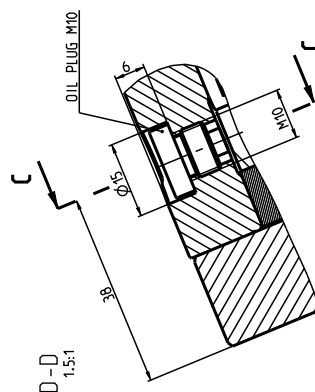
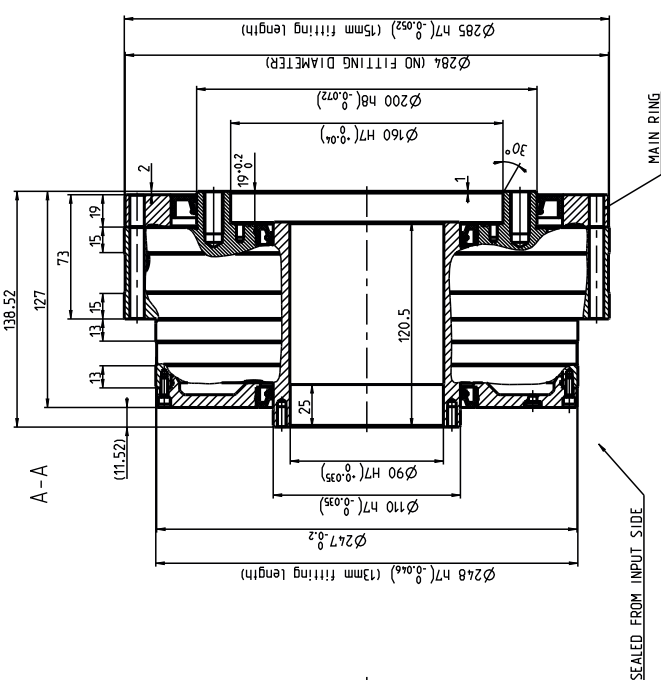
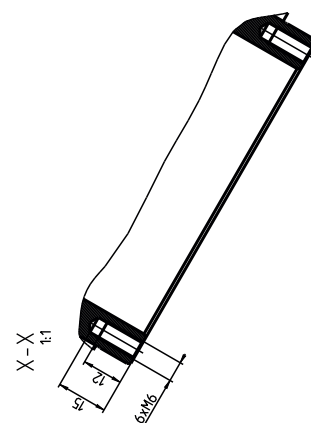
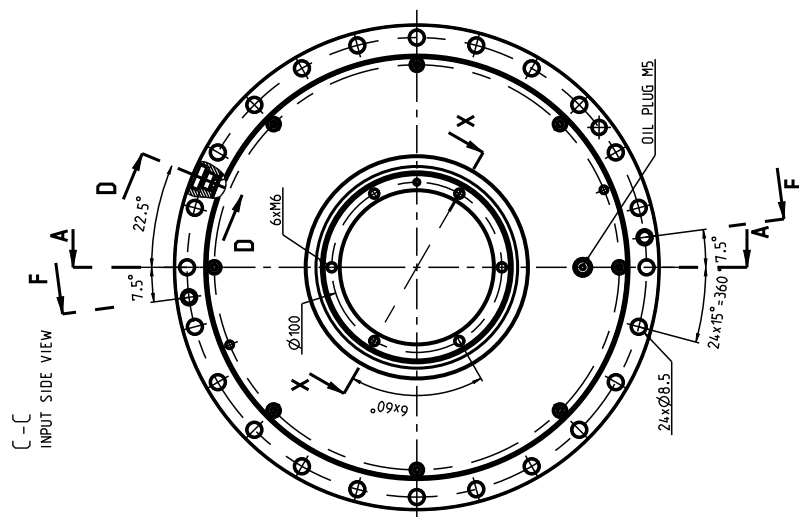


Note:

- Main ring must be fixed in operation with 21prs screw M8 St 12.9, tightening torque 35Nm

TS 285 - i - GH - H90

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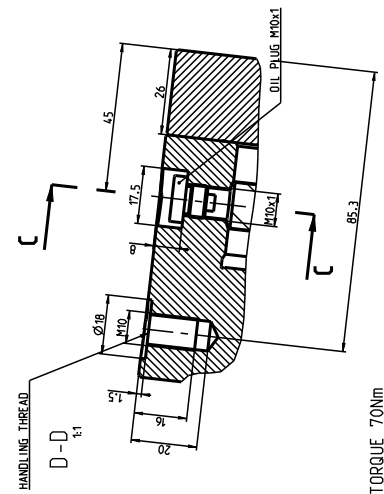
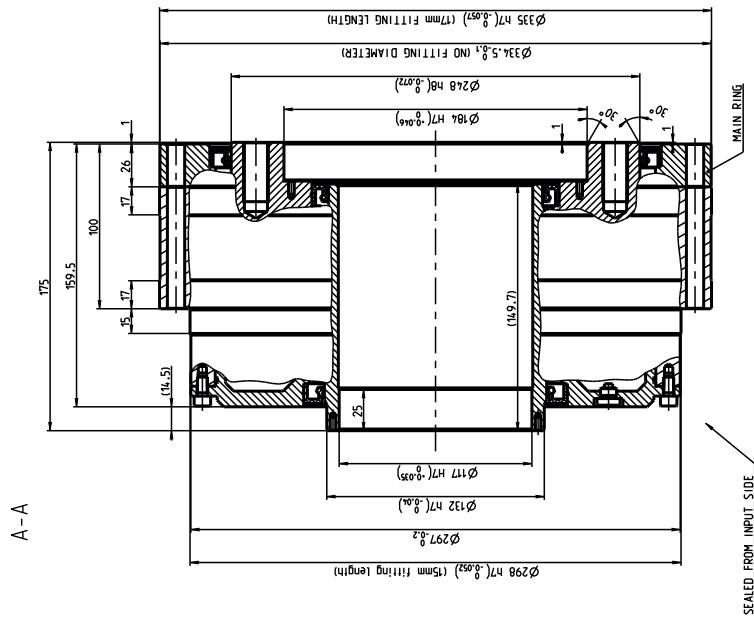
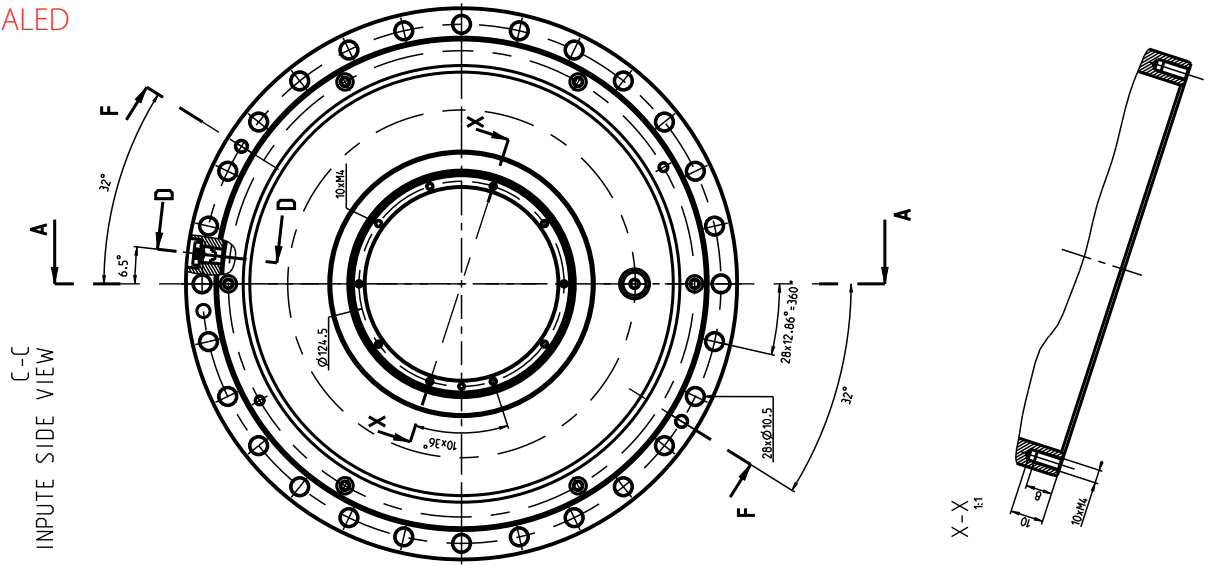
TS 285 - i - GH - H90

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Note:
- Main ring must be fixed in operation with 24pcs of screw M8, st 12,9, tightening torque 35Nm

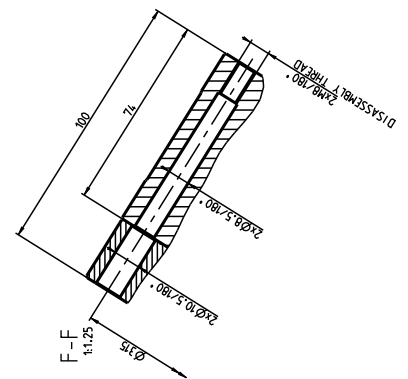
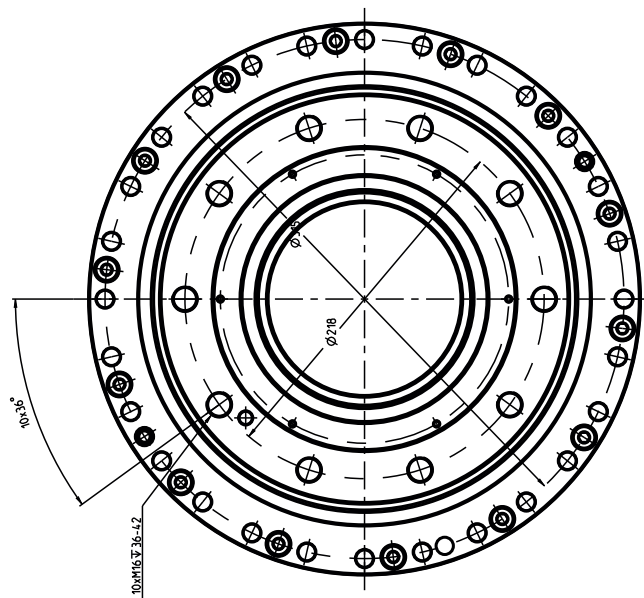
TS 335 - i - GH - H117

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TS 335 - i - GH - H117

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o.e:
- Main ring must be fixed in operation with 28prs screw M10 St 12.9, TIGHTENING TORQUE 70Nm



Product characteristics

W 346 H



The W series represent a new transmission mechanism in SPINEA's portfolio. With the W series, we are able to provide a high-precision gearbox for high-precision applications in robotics for torques above 3000 Nm.

Main parameters of reduction gear

Size	Rated output torque	Acceleration / deceleration torque	Rated output speed	Rated life L10	Torsional rigidity Typical value	Lost motion & Hysteresis	Max output speed [rpm] At max case temperature 65°C	Speed ratio of discrete reduction gear	Supported overall speed ratios with 1st & 2nd stage wheels
	[Nm]	[Nm]	[rpm]	[Hrs]	[Nm/arcmin]	[arcmin]			
W 346 H	3 200	8 000	15	6 000	1 750 - 2 000 dependent on LM	< 1	30	38,14	106,39; 158,02 205,98; 243,52

Main parameters of output bearings in reduction gear

Size	Rated output moment	Allowable moment during starting and stopping	Max reduction gear diameter	Rated life L10	Moment rigidity Typical value	Rated radial force	Rated axial force	Weight of discrete reduction gear	Power Density
	[Nm]	[Nm]	[mm]	[Hrs]	[Nm/arcmin]	[N]	[N]	[kg]	[Nm/kg]
W 346 H	8 950	17 900	346	12 000	11 000 - 14 500 dependent on preload	84 000	93 000	60	53,3