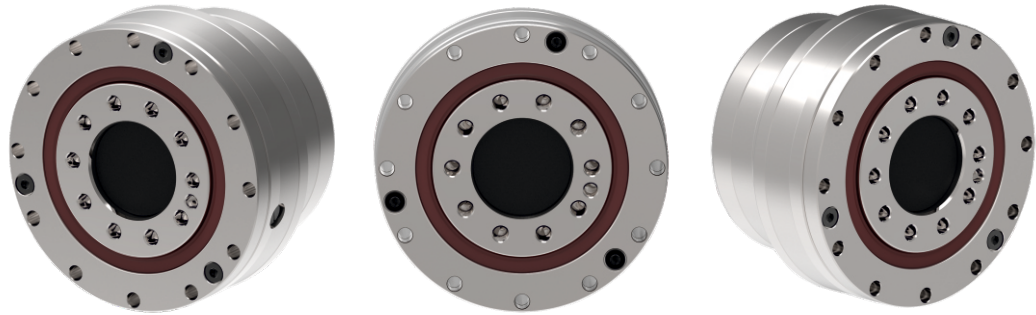




NEW SIZES & PRODUCTS 2023
(reduction gears)



TS G - series

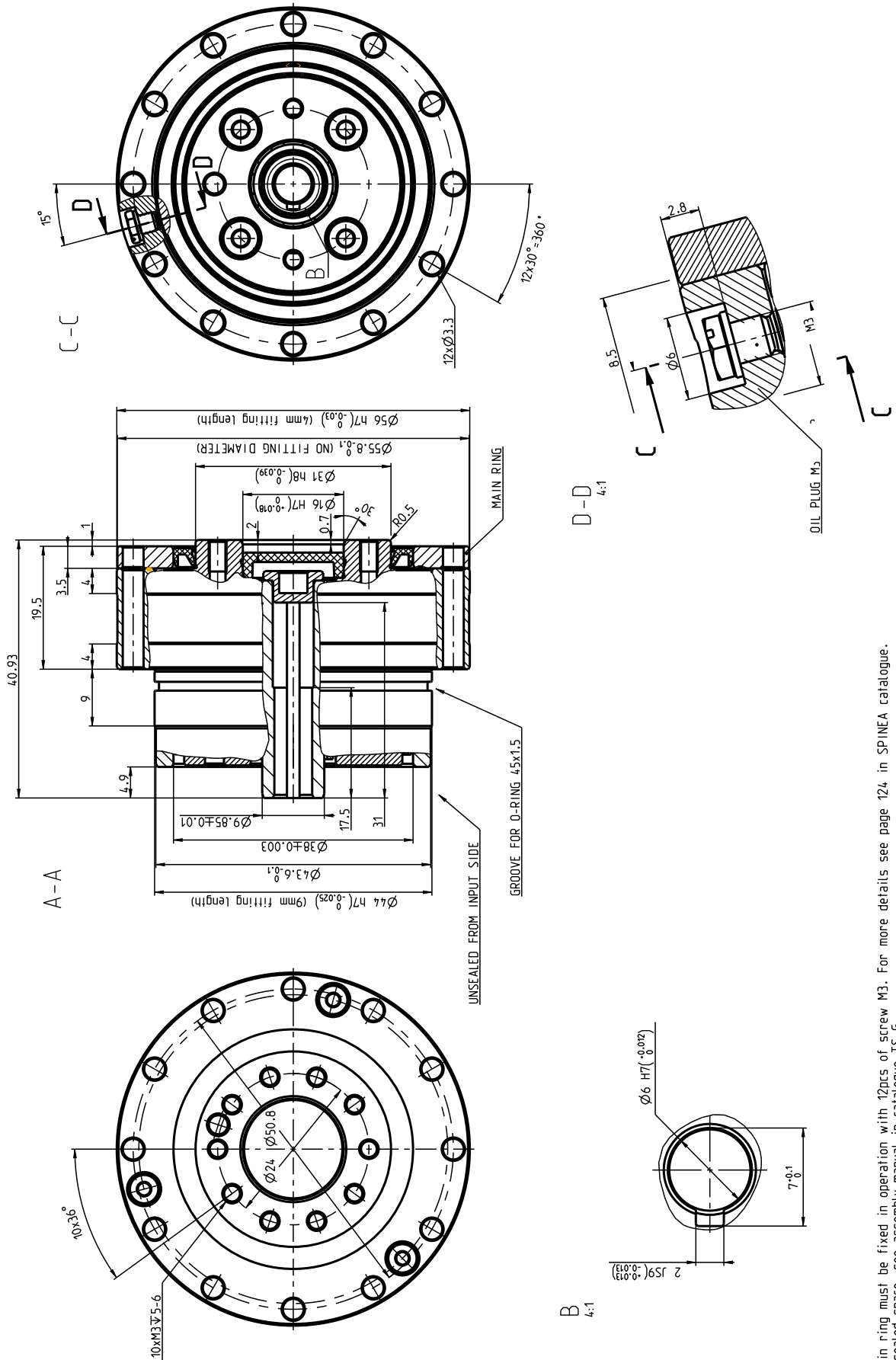


G series rating table

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	Weight
	i	T_R [Nm]	T_{acc} [Nm]	T_{em} [Nm]	n_R [rpm]	n_{max} [rpm]	LM [arcmin]	H [arcmin]	ATE [arcsec]	[kg]
TS 055 G	35	17	34	59,5	2 000		< 1	< 1		0,46
	77									
TS 245 G	51	2 200	4 500	11 000	910		< 1	< 1		29,9
	87									
	121									
	155									
TS 285 G	55	3 030	7575	15 150	1 500		< 1	< 1		49,7
	125									
	191									

TS 055 - i - G - P6

TS 055 - i - G - P6



Note:
 - Main ring must be fixed in operation with 12pcs of screw M3. For more details see page 124 in SPINEA catalogue.
 - Unsealed space, see assembly manual in catalogue TS G

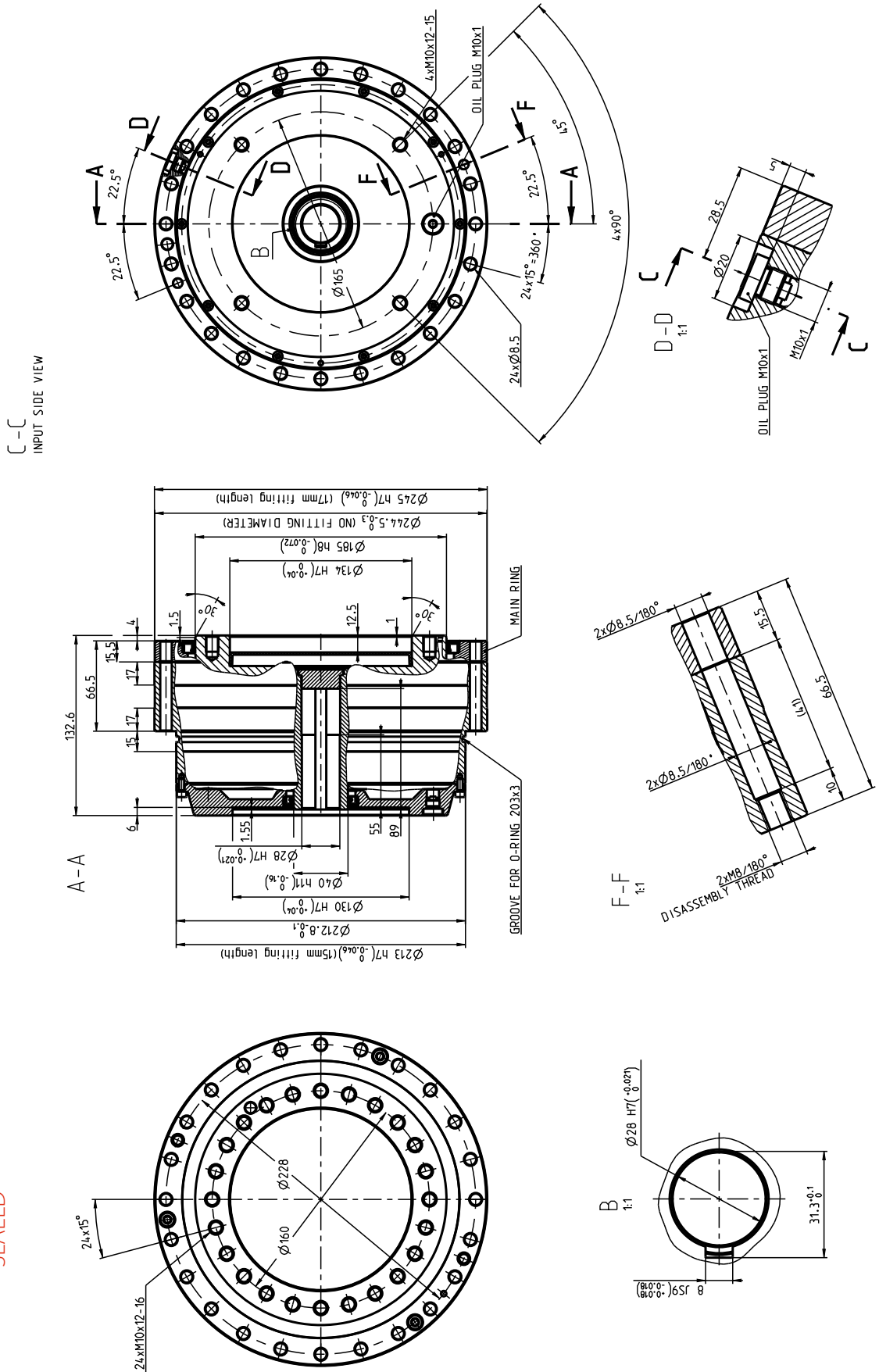
RECOMMENDATION FOR SEALING MOTOR FLANGE:
 - recommended tolerance for fitting diameter ($\varnothing 38$ -0.03 -0.06)

TS 245 - i - G - P28

SEALED

TS 245 - i - G - 28

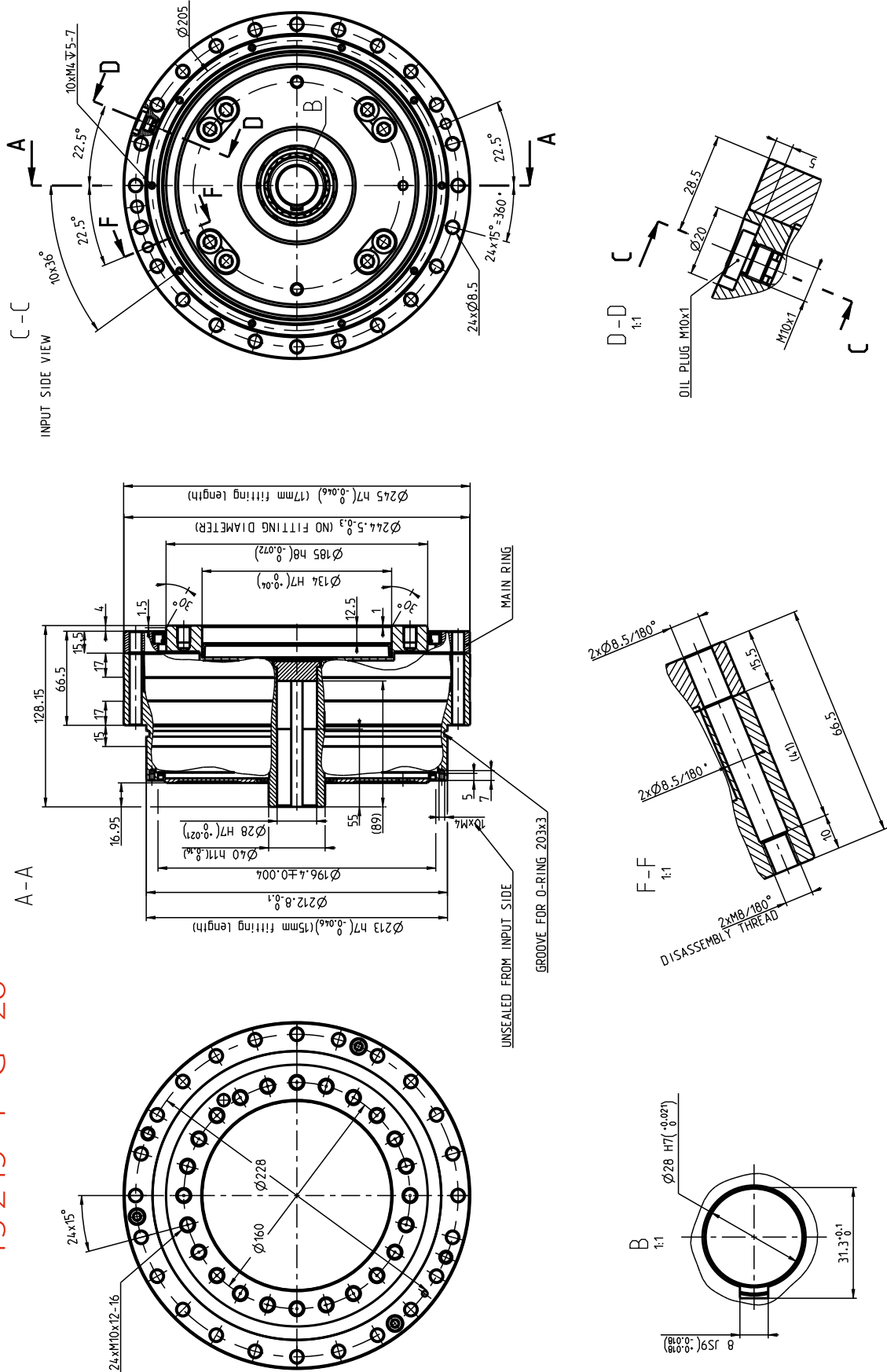
SEALED



Note:
- Main ring must be fixed in operation with 24pcs of SCREW M8. For more details see page 124 in SPINEA catalogue.

TS 245 - i - G - P28

TS 245 - i - G - 28



Note:
 - Main ring must be fixed in operation with 24 pcs of screw M8. For more details see page 124 in SPINEA catalogue.
 - Unsealed space, see assembly manual in catalogue TS G

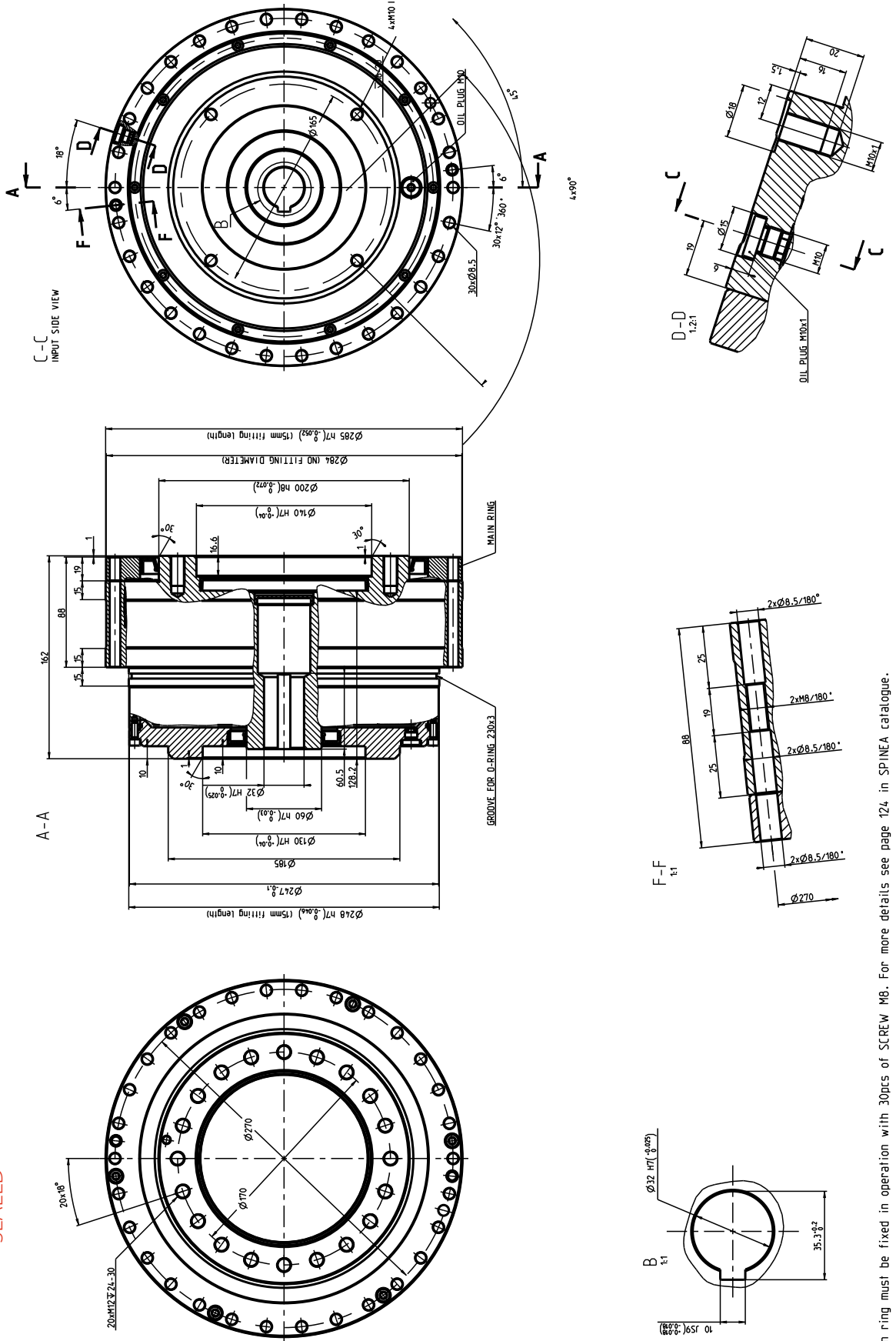
RECOMMENDATION FOR SEALING MOTOR FLANGE:
 - recommended tolerance for fitting diameter ($\phi 196.4 - 0.03$ - 0.06)

TS 285 - i - G - P32

SEALED

TS 285 - i - G - P32

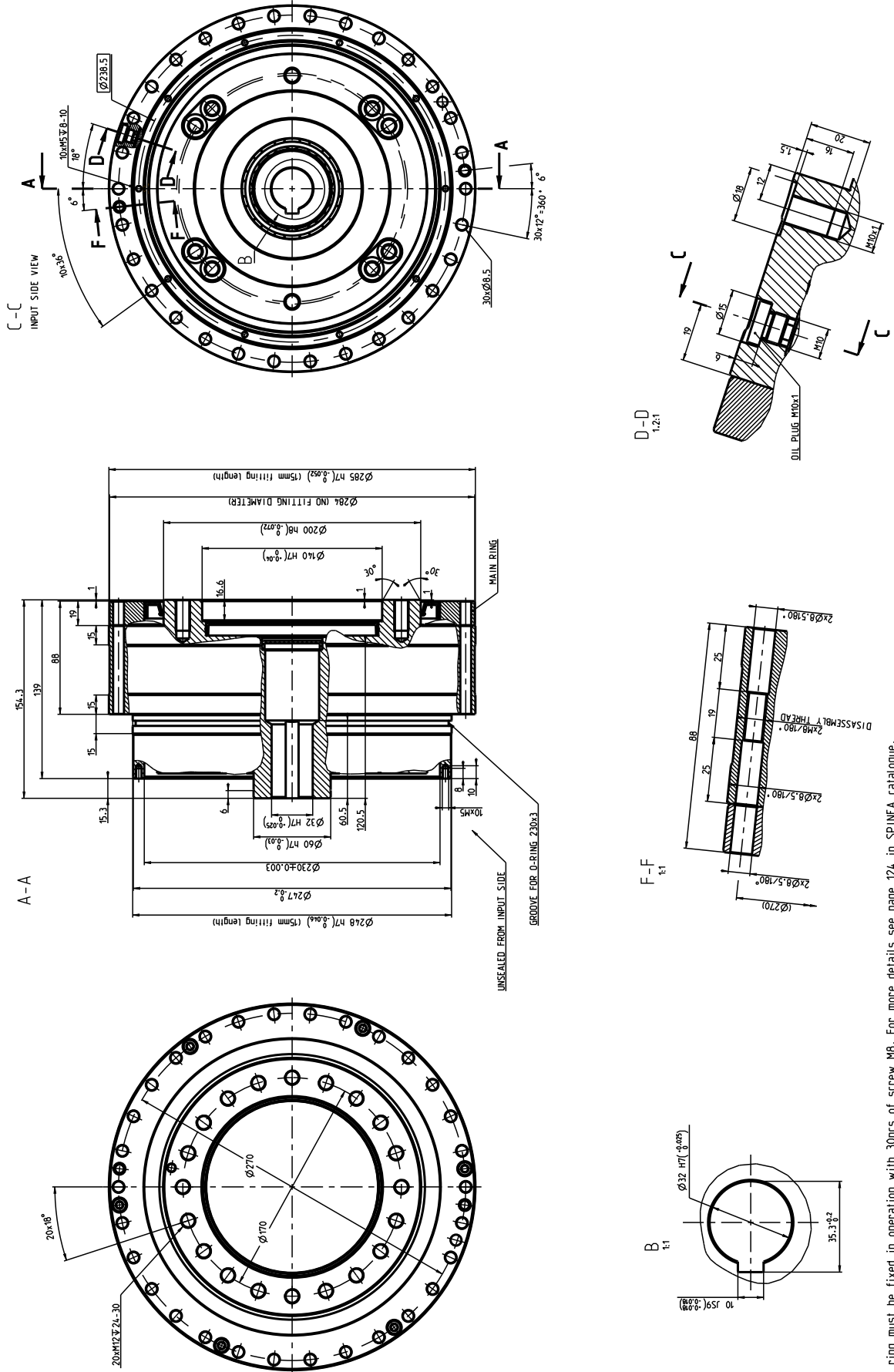
SEALED



Note:
 - Main ring must be fixed in operation with 30pcs of SCREW MB. For more details see page 124 in SPINEA catalogue.

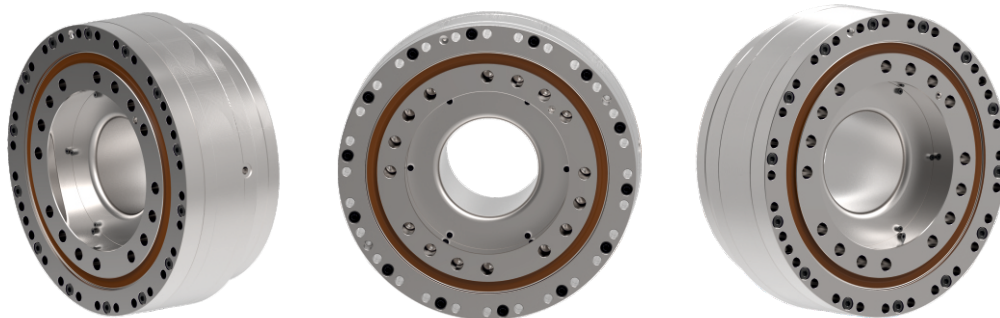
TS 285 - i - G - P32

TS 285 - i - G - P32



Note:
 - Main ring must be fixed in operation with 30pcs of screw M8. For more details see page 124 in SPINEA catalogue.
 - Unsealed space, see assembly manual in catalogue TS G
 RECOMMENDATION FOR SEALING MOTOR FLANGE:
 - recommended tolerance for fitting diameter (Ø230 -0,03 -0,06)

TS GH - series



GH series rating table

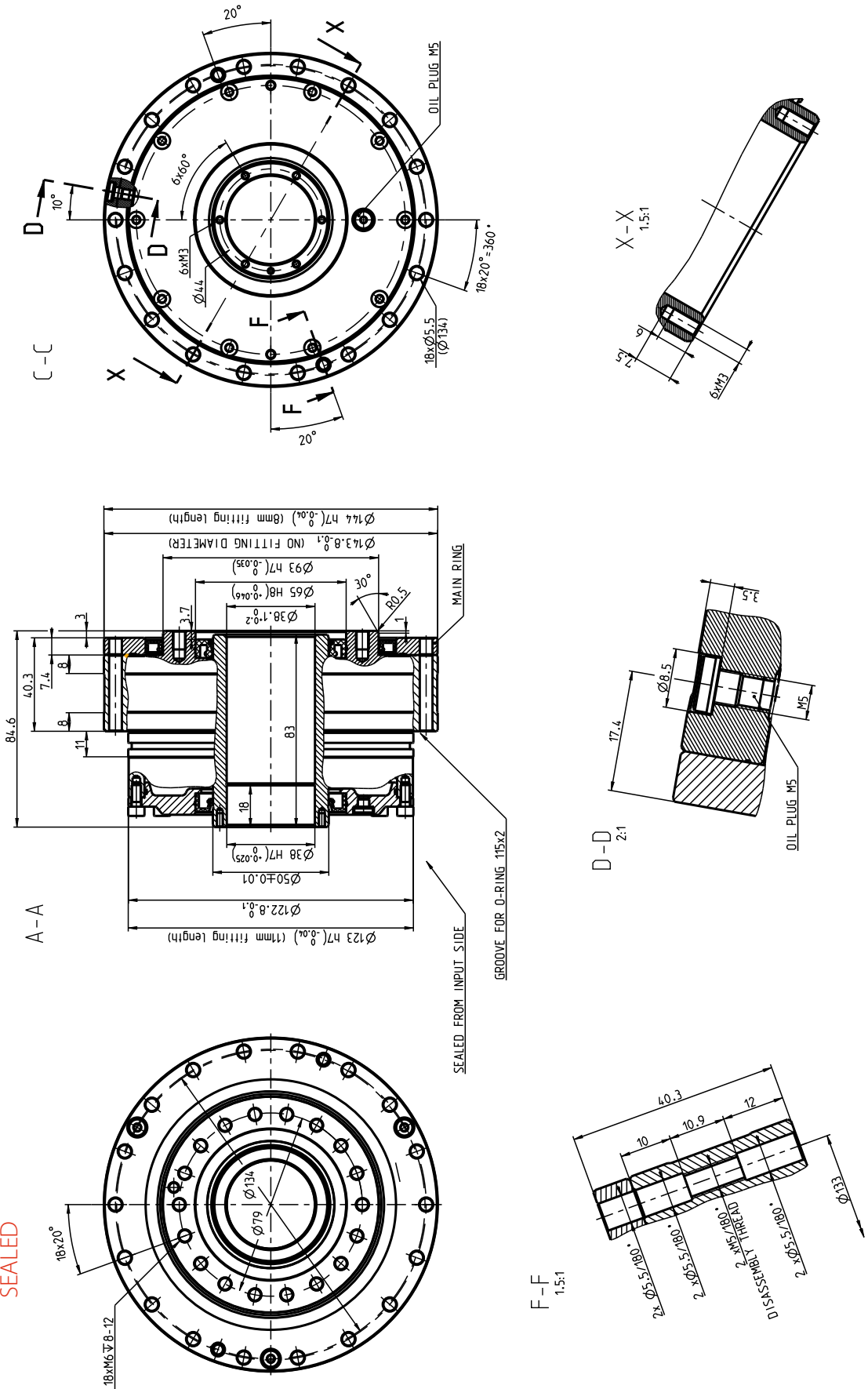
Size	Reduction ratio	Rated output torque	Max. acceleration / deceleration torque	Maximum permissible torque at emergency / E-stop	Rated input speed	Maximum input speed	Lost motion	Hysteresis	Angular Transmission Error	Weight
	i	T_R [Nm]	T_{acc} [Nm]	T_{em} [Nm]	n_R [rpm]	n_{max} [rpm]	LM [arcmin]	H [arcmin]	ATE [arcsec]	[kg]
TS 145 GH	53 69 115	211	528	1 055	2 000		< 1	< 1		6,1

TS 145 - i - GH - H38

SEALED

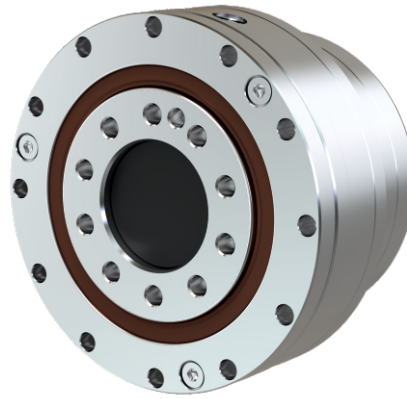
TS 145 - i - GH - H38

SEALED



Note:
- Main ring must be fixed in operation with 18pcs of screw M5. For more details see page 124 in SPINEA catalogue.

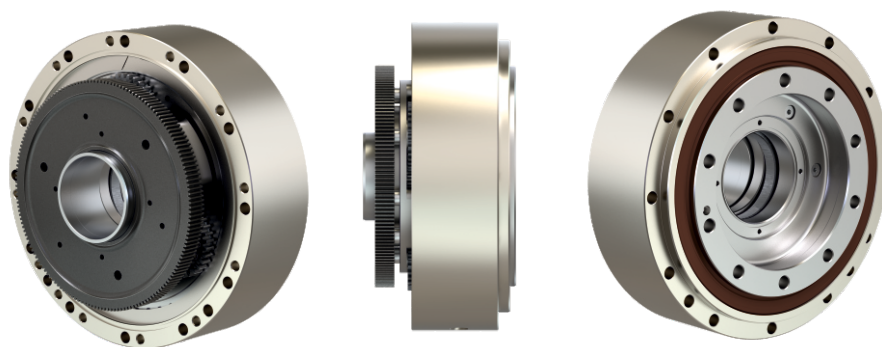
TS GXXL - series



GXXL 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	Weight
	i	T _R [Nm]	T _{acc} [Nm]	T _{em} [Nm]	n _R [rpm]	n _{max} [rpm]	LM [arcmin]	H [arcmin]	ATE [arcsec]	[kg]
TS 65 GXXL	21	38	76	190	2 000		< 1	< 1		1,05
TS 95 GXXL	21	85	170	425	2 000		< 1	< 1		2,83

W-350 H



The W hollow shaft reduction gears represent a new transmission mechanism in SPINEA's portfolio. With the W series, we are able to provide a high-precision reduction gears for high-precision applications.

Main parameters of hollow shaft reduction gear W-350 H

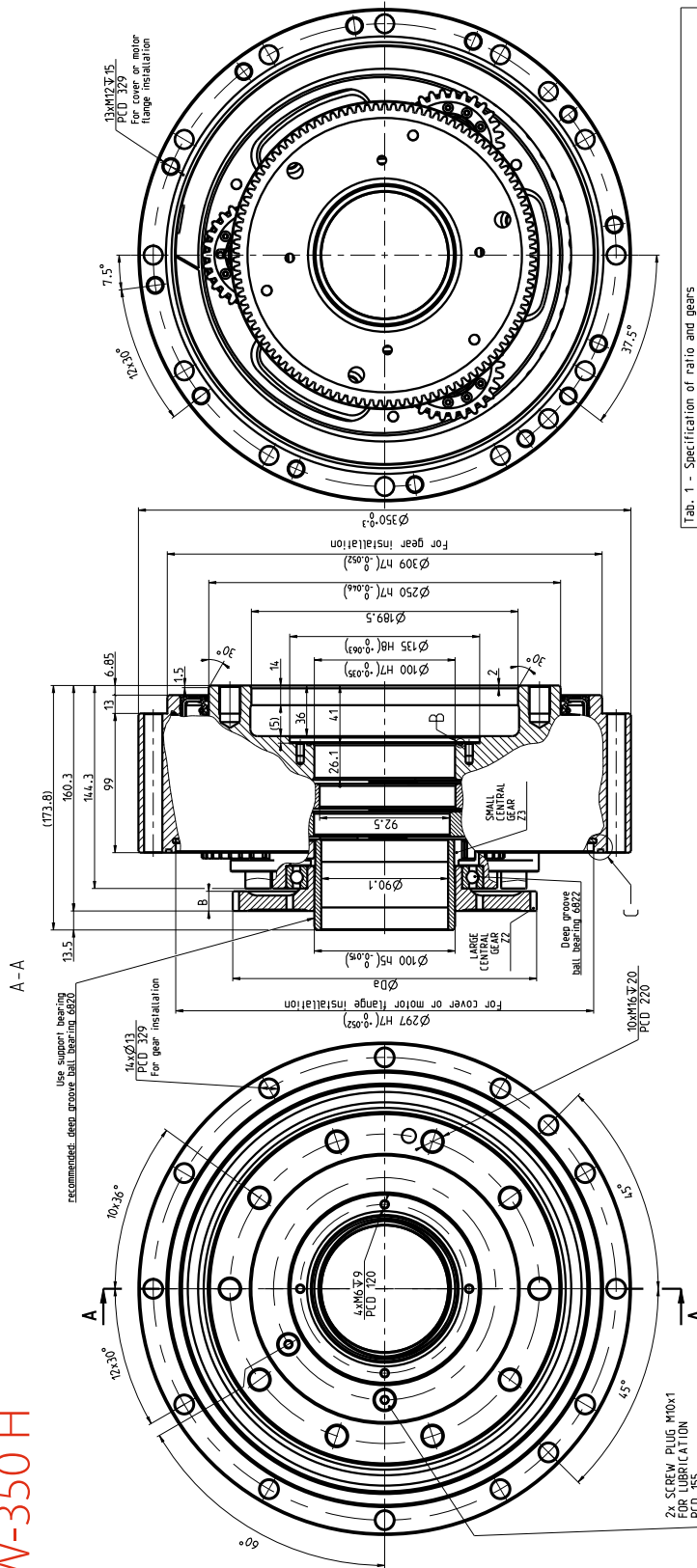
Size	Rated output torque	Acceleration / deceleration torque	Rated output speed	Reduction gear rated life L10	Torsional stiffness Typical value	Lost motion & Hysteresis lost	Max output speed at max case temperature 65°C	Speed ratio of basic reduction gear	Supported overall speed ratios with 1st & 2nd pre-stage wheels
	[Nm]	[Nm]	[rpm]	[Hrs]	[Nm/arcmin]	[arcmin]	[rpm]		
W 350 H	3 050	7 625	15	6 000	1 750 - 2 000	< 1	30	38,14	106,39; 158,02 205,98; 243,52

Main parameters of output bearings in hollow shaft reduction gear W-350 H

Max reduction gear diameter	Rated output moment	Allowable moment during starting and stopping	Rated output speed	Output bearing rated life L10	Tilting stiffness Typical value	Rated radial force	Rated axial force	Weight of basic reduction gear	Central hole diameter
[mm]	[Nm]	[Nm]	[rpm]	[Hrs]	[Nm/arcmin]	[N]	[N]	[kg]	[mm]
350	7 080	14 160	15	12 000	13 000 - 16 000	87 000	97 000	62,1	90

W-350 H

W-350 H



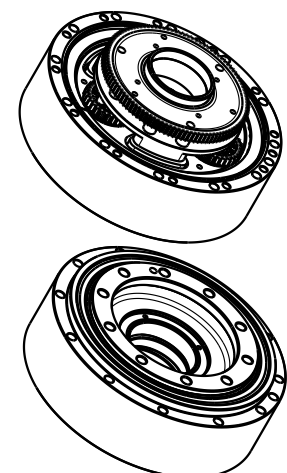
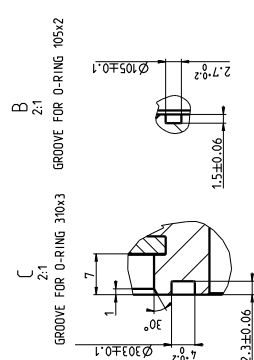
Tab. 1 - Specification of ratio and gears

Code of Ratio	i	#	Specification of large center gear			Specified pinion		
			Module	Number of teeth	W dim	Number of teeth	W dim	W dim
106 C	106.40	15/81/17/3	2	106	216	14	0	38/2
158 D	158.02	15/81/8/90	2	116	236	18	0	28/2
206 F	206.97	17/29/2/31	1.5	162	246	22	0	30/1.5
243 G	243.53	22/16/9/9	1.5	166	252	22	0	26/1.5

Tab. 2 - Specification of small center gear

Module	Number of teeth	W dim	W dim
2.5	42	110	14.5
3	42	110	14.5

Specify Z pinion of a discrete reduction gear R11-38.1% (1602/42)

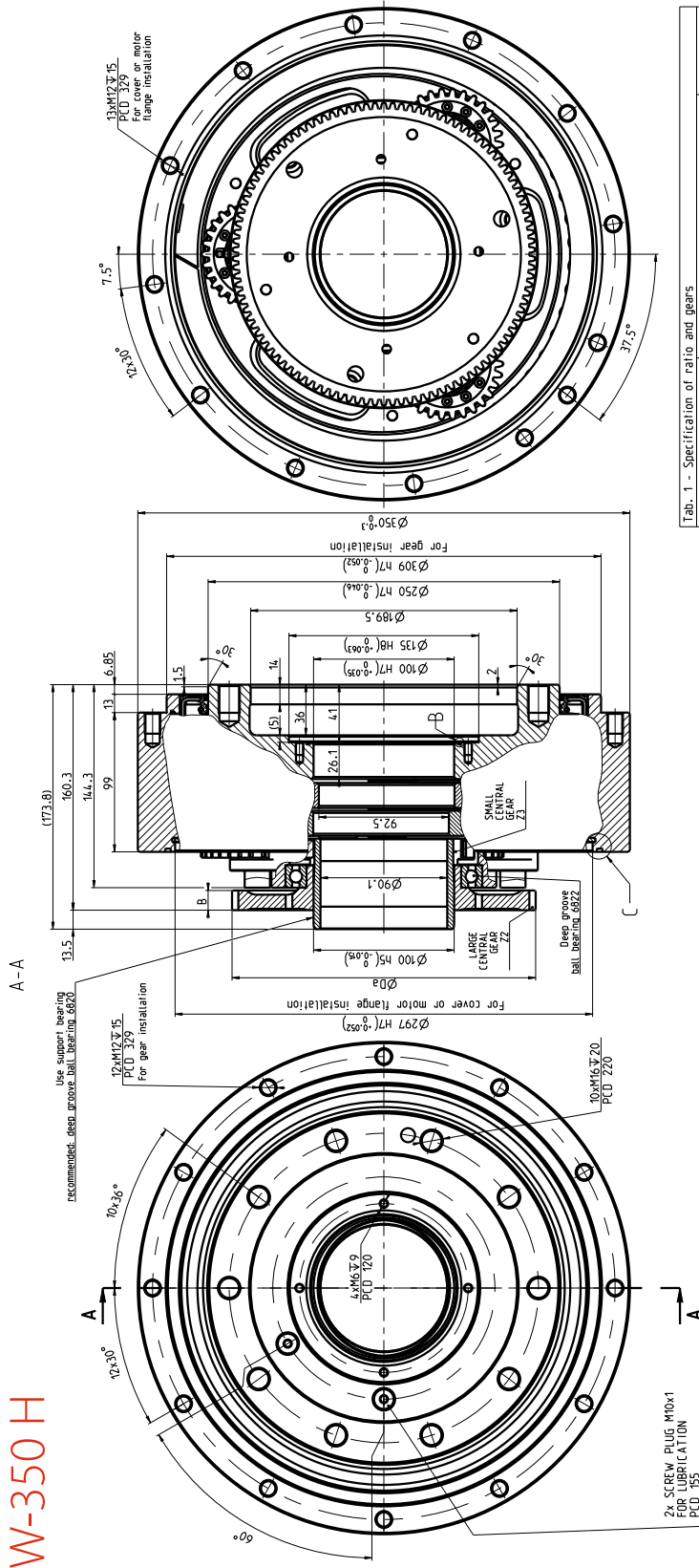


Change	Date	Signature
SPINEA EXCELLENCE IN MOTION Unmeasured Edges - 0.3x5 - Rounding 0.3 General Tolerances - EN ISO 2768-MS Weight (kg) 64.2 Position 13 Mod. Name / Vers. 9-0241_PO_000-27 Drawing Name / Vers. 9-0241_PO_000-27 Sheet / Sheets 1/1 MATERIAL SPINEA W-350H-i-H90-90241 W 350H Description Drawing No. 9-0241 PO #00-2 Type -/- Ver./Rev.		

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W-350 H

W-350 H

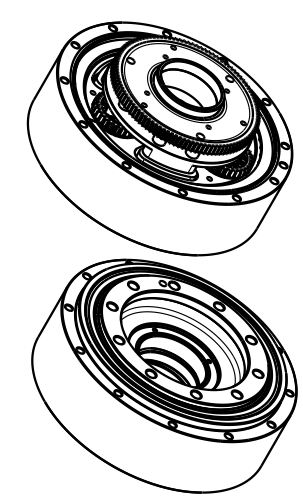
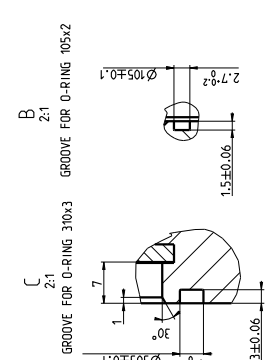


Tab. 1 - Specification of ratio and gears

Code of Ratio	Ratio	Module	Number of teeth	Approximate diameter (da)	Width (b)	Approximate coefficient	Requested pinion
i							z1 / z2
106 C	100.40 (16.91/131)	2	106	216	14	0	39/2
158 D	98.02 (16.84/198)	2	116	236	18	0	28/2
206 F	205.97 (17.09/198)	1.5	162	246	22	0	30/1.5
243 G	243.53 (22.01/198)	1.5	166	252	22	0	26/1.5

Tab. 2 - Specification of small center gear

Module	Number of teeth	Approximate diameter (da)	Width (b)	Approximate coefficient
2.5	42	110	14.5	0
Speed ratio of a discrete reduction gear R11.38.14 (1602.42) (with Z3 as input gear)				



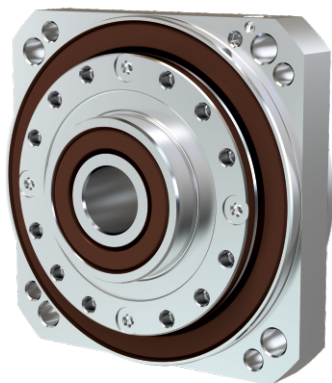
SPINEA
EXCELLENCE IN MOTION

Version: 1.0
Drawing No: 9-0241 P1 #00-2
Date: 2021.03.05
Scale: 1:1
Author: M. MITTEL
Checked: M. MITTEL
Design: M. MITTEL
Approved: M. MITTEL

W-350H-1-H90-90241
Type: W 350H
Description: Drawing no: 9-0241 P1 #00-2

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PCO - series



PCO is a new type of lightweight sealed small size hollow shaft reducer with high torsional and tilting capacity, self-locking at the output. The new concept enables wide range of gear ratios, in principle from $i = 13.5$ to $i = 210$ and more.

PCO series rating table

SIZE	REDUCTION RATIO	SHAFT INSIDE DIAMETER	RATED TORQUE	MAX. ACCELERATION/ DECCELERATION TORQUE	PERMISSIBLE TORQUE AT EMERGENCY STOP	RATED INPUT SPEED	TORSIONAL STIFFNESS 50-100% T_r	TILTING STIFFNESS	RATED MOMENT ¹⁾	BASIC DYNAMIC RATED LOAD C_d	BASIC STATIC RATED LOAD C_s	INPUT INERTIA	WEIGHT
	i	d (mm)	T_r (Nm)	T_{acc} (Nm)	T_{em} (Nm)	n_a (rpm)	k_t (Nm/arcmin)	M_t (Nm/arcmin)	M_c (Nm)	$\times 10^2$ (N)	$\times 10^2$ (N)	I (10^{-2} kgcm ²)	m (kg)
PCO 60	94,5	11	14,3	29	70	2 000	3	17	49	74	107	2,7	0,47

RIGHT TO CHANGE WITHOUT PRIOR NOTICE RESERVED

1) Load at output speed 15 rpm and $L_{10} = 12\ 000$ Hrs

Main technical features

- Gearbox with cycloidal gearing
- Concept for small sizes < 80 mm
- Small dimensions - low weight
- The largest possible hole in the "hollow shaft" type of gear
- High torque and tilting capacity
- High reduction ratio (higher than current TwinSpin®)
- Low reduction ratio (lower than current TwinSpin®)

PCO 60

PCO 60

