

Spindle and table drive

GM | RAM | MSD | MSR

Spindle and table drive

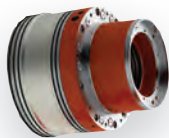
GM | RAM | MSD | MSR



GM

All-in-one two-speed spindle motors

Optimized for performance and reliability, GM exclusive design offers complete mechatronics integration, high-torque and high-speed in a record diameter, large hollow shaft for easy integration, and thermal stability.



RAM

Built-in two-speed spindle drive

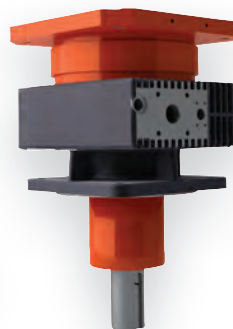
The RAM 2speed gearboxes have been designed to extend the constant power range of the machine tool spindle drive motors. This two-speed gearbox is integrated inside the RAM. this compact, light-weight design in-line between a water-cooled motor and spindle matches the latest spindle drive motor technology.



MSD

Off-line two speed gearbox

Conventional Spindle Drive Milling or turning spindle gearbox, versatile interfaces for any spindle arrangement with high torque capacity, MSD provides a perfect solution for air cooled spindle motor with a particular high radial load capacity for belts input and output.



MSR

Turnkey Turntable Drive solution

Original machine-tool sub assembly, MSR is the natural choice for the new generation of VTL and turntable combining continuous turning and C-axis functions, MSR offers design and assembly cost killing solution for OEMs.

SPINDLE DRIVE

INLINE

Turn Key

Integrated #2

Integrated #1

Built in

OFFLINE

Conventional design

TABLE DRIVE

Twin

Single

GEAR MOTOR



GM p5

GEARBOX + COOLING JACKET
+ OUTPUT SHAFT ARRANGEMENT



RAM FOA p5

GEARBOX + COOLING JACKET



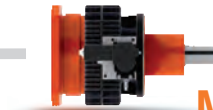
RAM FOT p5

GEARBOX ONLY



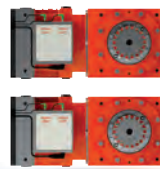
RAM HIT p5

GEARBOX ONLY



MSD p47

TURNING + C AXIS



MSR TWIN p61

TURNING

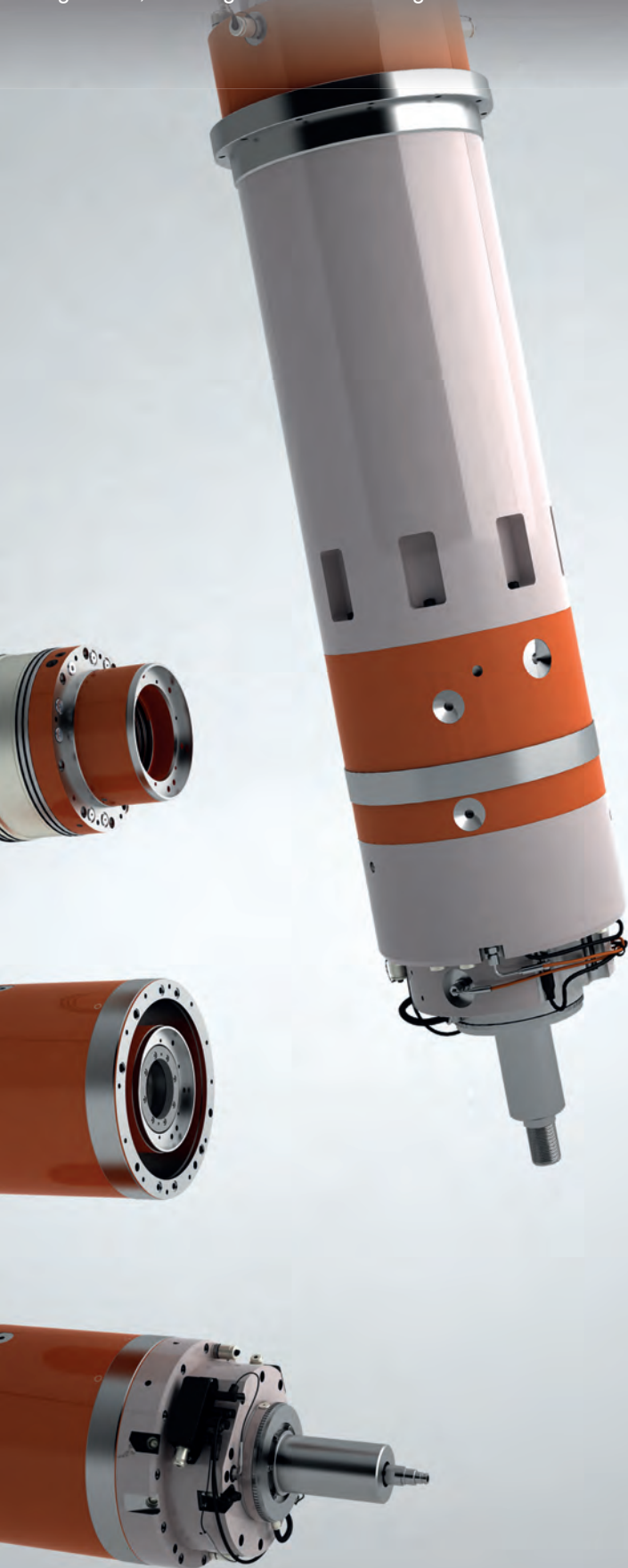


MSR p61

SPINDLE DRIVE

GM | RAM

GM was developed by KESSLER and REDEX, world leaders in machine-tool systems, to offer high performance hollow shaft liquid cooled motors in combination with a two-speed gearbox, avoiding redundant bearings and interfaces.

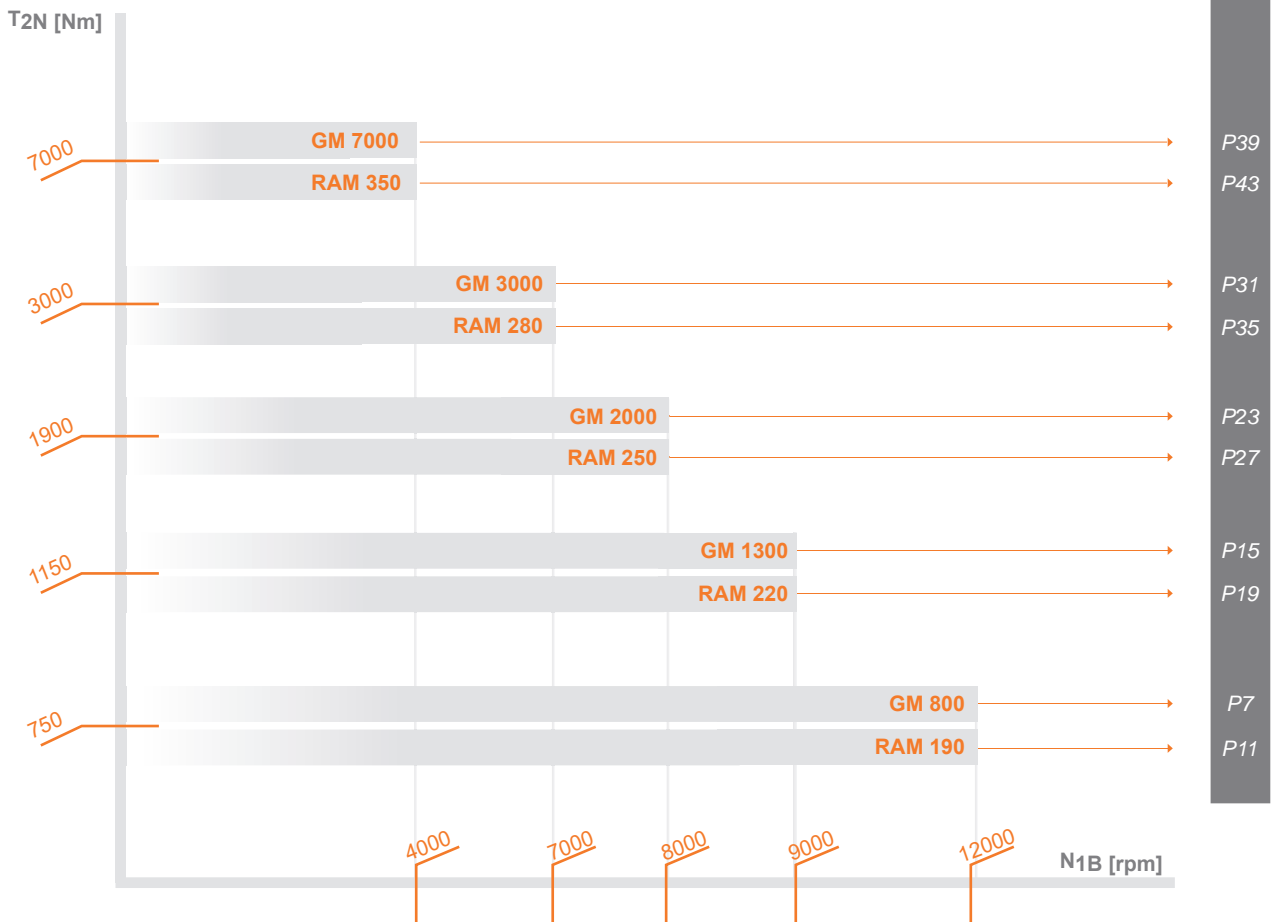


Modular spindle drive solutions available as GM Gear-Motor and/or 2-speed gearbox Built-in and Integrated RAM.

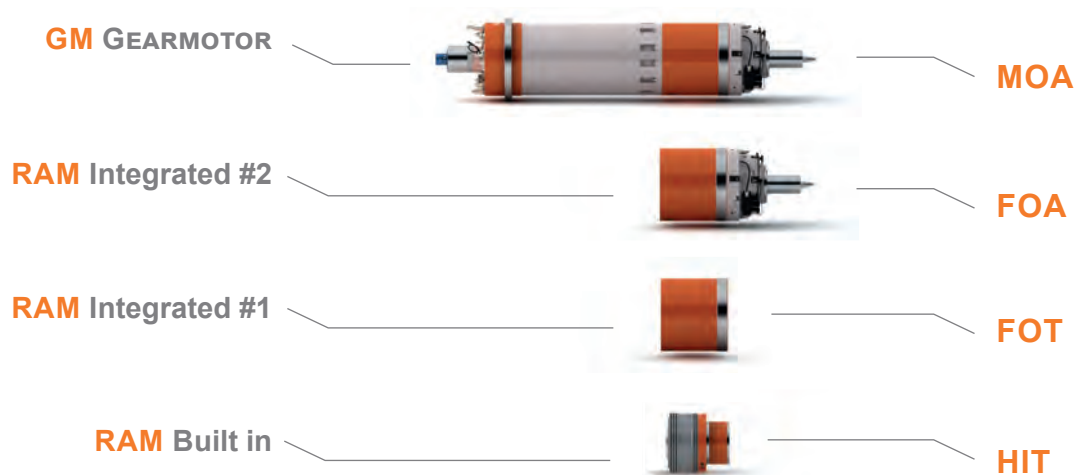
- > Real water cooled in-line spindle drive solutions
- > 6 sizes available, with or without spindle motor
- > Central bar for CTS and/or Tool clamping system.
- > Instrumented versions

Range Summary

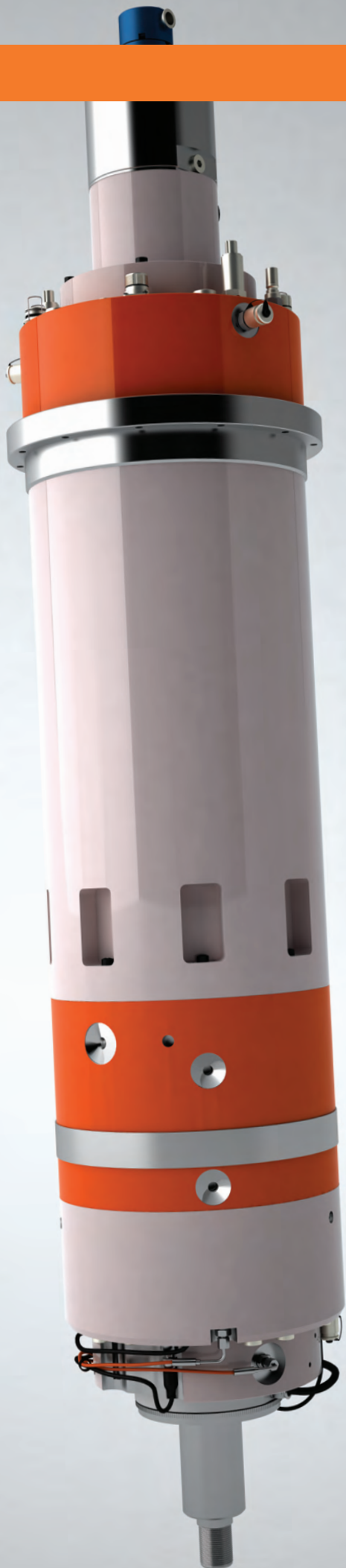
GM | RAM



Range type & versions



GM *SIZE 800*



Speed	N1B	[rpm]
Power	P	[kW]
Torque	T2N	[Nm]
Current	I	[A]

Speed	N1B	[rpm]
Power	P	[kW]
Torque	T2N	[Nm]
Current	I	[A]

Motor type

Mounting position

Control

Interface

Cooling/Flow rate **[l/mn]**

Cooling/Loss power **[kW]**

Bearings lubrication

Lubrication/Flow rate **[l/mn]**

Lubrication/Loss power **[kW]**

Speed shifting/Pressure **[bar]**

Speed shifting/Flow rate **[l/mn]**

Weight **[Kg]**

GM design for external forced lubrication

Rotary union

Tool clamping system

Pack sensors

Output encoder

Spindle head

S1 - 100%

Gear 1:1		
1500	8000	12000
24.5	24.5	17
156	29	13.5
107	48	33

Gear 5:1		
300	1600	2400
23.8	23.8	16.5
756.5	142	65.6
107	48	33

S6 - 40%

Gear 1:1		
1500	4500	12000
36.5	36.5	17
232	77.5	13.5
136	73	33

Gear 5:1		
300	900	2400
35.4	35.4	16.5
1127	375.7	65.6
136	73	33

GM 800



RAM 190



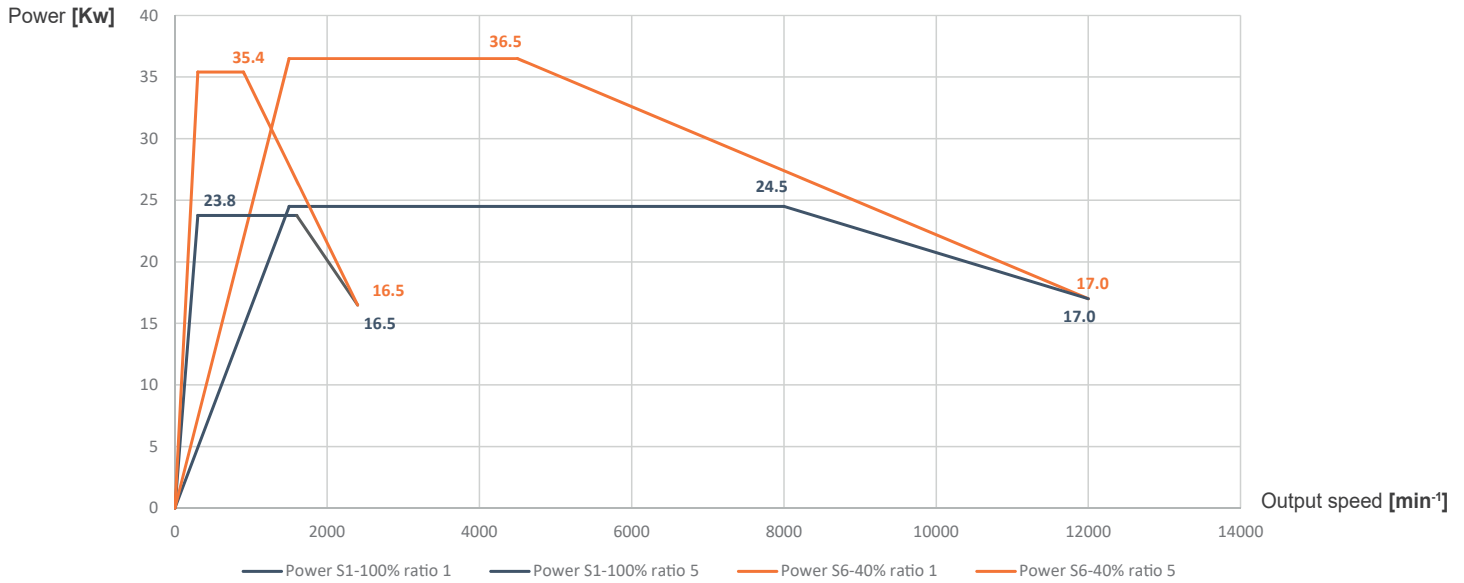
Technical Features

Asynchronous
Vertical and horizontal
Siemens/Fanuc/Heidenhain
Plain shaft + key
25
6
Grease
1.5
0.45
50 to 100
5 to 7
388

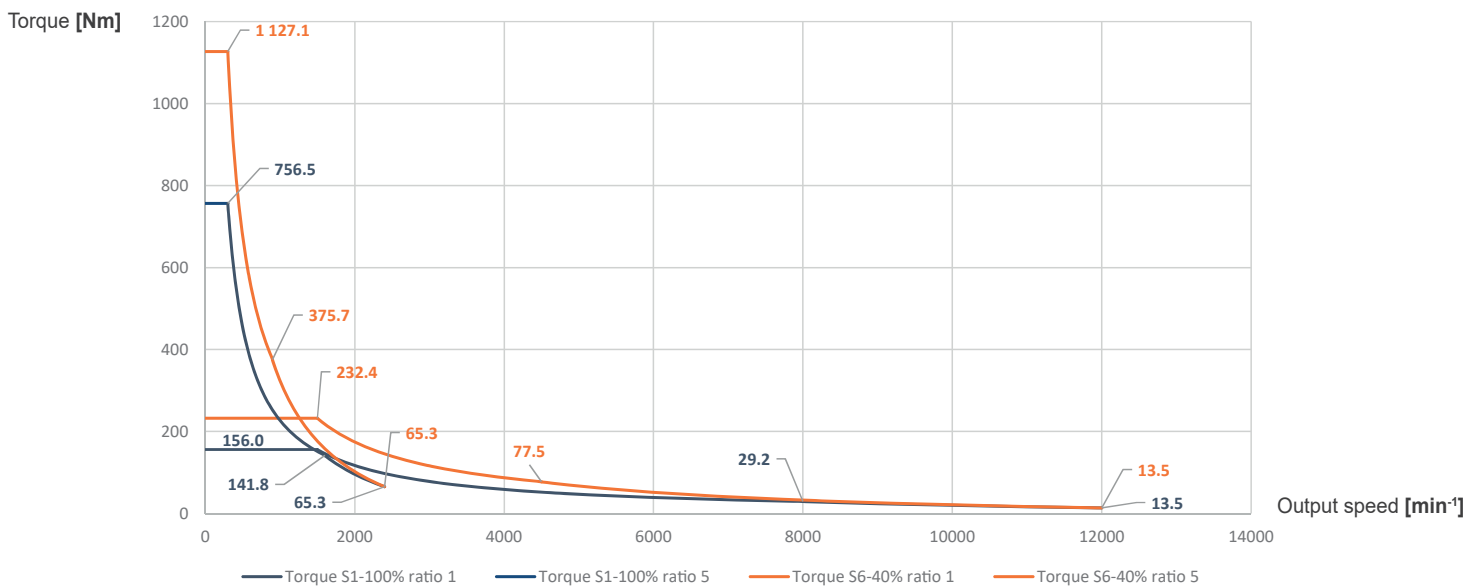
Options

max pressure 80 bar
Compatible for inner coolant/MQL/dry run/pressurized air
Stroke 15mm, with sensor
Oil leakage & temperature (Motor/Gearbox/Output bearing)
512 sin/cos
Contact us

Power



Torque

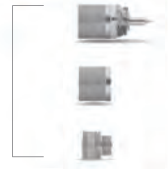


DIMENSIONS

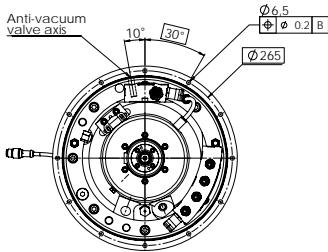
GM 800



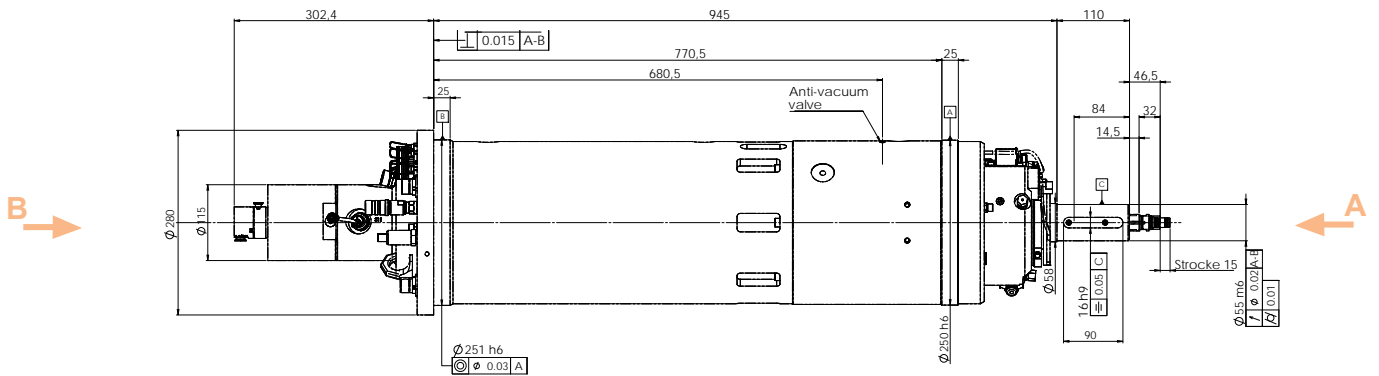
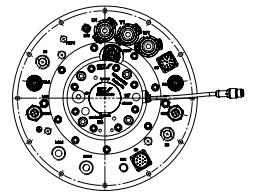
RAM 190



B View

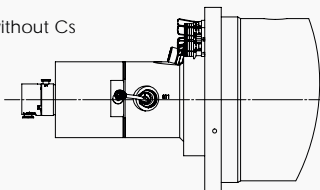


A View

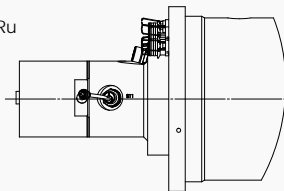


Interfaces

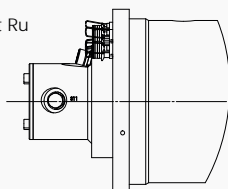
With Ru Cs
Or
With Ru without Cs



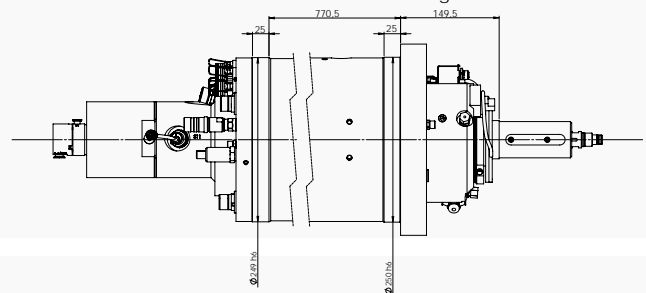
With Cs without Ru



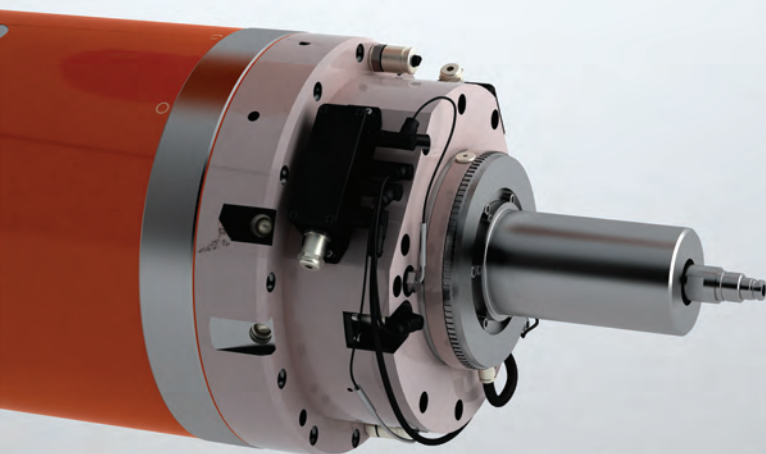
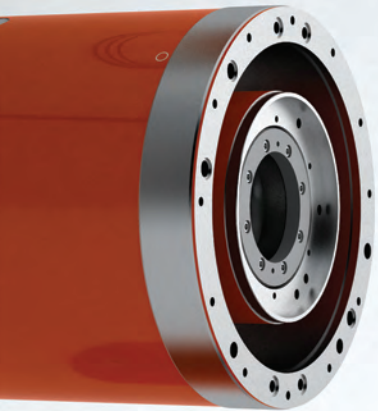
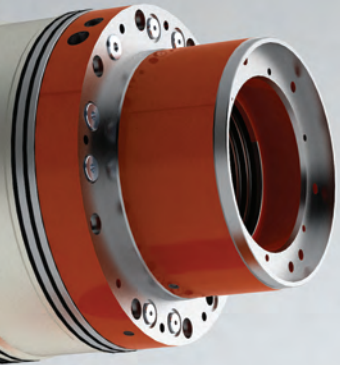
Without Cs and without Ru



Front fixing



RAM *SIZE 190*



Speed	N1B	[rpm]
Power	P	[kW]
Torque	T2N	[Nm]

Speed	N1B	[rpm]
Power	P	[kW]
Torque	T2N	[Nm]

Mounting position

Control

Interface

Cooling/Flow rate **[l/mn]**

Cooling/Loss power **[kW]**

Bearings lubrication

Lubrication/Flow rate **[l/mn]**

Lubrication/Loss power **[kW]**

Speed shifting/Pressure **[bar]**

Speed shifting/Flow rate **[l/mn]**

RAM design for external forced lubrication

Gearbox only

Gearbox + Cooling Jacket

Gearbox + Cooling Jacket
+ output shaft arrangement

S1 - 100%

		Gear 1:1		Gear 5:1	
		1500	12000	300	2400
		25.6	25.6	24.8	24.8
		163	20	790	99

S6 - 40%

		Gear 1:1		Gear 5:1	
		1500	12000	300	2400
		35.6	35.6	34.5	34.5
		227	28	1100	137

GM 800



RAM 190

Technical Features

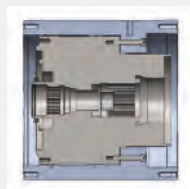
Vertical, horizontal and Swiveling
Siemens/Fanuc/Heidenhain
Internal splines
25
0.77
Grease
1.5
0.46
50 to 100
5 to 7

Interface

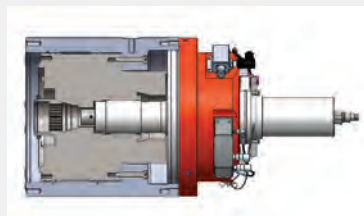
HIT



FOT



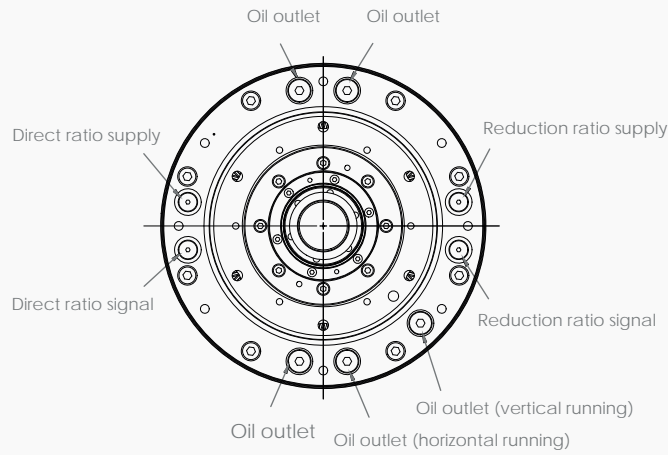
FOA



DIMENSIONS

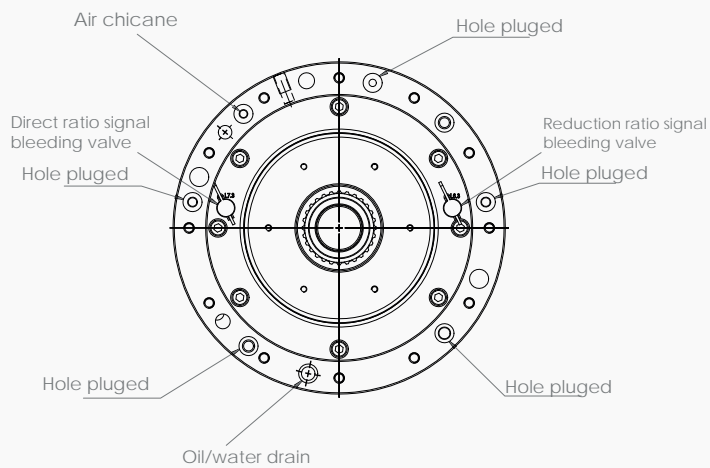
HIT

A View



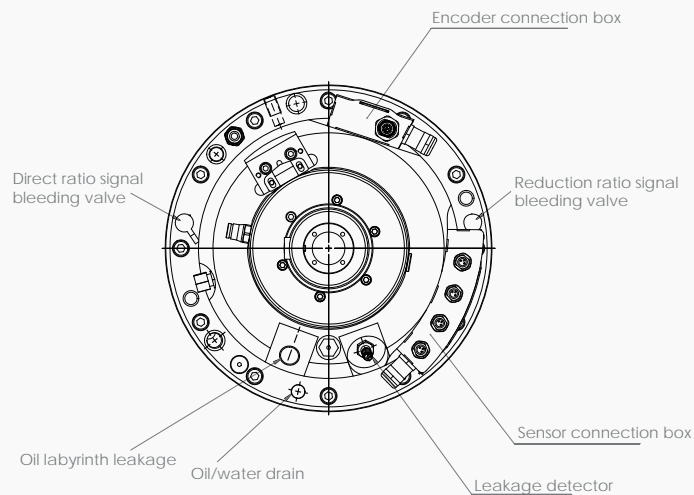
FOT

B View



FOA

C View

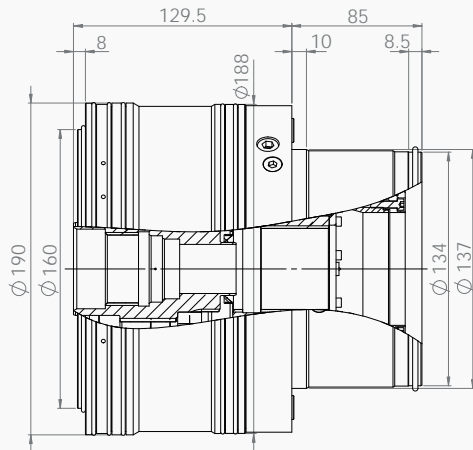


DIMENSIONS

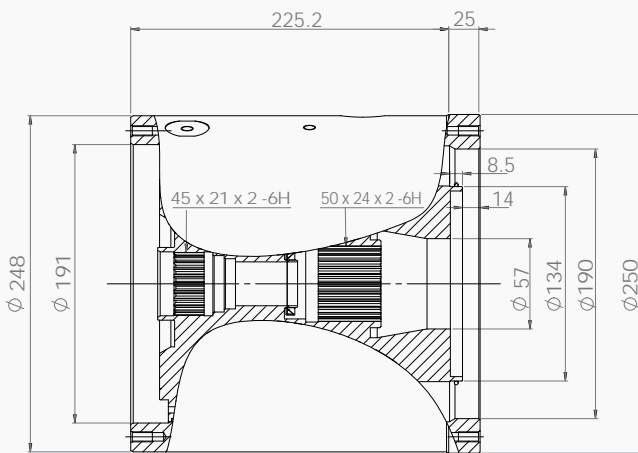
GM 800



RAM 190



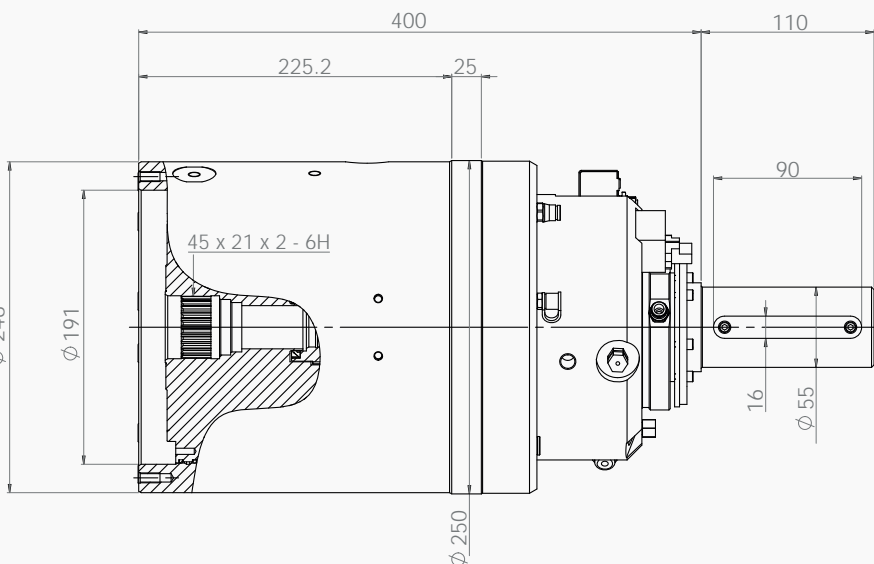
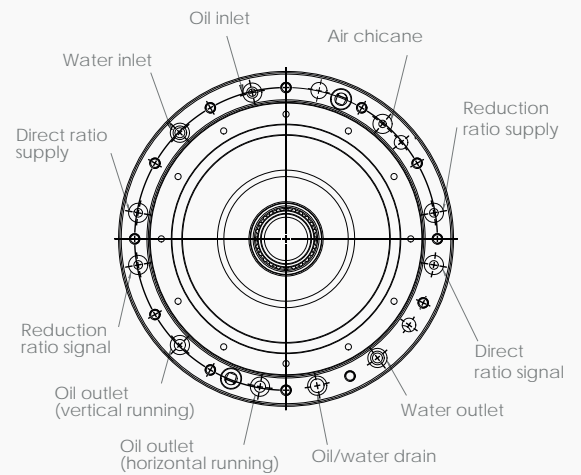
A



D

B

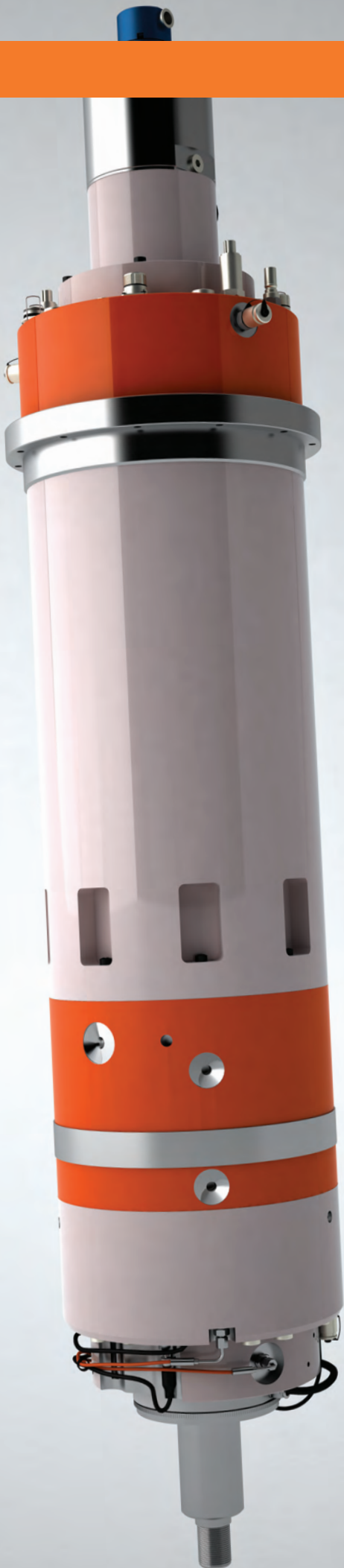
D View



D

C

GM *SIZE 1300*



Speed	N1B	[rpm]
Power	P	[kW]
Torque	T2N	[Nm]
Current	I	[A]

Speed	N1B	[rpm]
Power	P	[kW]
Torque	T2N	[Nm]
Current	I	[A]

Motor type	
Mounting position	
Control	
Interface	
Cooling/Flow rate	[l/mn]
Cooling/Loss power	[kW]
Bearings lubrication	
Lubrication/Flow rate	[l/mn]
Lubrication/Loss power	[kW]
Speed shifting/Pressure	[bar]
Speed shifting/Flow rate	[l/mn]
Weight	[Kg]

GM design for external forced lubrication

Rotary union
Tool clamping system
Pack sensors
Output encoder
Spindle head

S1 - 100%

Gear 1:1		
1500	5000	9000
40	40	25
255	76	27
145	77	48

Gear 5:1		
300	1000	1800
38.8	38.8	24.3
1235	371	129
145	77	48

S6 - 40%

Gear 1:1		
1500	3500	9000
60	60	25
382	164	27
191	119	48

Gear 5:1		
300	700	1800
58.2	58.2	24.3
1853	794	129
191	119	48

GM 1300



RAM 220

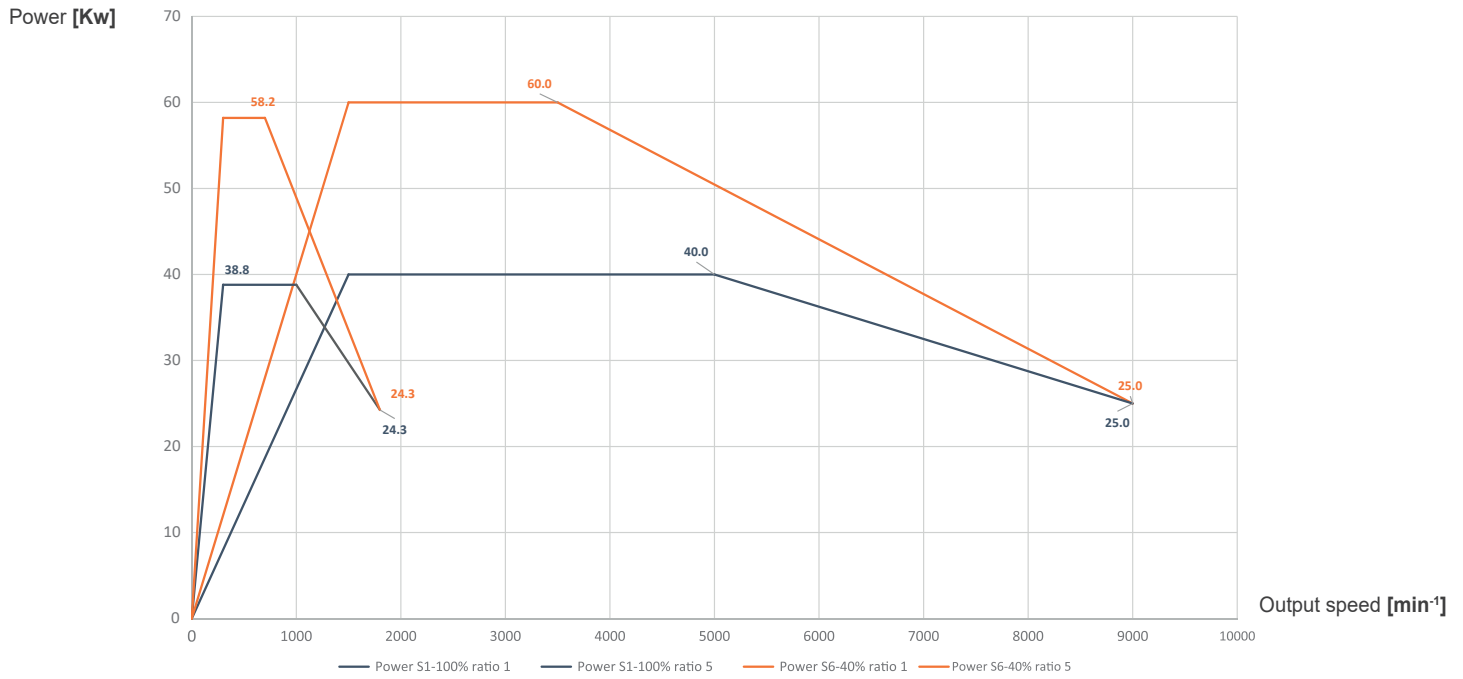
Technical Features

Asynchronous
Vertical and horizontal
Siemens/Fanuc/Heidenhain
Plain shaft + key
33
7
Grease
2
0.65
50 to 100
5 to 7
460

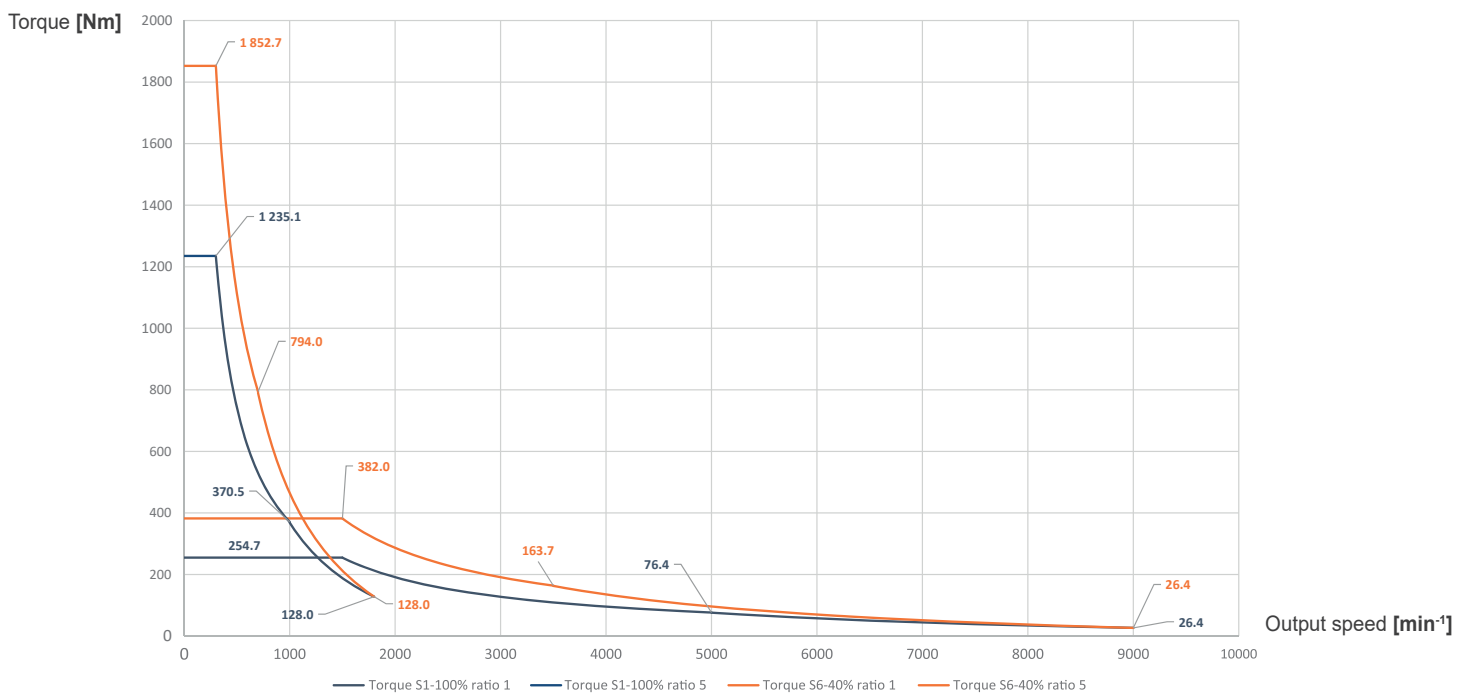
Options

max pressure 80 bar
Compatible for inner coolant/ MQL/dry run/pressurized air
Stroke 15mm, with sensor
Oil leakage & temperature (Motor/Gearbox/Output bearing)
512 sin/cos
Contact us

Power



Torque

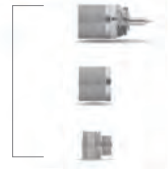


DIMENSIONS

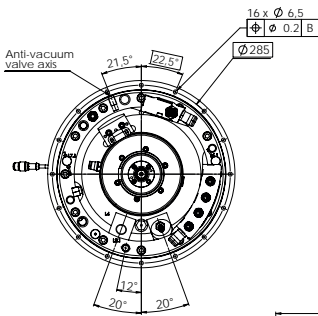
GM 1300



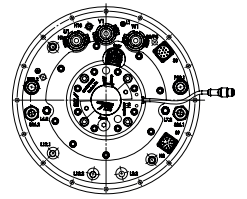
RAM 220



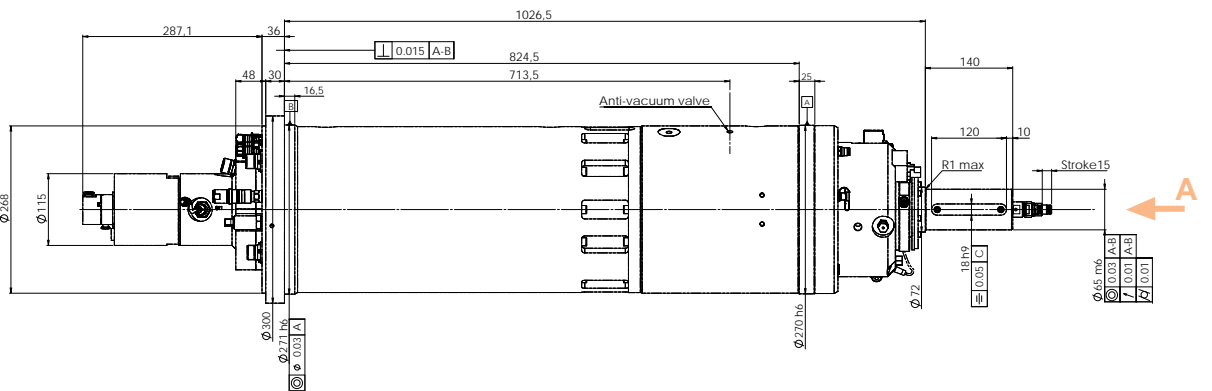
B View



A View



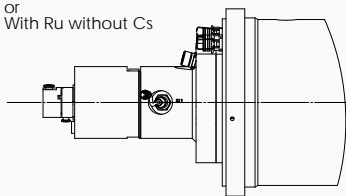
B →



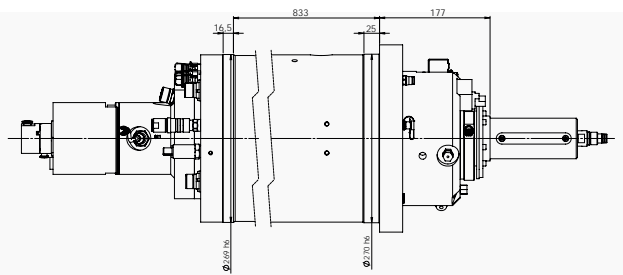
← A

Interfaces

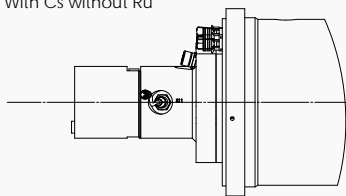
With Ru Cs
Or
With Ru without Cs



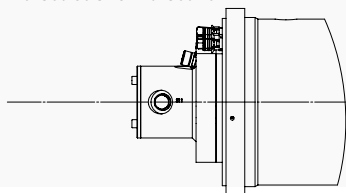
Front fixing



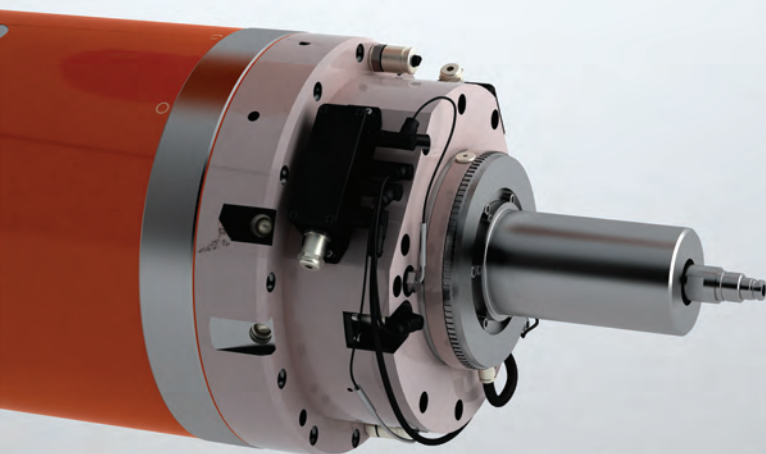
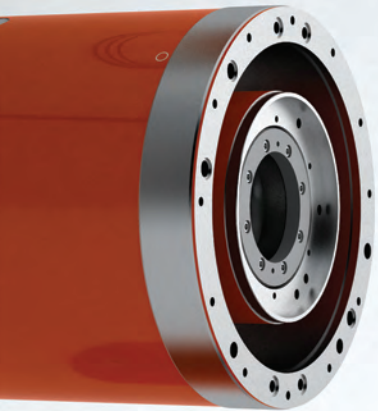
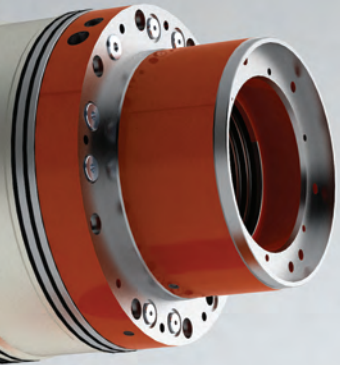
With Cs without Ru



Without Cs and without Ru



RAM *SIZE 220*



Speed	N1B	[rpm]
Power	P	[kW]
Torque	T2N	[Nm]

Speed	N1B	[rpm]
Power	P	[kW]
Torque	T2N	[Nm]

Mounting position

Control

Interface

Cooling/Flow rate **[l/mn]**

Cooling/Loss power **[kW]**

Bearings lubrication

Lubrication/Flow rate **[l/mn]**

Lubrication/Loss power **[kW]**

Speed shifting/Pressure **[bar]**

Speed shifting/Flow rate **[l/mn]**

RAM design for external forced lubrication

Gearbox only

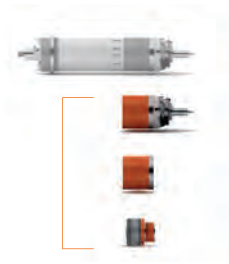
Gearbox + Cooling Jacket

Gearbox + Cooling Jacket
+ output shaft arrangement

S1 - 100%

		Gear 1:1		Gear 5:1	
		1500	9000	300	1800
		43.7	43.7	42.4	42.4
		278	46	1349	225

GM 1300



RAM 220

S6 - 40%

		Gear 1:1		Gear 5:1	
		1500	9000	300	1800
		60.9	60.9	59.1	59.1
		388	65	1880	313

Technical Features

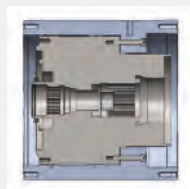
Vertical, horizontal and Swiveling
Siemens/Fanuc/Heidenhain
Internal splines
35
1.31
Grease
2
0.61
50 to 100
5 to 7

Interface

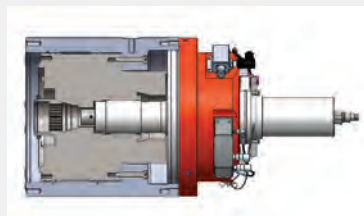
HIT



FOT



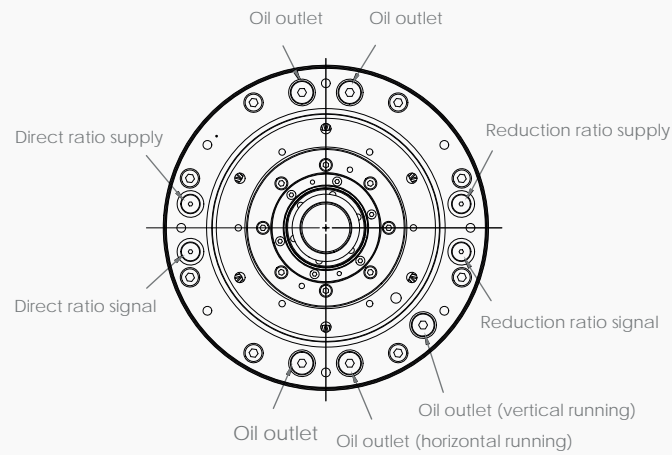
FOA



DIMENSIONS

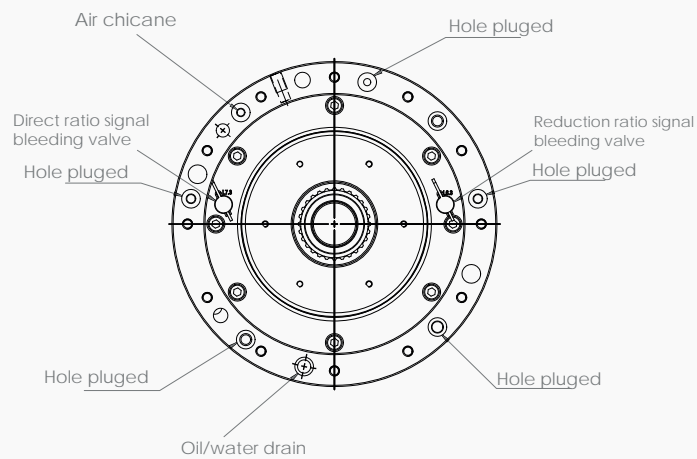
HIT

A View



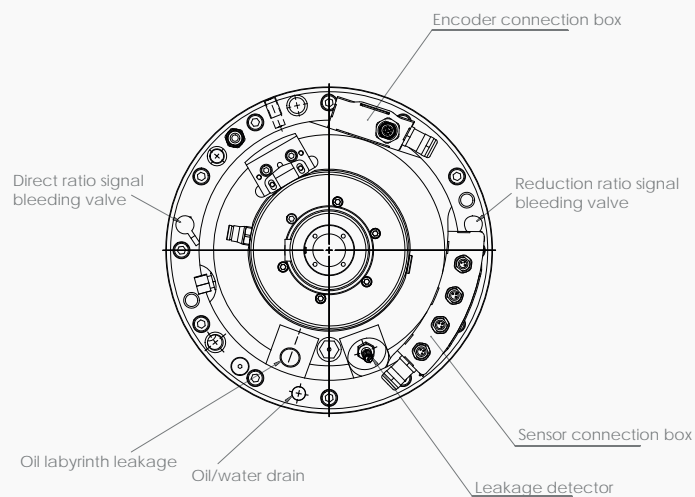
FOT

B View



FOA

C View

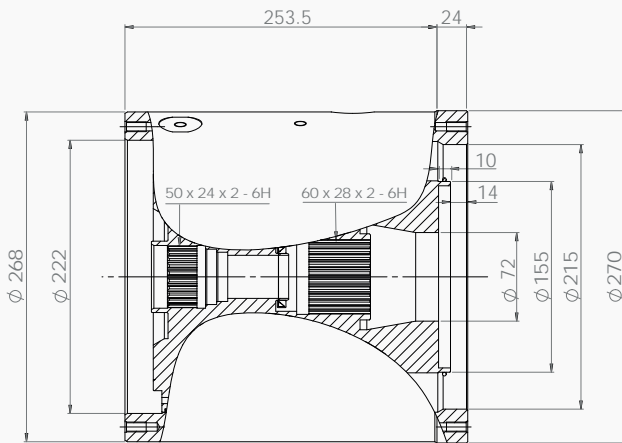
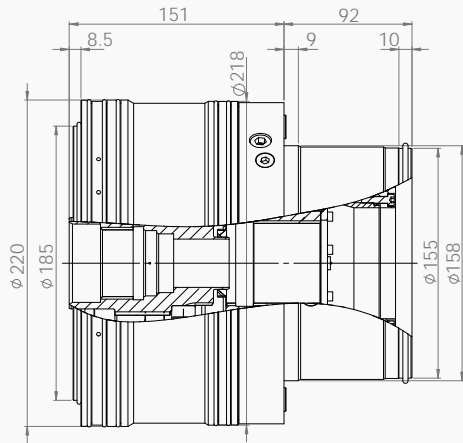


DIMENSIONS

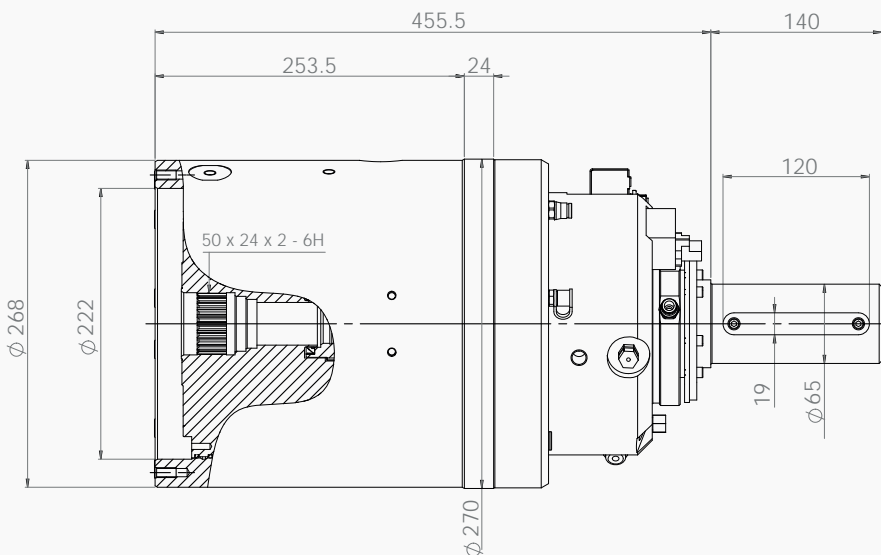
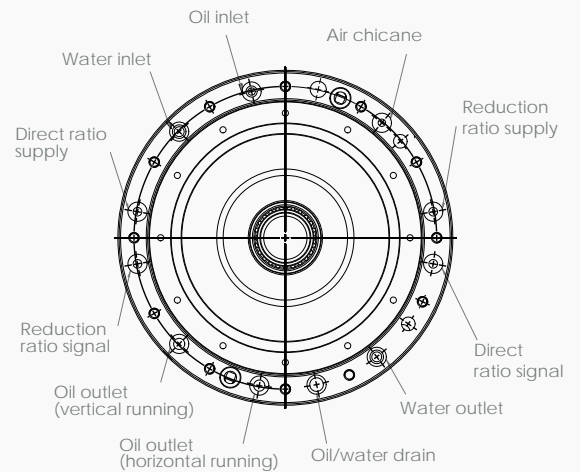
GM 1300



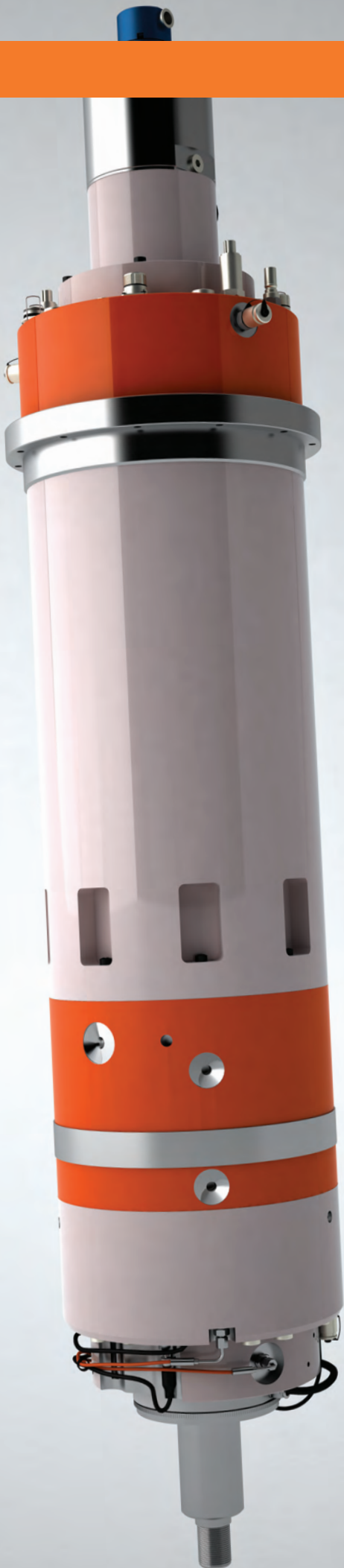
RAM 220



D View



GM *SIZE 2000*



Speed	N1B	[rpm]
Power	P	[kW]
Torque	T2N	[Nm]
Current	I	[A]

Speed	N1B	[rpm]
Power	P	[kW]
Torque	T2N	[Nm]
Current	I	[A]

Motor type	
Mounting position	
Control	
Interface	
Cooling/Flow rate	[l/mn]
Cooling/Loss power	[kW]
Bearings lubrication	
Lubrication/Flow rate	[l/mn]
Lubrication/Loss power	[kW]
Speed shifting/Pressure	[bar]
Speed shifting/Flow rate	[l/mn]
Weight	[Kg]

GM design for external forced lubrication

Rotary union
Tool clamping system
Pack sensors
Output encoder
Spindle head

S1 - 100%

Gear 1:1	
1500	8000
60	60
382	72
168	104

Gear 5:1	
300	1600
58.2	58.2
1853	347
168	104

S6 - 40%

Gear 1:1		
1500	5100	8000
78	78	60
497	146	72
208	138	104

Gear 5:1		
300	1020	1600
75.6	75.6	58.2
2409	708	347
208	138	104

GM 2000



RAM 250



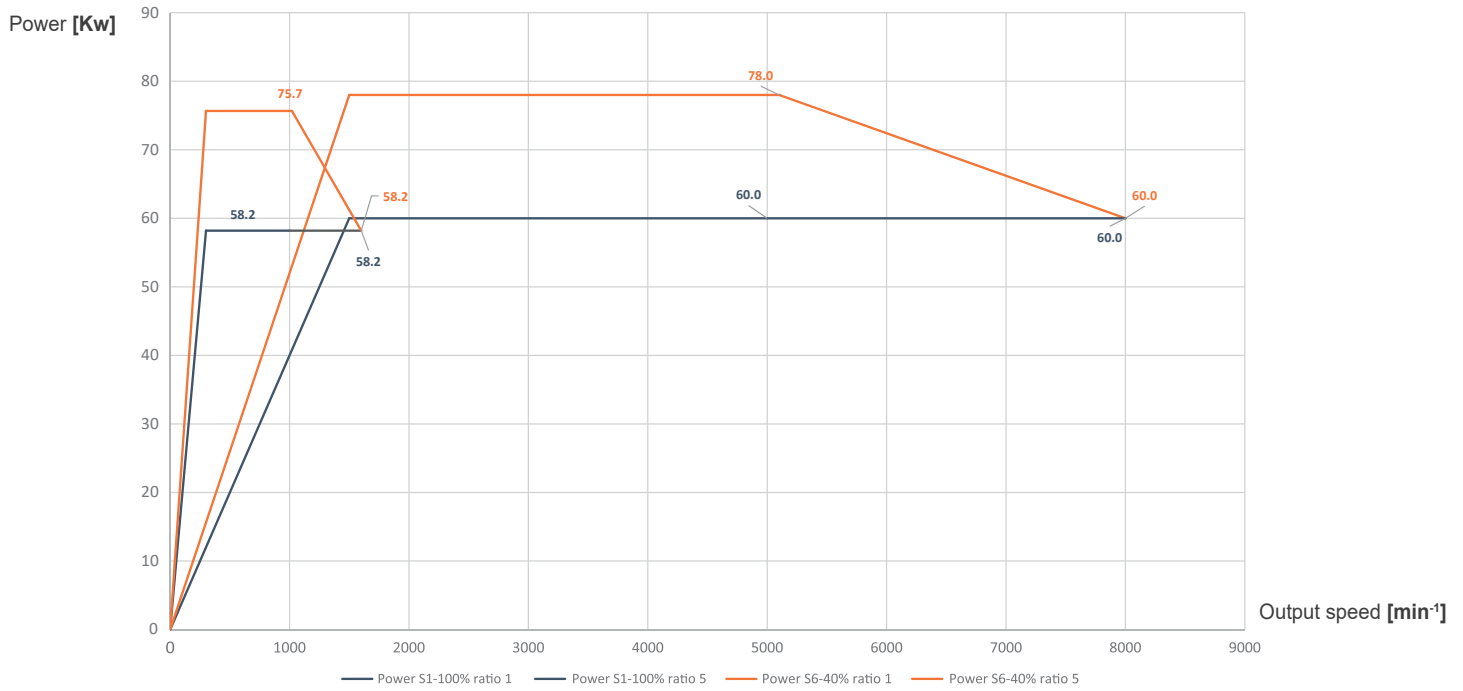
Technical Features

Asynchronous
Vertical and horizontal
Siemens/Fanuc/Heidenhain
Plain shaft + key
36
7,65
Grease
2,5
0.75
50 to 100
8 to 10
675

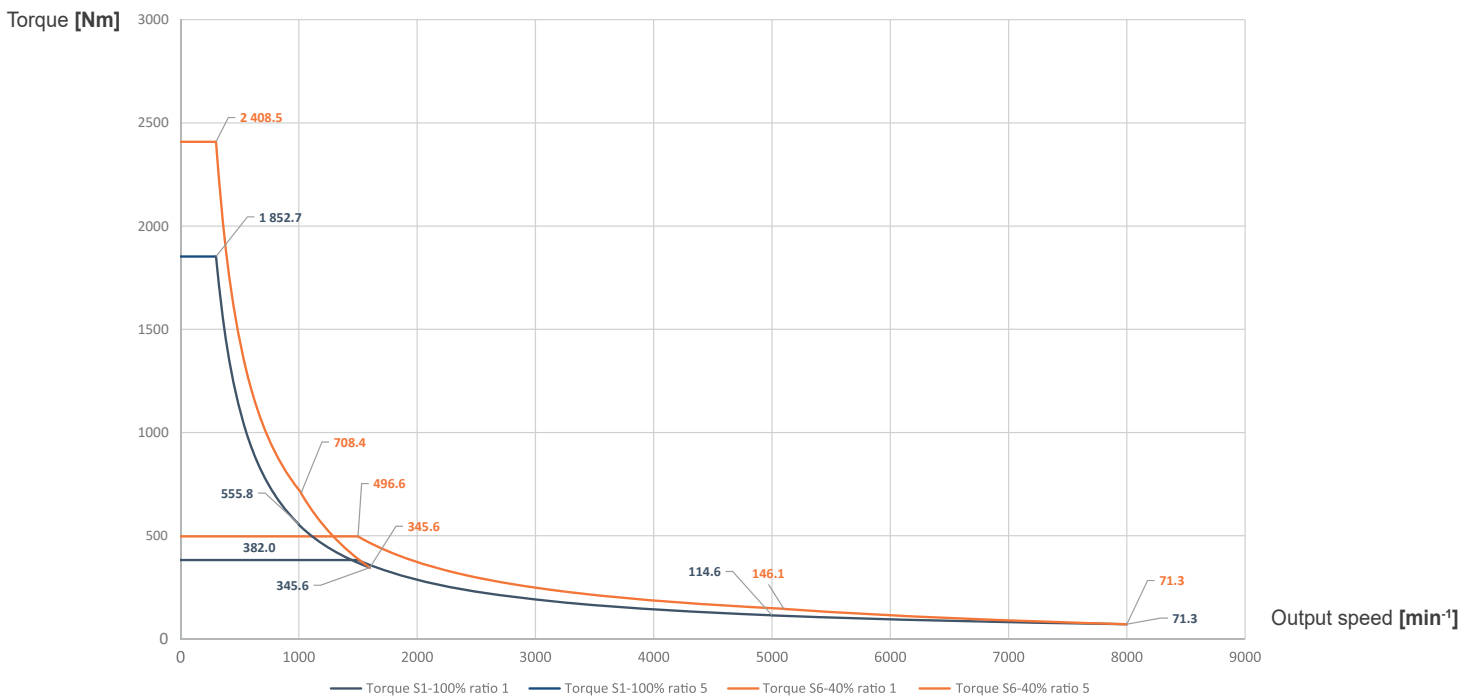
Options

max pressure 80 bar
Compatible for inner coolant/MQL/dry run/pressurized air
Stroke 15mm, with sensor
Oil leakage & temperature (Motor/Gearbox/Output bearing)
512 sin/cos
Contact us

Power



Torque

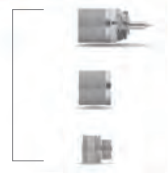


DIMENSIONS

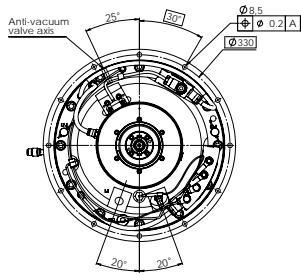
GM 2000



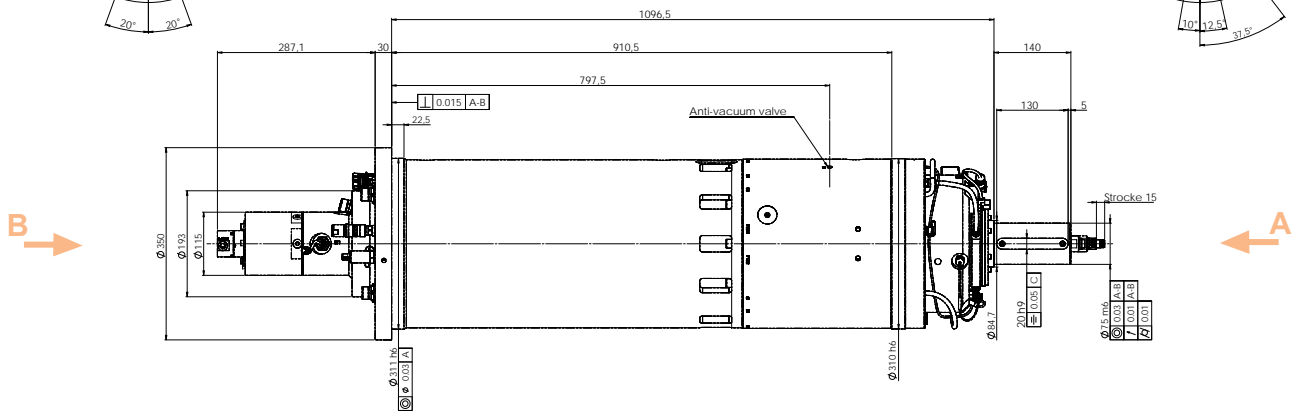
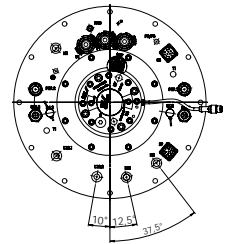
RAM 250



B View

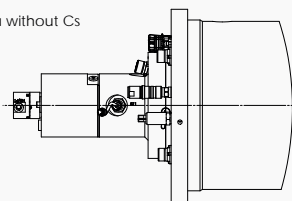


A View

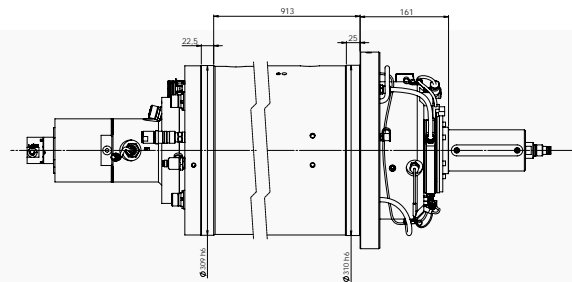


Interfaces

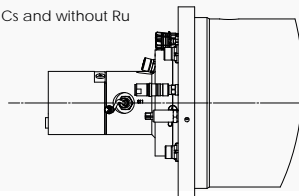
With Ru Cs
or
With Ru without Cs



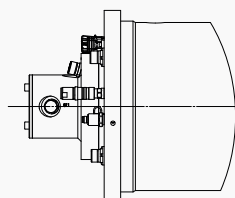
Front fixing



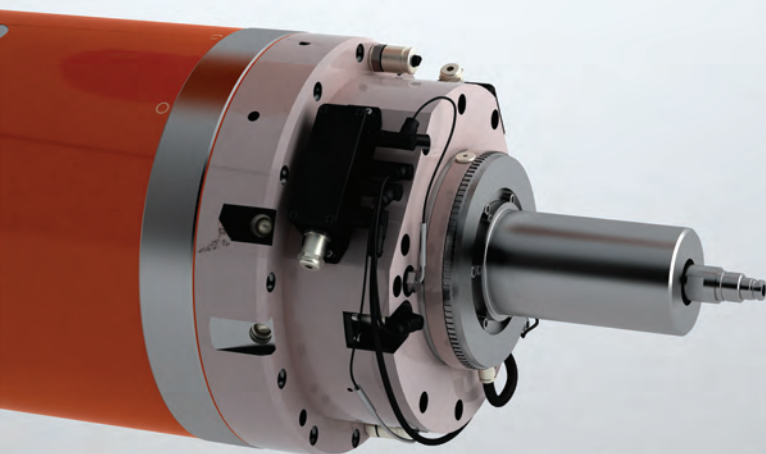
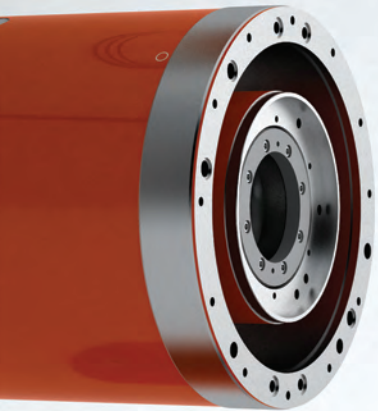
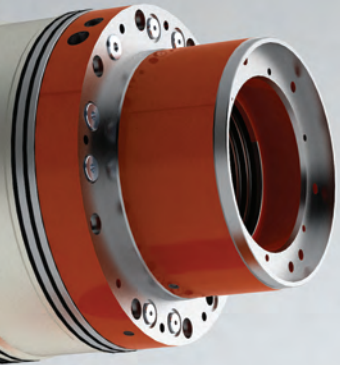
With Cs and without Ru



Without Ru Cs



RAM *SIZE 250*



Speed	N1B	[rpm]
Power	P	[kW]
Torque	T2N	[Nm]

Speed	N1B	[rpm]
Power	P	[kW]
Torque	T2N	[Nm]

Control	
Interface	
Cooling/Flow rate	[l/mn]
Cooling/Loss power	[kW]
Bearings lubrication	
Lubrication/Flow rate	[l/mn]
Lubrication/Loss power	[kW]
Speed shifting/Pressure	[bar]
Speed shifting/Flow rate	[l/mn]

RAM design for external forced lubrication

Gearbox only

Gearbox + Cooling Jacket

Gearbox + Cooling Jacket
+ output shaft arrangement

S1 - 100%

		Gear 1:1		Gear 5:1	
		1500	8000	300	1600
		60.2	60.2	58.4	58.4
		384	72	1860	349

GM 2000



RAM 250

S6 - 40%

		Gear 1:1		Gear 5:1	
		1500	8000	300	1600
		83.6	83.6	81	81
		532	100	2580	484

Technical Features

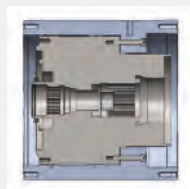
Siemens/Fanuc/Heidenhain
Internal splines
40
1.81
Grease
2.5
0.77
50 to 100
8 to 10

Interface

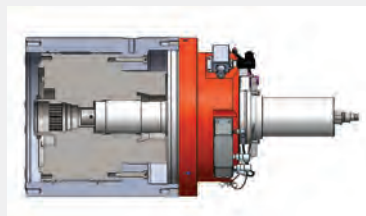
HIT



FOT



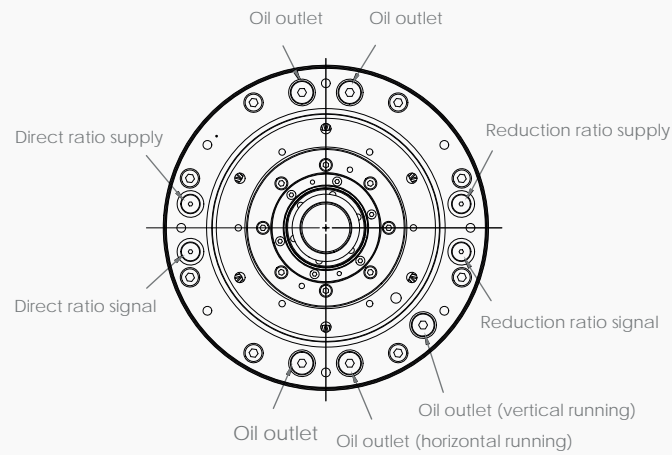
FOA



DIMENSIONS

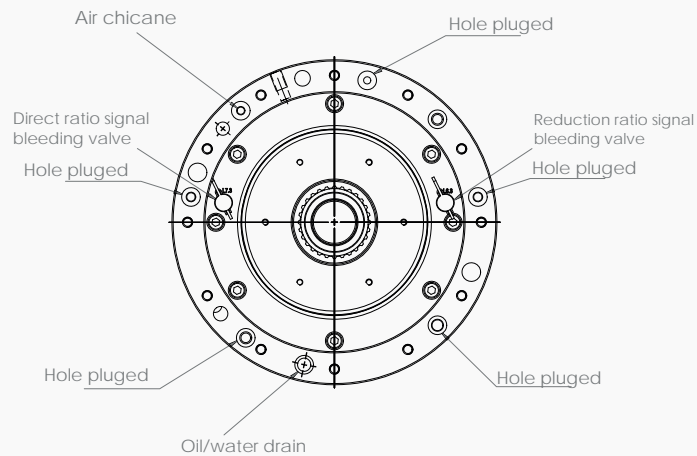
HIT

A View



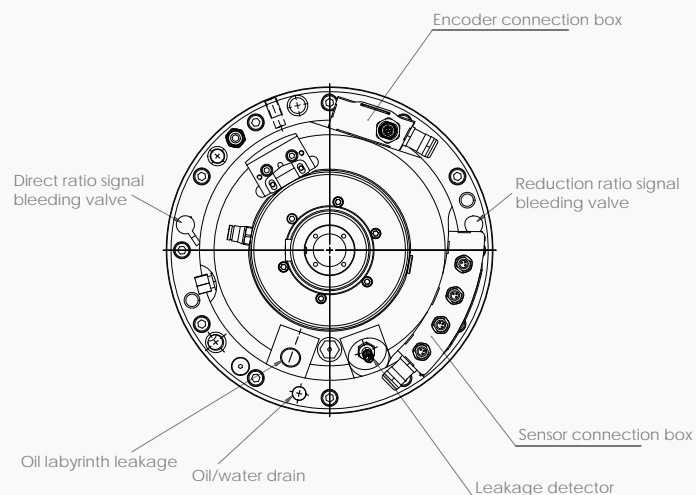
FOT

B View



FOA

C View

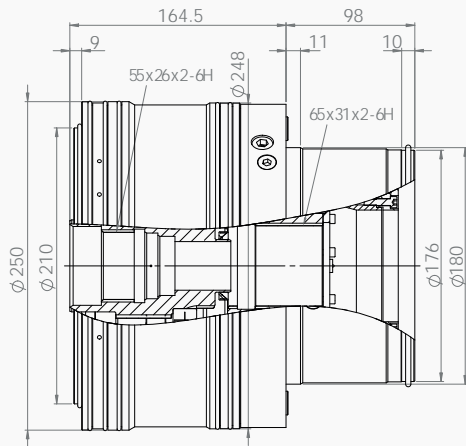


DIMENSIONS

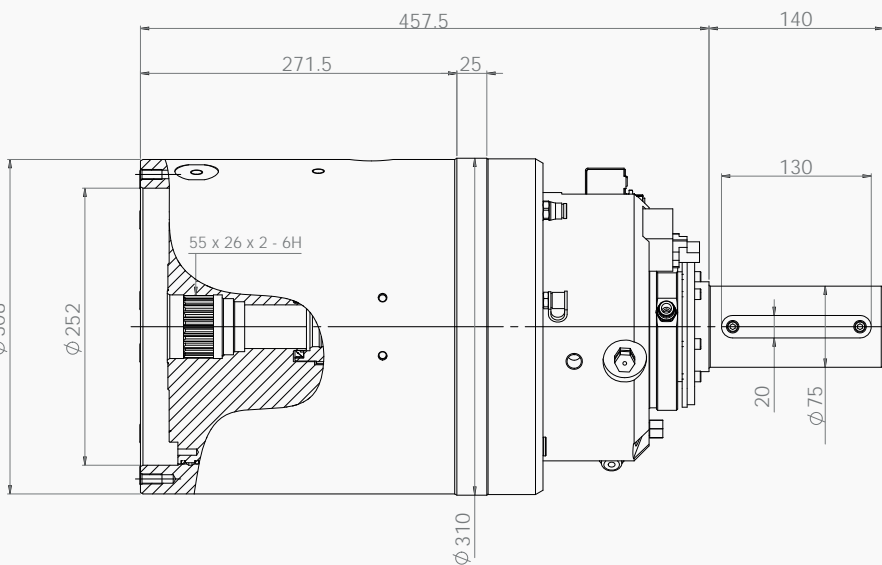
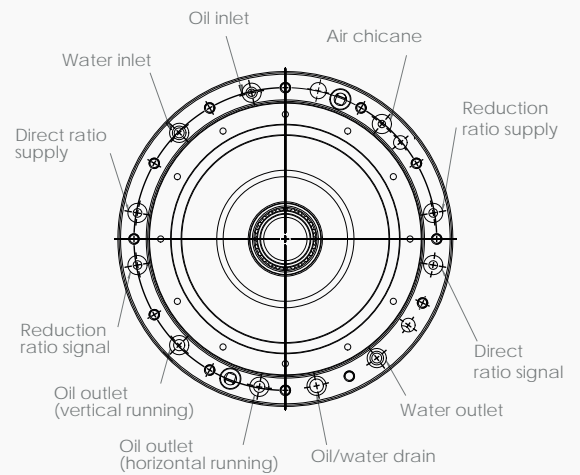
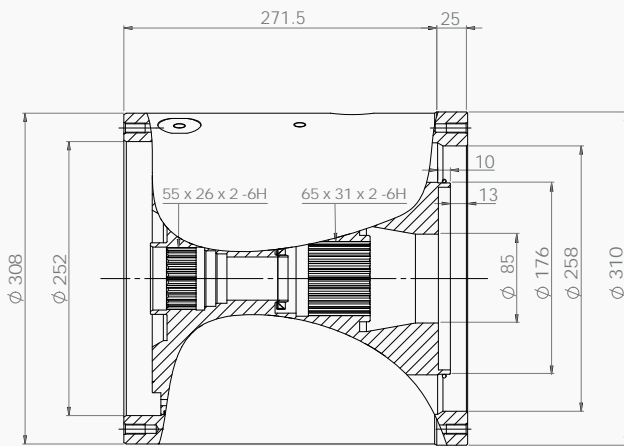
GM 2000



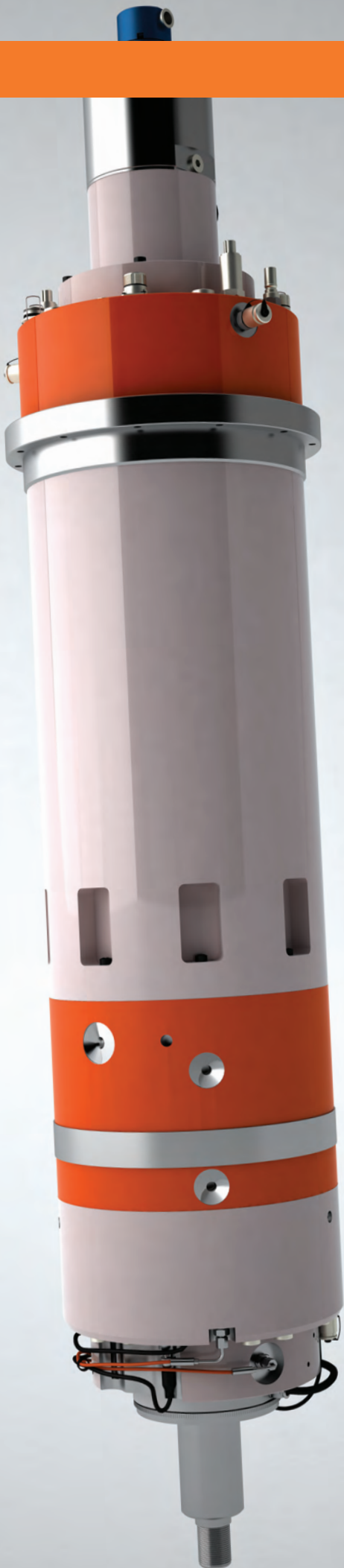
RAM 250



D View



GM *SIZE 3000*



Speed	N1B	[rpm]
Power	P	[kW]
Torque	T2N	[Nm]
Current	I	[A]

Speed	N1B	[rpm]
Power	P	[kW]
Torque	T2N	[Nm]
Current	I	[A]

Motor type	
Mounting position	
Control	
Interface	
Cooling/Flow rate	[l/mn]
Cooling/Loss power	[kW]
Bearings lubrication	
Lubrication/Flow rate	[l/mn]
Lubrication/Loss power	[kW]
Speed shifting/Pressure	[bar]
Speed shifting/Flow rate	[l/mn]
Weight	[Kg]

GM design for external forced lubrication

Rotary union
Tool clamping system
Pack sensors
Output encoder
Spindle head

S1 - 100%

Gear 1:1		Gear 5:1	
1700	7000	300	1400
94	94	91.2	91.2
598	128	2903	622
200	150	200	150

GM 3000



RAM 280

S6 - 40%

Gear 1:1		Gear 5:1	
1500	7000	300	1400
105	105	101.9	101.9
669	143	3242	695
230	157	230	157

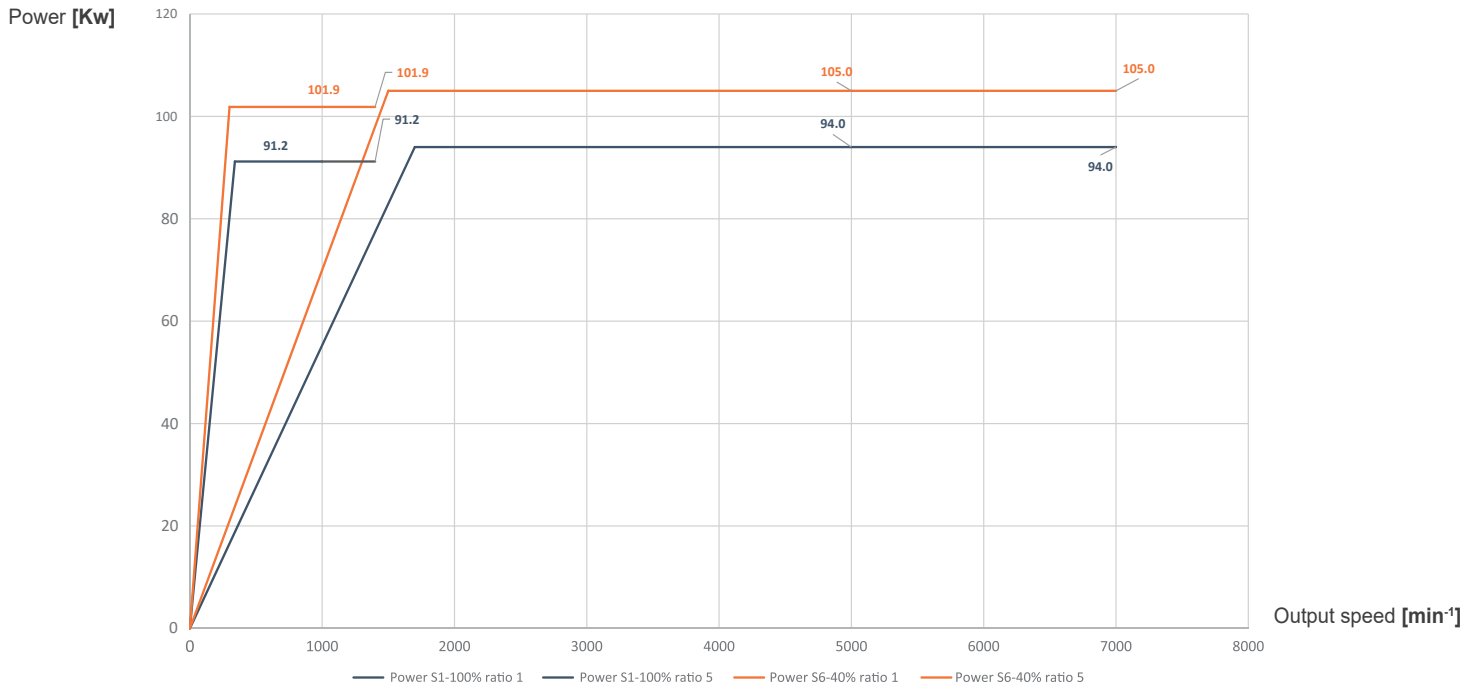
Technical Features

Asynchronous
Vertical and horizontal
Siemens/Fanuc/Heidenhain
Plain shaft + key
36
7.5
Grease
3
1
50 to 100
8 to 10
1038

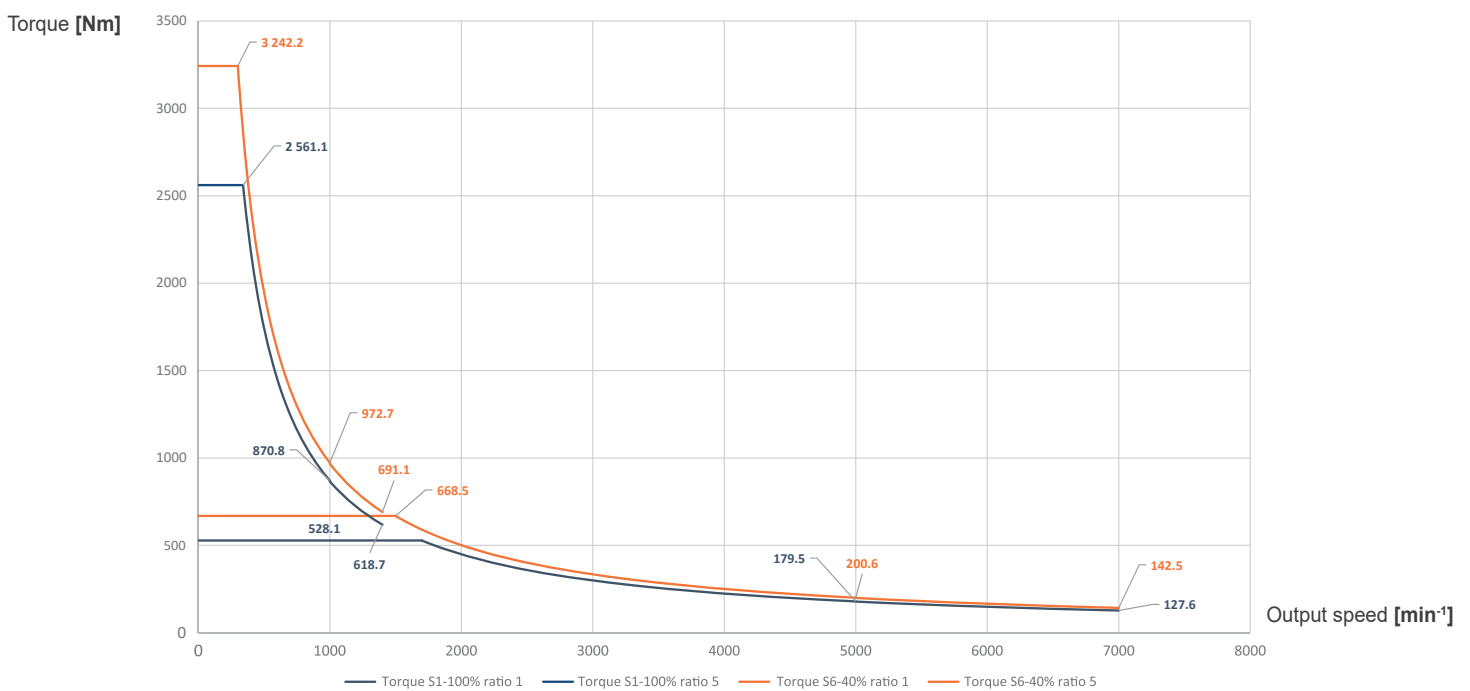
Options

max pressure 80 bar
Compatible for inner coolant/MQL/dry run/pressurized air
Stroke 15mm, with sensor
Oil leakage & temperature (Motor/Gearbox/Output bearing)
512 sin/cos
Contact us

Power



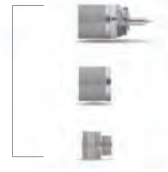
Torque



GM 3000

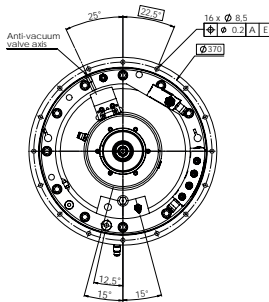


RAM 280

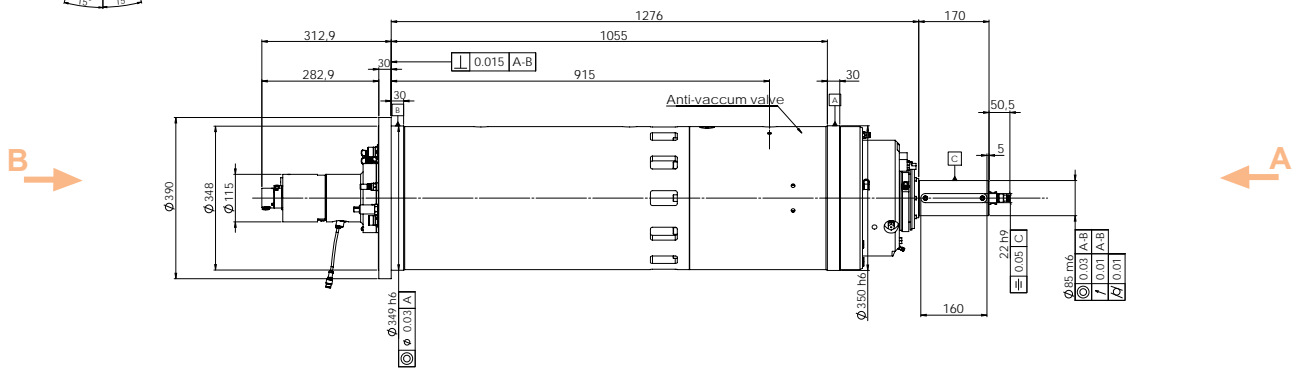
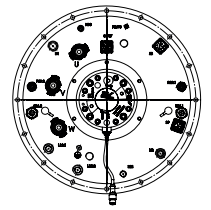


DIMENSIONS

B View

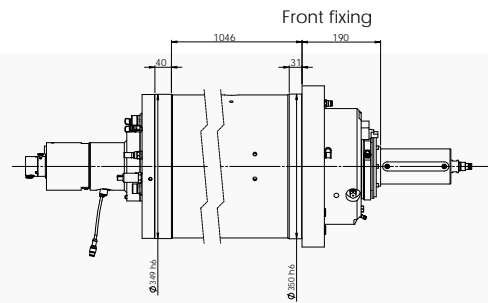
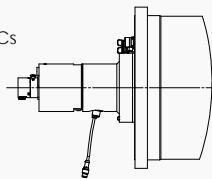


A View

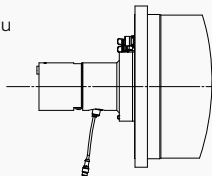


Interfaces

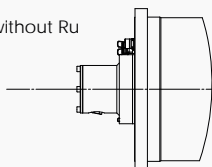
With Ru Cs
or
With Ru without Cs



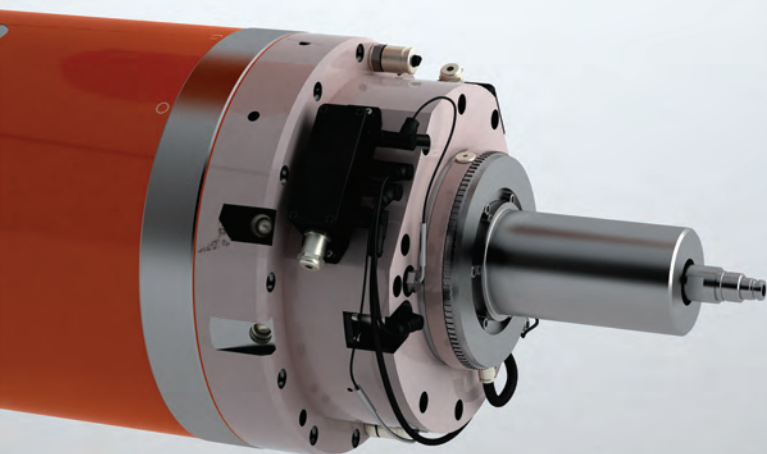
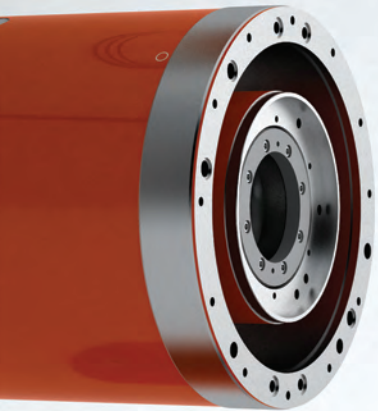
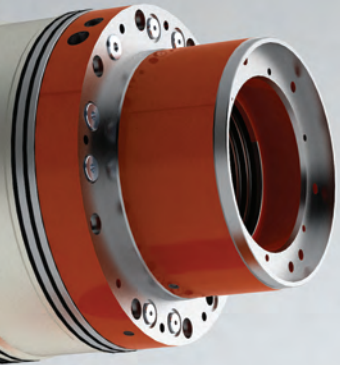
With Cs without Ru



Without Cs and without Ru



RAM *SIZE 280*



Speed	N1B	[rpm]
Power	P	[kW]
Torque	T2N	[Nm]

Speed	N1B	[rpm]
Power	P	[kW]
Torque	T2N	[Nm]

Mounting position

Control

Interface

Cooling/Flow rate **[l/mn]**

Cooling/Loss power **[kW]**

Bearings lubrication

Lubrication/Flow rate **[l/mn]**

Lubrication/Loss power **[kW]**

Speed shifting/Pressure **[bar]**

Speed shifting/Flow rate **[l/mn]**

RAM design for external forced lubrication

Gearbox only

Gearbox + Cooling Jacket

Gearbox + Cooling Jacket
+ output shaft arrangement

S1 - 100%

		Gear 1:1		Gear 5:1	
		1500	7000	300	1400
		97.1	97.1	94.2	94.2
		619	133	3000	643

S6 - 40%

		Gear 1:1		Gear 5:1	
		1500	7000	300	1400
		145.7	145.7	141.3	141.3
		928	199	4500	964

GM 3000



RAM 280

Technical Features

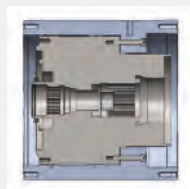
Vertical and horizontal
Siemens/Fanuc/Heidenhain
Internal splines
40
2.91
Grease
3
0.92
50 to 100
8 to 10

Interface

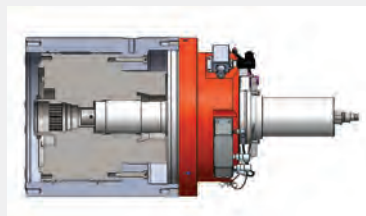
HIT



FOT



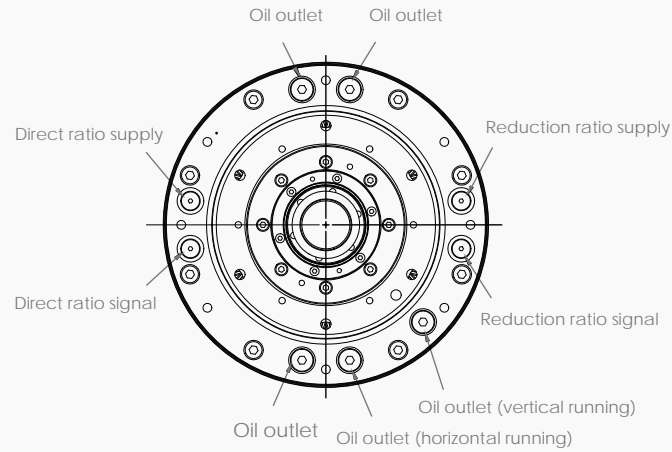
FOA



DIMENSIONS

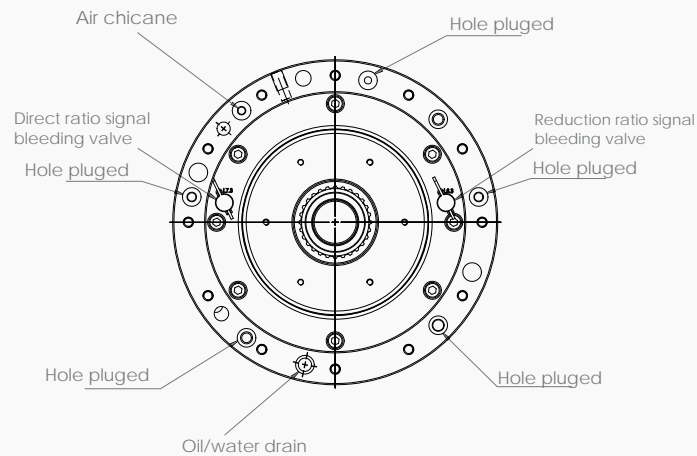
HIT

A View



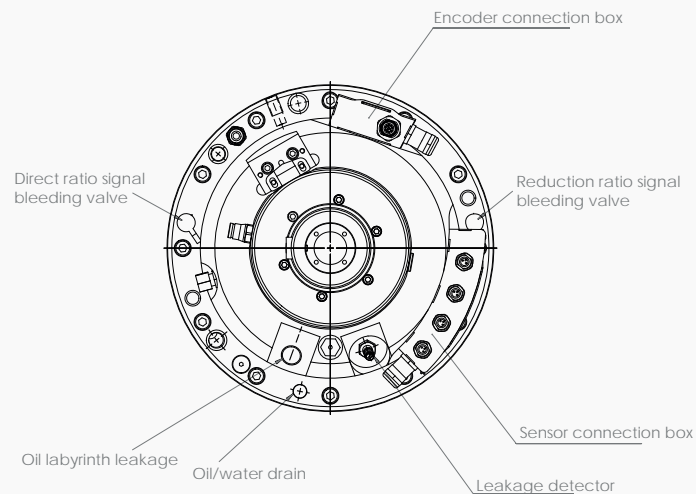
FOT

B View



FOA

C View

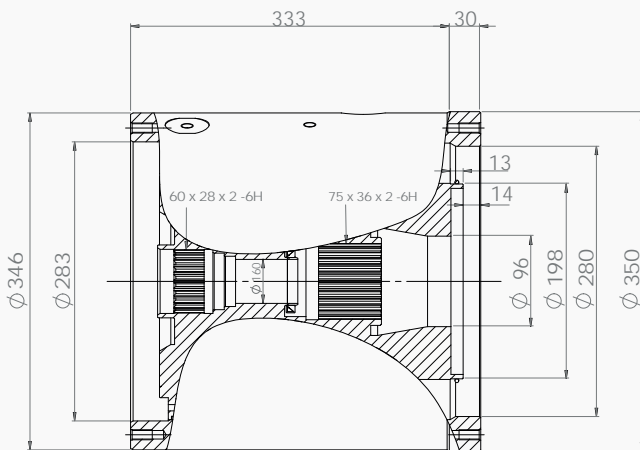
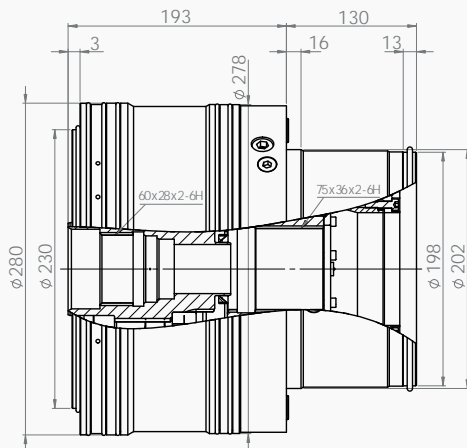


DIMENSIONS

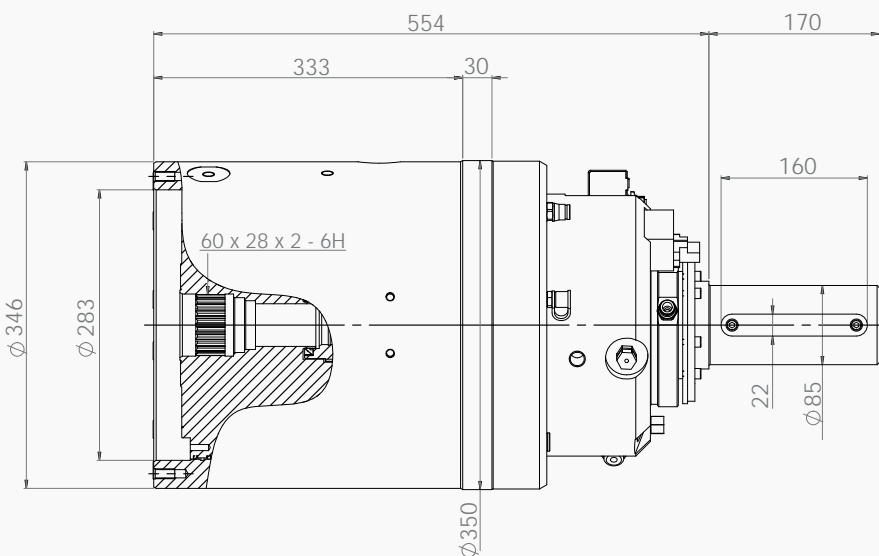
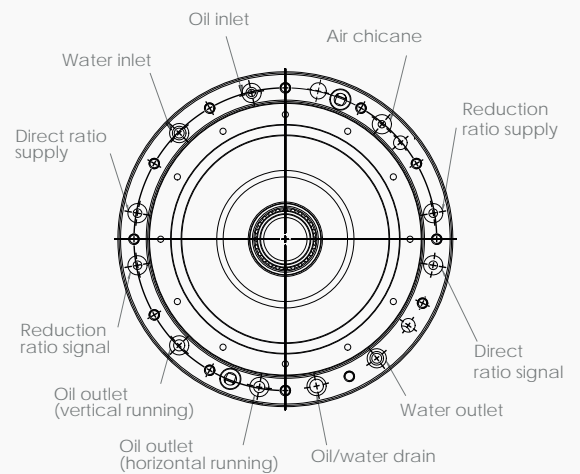
GM 3000



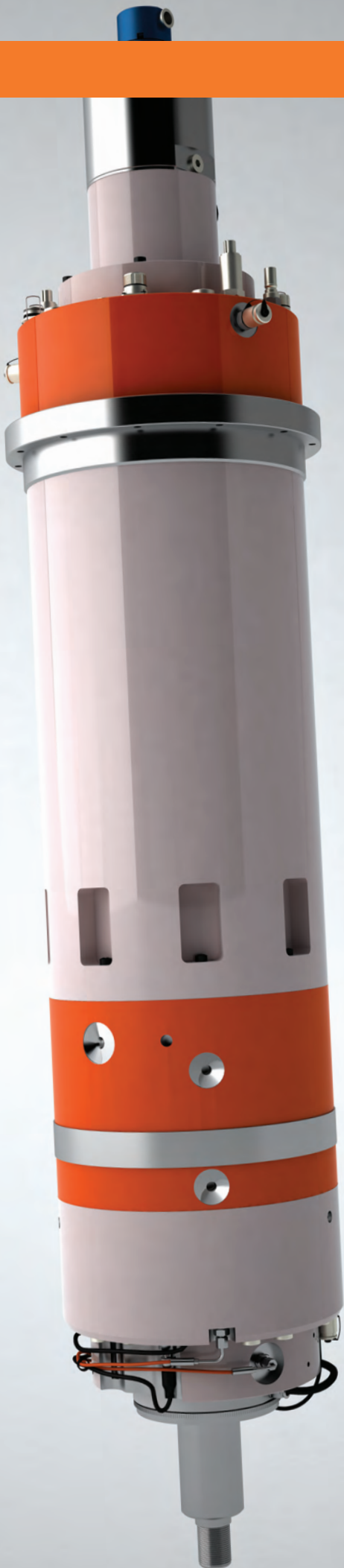
RAM 280



D View



GM *SIZE 7000*



Speed	N1B	[rpm]
Power	P	[kW]
Torque	T2N	[Nm]
Current	I	[A]

Speed	N1B	[rpm]
Power	P	[kW]
Torque	T2N	[Nm]
Current	I	[A]

Motor type

Interface

Cooling

Bearings lubrication

Control

Weight **[Kg]**

Rotary union

Clamping system

Encoder

Spindle head

GM design for external forced lubrication

S1 - 100%

Gear 1:1		Gear 5:1	
550	4000	110	800
83.5	83.5	81	81
1450	199	7032	967
200	125	200	125

S6 - 40%

Gear 1:1		Gear 5:1	
550	4000	110	800
93	93	90.2	90.2
1615	222	7832	1077
230	136	230	136

GM 7000



RAM 350

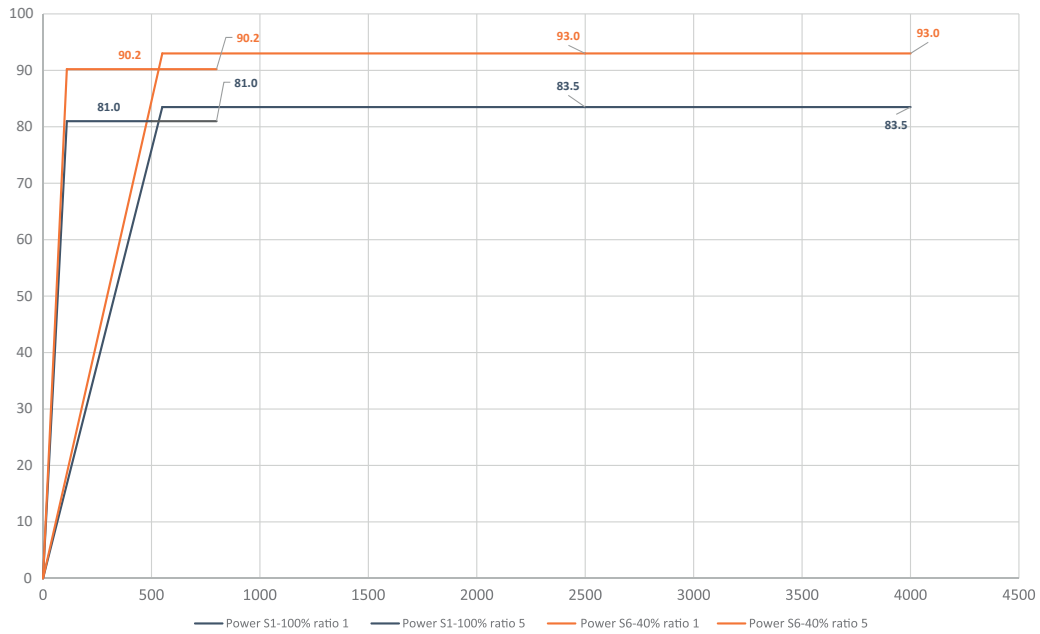
Technical Features

Synchronous, asynchronous
Cylinder shaft
Liquid cooled
Grease
Siemens/Fanuc/Heidenhain
1645

<input type="radio"/>
<input type="radio"/>
<input checked="" type="radio"/>
<input type="radio"/>

Power

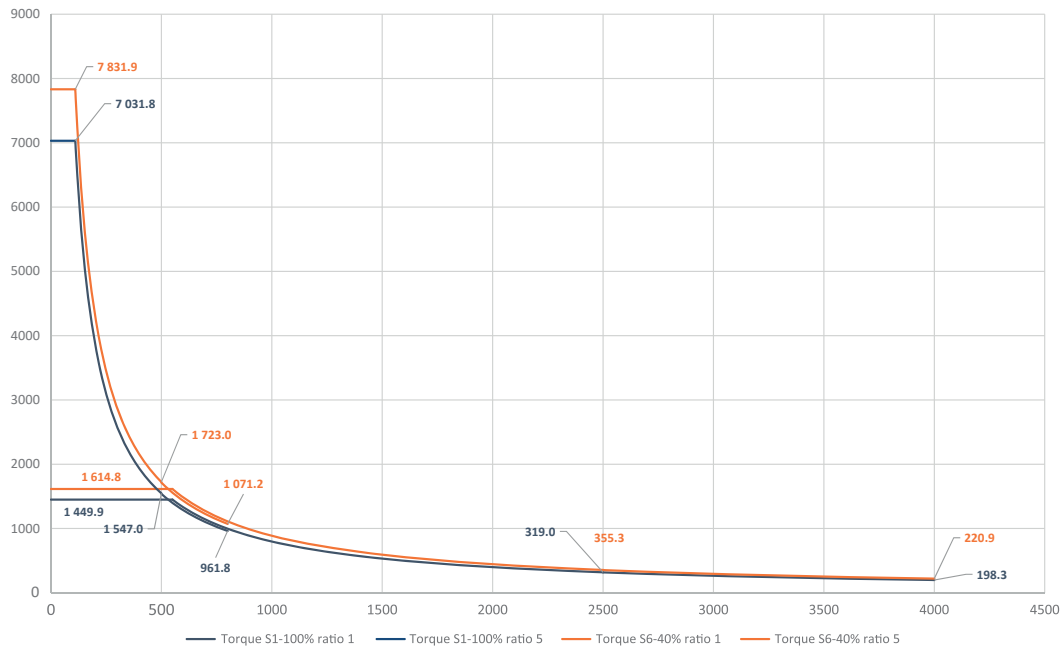
Power [Kw]



Output speed [min⁻¹]

Torque

Torque [Nm]

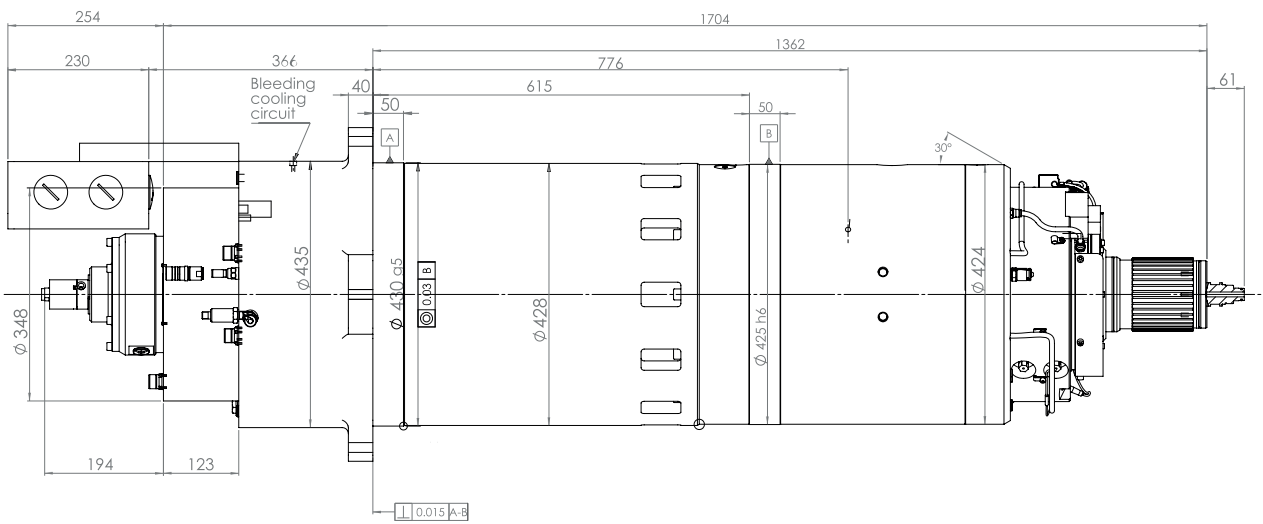


Output speed [min⁻¹]

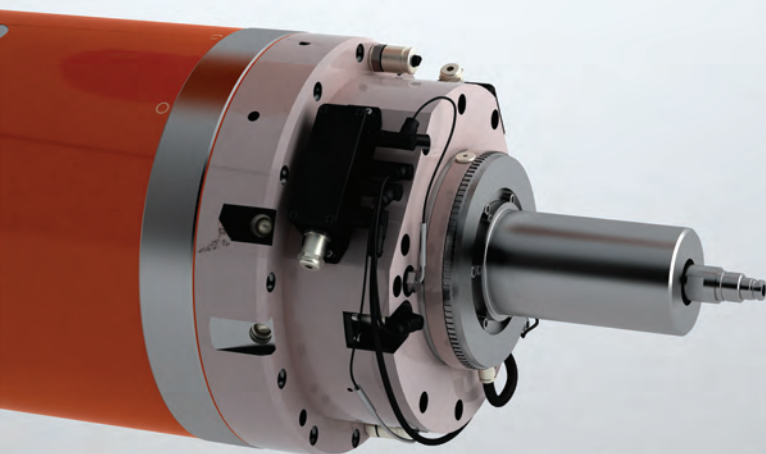
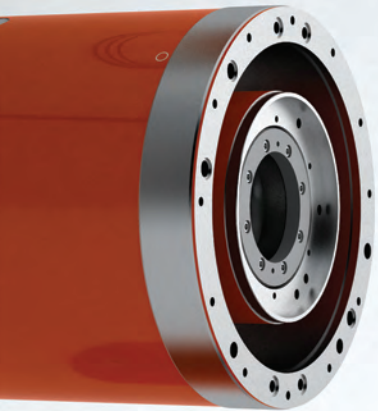
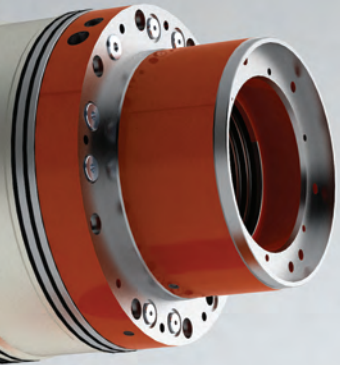
GM 7000



RAM 350



RAM *SIZE 350*



Speed	N1B	[rpm]
Power	P	[kW]
Torque	T2N	[Nm]

Speed	N1B	[rpm]
Power	P	[kW]
Torque	T2N	[Nm]

Control

Interface

Cooling/Flow rate **[l/mn]**

Cooling/Loss power **[kW]**

Bearings lubrication

Lubrication/Flow rate **[l/mn]**

Lubrication/Loss power **[kW]**

Speed shifting/Pressure **[bar]**

Speed shifting/Flow rate **[l/mn]**

RAM design for external forced lubrication

Gearbox only

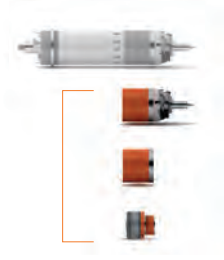
Gearbox + Cooling Jacket

Gearbox + Cooling Jacket
+ output shaft arrangement

S1 - 100%

Gear 1:1		Gear 5:1	
550	6000	110	1200
83.1	83.1	80.6	80.6
1443	132	7000	642

GM 7000



RAM 350

S6 - 40%

Gear 1:1		Gear 5:1	
550	6000	110	1200
133	133	129	129
2309	212	11200	1027

Technical Features

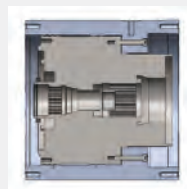
Siemens/Fanuc/Heidenhain
Internal splines
40
2.49
Grease
3.5
1.07
50 to 100
8 to 10

Interface

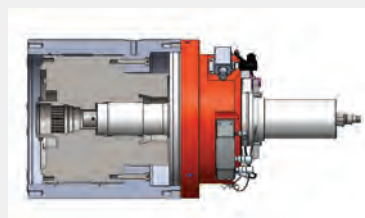
HIT



FOT



FOA/FOB

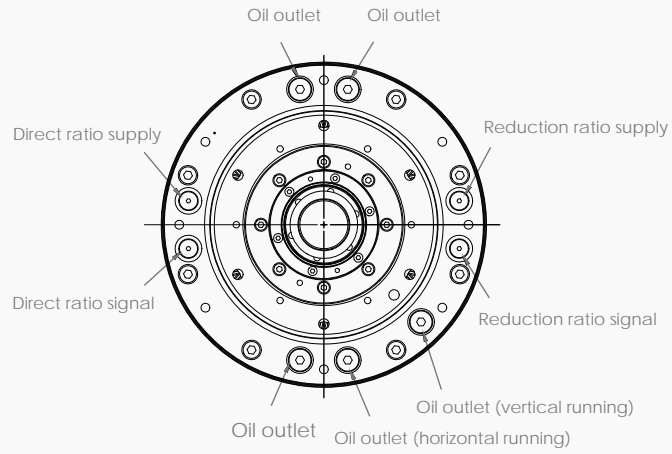


RAM SIZE 350

DIMENSIONS

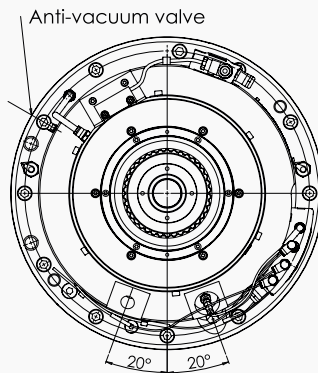
HIT

A View



FOB

B View

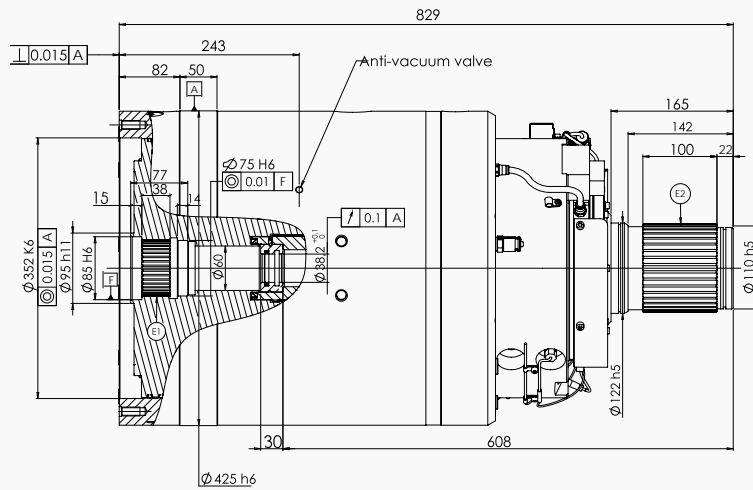
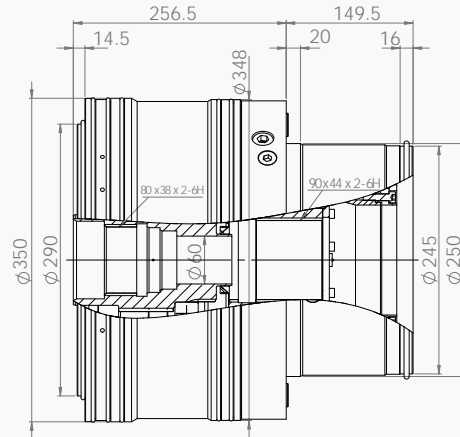


DIMENSIONS

GM 7000



RAM 350



SPINDLE DRIVE

MSD

With high torque capacity and off-line mounting arrangement, MSD provides a perfect solution for air cooled spindle motor with a particular high radial load capacity for belts on input & output.

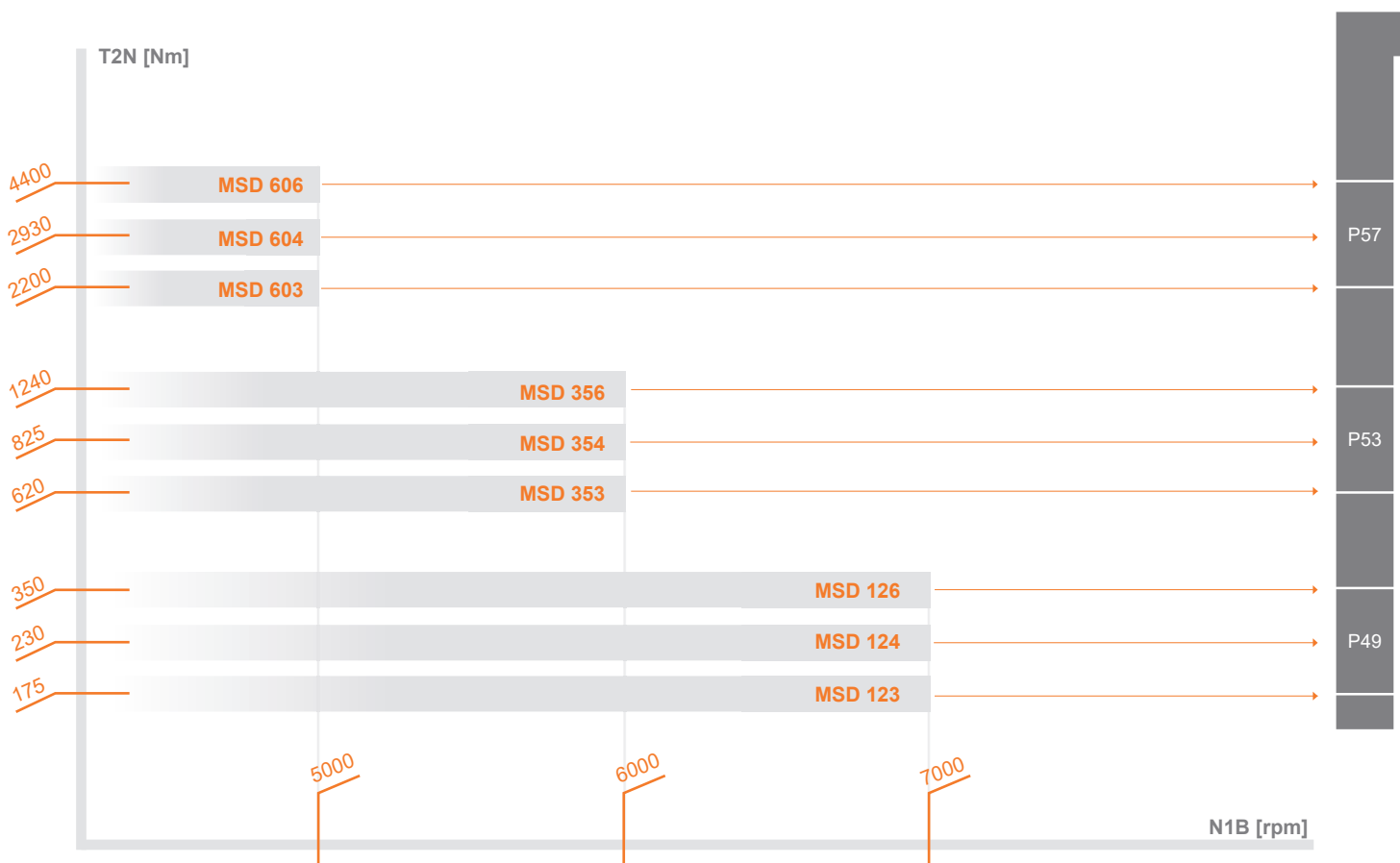
MSD offers the highest torque and power capacity of the market.

- > 3 sizes, more than 100 possible configurations
- > Forced lubrication
- > Optimized Heat transfer capacity
- > High bearing capacity for belt input and output
- > 100% compliant with machine-tool quality manufacturing and testing standards



Range Summary

MSD



* Number of satellite

xx3 SAT



xx4 SAT



xx6 SAT



MSD *SIZE 12*



Rated output torque (S1-100%)

Max input speed

Reduction ratio

Motor frame size

Gearbox housing dimensions

Torsional backlask

Thermal capacity

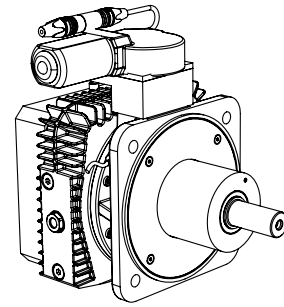
Efficiency

^(*) Only available with 4 planets

Input without sealing ring

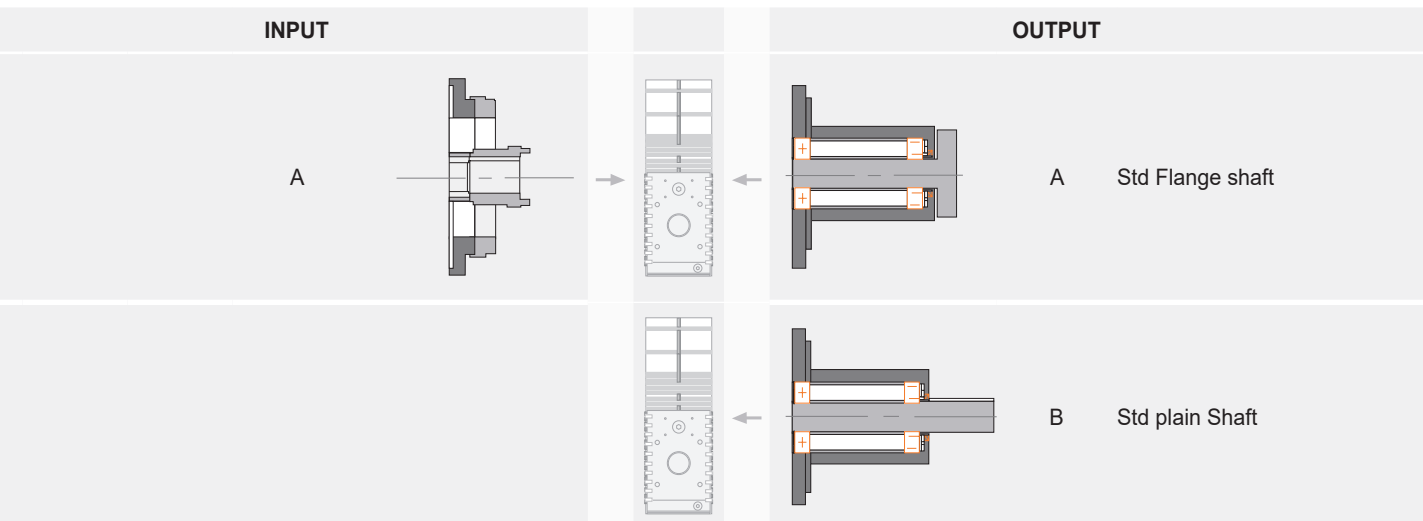
Technical Features

	SIZE	123	124	126
T2N	[Nm]	175	230	350
N1B	[rpm]	7000		
i		1.00 & 3.83		
		1.00 & 4.94 ^(*)		
	[mm]	100/112		
	[mm]	220 x 208		
-	[arcmin]	30		
P	[kW]	12		
η	%	97		



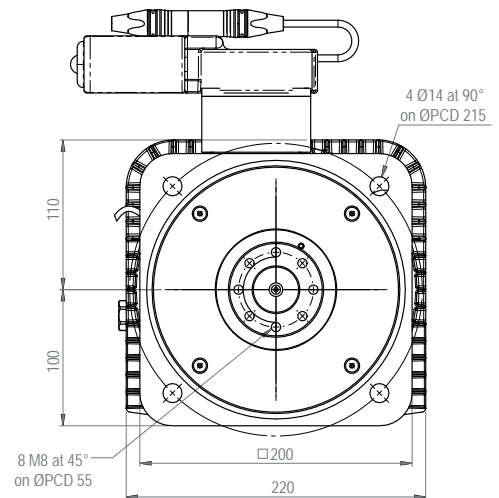
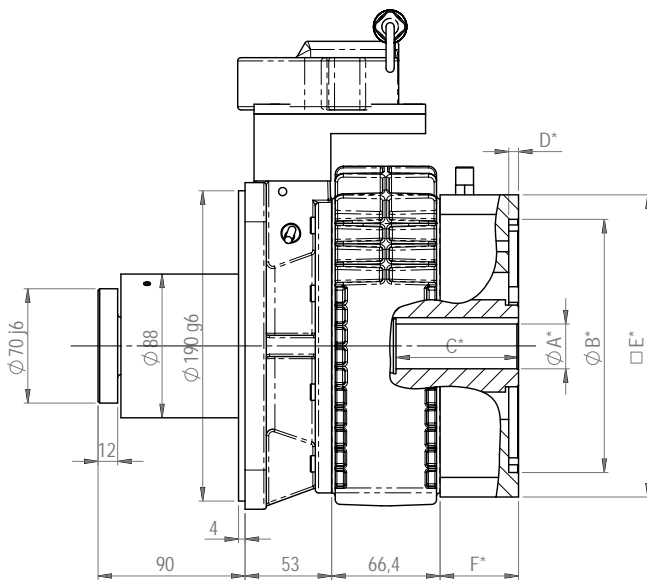
*Exemple: **MSD 12**
INPUT - A. OUTPUT - B

Interface



DIMENSIONS

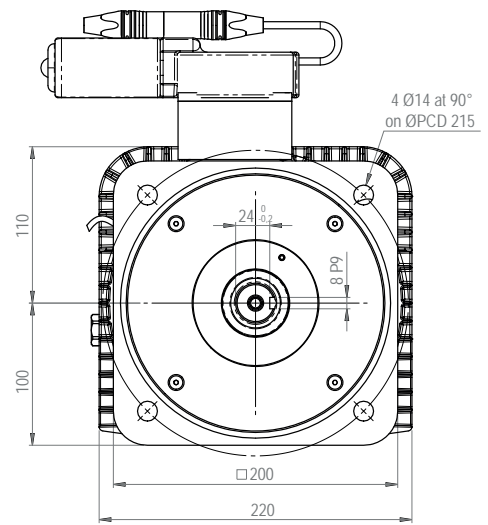
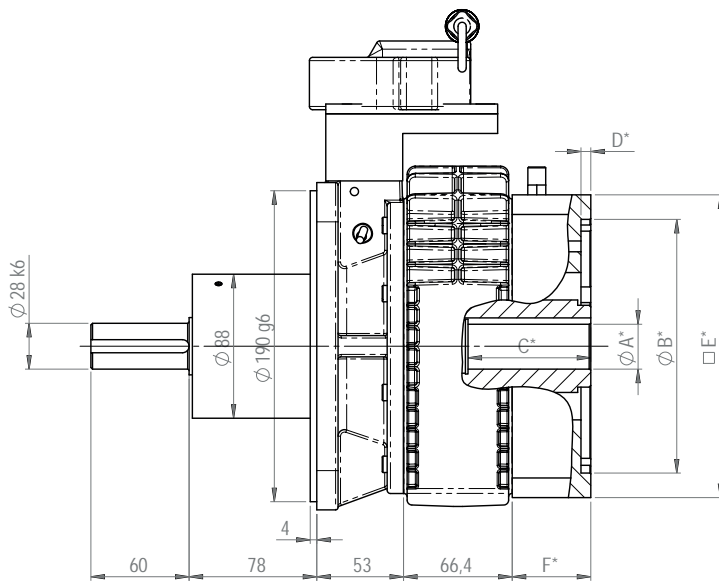
INPUT - TYPE A
OUTPUT - TYPE A



* A B C D E F According to motor dimensions

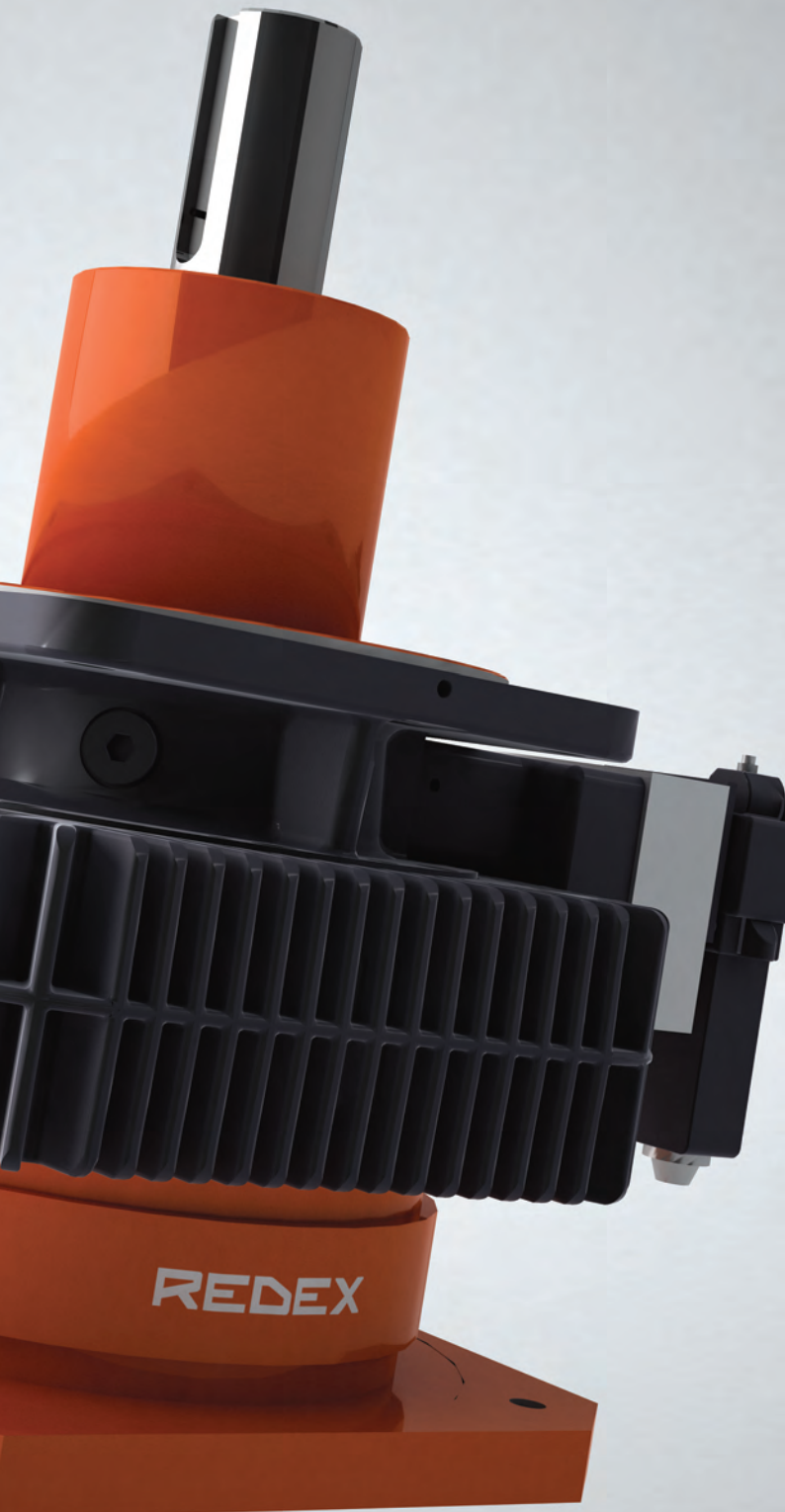
DIMENSIONS

INPUT - TYPE A
OUTPUT - TYPE B



* A B C D E F According to motor dimensions

MSD *SIZE 35*



Rated output torque (S1-100%)

Max input speed

Reduction ratio

Motor frame size

Gearbox housing dimensions

Torsional backlash

Thermal capacity

Efficiency

(*) For size 354, the rated output torque is 1249 Nm when ratio is 4.94

(**) Only available with 4 planets

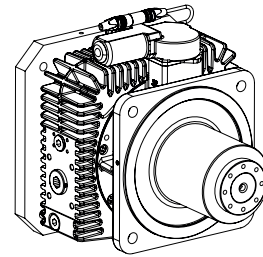
Input without sealing ring

Input and output bearing arrangement

Input with sealing ring

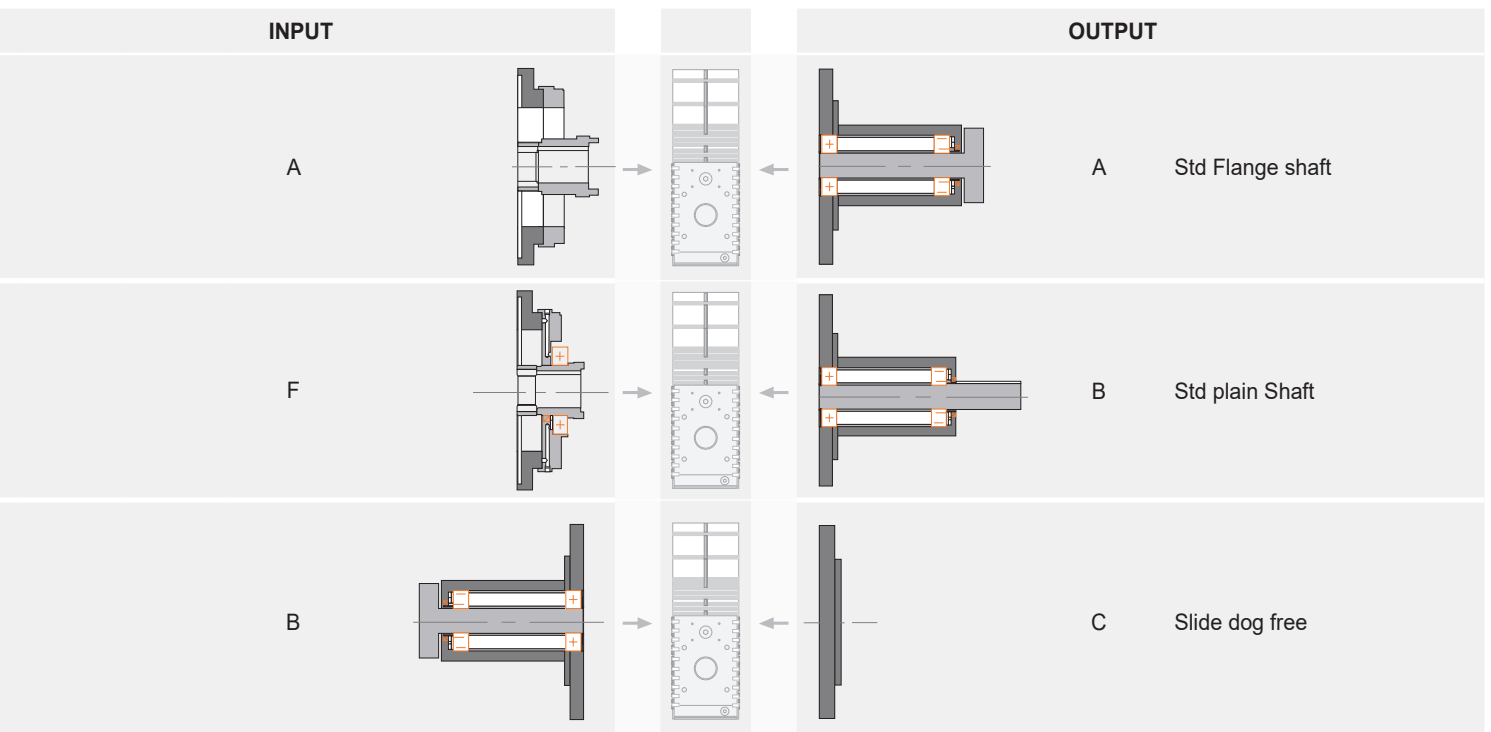
Technical Features

	SIZE	353	354 ^(*)	356
T_{2N}	[Nm]	620	825	1240
N_{1B}	[rpm]	6000		
i		1.00 & 3.83 1.00 & 4.94 ^(**)		
	[mm]	132/160		
	[mm]	315 x 289		
-	[arcmin]	30		
P	[kW]	28		
η	%	97		



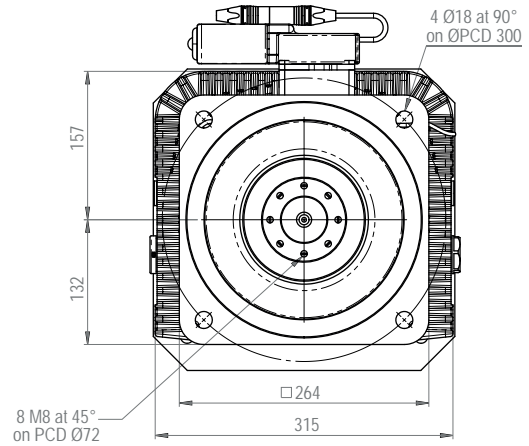
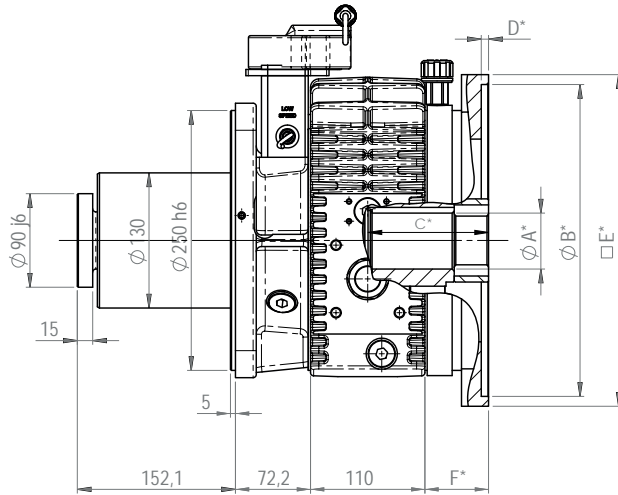
*Example: **MSD 35**
INPUT - A/F . OUTPUT - A

Interface

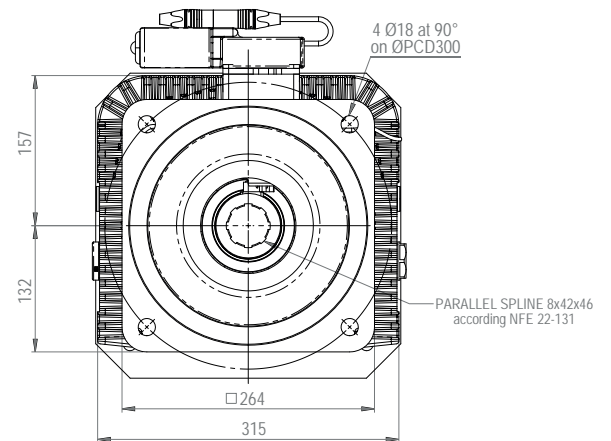
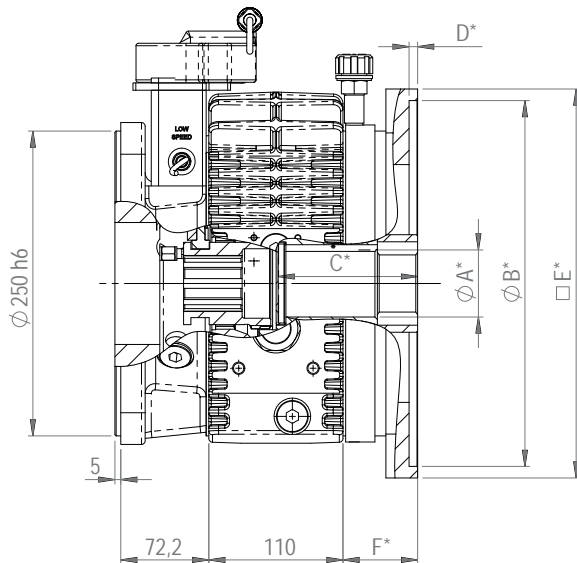


DIMENSIONS

INPUT - TYPE A/F
OUTPUT - TYPE A



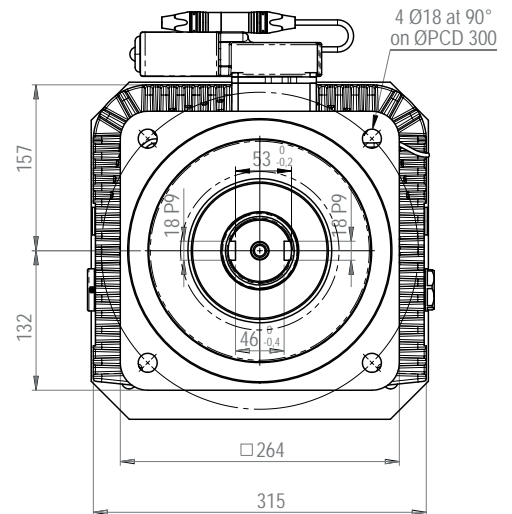
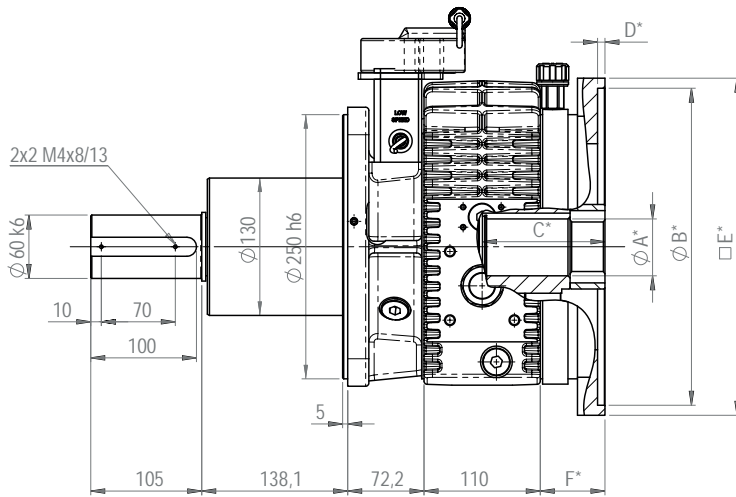
INPUT - TYPE A/F
OUTPUT - TYPE C



* A B C D E F According to motor dimensions

DIMENSIONS

INPUT - TYPE A/F
OUTPUT - TYPE B



* A B C D E F According to motor dimensions

MSD *SIZE 60*



Rated output torque (S1-100%)

Max input speed

Reduction ratio

Motor frame size

Gearbox housing dimensions

Torsional backlash

Thermal capacity

Efficiency

^(*) Only available with 4 planets

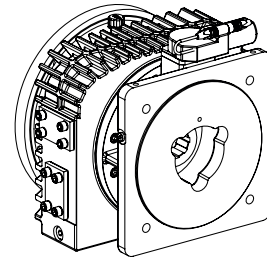
Input without sealing ring

Input and output bearing arrangement

Input with sealing ring

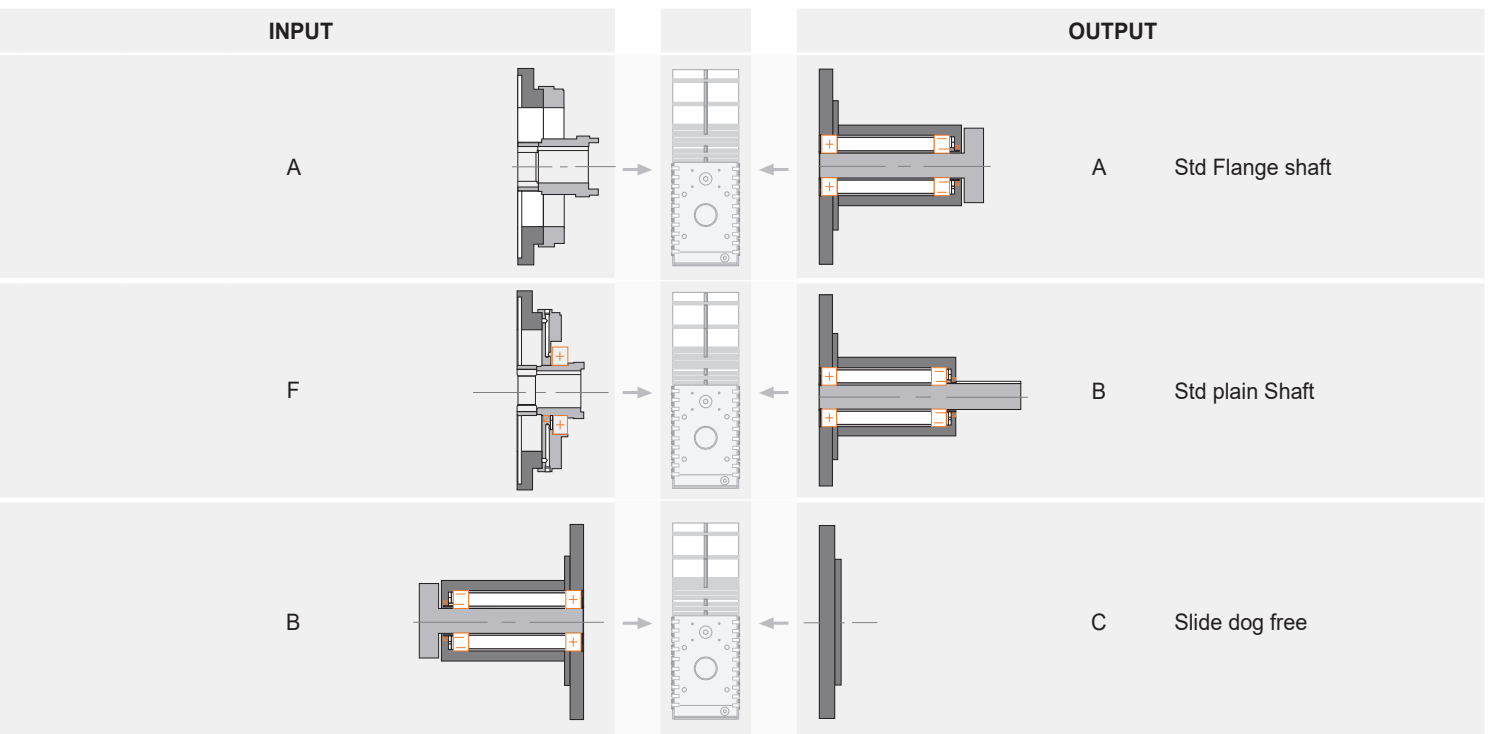
Technical Features

	SIZE	603	604	606
T _{2N}	[Nm]	2200	2930	4400
N _{1B}	[rpm]	5000		
i		1.00 & 3.83 1.00 & 4.94 ^(*)		
	[mm]	180/200/225		
	[mm]	420 x 380		
-	[arcmin]	30		
P	[kW]	External forced cooling		
η	%	97		



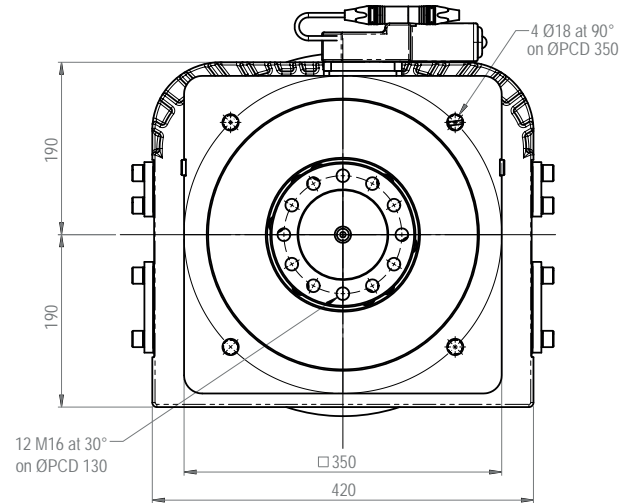
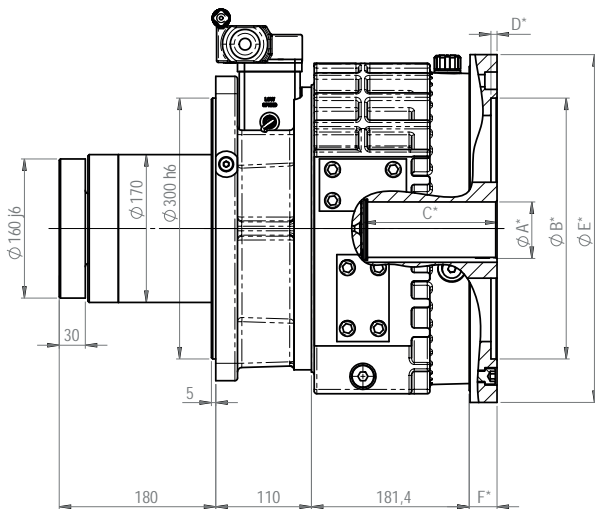
*Example: **MSD 60**
INPUT - A/F . OUTPUT - C

Interface

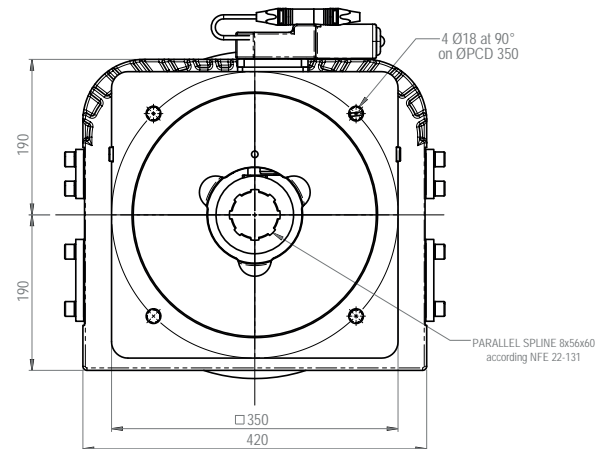
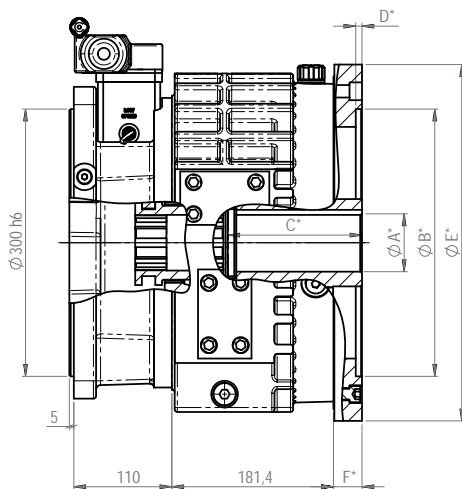


DIMENSIONS

INPUT - TYPE A/F
OUTPUT - TYPE A



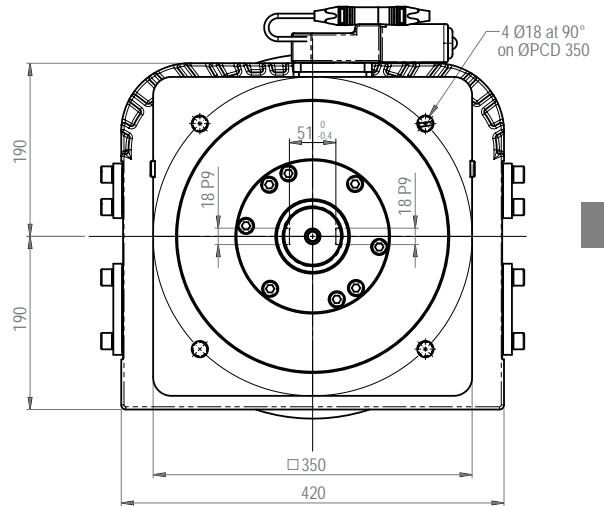
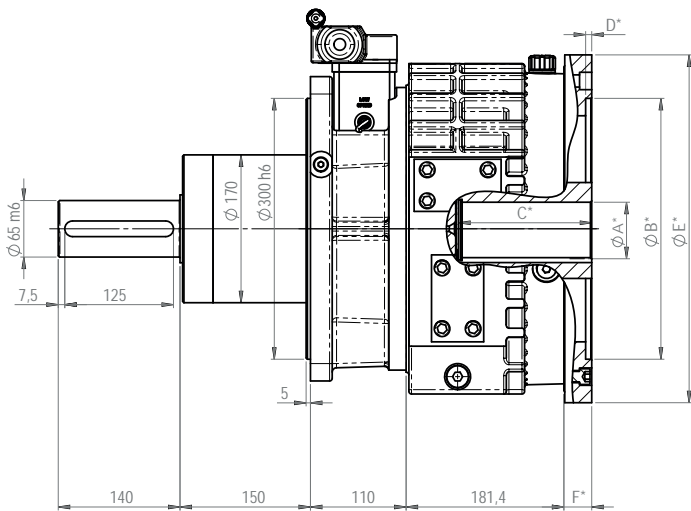
INPUT - TYPE A/F
OUTPUT - TYPE C



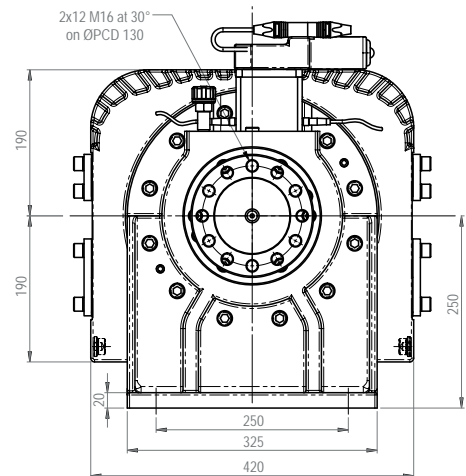
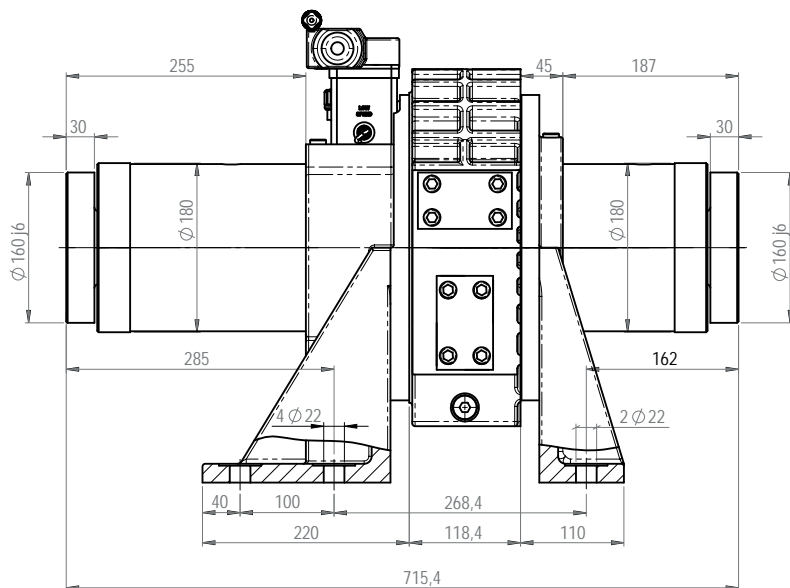
* A B C D E F According to motor dimensions

DIMENSIONS

INPUT - TYPE A/F
OUTPUT - TYPE B



INPUT- TYPE B
OUTPUT - TYPE A



* A B C D E F According to motor dimensions

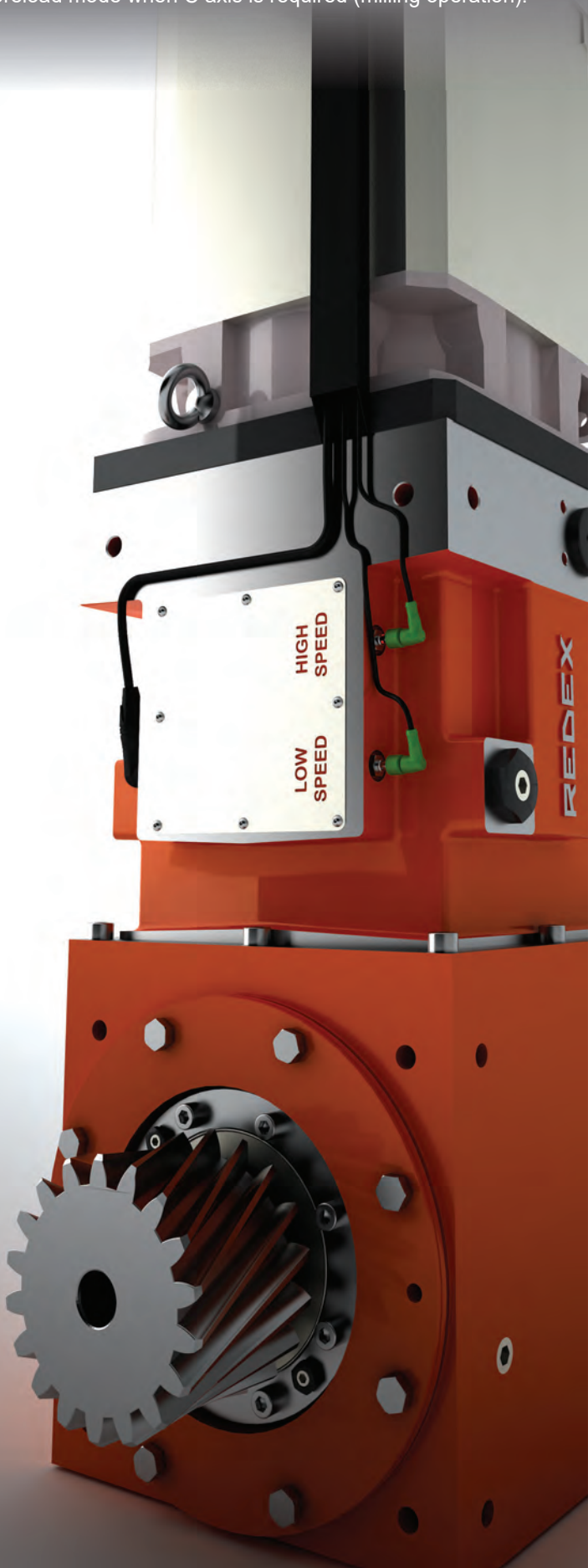
TABLE DRIVE

MSR

REDEX have introduced on the market an innovative solution for VTL and turntables, taking advantage from the latest CNC technology. Two identical gearboxes (Twin pinions) share the driving torque (50%-50%) during turning operations and work in preload mode when C axis is required (milling operation).

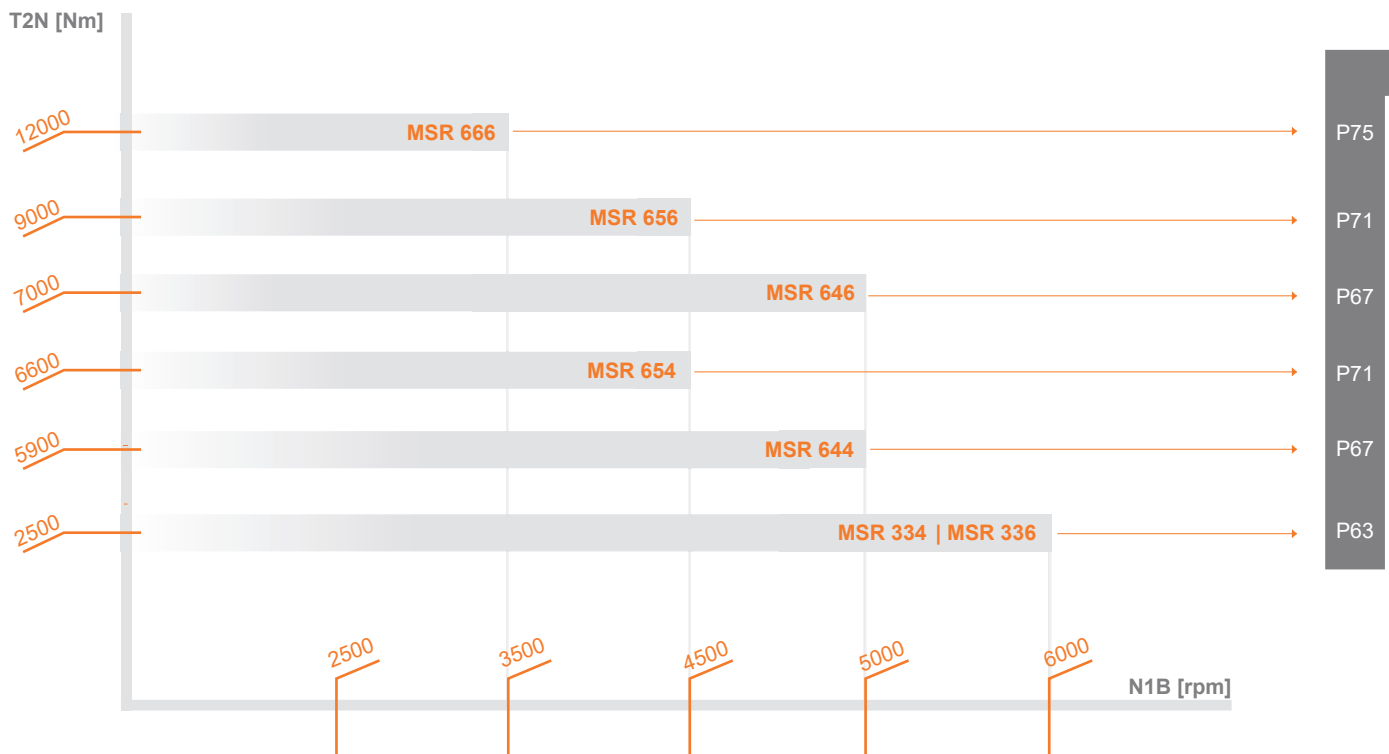
Gear ratio shifting allows to cover the full range of speed high-speed for turning and low speed for milling:

- > 5 sizes, more than 50 possible configurations
- > Motor power up to 240 kW
- > Forced lubrication
- > Optimized Heat transfer capacity
- > 100% compliant with machine-tool quality manufacturing and testing standards



Range Summary

MSR



* Number of satellite

xx4 SAT



xx6 SAT



MSR *SIZE 330*



PERFORMANCES

Unit codification

High speed ratio

Low speed ratio

Ratio code

Nominal output torque (S1-100%)

Maximum input speed

Inertia @ input (high speed ratio)

Inertia @ input (low speed ratio)

Efficiency at rated input speed

Weight

Max radial load output
(@131rpm output, in the middle of the shaft)

PERFORMANCES

Unit codification

High speed ratio

Low speed ratio

Ratio code

Nominal output torque (S1-100%)

Maximum input speed

Inertia @ input (high speed ratio)

Inertia @ input (low speed ratio)

Efficiency at rated input speed

Weight

Max radial load output
(@131rpm output, in the middle of the shaft)

Paint RAL 2002 & RAL 7016

Speed changer: voltage 24V DC,
switching current 200mA at 70°C, cable length 5m

Key ways following NFE 22.175

Motor must follow DIN 42955 class R

Oil inlet interface

Oil flow rate (input pressure)

Oil outlet interface

Technical Features

MSR 334		
i1		2.00
i2		9.88
i		2010
T2N	[Nm]	2500
N1B	[rpm]	6000
J1h	[Kg.mm ²]	56000
J1l	[Kg.mm ²]	10000
η	%	94
m	[kg]	280
Fr	[N]	30000

Technical Features

MSR 336		
i1		2.00
i2		7.66
i		2076
T2N	[Nm]	2500
N1B	[rpm]	6000
J1h	[Kg.mm ²]	51000
J1l	[Kg.mm ²]	13000
η	%	94
m	[kg]	276
Fr	[N]	30000

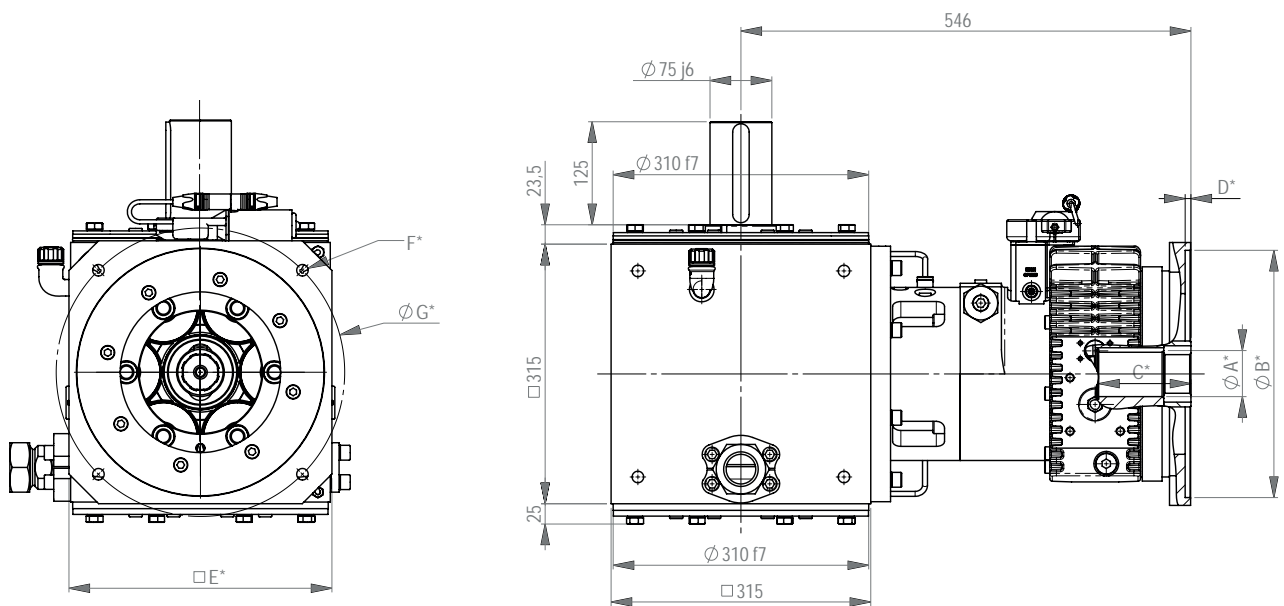
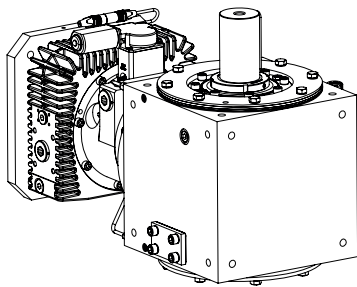
Additional Features

Oi		1/2"G
Of	[l/min]	9 (1,5 - 6 bars)
Oo		Tube 42mm

MSR *SIZE 330*

DIMENSIONS

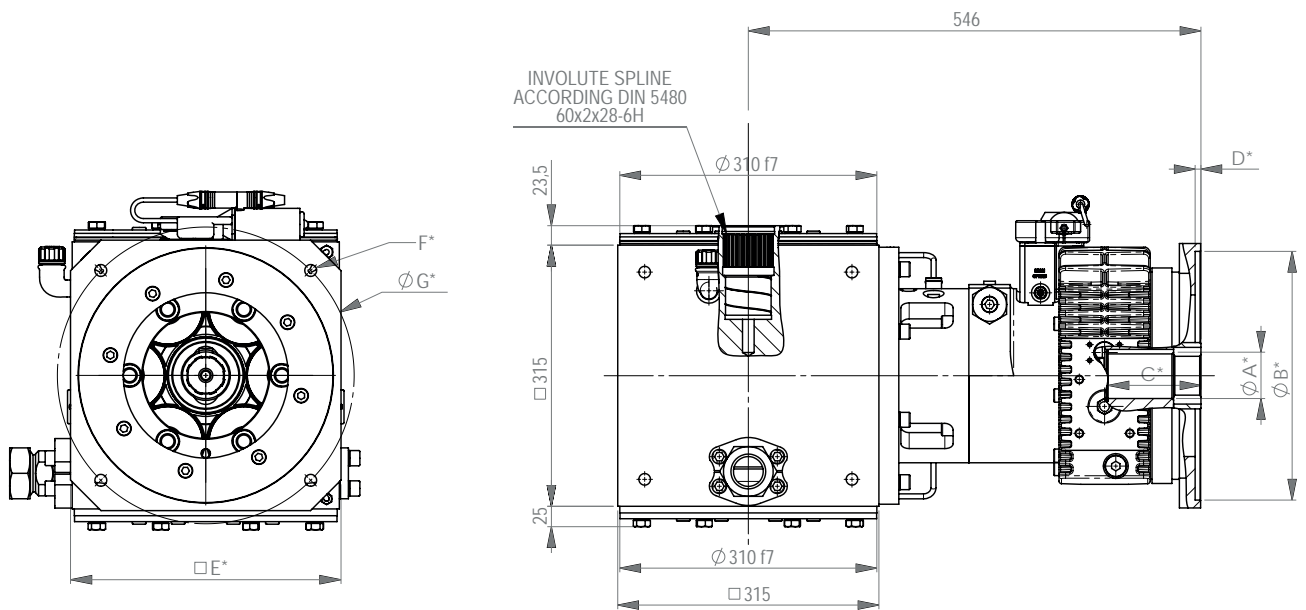
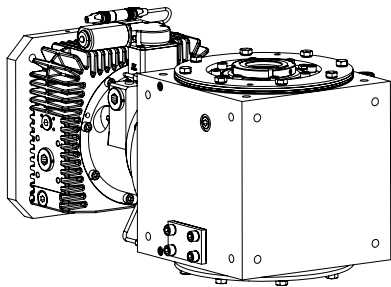
INPUT - TYPE A/F
OUTPUT - TYPE D



* A B C D E F G According to motor dimensions

DIMENSIONS

INPUT - TYPE A/F
OUTPUT - TYPE H



* A B C D E F G According to motor dimensions

MSR *SIZE 640*



PERFORMANCES

Unit codification
High speed ratio
Low speed ratio
Ratio code
Nominal output torque (S1-100%)
Maximum input speed
Inertia @ input (high speed ratio)
Inertia @ input (low speed ratio)
Efficiency at rated input speed
Weight
Max radial load output (@131rpm output, in the middle of the shaft)

PERFORMANCES

Unit codification
High speed ratio
Low speed ratio
Ratio code
Nominal output torque (S1-100%)
Maximum input speed
Inertia @ input (high speed ratio)
Inertia @ input (low speed ratio)
Efficiency at rated input speed
Weight
Max radial load output (@131rpm output, in the middle of the shaft)

Paint RAL 2002 & RAL 7016

Speed changer: voltage 24V DC,
switching current 200mA at 70°C, cable length 5m

Key ways following NFE 22.175

Motor must follow DIN 42955 class R

Oil inlet interface

Oil flow rate (input pressure)

Oil outlet interface

Technical Features

			MSR 644
i1			2.00
i2			9.88
i			2010
T2N	[Nm]		5900
N1B	[rpm]		5000
J1h	[Kg.mm²]		122000
J1l	[Kg.mm²]		34000
η	%		94
m	[kg]		548
Fr	[N]		50000

Technical Features

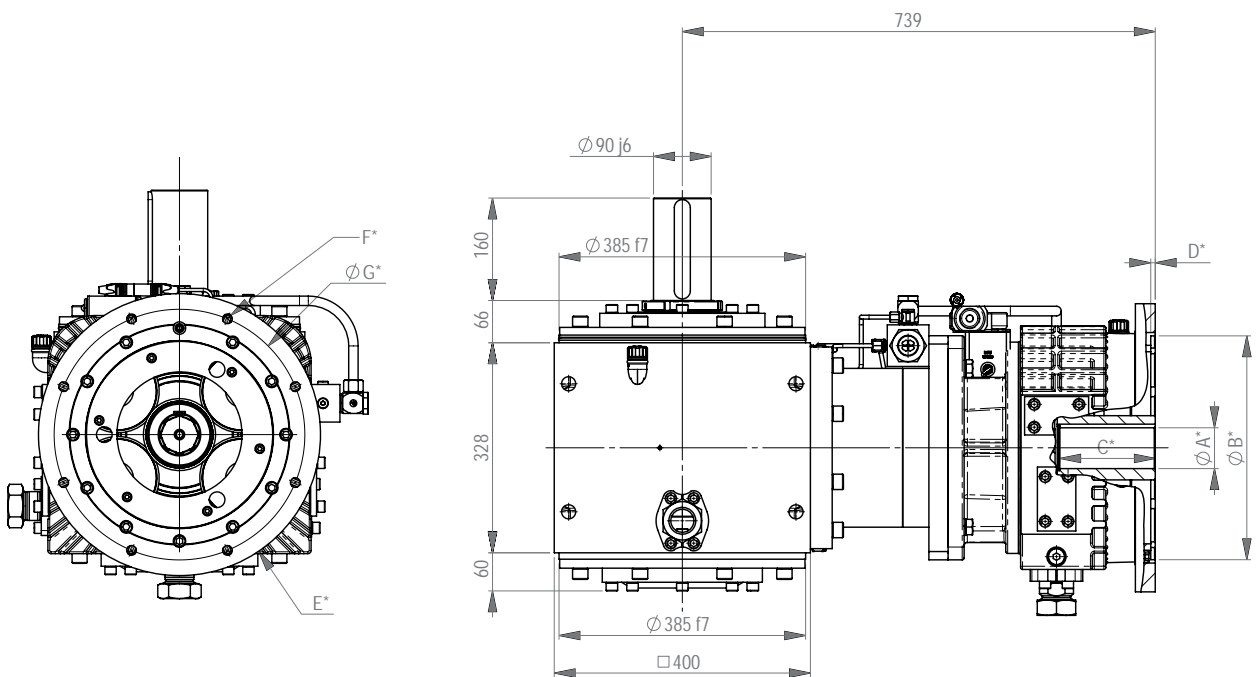
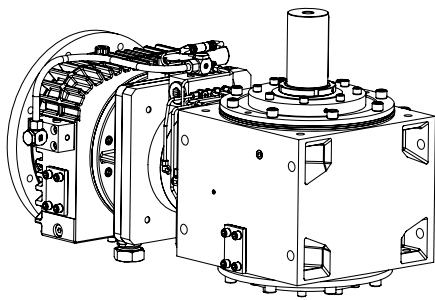
			MSR 646	
i1			2.00	3.00
i2			7.66	11.49
i			2076	3012
T2N	[Nm]		7000	7000
N1B	[rpm]		5000	5000
J1h	[Kg.mm²]		132000	98000
J1l	[Kg.mm²]		48000	45000
η	%		94	94
m	[kg]		548	548
Fr	[N]		50000	50000

Additional Features

Oi		1"G
Of	[l/min]	17 (1,5 - 6 bars)
Oo		Tube 42mm

DIMENSIONS

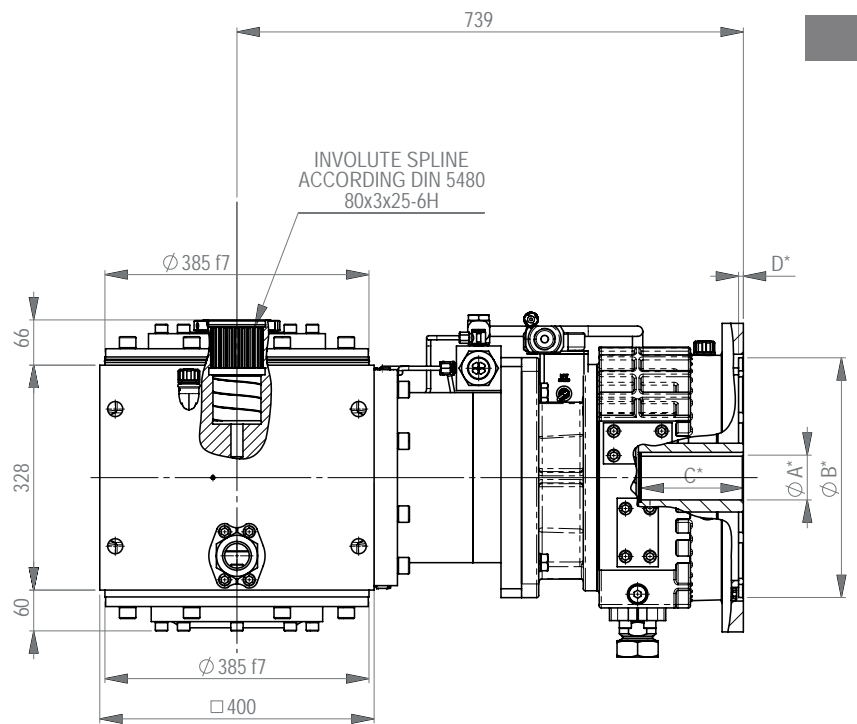
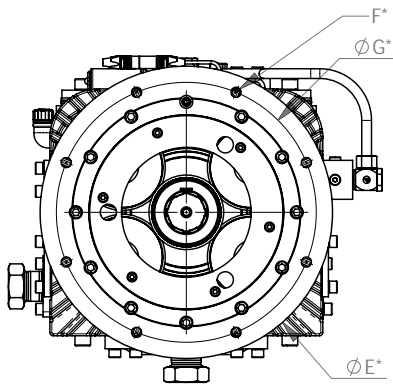
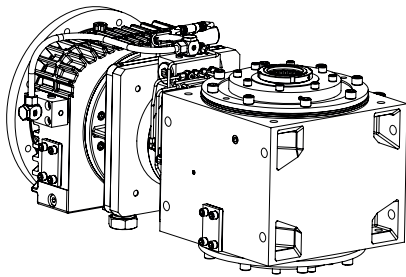
INPUT - TYPE A/F
OUTPUT - TYPE D



* A B C D E F G According to motor dimensions

DIMENSIONS

INPUT - TYPE A/F
OUTPUT - TYPE H



* A B C D E F G According to motor dimensions

MSR *SIZE 650*



PERFORMANCES

Unit codification

High speed ratio

Low speed ratio

Ratio code

Nominal output torque (S1-100%)

Maximum input speed

Inertia @ input (high speed ratio)

Inertia @ input (low speed ratio)

Efficiency at rated input speed

Weight

Max radial load output
(@131rpm output, in the middle of the shaft)

PERFORMANCES

Unit codification

High speed ratio

Low speed ratio

Ratio code

Nominal output torque (S1-100%)

Maximum input speed

Inertia @ input (high speed ratio)

Inertia @ input (low speed ratio)

Efficiency at rated input speed

Weight

Max radial load output
(@131rpm output, in the middle of the shaft)

Paint RAL 2002 & RAL 7016

Speed changer: voltage 24V DC,
switching current 200mA at 70°C, cable length 5m

Key ways following NFE 22.175

Motor must follow DIN 42955 class R

Oil inlet interface

Oil flow rate (input pressure)

Oil outlet interface

Technical Features

MSR 654		
i1		2.26
i2		11.16
i		2211
T2N	[Nm]	6600
N1B	[rpm]	4500
J1h	[Kg.mm²]	307000
J1l	[Kg.mm²]	44000
η	%	94
m	[kg]	750
Fr	[N]	75000

Technical Features

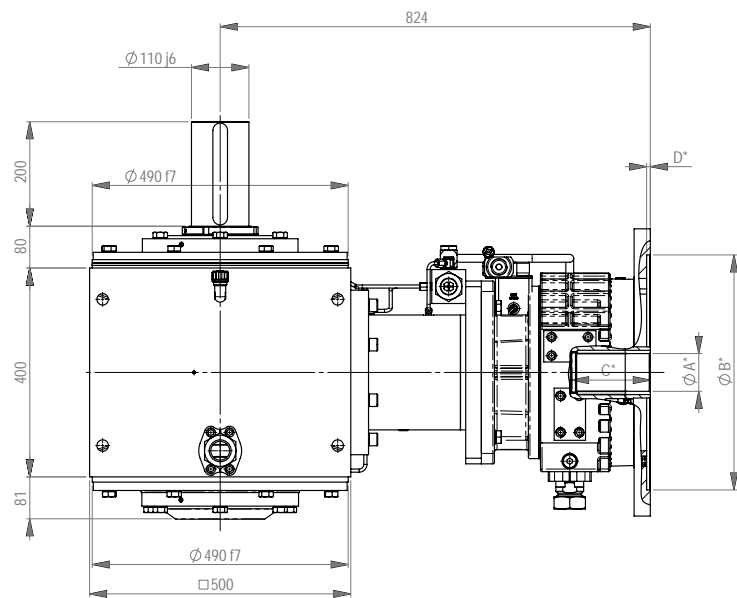
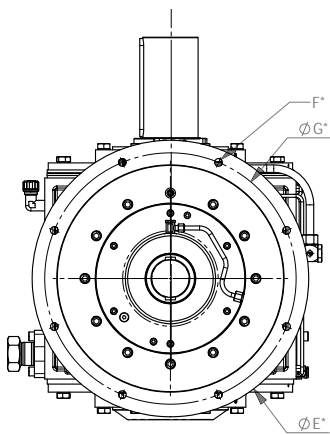
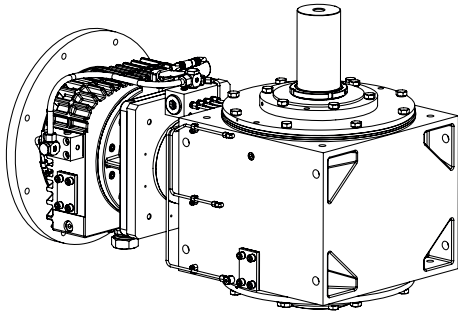
MSR 656		
i1		2.26
i2		8.66
i		2286
T2N	[Nm]	9000
N1B	[rpm]	4500
J1h	[Kg.mm²]	317000
J1l	[Kg.mm²]	60000
η	%	94
m	[kg]	750
Fr	[N]	75000

Additional Features

Oi		1"G
Of	L/min	18 (1,5 - 6 bars)
Oo		Tube 42mm

DIMENSIONS

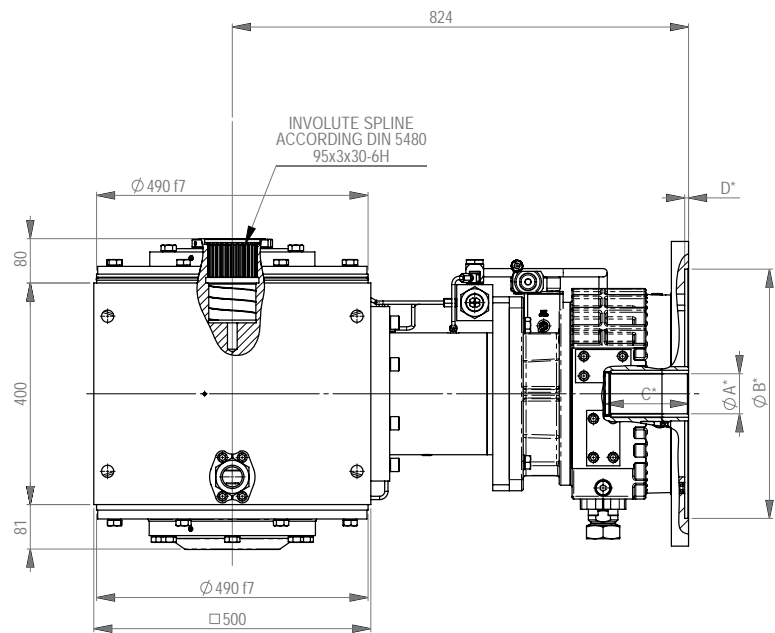
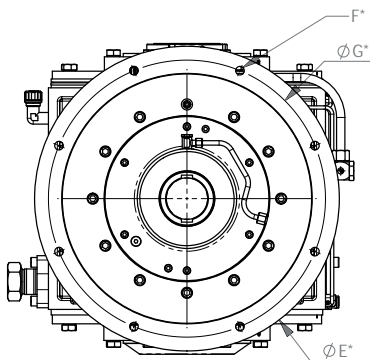
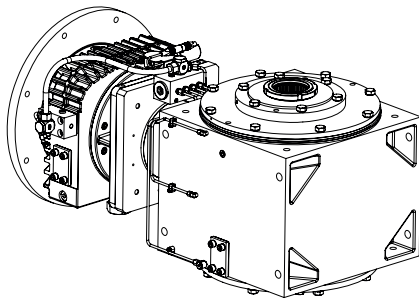
INPUT - TYPE A/F
OUTPUT - TYPE D



* A B C D E F G According to motor dimensions

DIMENSIONS

INPUT - TYPE A/F
OUTPUT - TYPE H



* A B C D E F G According to motor dimensions

MSR *SIZE 660*



PERFORMANCES

Unit codification

High speed ratio

Low speed ratio

Ratio code

Nominal output torque (S1-100%)

Maximum input speed

Inertia @ input (high speed ratio)

Inertia @ input (low speed ratio)

Efficiency at rated input speed

Weight

Max radial load output
(@131rpm output, in the middle of the shaft)

Paint RAL 2002 & RAL 7016

Speed changer: voltage 24V DC,
switching current 200mA at 70°C, cable length 5m

Key ways following NFE 22.175

Motor must follow DIN 42955 class R

Oil inlet interface

Oil flow rate (input pressure)

Oil outlet interface

Technical Features

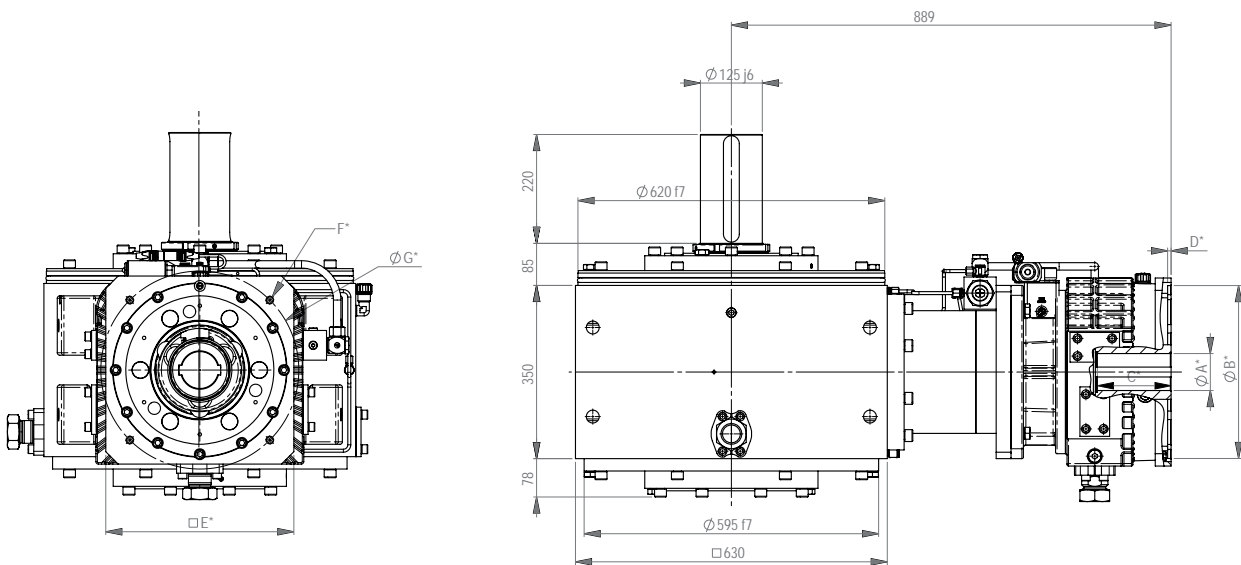
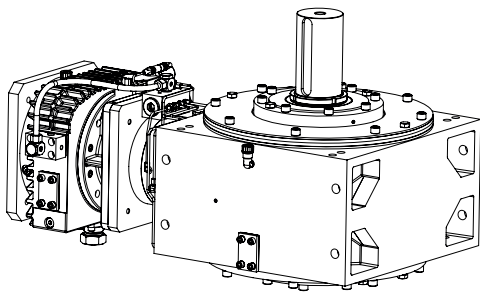
			MSR 666
i1			3.00
i2			11.49
i			3012
T2N	[Nm]		12000
N1B	[rpm]		3500
J1h	[Kg.mm²]		480000
J1l	[Kg.mm²]		69000
η	%		94
m	[kg]		1400
Fr	[N]		85000

Additional Features

Oi			1"G
Of	[l/min]		19 (1,5 - 6 bars)
Oo			Tube 42mm

DIMENSIONS

INPUT - TYPE A/F
OUTPUT - TYPE D



* A B C D E F G According to motor dimensions



Further **information** available on request.



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