



HYDRAULIC COMPONENTS
HYDROSTATIC TRANSMISSIONS
GEARBOXES - ACCESSORIES

Certified Company ISO 9001 - 14001



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Reduction Gearboxes



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General Information**Reduction Gearboxes**

They are used for installing hydraulic motors on the self-propelled farm machinery, earth moving machines and marine equipments.

Reduced max. output speed is 200 n/min.

Therefore the working speed of the hydraulic motors is to be adjusted that input speed is not higher than 3000 n/min.

GEARBOX:

Made in alluminium alloy or cast iron with high mechanical resistance.

GEARS:

In compliance with ISO - DIN 3990-80 standard.

Made in treated steel UNI 18 Ni Cr Mo 5 with properly shaved teeth.

SHAFT:

Made in treated steel UNI 16 Cr Ni 4 and key coupled with gears.

TORQUE:

The torque mentioned in technical charts refer to continuous duty.

For intermittent duty the torque may be higher of 20%.

LUBRICATION:

Use oil SAE 90 to ensure proper running and long life of the unit.

Check the oil level via the level gauge every 50 hours.

Change the oil first after 100-150 hours.

WORKING TEMPERATURE:

The working temperature should not exceed 120°C under continuous duty.

HYDRAULIC MOTORS INSTALLATION:

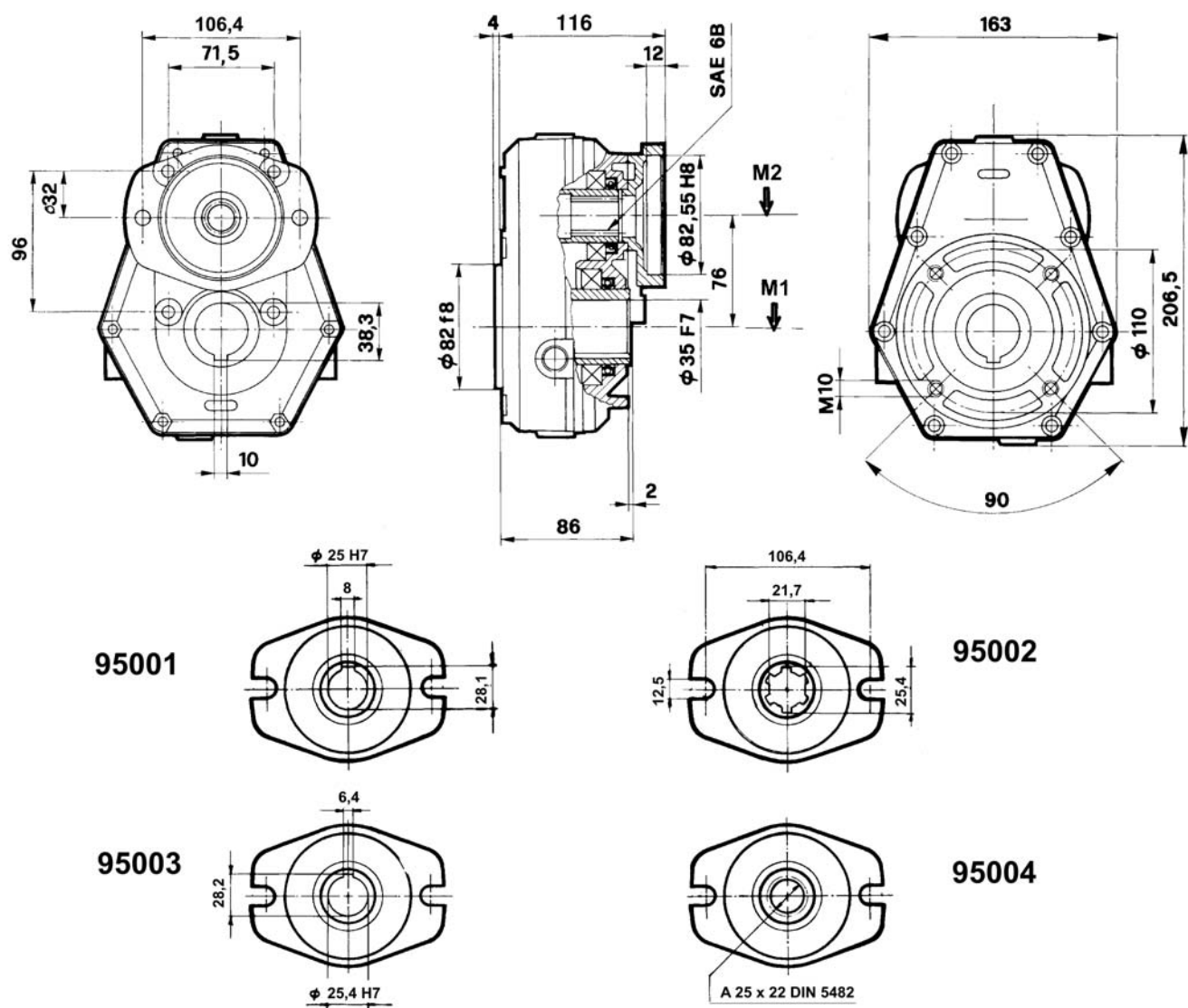
The installation of the hydraulic motors on the gearboxes is a particular operation because the user may purchase motors with cylindrical shaft (thus requiring key) or spline shaft in compliance with SAE or DIN standards (in this case coupling is direct).

Please contact our Tech. Dpt. for special components with working characteristics different from those mentioned in this catalogue.

General Information
Reduction Gearboxes
Product Overview

REDUCTION GEARBOX SERIES	POWER kw	REDUCTION RATIO N1 /N2	INLET FLANGE	INLET SHAFT	OUTLET SHAFT	HOUSING
95000	10	1,5 - 2 - 2,5 3 - 3,5 - 3,8	SAE A	SAE 6 B Ø 25 Ø 25,4 25x22 DIN 5482	Female Ø 35	Alluminium
96000	20	1,5 - 2 - 2,5 3 - 3,5 - 3,8	SAE A SAE B	SAE A Ø 25 Ø 25,4 25x22 DIN 5482	Female Ø 35	Alluminium
97500	18	1,5 - 2 - 2,5 3 - 3,5 - 3,8	SAE A	SAE A Ø 25 Ø 25,4 25x22 DIN 5482	Female Ø 35	Cast Iron
97003	37	2 3 3,5	SAE A SAE B	SAE A Ø 25 Ø 25,4 35x31 DIN 5482	Female Ø 35	Cast Iron
97001	68	2 2,5 3	SAE A	Ø 25	Female Ø 35	Cast Iron
97001/13 97001/15	68	2 2,5 3	SAE B	Z 13 SAE 16/32 Z 15 SAE 16/32	Female Ø 35	Cast Iron

Reduction Gearboxes Series 95000 - 10 kW
Inlet motor flange SAE A
INSTALLATION DRAWING



Case oil capacity: lt.0,220

OUTPUT TORQUE M1 daNm	INPUT TORQUE M2 daNm	OUTPUT SPEED N 1 n/min.	INPUT SPEED N 2 n/min.	RATIO N2 / N1	POWER kW	MASS kg
19,6	13,1	200	300	1,5	10	5
17,6	8,8	200	400	2	10	5
19,2	7,7	200	500	2,5	10	5
20,1	6,7	200	600	3	10	5
21,4	6,3	200	700	3,5	10	5
18,6	4,9	200	760	3,8	10	5

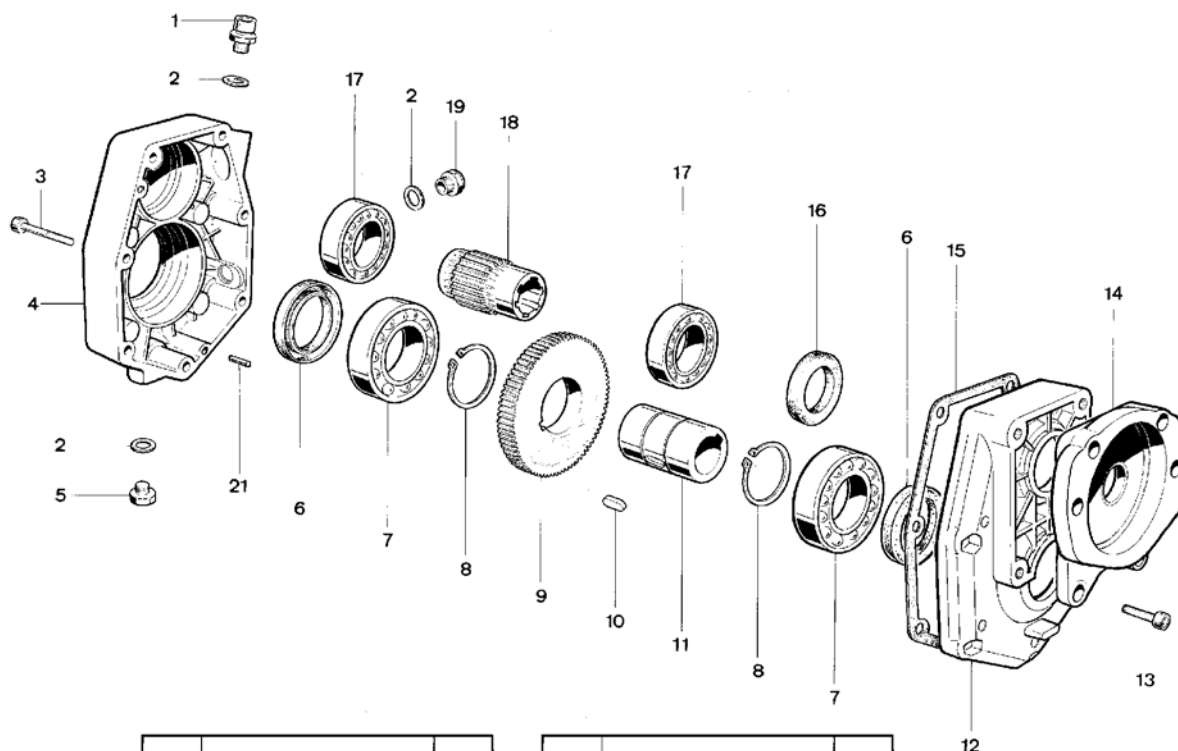
Reduction Gearboxes Series 95000 - 10 kW

Inlet motor flange SAE A

ORDER CODE

9500	1	-	1	-																																											
Reduction Gearbox Series 95000 Inlet motor flange SAE A				Special versions																																											
Inlet motor shaft 1 - Parallel shaft 25 mm. with key 2 - Splined shaft SAE 6B 3 - Parallel shaft 25,4 mm. with key 4 - Splined shaft A 25 x 22 DIN 5482																																															
Gear Ratio N2 / N1 <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Code - Ratio</th> <th style="text-align: left;">Shaft</th> <th style="text-align: center;">1</th> <th style="text-align: center;">2</th> <th style="text-align: center;">3</th> <th style="text-align: center;">4</th> </tr> </thead> <tbody> <tr> <td>1 - 1,5</td> <td></td> <td style="text-align: center;">x</td> <td style="text-align: center;">x</td> <td style="text-align: center;">x</td> <td style="text-align: center;">x</td> </tr> <tr> <td>2 - 2</td> <td></td> <td style="text-align: center;">x</td> <td style="text-align: center;">x</td> <td style="text-align: center;">x</td> <td style="text-align: center;">x</td> </tr> <tr> <td>3 - 2,5</td> <td></td> <td style="text-align: center;">x</td> <td style="text-align: center;">x</td> <td style="text-align: center;">x</td> <td style="text-align: center;">x</td> </tr> <tr> <td>4 - 3</td> <td></td> <td style="text-align: center;">x</td> <td style="text-align: center;">x</td> <td style="text-align: center;">x</td> <td style="text-align: center;">x</td> </tr> <tr> <td>5 - 3,5</td> <td></td> <td style="text-align: center;">x</td> <td style="text-align: center;">x</td> <td style="text-align: center;">x</td> <td style="text-align: center;">x</td> </tr> <tr> <td>6 - 3,8</td> <td></td> <td style="text-align: center;">x</td> <td style="text-align: center;">x</td> <td style="text-align: center;">x</td> <td style="text-align: center;">x</td> </tr> </tbody> </table> blank - not available x - Available						Code - Ratio	Shaft	1	2	3	4	1 - 1,5		x	x	x	x	2 - 2		x	x	x	x	3 - 2,5		x	x	x	x	4 - 3		x	x	x	x	5 - 3,5		x	x	x	x	6 - 3,8		x	x	x	x
Code - Ratio	Shaft	1	2	3	4																																										
1 - 1,5		x	x	x	x																																										
2 - 2		x	x	x	x																																										
3 - 2,5		x	x	x	x																																										
4 - 3		x	x	x	x																																										
5 - 3,5		x	x	x	x																																										
6 - 3,8		x	x	x	x																																										

SPARE PARTS LIST



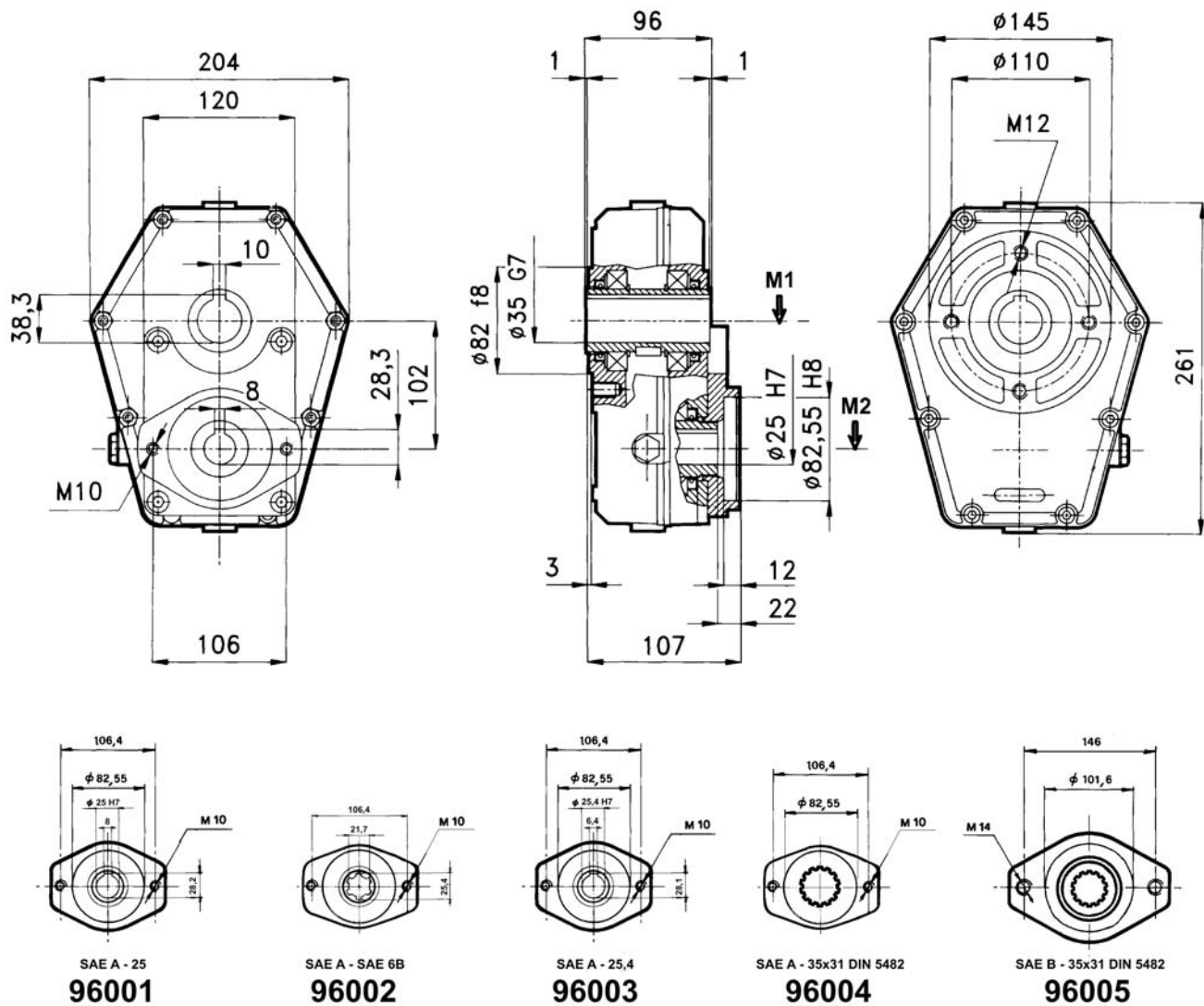
REF.	DESCRIPTION	Q.ty
1	Oil breather plug 3/8"	1
2	Gasket	3
3	Socket capscrew M6x50	8
4	Housing	1
5	Oil drain plug 3/8"	1
6	Sealing ring 50x65x8	2
7	Bearing type 6010	2
8	Snap ring $\varnothing$ 50	2
9	Ring gear	1
10	Key 12x20	1

REF.	DESCRIPTION	Q.ty
11	Hollow shaft $\varnothing$ 35	1
12	Cover	1
13	Screw M8x20	4
14	Flange SAE A	1
15	Gasket	1
16	Sealing ring 35x52x7	1
17	Bearing 6007	2
18	Pinion gear	1
19	Oil level plug 3/8"	1
20	Nut M6	8
21	Peg 5x16	2

Reduction Gearboxes Series 96000 - 20 kW

Inlet motor flange SAE A - SAE B

INSTALLATION DRAWING



Case oil capacity: lt 0,350

OUTPUT TORQUE M1 daNm	INPUT TORQUE M2 daNm	OUTPUT SPEED N1 n/min.	INPUT SPEED N 2 n/min.	RATIO N 2 / N 1	POWER kW	MASS kg
48	32	200	300	1,5	20	8,5
48,5	24,2	200	400	2	20	8,5
52	20,8	200	500	2,5	20	8,5
57	19	200	600	3	20	8,5
53	15,1	200	680	3,5	20	8,5
52,5	13,8	200	760	3,8	20	8,5

Reduction Gearboxes Series 96000 - 20 kW

Inlet motor flange SAE A - SAE B

ORDER CODE

9600

1

-

1

-

Reduction Gearbox Series 96000
Inlet motor flange SAE A - SAE B

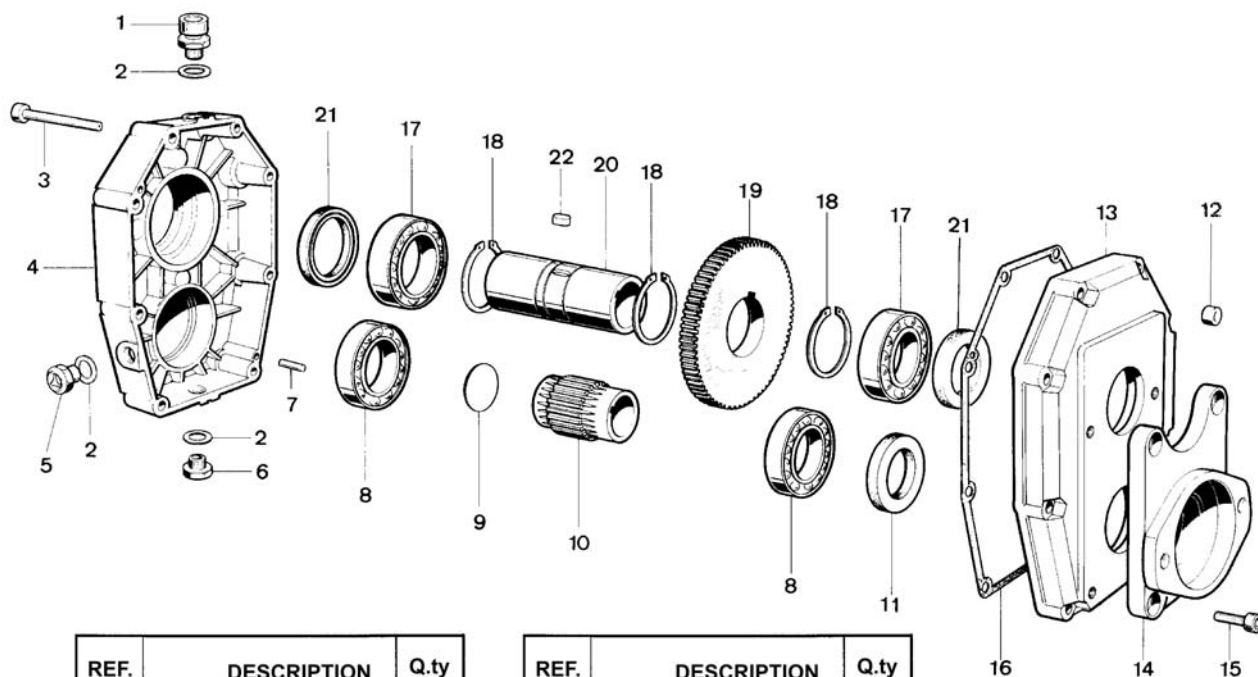
Inlet motor flange and shaft
1 - Flange SAE A - Parallel shaft 25 mm. with key
2 - Flange SAE A - Splined shaft SAE 6B
3 - Flange SAE A - Parallel shaft 25,4 mm. with key
4 - Flange SAE A - Splined shaft 35x31 DIN 5482
5 - Flange SAE B - Splined shaft 35x31 DIN 5482

Special versions

Gear Ratio N2 / N1

Code - Ratio	Shaft	1	2	3	4	5
1 - 1,5		x	x	x	x	x
2 - 2		x	x	x	x	x
3 - 2,5		x	x	x	x	x
4 - 3		x	x	x	x	x
5 - 3,5		x	x	x	x	x
6 - 3,8		x	x	x	x	x
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SPARE PARTS LIST

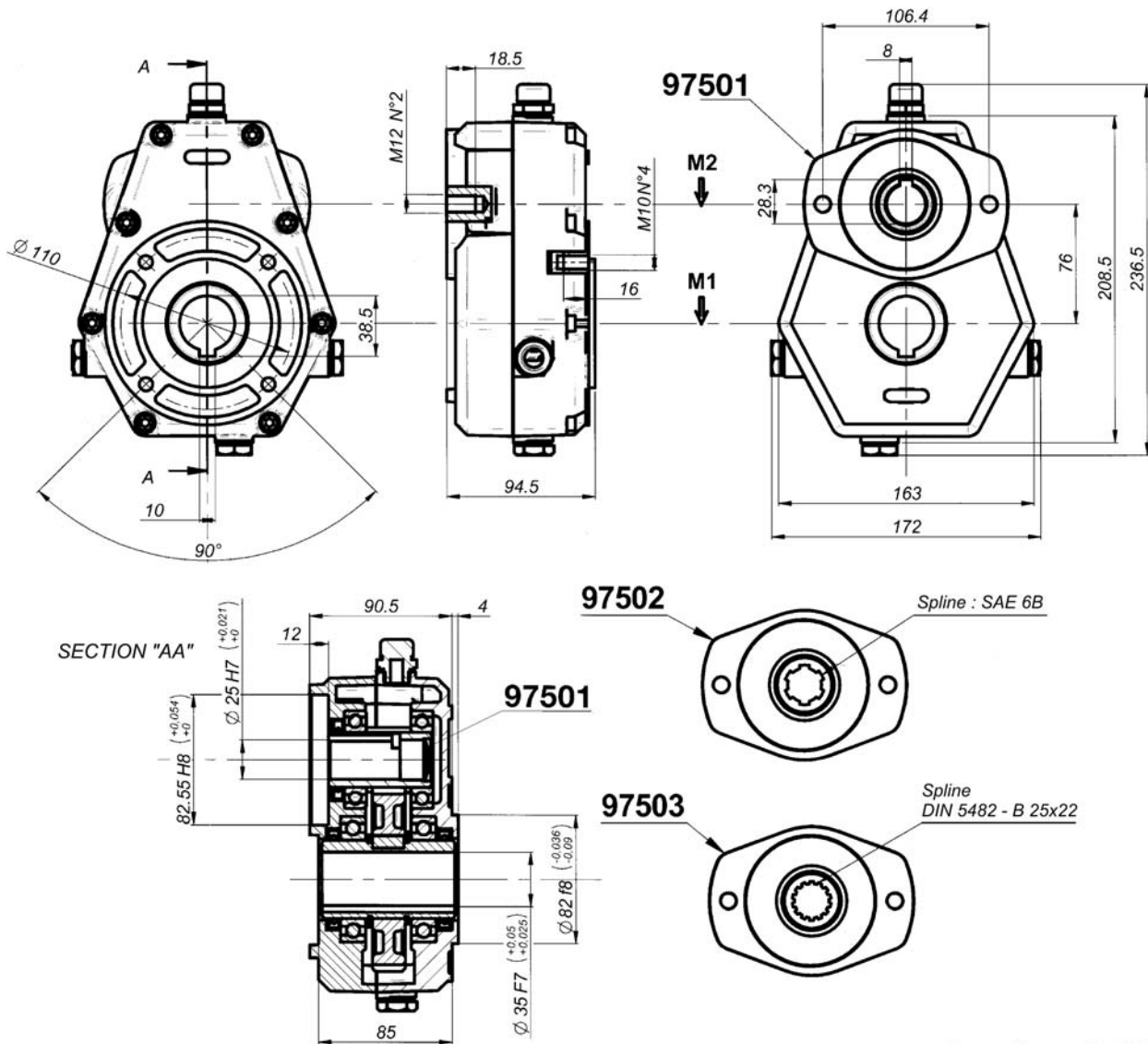


REF.	DESCRIPTION	Q.ty
1	Oil breather plug 3/8"	1
2	Gasket	3
3	Socket capscrew M8x70	8
4	Housing	1
5	Oil level plug 3/8"	1
6	Oil drain plug 3/8"	1
7	Peg 5x16	2
8	Bearing type 6009	2
9	Cap D.37 DIN 470	1
10	Pinion gear	1
11	Sealing ring 45x65x8	1

REF.	DESCRIPTION	Q.ty
12	Nut M8	8
13	Cover	1
14	Flange SAE A	1
15	Screw M10x20	4
16	Gasket	1
17	Bearing type 6010	2
18	Snap ring $\varnothing$ 50	2
19	Ring gear	1
20	Hollow shaft $\varnothing$ 35	1
21	Sealing ring $\varnothing$ 50x65x8	2
22	Key 12x25	1

Reduction Gearboxes Series 97500 - Cast Iron Housing - 18 kW Inlet motor flange SAE A

INSTALLATION DRAWING



Case oil capacity: 0,220

OUTPUT TORQUE M1 daNm	INPUT TORQUE M2 daNm	OUTPUT SPEED N 1 n/min.	INPUT SPEED N 2 n/min.	RATIO N2 / N1	POWER kW	MASS kg
24,7	16,5	200	300	1,5	18	10
32,4	16,2	200	400	2	18	10
38,7	15,5	200	500	2,5	18	10
24,0	8,0	200	600	3	18	10
25,5	7,5	200	680	3,5	18	10
26,6	7,0	200	760	3,8	18	10

Reduction Gearboxes Series 97500 - Cast Iron Housing - 18 kW

Inlet motor flange SAE A

ORDER CODE

9750

1

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1

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Reduction Gearbox Series 97500
Inlet motor flange SAE A
Cast Iron Housing

Special versions

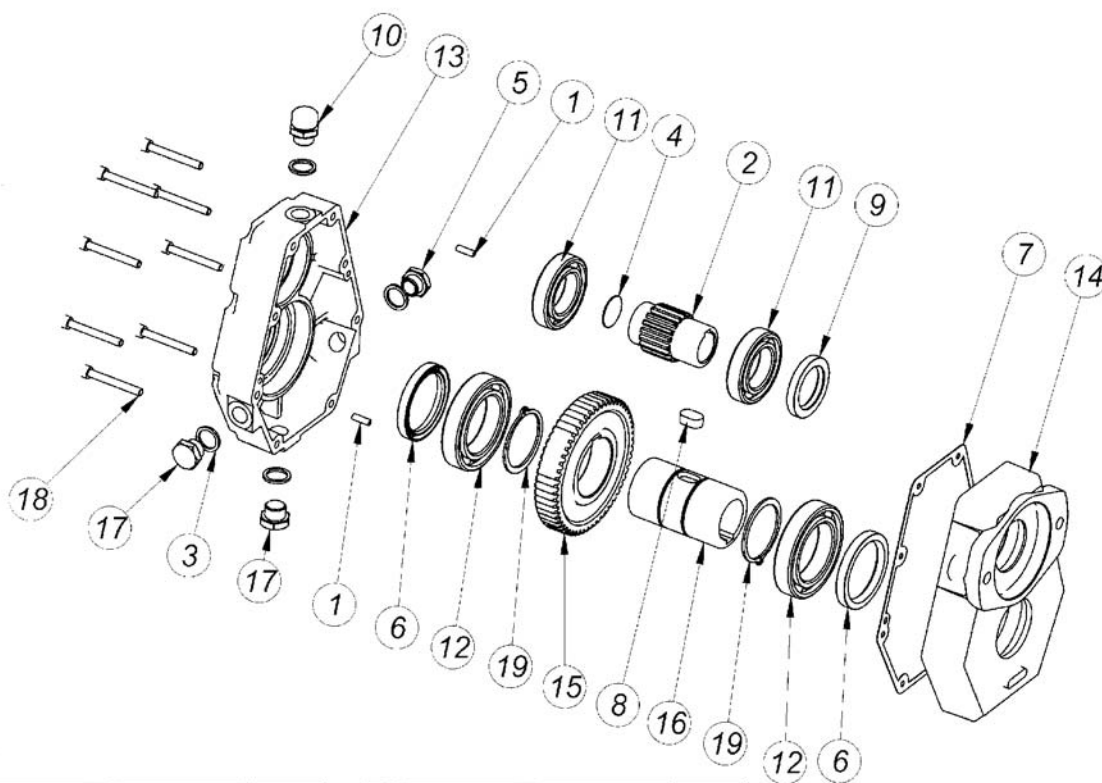
Inlet motor shaft

1 - Parallel shaft 25 mm. with key
2 - Splined shaft SAE 6B
3 - Splined shaft B 25x22 - DIN 5482

Gear Ratio N2 / N1

Code - Ratio	Shaft	1	2	3
1 - 1,5		x	x	x
2 - 2			x	x
3 - 2,5		x	x	x
4 - 3		x	x	x
5 - 3,5			x	x
6 - 3,8			x	x
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SPARE PARTS LIST

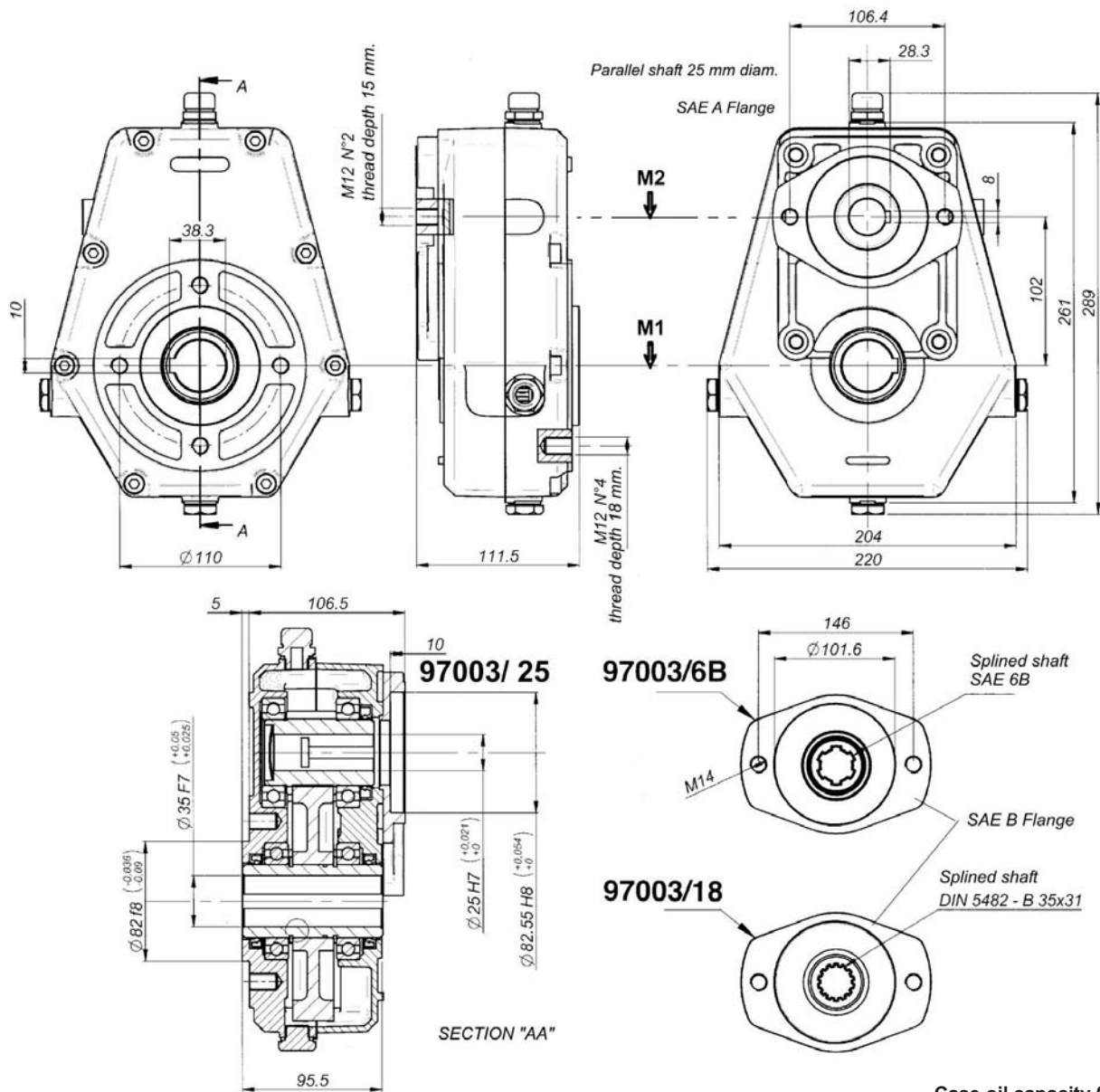


Ref.	DESCRIPTION	Q.ty
1	Peg 5x16	2
2	Pinion gear	1
3	Gasket	4
4	Cap D.27 DIN 470	1
5	Oil drain plug 3/8"	1
6	Sealing ring 50x65x8	2
7	Gasket	1
8	Key 12x20	1
9	Sealing ring 35x52x7	1
10	Oil breather plug 3/8"	1

Ref.	DESCRIPTION	Q.ty
11	Bearing 6007	2
12	Bearing 6010	2
13	Housing	1
14	Cover	1
15	Ring gear	1
16	Hollow shaft d.35	1
17	Oil drain plug	2
18	Socket UNI 5931 M6x45	8
19	Snap ring d.50	2

Reduction Gearboxes Series 97003 - Cast Iron Housing - 37 kW Inlet motor flange SAE A - SAE B

INSTALLATION DRAWING



Case oil capacity 0,220

OUTLET TORQUE M1 daNm	INLET TORQUE M2 daNm	OUTLET SPEED N1 n/min.	INLET SPEED N2 n/min.	RATIO N.2 / N.1	POWER Kw	MASS Kg
66	44	200	300	1,5	37	14,5
66	33	200	400	2	37	14,5
66	26,4	200	500	2,5	37	14,5
66	22	200	600	3	37	14,5
66	18	200	680	3,5	35	14,5
66	16,6	200	760	3,8	35	14,5

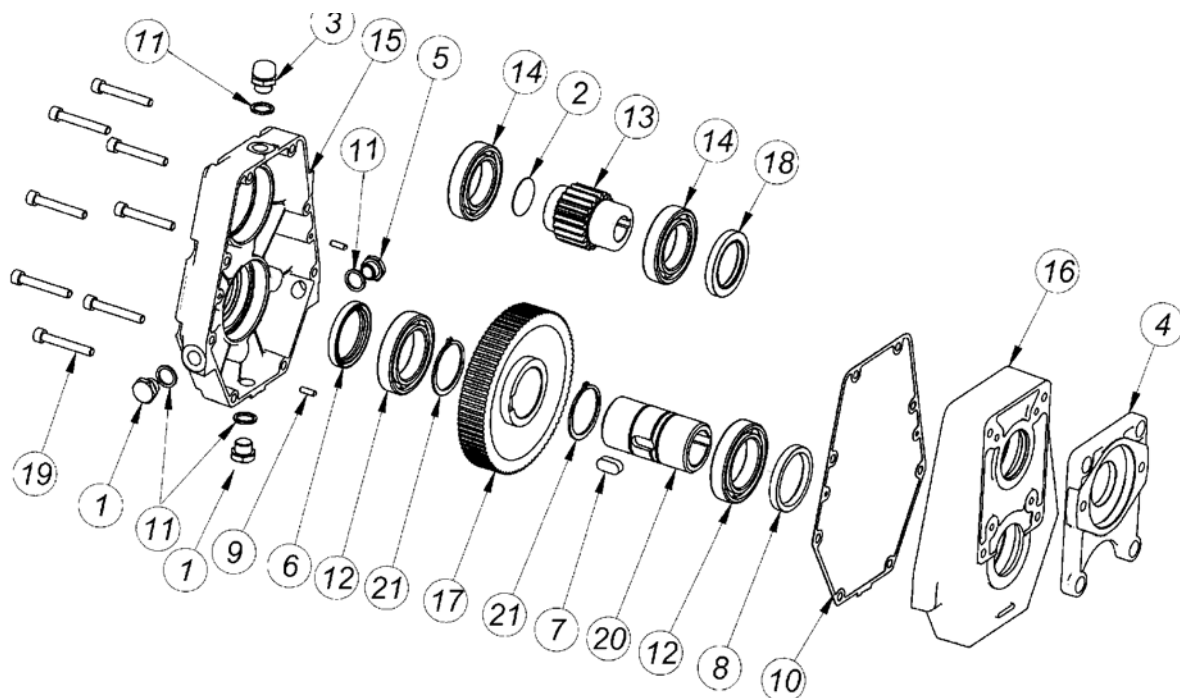
Reduction Gearboxes Series 97003 - Cast Iron Housing - 37 kW

Inlet motor flange SAE A - SAE B

ORDER CODE

97003	6B	-	2	-																																														
Reduction Gearbox Series 97003 Inlet motor flange SAE A -SAE B Cast Iron Housing				Special versions																																														
Inlet motor shaft 25 - Parallel shaft 25 mm. with key - Flange SAE A 6B - Splined SAE 6B - Flange SAE B 18SB - Splined B 35-31 DIN 5482 - Flange SAE B				<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="5">Gear Ratio N2 / N1</th> </tr> <tr> <th>Code - Ratio</th> <th>Shaft</th> <th>25</th> <th>6B</th> <th>18SB</th> </tr> </thead> <tbody> <tr> <td>1 -</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2 - 2</td> <td></td> <td>x</td> <td>x</td> <td>x</td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4 - 3</td> <td></td> <td>x</td> <td>x</td> <td>x</td> </tr> <tr> <td>5 - 3,5</td> <td></td> <td></td> <td></td> <td>x</td> </tr> <tr> <td>6</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2">blank - not available</td> <td colspan="3">x - Available</td> </tr> </tbody> </table>		Gear Ratio N2 / N1					Code - Ratio	Shaft	25	6B	18SB	1 -					2 - 2		x	x	x	3					4 - 3		x	x	x	5 - 3,5				x	6					blank - not available		x - Available		
Gear Ratio N2 / N1																																																		
Code - Ratio	Shaft	25	6B	18SB																																														
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2 - 2		x	x	x																																														
3																																																		
4 - 3		x	x	x																																														
5 - 3,5				x																																														
6																																																		
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SPARE PARTS LIST

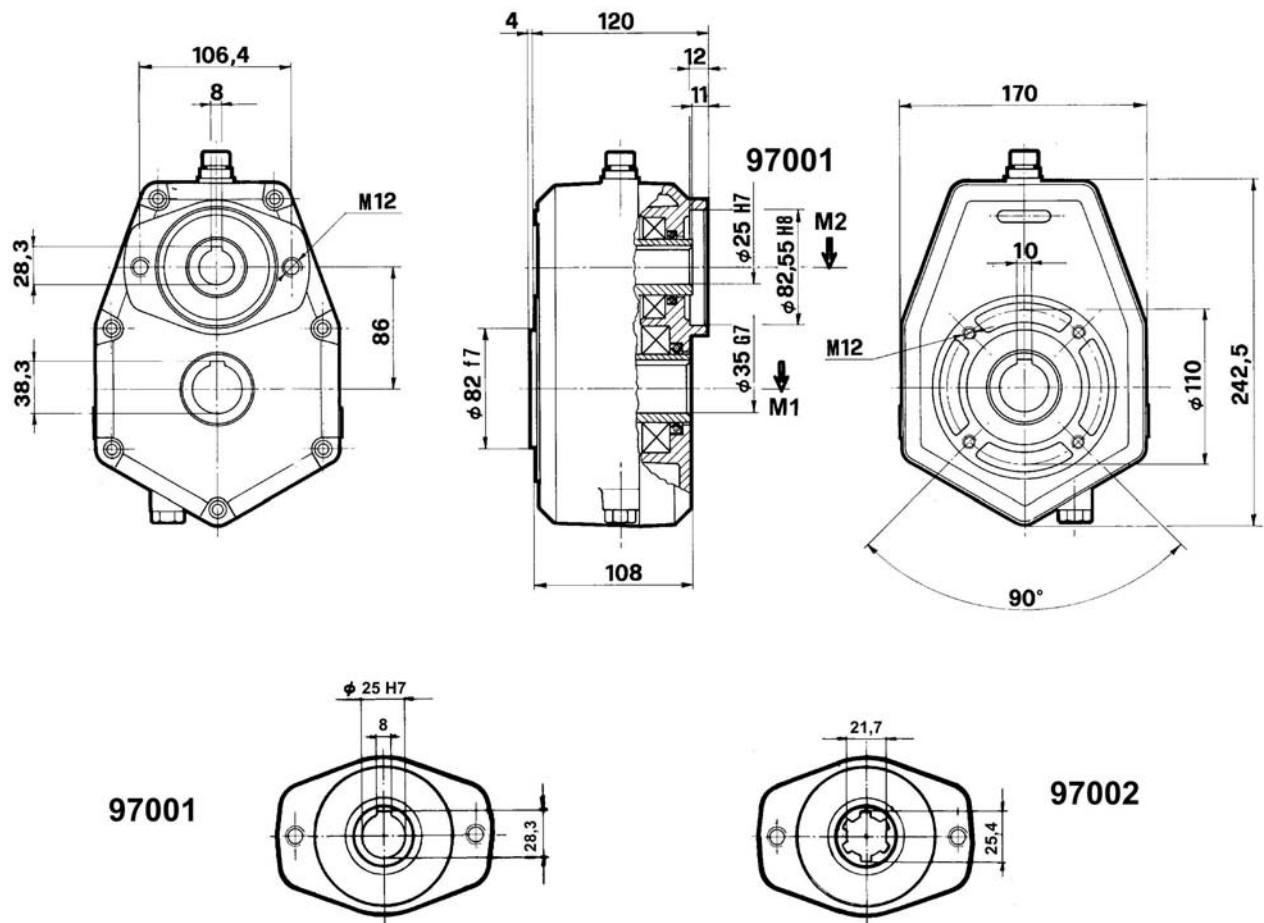


Ref.	DESCRIPTION	Q.ty
1	Oil drain plug	2
2	Cap D.37 DIN 470	1
3	Oil breather plug 3/8"	1
4	Flange SAE A , AI	1
5	Oil drain plug 3/8"	1
6	Sealing ring 50x65x8	1
7	Key 12x25	1
8	Sealing ring 50x65x8	1
9	Peg 5X20	2
10	Gasket	1

Ref.	DESCRIPTION	Q.ty
11	Gasket	4
12	Bearing 6010	2
13	Pinion gear	1
14	Bearing 6009	2
15	Housing cast iron	1
16	Cover cast iron	1
17	Ring gear	1
18	Sealing ring 45x65x8	1
19	Socket capscREW M8x55	8
20	Hollow shaft ø 35	1
21	Snap ring d.50	2

Reduction Gearboxes Series 97001 - Cast Iron Housing - 68 kW
Inlet motor flange SAE A

INSTALLATION DRAWING



Case oil capacity: lt.0,220

OUTPUT TORQUE M1 daNm	INPUT TORQUE M2 daNm	OUTPUT SPEED N 1 n/min.	INPUT SPEED N 2 n/min.	RATIO N2 / N1	POWER kW	MASS kg
82.5	55	200	300	1.5	68	16
98	49	200	400	2	68	16
112.5	45	200	500	2.5	68	16
132	44	200	600	3	68	16
122.5	35	200	680	3.5	68	16
110.2	29	200	760	3.8	68	16

Reduction Gearboxes Series 97001 - Cast Iron Housing - 68 kW

Inlet motor flange SAE A

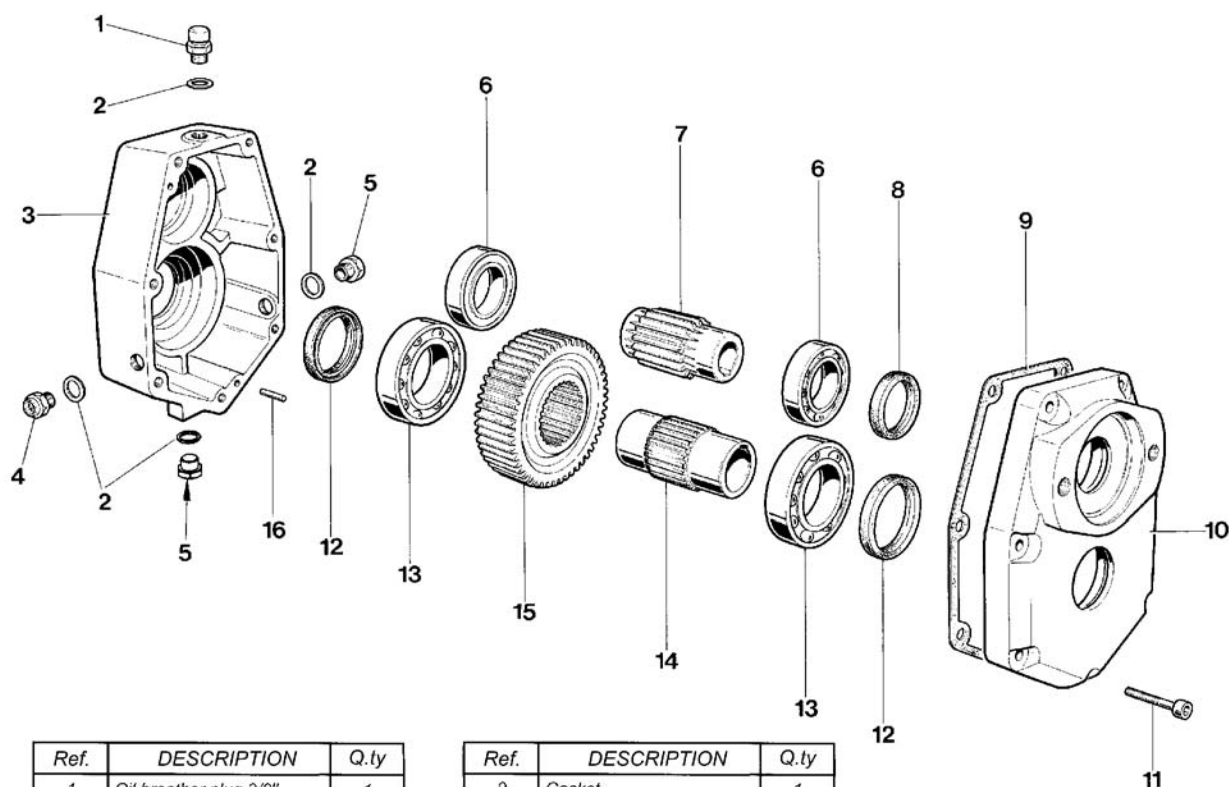
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9700 1 - 1 -	Reduction Gearbox Series 97000 Inlet motor flange SAE A Cast Iron Housing Special versions Gear Ratio N2 / N1 <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Code - Ratio</th> <th style="text-align: left;">Shaft</th> <th style="text-align: center;">1</th> <th style="text-align: center;">2</th> </tr> </thead> <tbody> <tr> <td>1 - 1,5</td> <td></td> <td style="text-align: center;">x</td> <td style="text-align: center;">x</td> </tr> <tr> <td>2 - 2</td> <td></td> <td style="text-align: center;">x</td> <td style="text-align: center;">x</td> </tr> <tr> <td>3 - 2,5</td> <td></td> <td style="text-align: center;">x</td> <td style="text-align: center;">x</td> </tr> <tr> <td>4 - 3</td> <td></td> <td style="text-align: center;">x</td> <td style="text-align: center;">x</td> </tr> <tr> <td>5 - 3,5</td> <td></td> <td style="text-align: center;">x</td> <td style="text-align: center;">x</td> </tr> <tr> <td>6 - 3,8</td> <td></td> <td style="text-align: center;">x</td> <td style="text-align: center;">x</td> </tr> <tr> <td>blank - not available</td> <td></td> <td colspan="2" style="text-align: center;">x - Available</td> </tr> </tbody> </table>	Code - Ratio	Shaft	1	2	1 - 1,5		x	x	2 - 2		x	x	3 - 2,5		x	x	4 - 3		x	x	5 - 3,5		x	x	6 - 3,8		x	x	blank - not available		x - Available	
Code - Ratio	Shaft	1	2																														
1 - 1,5		x	x																														
2 - 2		x	x																														
3 - 2,5		x	x																														
4 - 3		x	x																														
5 - 3,5		x	x																														
6 - 3,8		x	x																														
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Inlet motor shaft

 1 - Parallel shaft 25 mm. with key
 2 - Splined shaft SAE 6B

SPARE PARTS LIST

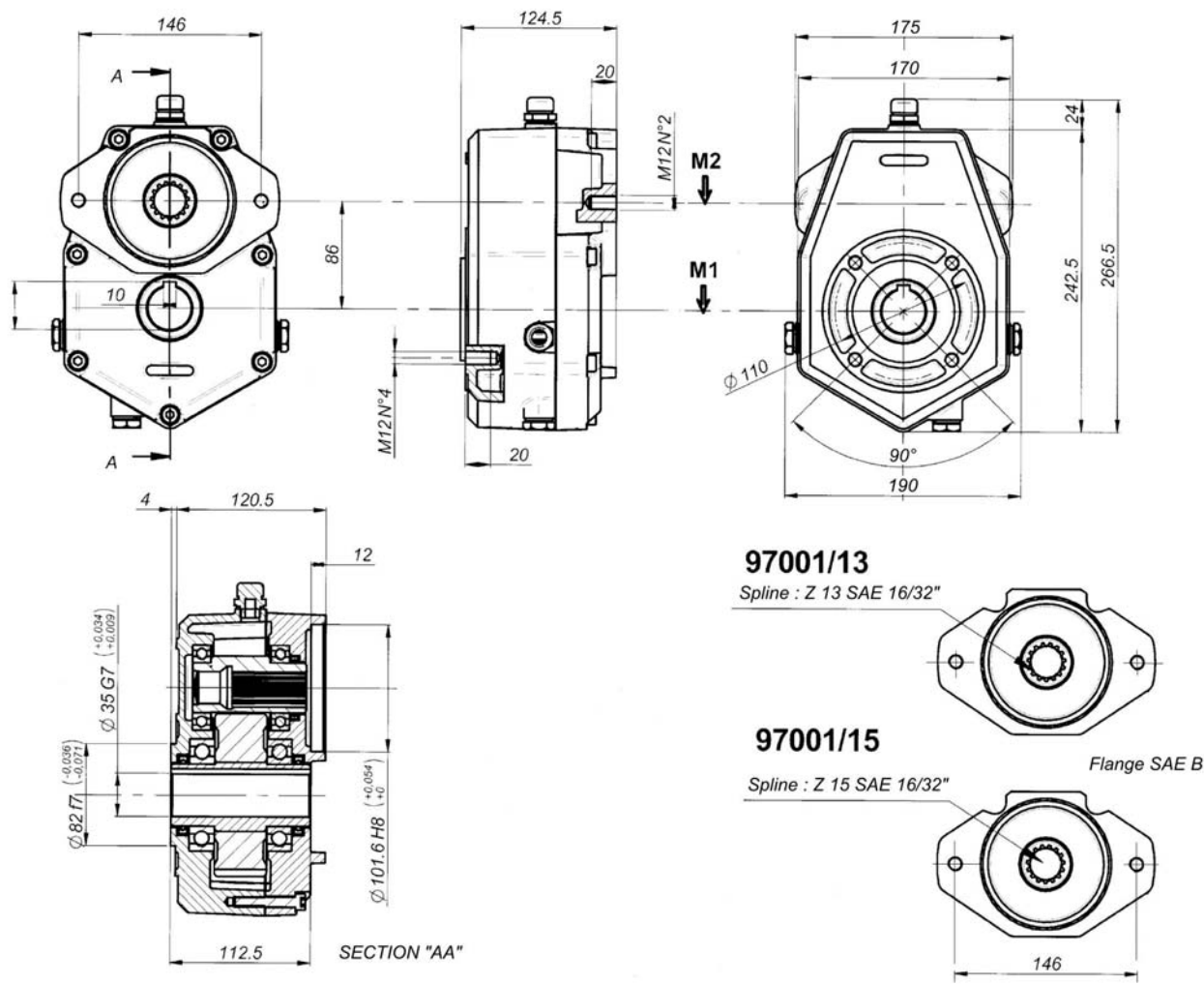


Ref.	DESCRIPTION	Q.ty
1	Oil breather plug 3/8"	1
2	Gasket	4
3	Housing	1
4	Oil drain plug 3/8"	1
5	Oil drain plug	2
6	Bearing 6008	2
7	Pinion gear	1
8	Sealing ring 40x52x7	1
9	Gasket	1

Ref.	DESCRIPTION	Q.ty
9	Gasket	1
10	Cover SAE A	1
11	Socket capscREW M8x50	7
12	Sealing ring 50x65x8	2
13	Bearing 6210	2
14	Hollow shaft d.35	1
15	Ring gear	1
16	Peg 5X16	2

Reduction Gearboxes Series 97001/13 - 97001/15
Cast Iron Housing - 68 kW
Inlet motor flange SAE B

INSTALLATION DRAWING



OUTPUT TORQUE M1 daNm	INPUT TORQUE M2 daNm	OUTPUT SPEED N. 1 n/min.	INPUT SPEED N. 2 n.min.	RATIO N.2/N.1	POWER Kw	MASS Kg
98	49	200	400	2	68	16
112,5	45	200	500	2,5	68	16
132	44	200	600	3	68	16

Reduction Gearboxes Series 97001/13 - 97001/15

Cast Iron Housing - 68 kW

Inlet motor flange SAE B

ORDER CODE

9700113 - 2 -

Reduction Gearbox Series 97001
Inlet motor flange SAE B
Cast Iron Housing

Special versions

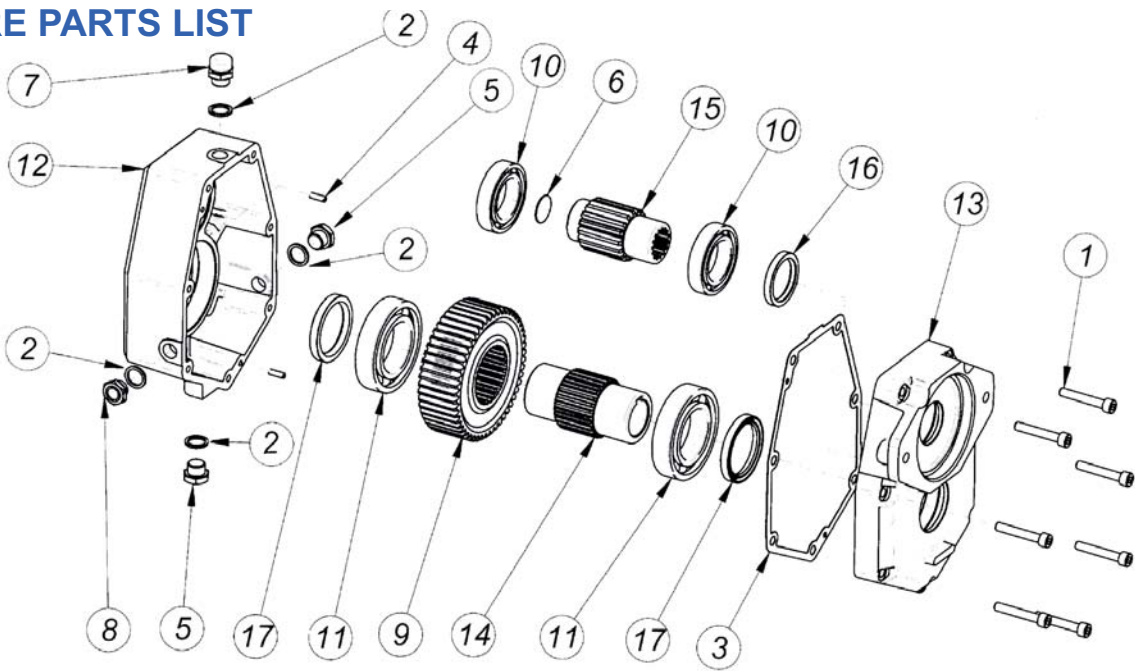
Inlet motor shaft

13 - Splined shaft Z13 SAE 16/32"
15 - Splined shaft Z15 SAE 16/32"

Gear Ratio N2 / N1

Code - Ratio	Shaft	13	15
2 - 2		x	x
3 - 2,5		x	x
4 - 3		x	x
blank - not available		x	x

SPARE PARTS LIST



Ref.	DESCRIPTION	Q.ty
1	Socket capscREW M8x50	7
2	Gasket	4
3	Gasket	1
4	Peg 5X16	2
5	Oil drain plug	2
6	Cap D.27 DIN 470	1
7	Oil breather plug 3/8"	1
8	Oil drain plug 3/8"	1
9	Ring gear	1
10	Bearing 6008	2
11	Bearing 6210	2
12	Housing	1
13	Cover SAE B	1
14	Hollow shaft d.35	1
15	Pinion gear	1
16	Sealing ring 40x52x7	1
17	Sealing ring 50x65x8	2

As HANSA-TMP has a very extensive range of products and some products have a variety of applications, the information supplied may often only apply to specific situations.

If the catalogue does not supply all the information required, please contact HANSA-TMP.

In order to provide a comprehensive reply to queries we may require specific data regarding the proposed application.

Whilst every reasonable endeavour has been made to ensure accuracy, this publication cannot be considered to represent part of any contract, whether expressed or implied.

The data in this catalogue refer to the standard product.

The policy of HANSA-TMP consists of a continuous improvement of its products. It reserves the right to change the specifications of the different products whenever necessary and without giving prior information.



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GEARBOXES - ACCESSORIES**

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