

Wilo-Atmos NHD



en Installation and operating instructions

Table of contents

1	Identification.....	6
1.1	Product data	6
1.2	Manufacturer	6
1.3	Product identification.....	7
1.3.1	Safety instructions	7
1.3.2	CE mark	7
1.3.3	Type plate	7
1.3.4	Type codes.....	8
1.3.5	Further data.....	9
2	About this manual/User instructions	10
2.1	Formats used for instructions	10
2.2	Formats used for lists.....	11
2.3	Pictograms	12
2.3.1	Mandatory sign	12
2.3.2	Warning signs.....	12
3	Safety instructions.....	14
3.1	How to use the product	14
3.1.1	Intended use.....	14
3.1.2	Inproper use	14
3.2	Risks associated with handling the pump Atmos NHD.....	15
3.3	Residual risks.....	15
3.4	Personal protective equipment.....	16
3.5	Obligation for the operator.....	17
3.6	Obligation for the staff	17
3.7	Qualification of the staff.....	18
3.7.1	Operator	18
3.7.2	Maintenance staff	19
3.7.3	Special staff.....	19
4	Product description	20
4.1	Overview	20
4.2	Versions	21
4.2.1	Type Atmos NHD 032-200 – Atmos NHD 050-200.....	21
4.2.2	Type Atmos NHD 065-200 – Atmos NHD 050-315.....	21
4.2.3	Type Atmos NHD 100-250 – Atmos NHD 125-400.....	22

Wilo-Atmos NHD	
4.2.4	Type Atmos NHD 200-250 – Atmos NHD 200-400.....22
4.2.5	Type Atmos NHD 250-400 – Atmos NHD 300-600.....23
4.3	Shaft sealing versions24
4.3.1	Mechanical seal M2.....24
4.3.2	Single Cartridge seal CAPI M424
4.3.3	Double Cartridge seal CMDS M5.....24
4.3.4	Gland packing rings.....25
4.3.5	Dynamic seal DS.....25
4.4	Technical data26
4.4.1	Dimensions and weight of the individual types26
4.4.2	General technical data.....28
4.4.3	Auxiliary and operating materials29
4.4.4	Volumetric range 1500 RPM30
4.4.5	Volumetric range 3000 RPM.....31
5	Transport and packaging.....32
5.1	Transport.....32
5.2	Before the transport32
5.3	Transport - loading/unloading.....33
5.3.1	Lifting proposal 133
5.3.2	Lifting proposal 2.....34
5.3.3	Lifting proposal 3.....35
6	Installation.....36
6.1	General assembly.....36
6.1.1	Foundation37
6.1.2	Piping38
6.1.3	Arrangement of the suction tank under the pump.....38
6.1.4	Suction and feed tanks above the pump38
6.1.5	Reducer.....38
6.1.6	Pressure line.....39
6.1.7	Piping shaft seal39
6.1.8	Electrical connection of the motor39
6.2	Dismantling and assembly.....40
6.2.1	Dismantling and assembly of the back pull-out unit.....40
6.2.2	Dismantling of the impeller.....42
6.2.3	Replacement of the impeller and frame42
6.2.4	Dismantling and assembly of the dynamic seal43
6.2.5	Dismantling and assembly of the mechanical seal45
6.2.6	Dismantling and assembly of the soft packing.....47

Wilo-Atmos NHD	
6.2.7	Dismantling of the bearing housing49
7	Commissioning51
8	Control and Operation52
8.1	Switching-on the pump52
8.1.1	Checks during and after commissioning52
8.1.2	Noise level53
8.2	Switching-off the pump53
9	Servicing54
9.1	Customer service55
9.2	Maintenance56
9.3	Maintenance intervals57
9.3.1	Seals57
9.3.2	Bearing lubrication and temperature57
9.3.3	Lubricants58
9.3.4	Oil lubrication58
9.3.5	Grease lubrication59
9.3.6	Lubrication intervals60
9.3.7	Lubrication intervals for grease60
9.3.8	Oil change intervals61
9.4	Cleaning61
10	Fault finding and troubleshooting62
10.1	Elimination of faults63
11	Decommissioning66
11.1	Temporary decommissioning66
11.2	Storage after temporary decommissioning67
11.3	Final decommissioning68
12	Disposal69
13	Parts list70
13.1.1	Storage of spare parts73
14	Compatibility list74
15	Sealing water demand and sealing water pressure76
16	Supplier documentation77
17	Instruction log78
18	Index79
19	EC declaration80

List of figures

Figure 1 Type Atmos NHD 032-200 – Atmos NHD 050-200.....	21
Figure 2 Type Atmos NHD 065-200 – Atmos NHD 050-315.....	21
Figure 3 Type Atmos NHD 100-250 – Atmos NHD 125-400.....	22
Figure 4 Type Atmos NHD 200-250 – Atmos NHD 200-400.....	22
Figure 5 Type Atmos NHD 250-400 – Atmos NHD 300-600.....	23
Figure 6 Mechanical seal M2.....	24
Figure 7 Dynamic seal DS.....	25
Figure 8 Volumetric range 1500 rpm, impeller: open.....	25
Figure 9 Volumetric range 3000 rpm, impeller: open.....	30
Figure 10 Lifting proposal 1.....	31
Figure 11 Lifting proposal 2.....	33
Figure 12 Lifting proposal 3.....	34
Figure 13 Eccentric reducer for inlet flange.....	35
Figure 14 Dismantling of back pull-out unit.....	38
Figure 15 Assembly of back pull-out unit.....	40
Figure 16 Dismantling of impeller.....	41
Figure 17 Dismantling of dynamic seal.....	42
Figure 18 Assembly of dynamic seal.....	43
Figure 19 Dismantling of mechanical seal.....	44
Figure 20 Assembly of mechanical seal.....	45
Figure 21 Dismantling of soft packing.....	46
Figure 22 Assembly of soft packing.....	47
Figure 23 Dismantling/assembly of bearing housing.....	48
Figure 24 Replacing bearings.....	49
Figure 25 Replacing bearings.....	50

1 Identification

1.1 Product data

Product name:	Atmos NHD
Product type:	Centrifugal pump
Year of construction:	2016

1.2 Manufacturer

WILO SE
Wilopark 1
44263 Dortmund
Germany
T +49 (0)231 4102-0
T +49 (0)231 4102-7363
wilo@wilo.com
www.wilo.com

1.3 Product identification

1.3.1 Safety instructions

The product is provided with safety information on residual risks, which cannot be avoided by design and construction.

The display method corresponds to the form shown below. For details and variants of the display, please refer to chapter 2.1 Formats used for information.

For the dangers and notes that are actually attached to the product, please refer to chapter 3.3 Residual risks.

Symbol	KEYWORD	Additional description
	DANGER	Description of the type and the source of dangers and potential consequences.

1.3.2 CE mark



The CE mark shown in the table below is attached to the product.

The sign illustrates the compliance of the product with all valid EC directives, which had been applicable for the product at the time of placing it on the market.

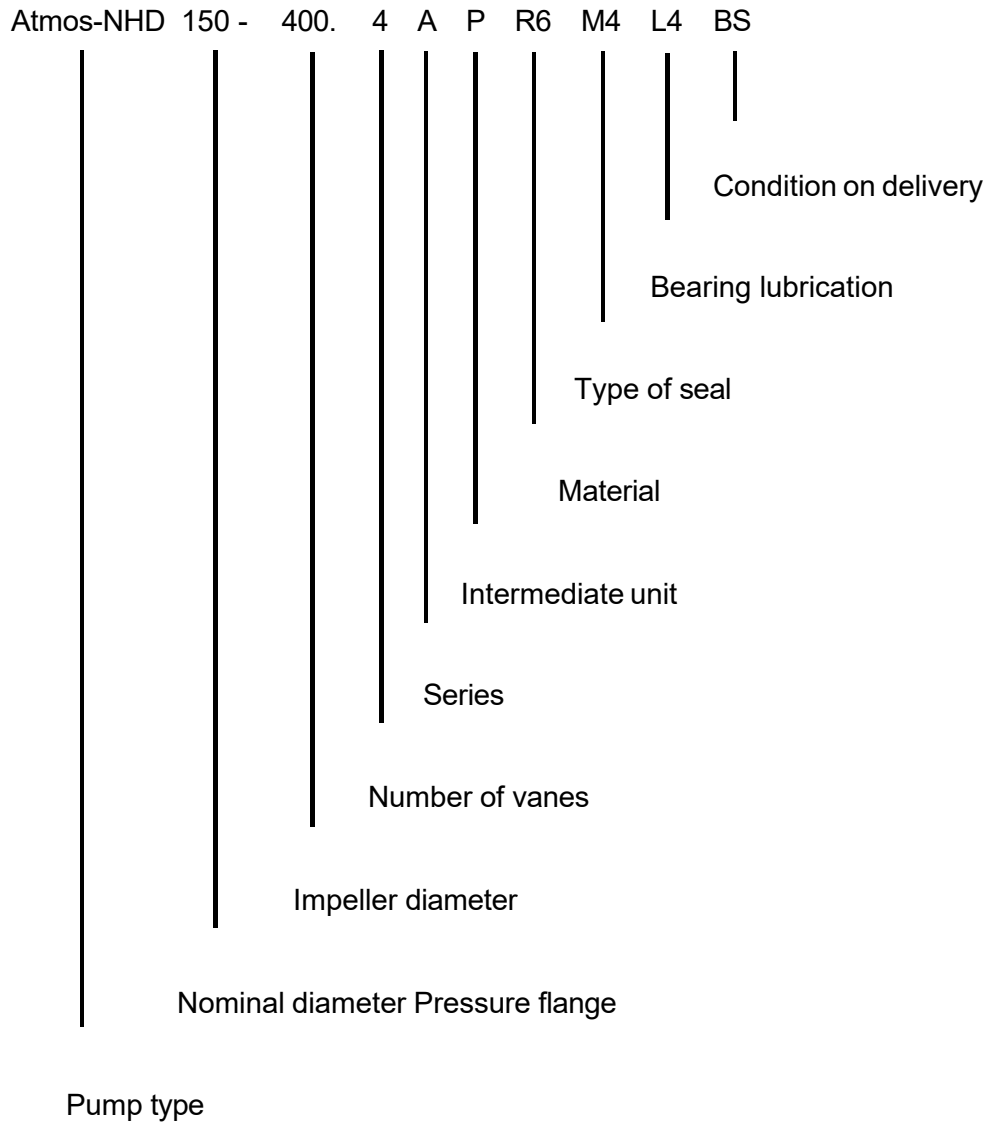
1.3.3 Type plate

wilo		
Typ MFY		
Q	H	n
T _{min}	T _{max}	P ₂
	M _{hydr}	P _{max}
	[-△-]	
S/N:		Made in Germany
Art. no.:		
WILO SE Wilopark 1 44263 Dortmund Germany		

The type plate shown opposite is attached to the product.

It includes the identification data; see section 1.1 and 1.2 of this manual.

1.3.4 Type codes







1.3.5 Further data



Series	Process pump
Intermediate unit	P = Standard pump S = Self-priming
Material	G1 = Grey cast iron G2 = Grey cast iron and bronze G3 = Bronze G4 = Grey cast iron and stainless steel H7 = Hastelloy C R6 = Stainless steel
Bearings	L1 = Self-lubricating bearings L2= Simple bearings oil lubrication L3= Heavy-duty bearings grease lubrication L4= Heavy-duty bearings oil lubrication

2 About this manual/User instructions

2.1 Formats used for instructions

Safety instructions in the manual are shown by a pictogram/symbol and a keyword in three columns. The signal word describes the seriousness of the imminent risk.

Symbol	KEYWORD	Additional description
	DANGER	<p>The signal word “DANGER” is used if death or severe health damage will result if the safety instructions are not or not sufficiently respected. The contents of the note is structured as follows:</p> <p>Type/source of danger! Possible consequences! <ul style="list-style-type: none"> > Preventive action </p>
	WARNING	<p>The signal word “WARNING” is used if severe health damage may result if the safety instructions are not or not sufficiently respected. The contents of the note is structured as follows:</p> <p>Type/source of danger! Possible consequences! <ul style="list-style-type: none"> > Preventive action </p>
	CAUTION	<p>The signal word “CAUTION” (background colour: Yellow) is used if medium or slight health damage may result if the safety instructions are not or not sufficiently respected. The contents of the note is structured as follows:</p> <p>Type/source of danger Possible consequences! <ul style="list-style-type: none"> > Preventive action </p>
	ATTENTION	<p>The signal word “ATTENTION” is used if machine damage may result if the safety instructions are not or not sufficiently respected. The contents of the note is structured as follows:</p> <p>Type/source of danger Possible consequences! <ul style="list-style-type: none"> > Preventive action </p>

	<p>NOTE</p>	<p>Useful instructions on use and information for using the product.</p>
	<p>REFERENCE</p>	<p>Cross reference to a particular document.</p>

2.2 Formats used for lists

Lists or descriptions of activities without mandatory order

Tasks to be performed that are not subject to any mandatory order are shown as a list with bullets.
Example:

- Point 1
- Point 2
- Point 3



Instructions or descriptions of tasks with required order

Tasks to be performed are numbered and shown in a list. The order of the activities is to be observed. The system response of the product to the respective action is shown in italics and indicated by a check mark. Example:




1. Action, e.g. **push the button "Horn off"**:
Response1, e.g. "the signal alarm ceases" *Reaction 2 of the product on action 1*
2. Action or operation:
 Response1 of the product on action 2
Response 2 of the product on action 2




2.3 Pictograms

2.3.1 Mandatory sign

	<p>General mandatory sign</p> <p>This symbol is used only with a separate note in text form.</p>
	<p>Observe the operating manual</p> <p>A reference to the documentation or specific documentation.</p>

2.3.2 Warning signs

	<p>Warning of a danger point</p> <p>This symbol is used only with a separate note in text form.</p>
	<p>Warning of an entanglement hazard</p> <p>There are pull-in points, where the body/parts of the body can be pulled in.</p>
	<p>Warning of hazardous electrical voltage</p> <p>The electrical voltage is so high that this voltage can negatively affect the human organism permanently.</p>

	<p>Warning of hand injuries There are danger points, which may result in hand injury.</p>
	<p>Warning of hot surface The surface temperature is so high that injuries are possible.</p>
	<p>Warning of suspended load There are suspended loads.</p>

3 Safety instructions

	<p>DANGER</p>	<p>The disregard of information from these instructions can have serious consequences for people or the environment.</p>
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3.1 How to use the product

	<p>ATTENTION</p>	<p>The machine must be operated only in accordance with the intended use and in proper safety condition!</p> <p>This is the only way to ensure the operational safety of the machine!</p>
--	-------------------------	---

3.1.1 Intended use

The Wilo-Atmos NHD pump of the company Wilo SE is exclusively used for conveying liquid media in all areas of industry. The centrifugal pump is driven via a coupling with a motor and is an integral part of a conveying circuit for the cooling, lubrication and transport of liquid media.

	<p>ATTENTION</p>	<p>The machine must be operated only in accordance with the intended use and in proper safety condition!</p> <p>This is the only way to ensure the operational safety of the machine!</p>
--	-------------------------	---

3.1.2 Improper use

Any use other than "intended use" specified or any use beyond this is regarded as not in compliance with the intended purpose!


	<p>DANGER</p>	<p>Improper use of the pump can result in serious damage!</p>
	<p>NOTE</p>	<p>The manufacturer assumes no liability for damage caused by improper use!</p>

3.2 Risks associated with handling the pump Atmos NHD





Risks and impairments can arise during operation:

- For life and limb of the operator or third parties
- For the machine itself,
- on other property values

3.3 Residual risks

	<p>DANGER</p>	<p>The product has been manufactured in accordance with the currently valid state-of-the-art technology and recognized safety principles taking into account the relevant statutory regulations.</p> <p>Nevertheless, hazards for persons and/or the environment may occur when handling the product.</p>
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3.4 Personal protective equipment

	<p>REQUIREMENT</p>	<p>Wear protective goggles!</p>
	<p>REQUIREMENT</p>	<p>Wear protective helmet!</p>
	<p>REQUIREMENT</p>	<p>Wear safety boots!</p>
	<p>REQUIREMENT</p>	<p>Wear protective clothing!</p>

3.5 Obligation for the operator

The operator is obliged to ensure that the people who work with the product, first of all

- read the instructions
- are informed about the content of this manual
- are trained with regard to the basic rules of safety at work and the prevention of accidents
- are provided with personal protective equipment for the safe use of the product

	REFERENCE	The operator has the obligation to observe the national and any existing regional specifications of the safety at work.
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3.6 Obligation for the staff

All persons who work with the product, are obliged

- to have read and understood this manual before first use.
- to refrain from procedures, which negatively affect machine safety.
- to immediately report any defects on the machine and have them eliminated in an expert manner.
- to not operate the machine without protective devices.
- to prevent and report obviously incorrect acts of third parties.

	NOTE	For open questions, please contact the manufacturer.
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3.7 Qualification of the staff

For different activities, which must be performed with or on the product, different skills of the staff are required in accordance with the following matrix:

Qualification	Operator	Maintenance staff	Special staff
Activity			
Transportation			
Installation			
Initial commissioning			
Commissioning			
Setting up			
Operation			
Troubleshooting			
Servicing			
Temporary decommissioning			
Decommissioning			
Dismantling			

3.7.1 Operator

The operator meets all of the following requirements:

- 3.7.1.1 He is authorized by the operating company to operate the machine
- 3.7.1.2 He is physically and mentally able to operate the machine without creating any additional hazards
- 3.7.1.3 He can speak and write the national language so that he is able to understand the manual as well as the user interface
- 3.7.1.4 On the basis of the training received and the experience made on the machine itself, he knows the risks when working with the machine

3.7.2 Maintenance staff

The maintenance specialist meets all of the following requirements:

- 3.7.2.1** He is qualified by training and experience to carry out operations on the machine
- 3.7.2.2** He has basic experience with the system (e.g. electric control) on which this person is to carry out operations
- 3.7.2.3** He has extended experience with the system (e.g. functional safety) on which this person is to carry out operations

In addition, the maintenance specialist must have the qualifications of the operator, which are stated in chapter 3.7.1 .

3.7.3 Special staff

The special staff meets all of the following requirements:

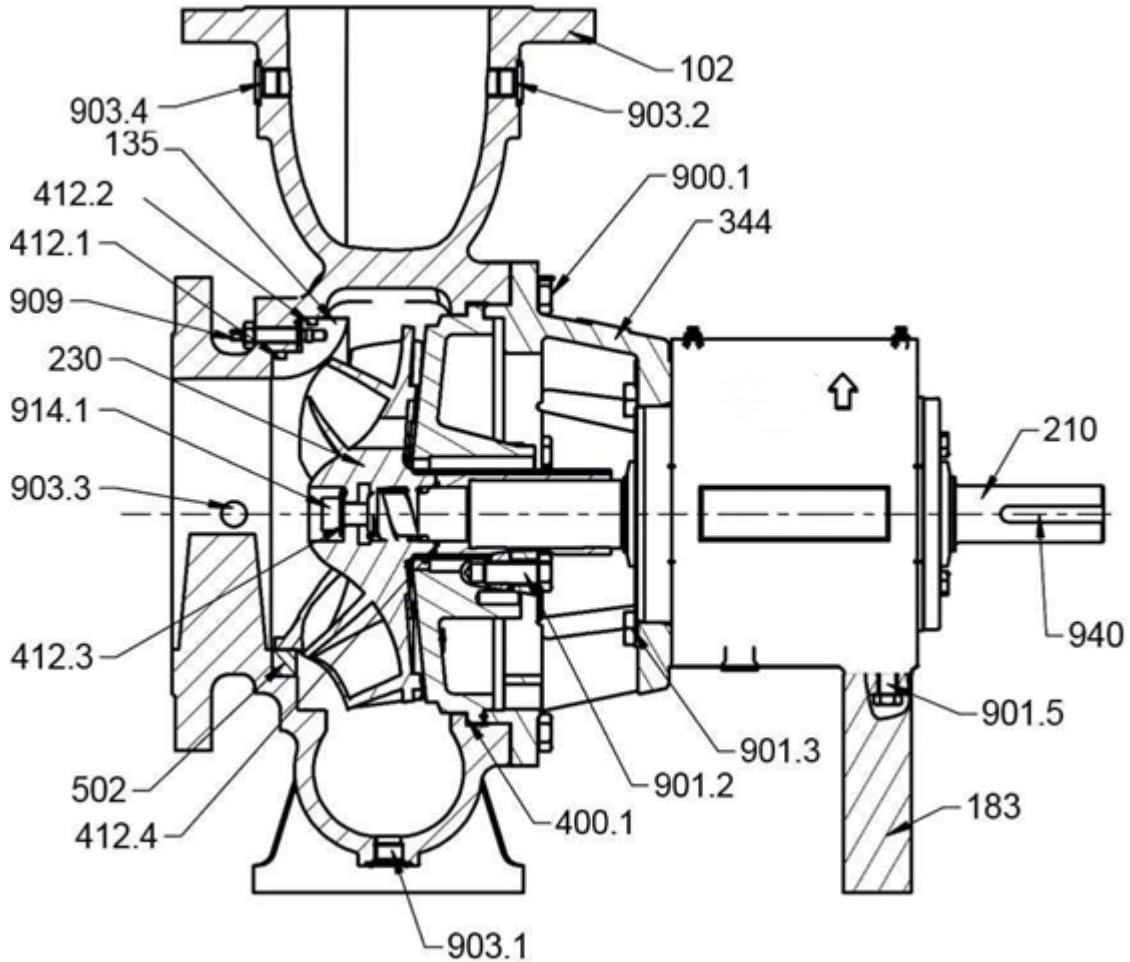
- 3.7.3.1** They are qualified by training and experience to carry out operations on the machine
- 3.7.3.2** They have basic experience with the system (e.g. electric control) on which these operations are to be carried out
- 3.7.3.3** They have extended experience with the system (e.g. functional safety) on which these operations are to be carried out
- 3.7.3.4** They have additional qualifications and experiences concerning the above-mentioned life phases

	<p>NOTE</p>	<p>It is possible that a person is qualified in such a way that he can carry out all operations.</p>
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4 Product description

This chapter describes the structure and functions of the product and the operating points as well as the technical data. If possible, read it close to the machine. This is the best way to become familiar with the machine.

4.1 Overview



	<p>REFERENCE</p>	<p>Please, also refer to the parts list in Chapter 13 of this operating manual</p>
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4.2 Versions

The versions of the Atmos NHD pumps differ in the structural design of the impeller.

4.2.1 Type Atmos NHD 032-200 – Atmos NHD 050-200

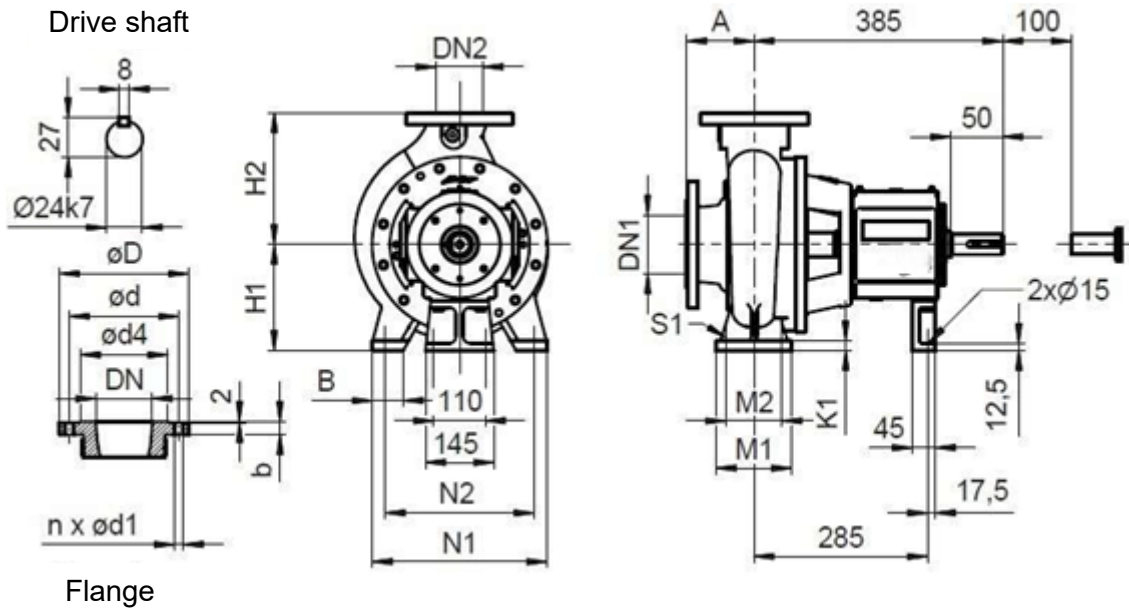


Figure 1 Type Atmos NHD 032-200 – Atmos NHD 050-200

4.2.2 Type Atmos NHD 065-200 – Atmos NHD 050-315

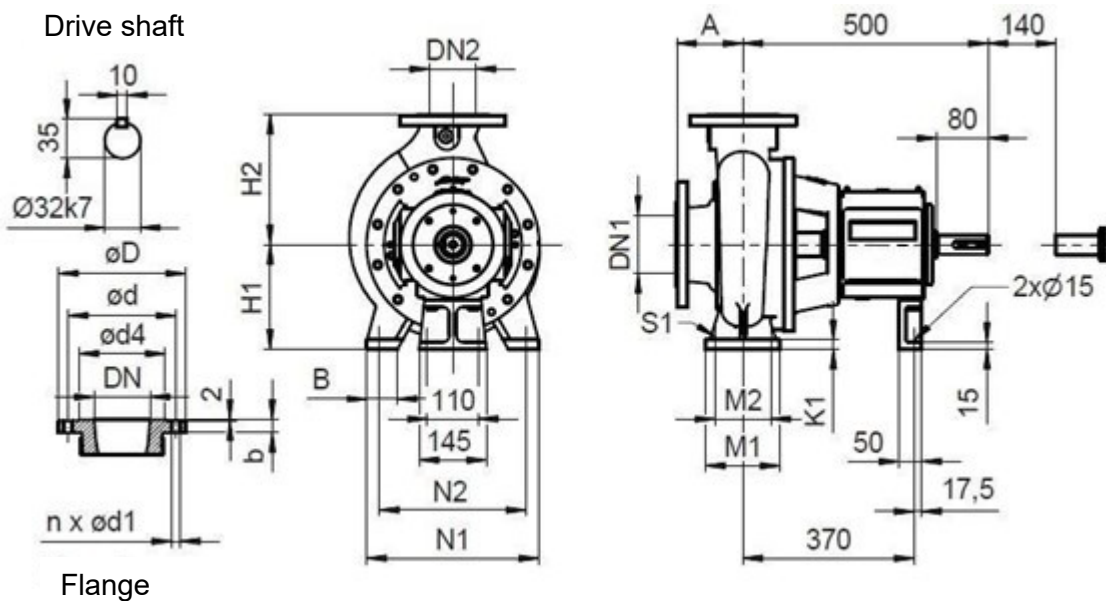


Figure 2 Type Atmos NHD 065-200 – Atmos NHD 050-315

4.2.3 Type Atmos NHD 100-250 – Atmos NHD 125-400

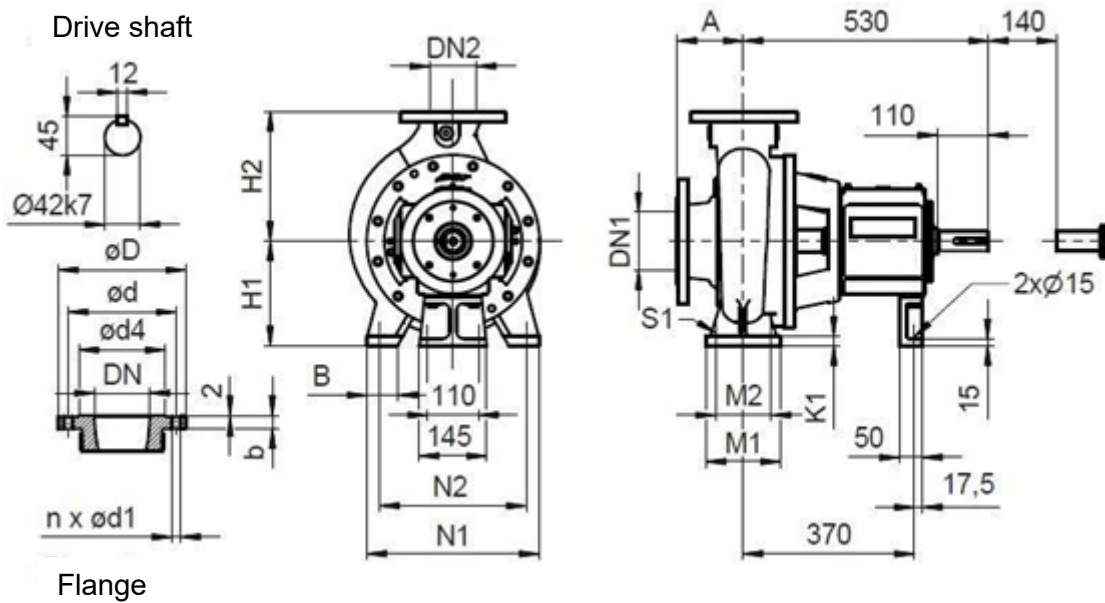


Figure 3 Type Atmos NHD 100-250 – Atmos NHD 125-400

4.2.4 Type Atmos NHD 200-250 – Atmos NHD 200-400

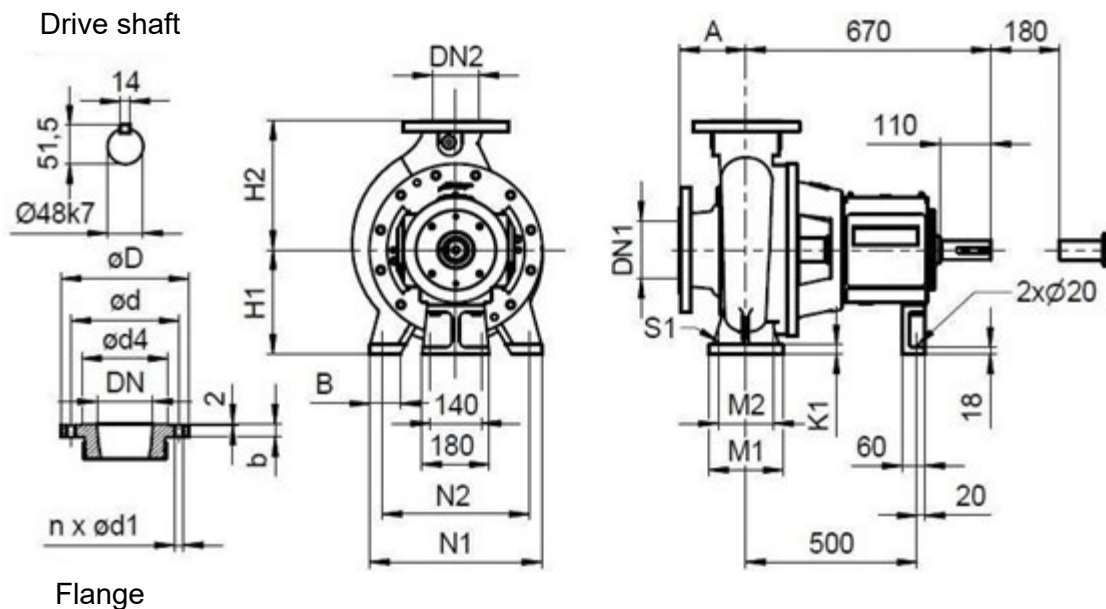


Figure 4 Type Atmos NHD 200-250 – Atmos NHD 200-400

4.3 Shaft sealing versions

The Atmos NHD comes with different shaft sealing versions.

4.3.1 Mechanical seal M2

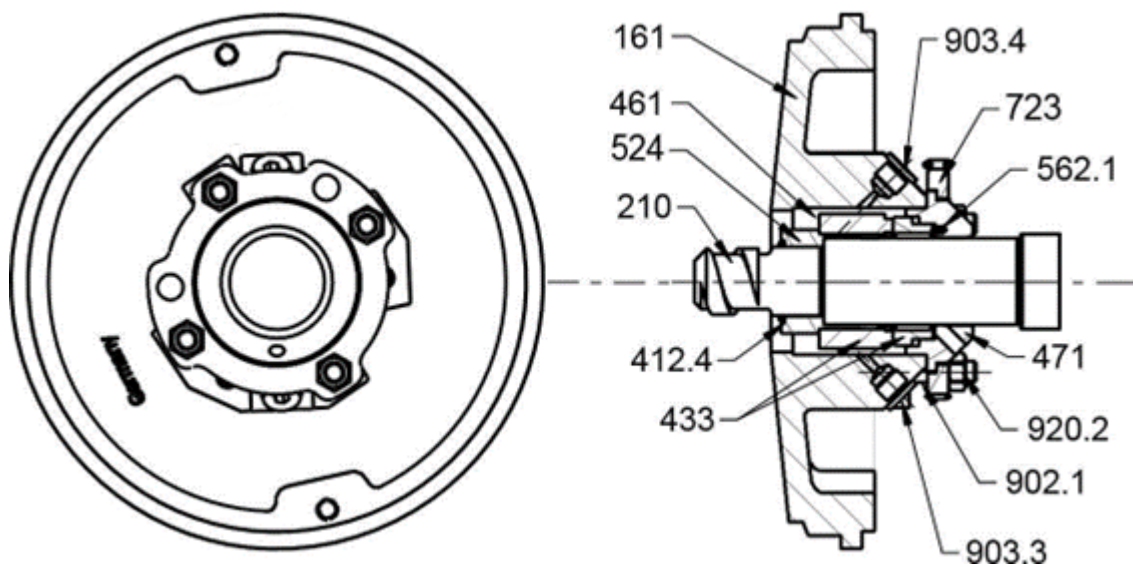


Figure 6 Mechanical seal M2

4.3.2 Single Cartridge seal CAPI M4

See separate manual

4.3.3 Double Cartridge seal CMDS M5

See separate manual

4.3.4 Gland packing rings

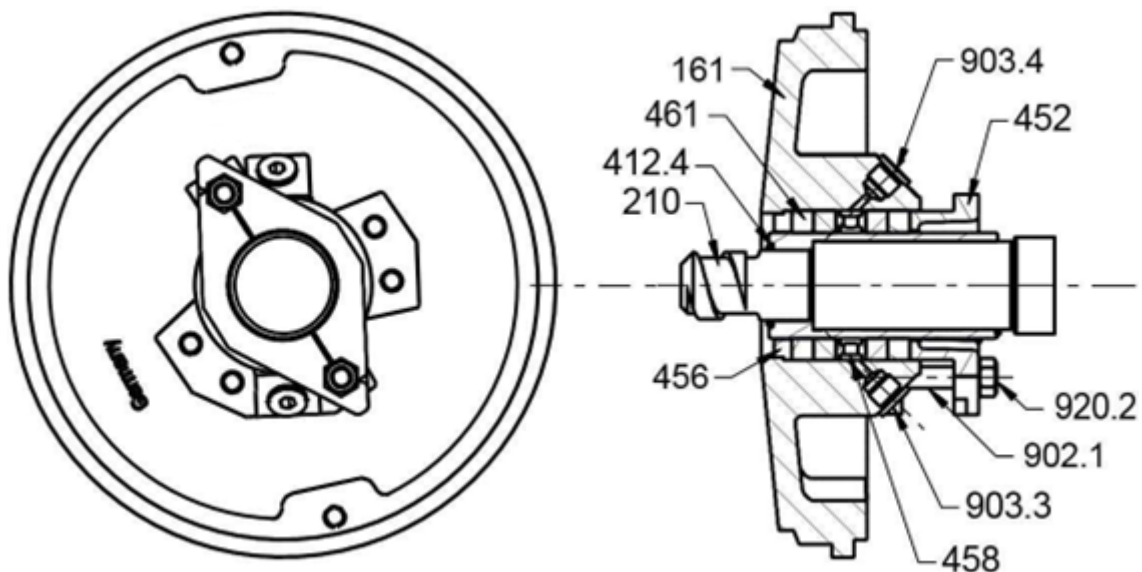


Figure 7 Soft packing

4.3.5 Dynamic seal DS

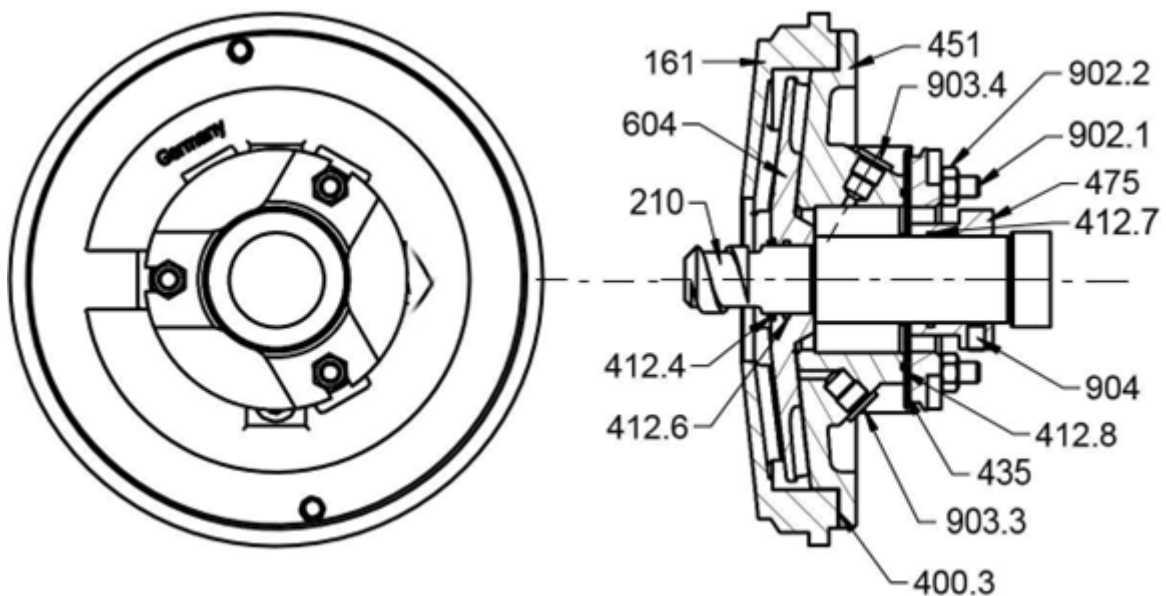


Figure 8 Dynamic seal DS

4.4 Technical data

4.4.1 Dimensions and weight of the individual types

Type	BG	DN1	DN2	A	H1	H2	B	M1	M2	N1	N2	S1	K1	ap pro x
32-200	1	050	032	080	160	180	45	100	70	230	190	15	15	65
40-200	1	065	040	080	160	180	45	100	70	255	212	15	15	66
50-200	1	080	050	080	160	180	45	100	70	255	212	15	15	66
65-200	2	100	065	100	180	225	55	125	95	300	250	15	18	100
80-200	2	125	080	125	180	250	55	125	95	330	280	15	18	100
32-250	2	050	032	100	180	225	55	125	95	300	250	15	18	103
40-250	2	065	040	100	180	225	55	125	95	300	250	15	18	103
50-250	2	080	050	125	180	225	55	125	95	300	250	15	18	105
65-250	2	100	065	125	200	250	65	160	120	340	280	19	20	107
80-250	2	125	080	125	225	280	65	160	120	370	315	19	20	112
40-315	2	065	040	125	225	280	55	125	95	330	280	15	18	131
50-315	2	080	050	125	225	280	55	125	95	330	280	15	18	141
100-250	3	125	100	140	225	280	65	160	120	370	315	19	20	162
125-250	3	150	125	140	250	355	65	160	120	370	315	19	20	178
150-250	3	200	150	160	280	375	85	200	150	470	400	24	20	208
65-315	3	100	065	125	225	280	65	160	120	370	315	19	20	167
80-315	3	125	080	125	250	315	65	160	120	370	315	19	20	172
100-315	3	125	100	140	250	315	65	160	120	370	315	19	20	182

Type	BG	DN1	DN2	A	H1	H2	B	M1	M2	N1	N2	S1	K1	ap pro x
125-315	3	150	125	140	280	355	85	200	150	470	400	24	20	102
100-400	3	125	100	140	280	355	85	200	150	470	400	24	20	223
125-400	3	150	125	140	315	400	85	200	150	470	400	24	20	238
200-250	4	250	200	200	315	450	85	200	150	520	450	24	25	305
300-250	4	300	300	225	400	560	90	250	190	570	500	28	25	405
150-315	4	200	150	160	315	400	85	200	150	520	450	24	25	255
200-315	4	250	200	180	315	450	85	200	150	520	450	24	25	295
250-315	4	300	250	225	400	560	90	250	190	570	500	28	25	375
300-315	4	350	300	250	450	630	90	250	190	570	500	28	25	475
150-400	4	200	150	160	315	450	85	200	150	520	450	24	25	285
200-400	4	250	200	180	355	500	85	200	150	520	450	24	25	330
250-400	5	300	250	200	450	560	90	250	190	570	500	28	25	440
300-400	5	350	300	250	450	670	90	250	190	570	500	28	25	575
350-500	5	400	350	280	560	800	110	315	250	680	600	28	30	745
400-500	5	400	400	280	630	850	135	400	315	940	850	35	30	855
100-500	5	200	100	180	400	500	90	250	190	570	500	28	25	355
150-500	5	250	150	180	400	500	90	250	190	570	500	28	25	385
200-500	5	250	200	180	400	560	90	250	190	570	500	28	25	505
250-500	5	300	250	200	450	630	90	250	190	570	500	28	25	570
300-500	5	350	300	250	500	670	90	250	190	570	500	28	25	625

Type	BG	DN1	DN2	A	H1	H2	B	M1	M2	N1	N2	S1	K1	ap pro x
400-600	5	500	400	355	630	850	135	400	315	940	850	35	30	1035
500-600	5	500	500	355	710	1000	135	400	315	940	850	35	30	1175
200-600	5	300	200	200	500	630	110	315	250	680	600	28	30	805
250-600	5	300	250	225	500	710	110	315	250	680	600	28	30	885
300-600	5	400	300	250	560	800	110	315	250	680	600	28	30	970
500-700	6	500	500	400	800	1000	185	430	340	1125	1000	36	40	1790
600-700	6	600	600	420	800	1180	178	430	340	1125	1000	36	40	2050
400-750	6	500	400	355	710	950	135	400	315	940	850	36	40	1620

4.4.2 General technical data

Flow rate	Up to 2800 (m ³ /h)
Delivery head	Up to 150 (m)
Max. admissible pressure	16 (bar)
Temperature limits	-40 to 180 (°C)

4.4.3 Auxiliary and operating materials

Recommended oils according to the classification ISO VG 46 for an ambient temperature above 15°C:

TEBO	Larita Oil 46
KLÜBER	Crucolan 46
ESSO	Teresso 46
NESTE	Paine 46
SHELL	Tellus Oil S46
MOBIL	DTE Oil Medium

Recommended grease according to the classification up to a bearing housing temperature of 80° C:

SHELL	ALVANIA EP 2
NESTE	Yleisrasva 2
ESSO	Beacon 2
SKF	LGMT 2
KLÜBER	Centoplex EP2

Recommended grease in accordance with the classification for a bearing housing temperature exceeding 80° C:

SHELL	Limona LX1
NESTE	Yleisrasva 2
ESSO	Unirex N3
SKF	LGHP 2
KLÜBER	Staburax NBU 8 EP

4.4.4 Volumetric range 1500 RPM

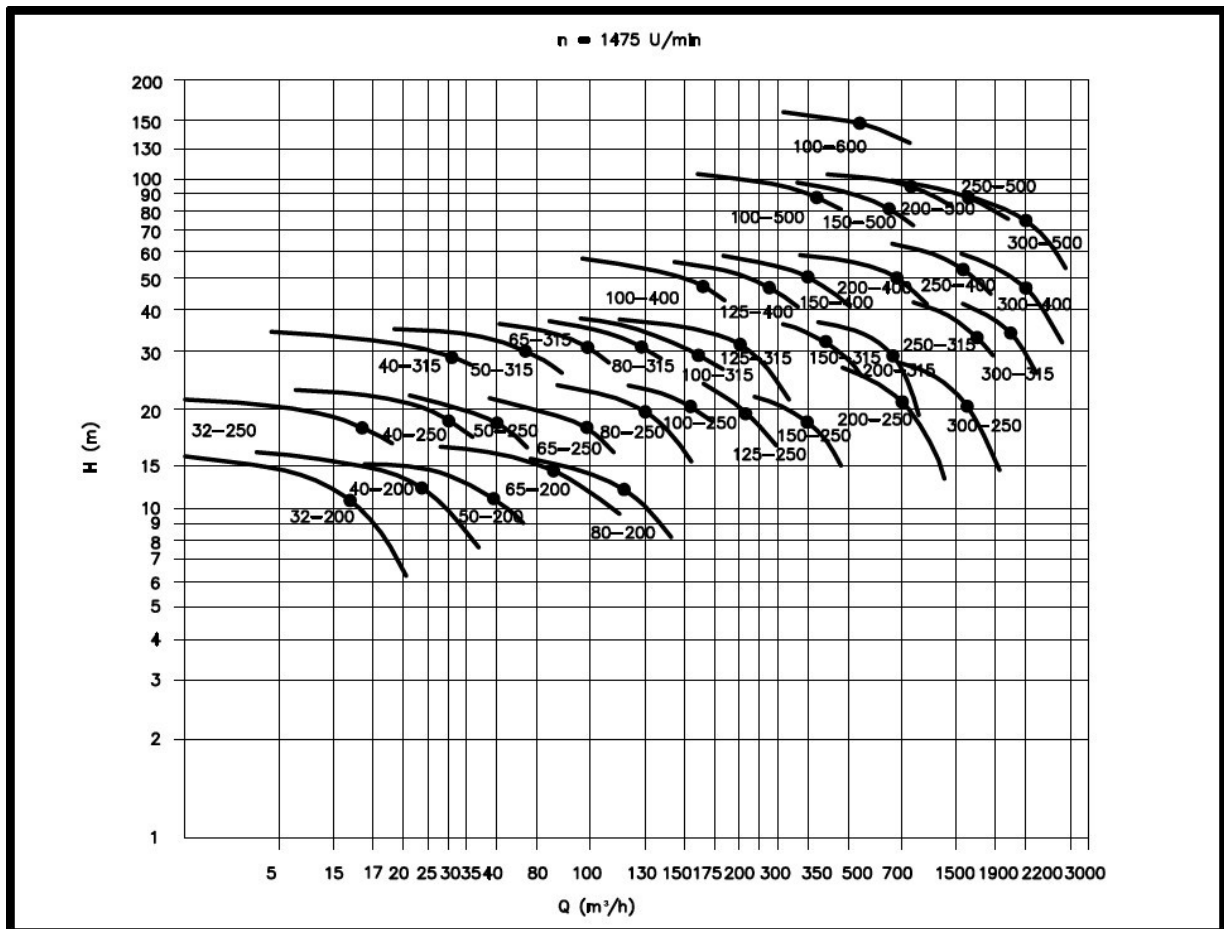


Figure 9 Volumetric range 1500 rpm, impeller: open

4.4.5 Volumetric range 3000 RPM

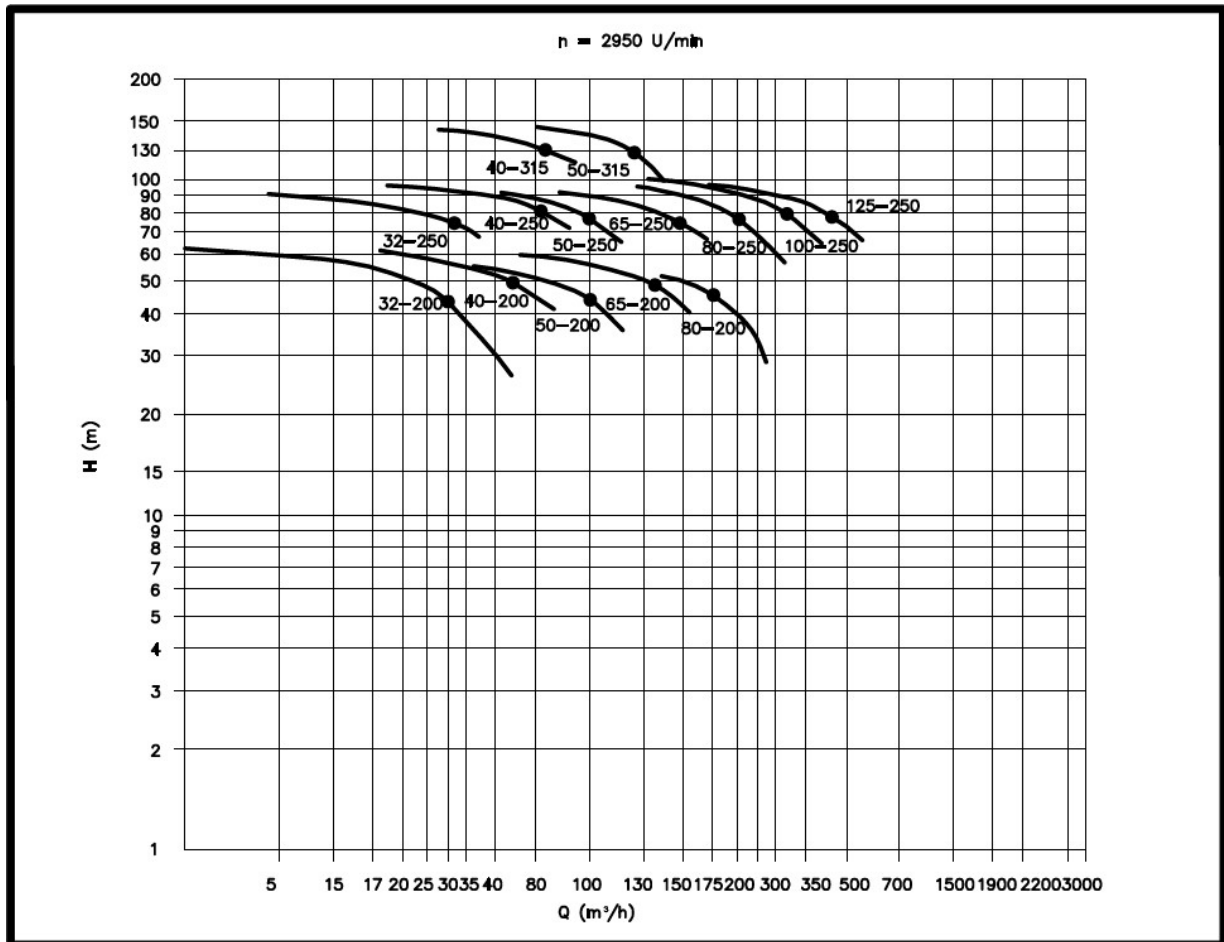


Figure 10 Volumetric range 3000 rpm, impeller: open

5 Transport and packaging

The chapter deals with the packaging and transportation of the product from the place of production to the site.

	<p>NOTE</p>	<p>The product may only be transported in individual product parts.</p>
	<p>ATTENTION</p>	<p>For the transport, only suitable and tested fastening means and hoists must be used!</p>
	<p>DANGER</p>	<p>Care should be taken during the transportation of the individual machines to ensure adequate stability. The individual machines must be secured against slipping.</p>

5.1 Transport

The following means of transport are required for the transport and the assembly of the product:

- 4 heavy-duty rollers
- Forklift truck
- A crane
- Fastening chain
- Lifting eyes

5.2 Before the transport

	<p>ATTENTION</p>	<p>Ensure the perfect condition of the parts and the packaging.</p>
	<p>ATTENTION</p>	<p>Make sure that</p> <ul style="list-style-type: none"> ▪ all parts are firmly screwed, ▪ the transport lock has been properly secured

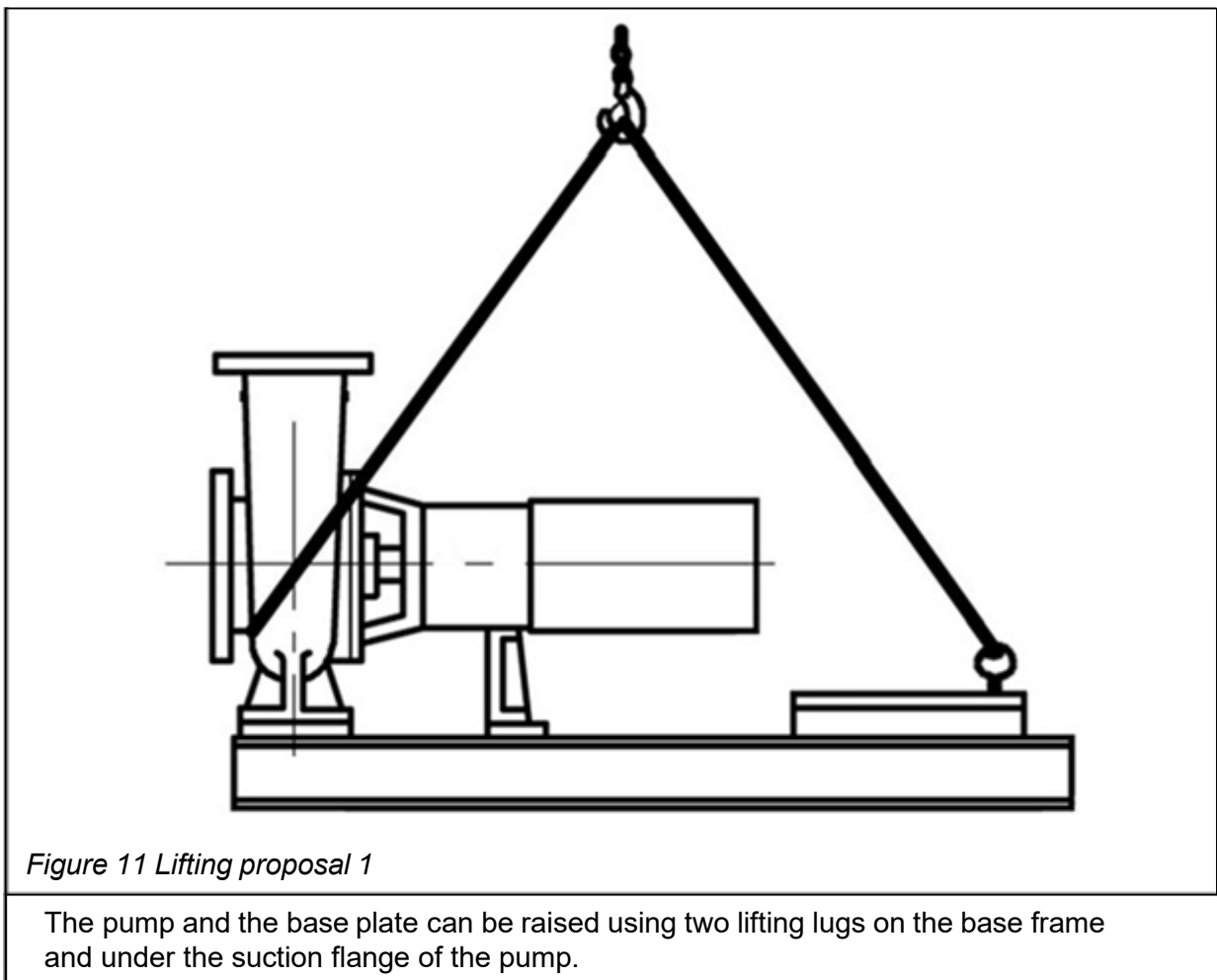
5.3 Transport - loading/unloading

	<p>DANGER</p>	<p>Risk by raised loads! You are not permitted to stay under suspended loads!</p>
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Below you will find 3 lifting proposals of the pump.

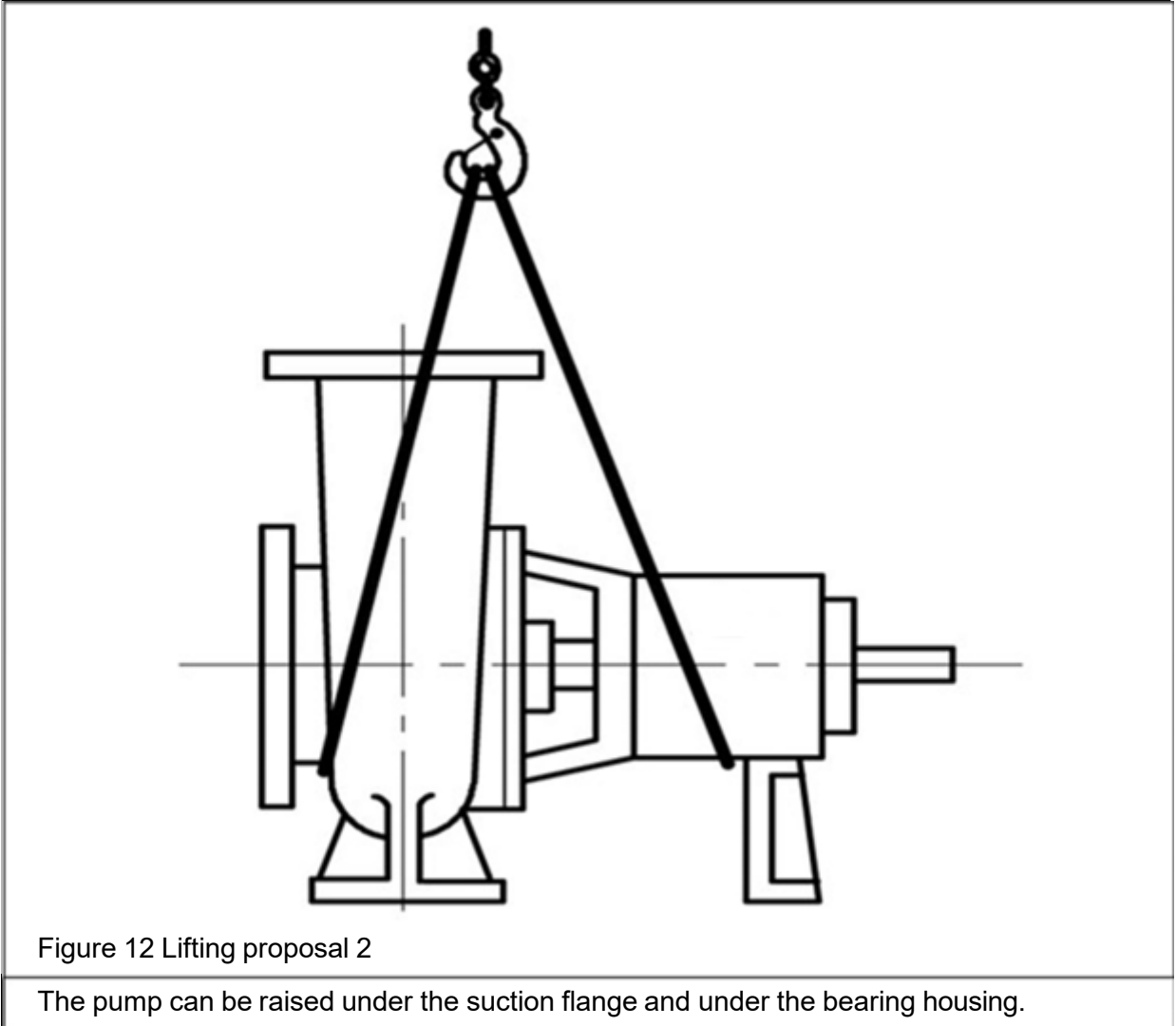
5.3.1 Lifting proposal 1

Lift the pump with the base plate and without the motor.



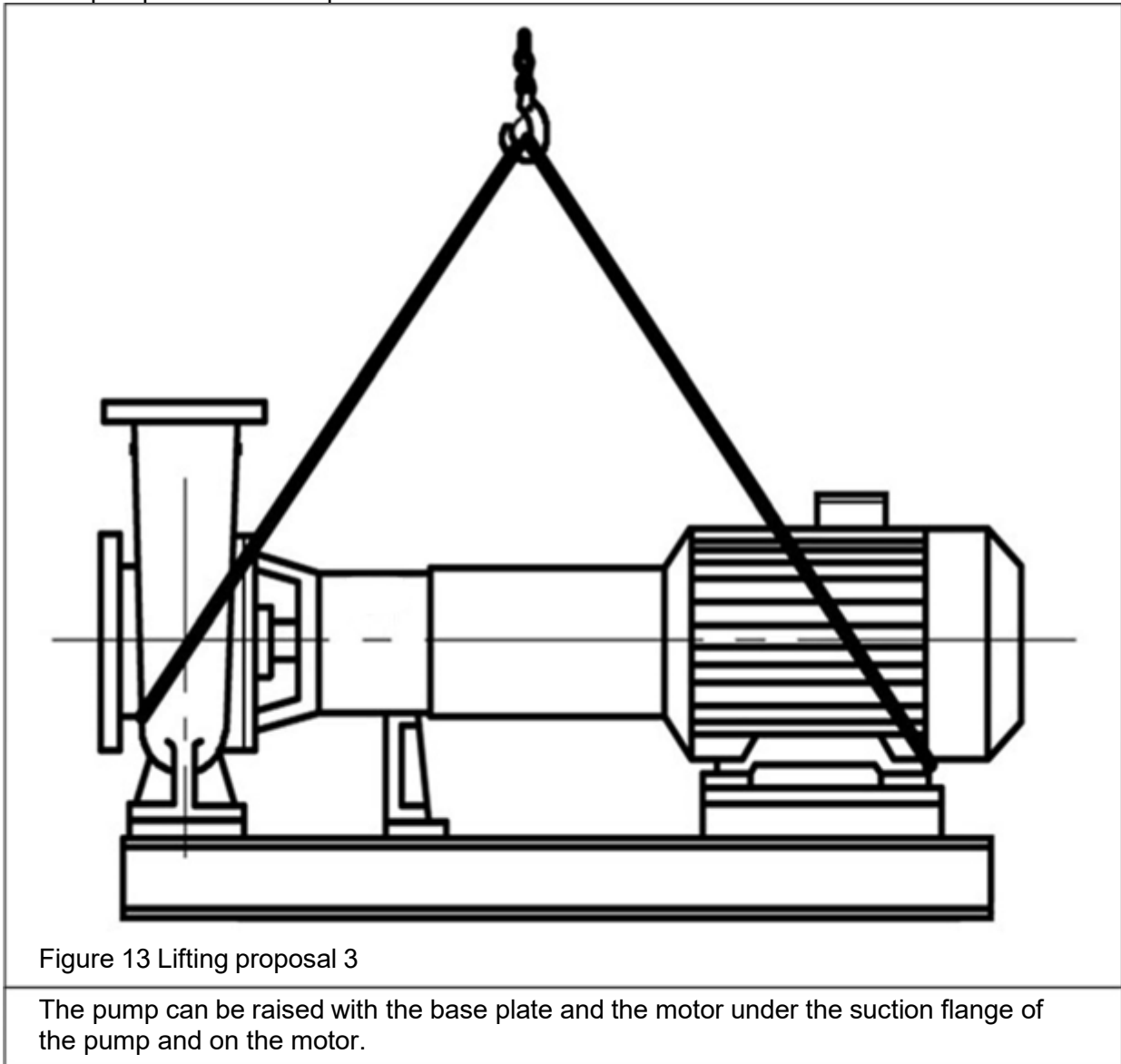
5.3.2 Lifting proposal 2

Lift the pump without the base plate and without the motor.






5.3.3 Lifting proposal 3

Lift the pump with the base plate and the motor.




6 Installation

6.1 General assembly

	<p>DANGER</p>	<p>Before working on electrical equipment, there must be checked with suitable measuring equipment that no current is present.</p>
	<p>DANGER</p>	<p>Only approved lifting equipment with the appropriate identification must be used for lifting and transport.</p>
	<p>REFERENCE</p>	<p>The installation is carried out by the staff or by the staff of contractors on site.</p>
	<p>REQUIREMENT</p>	<p>Wear protective helmet!</p>
	<p>REQUIREMENT</p>	<p>Wear safety boots!</p>
	<p>REQUIREMENT</p>	<p>Use gloves</p>

6.1.1 Foundation

	<p>NOTE</p>	<p>The location for the foundations of the pump unit must be selected so that there is enough space available for installation and future maintenance work.</p>
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The foundation must be designed so that it has the load-bearing capacity to withstand the weight of the pump unit and the forces produced, such as possible vibrations caused by the piping system.

When making the foundation, it must be ensured that the surfaces for the pump unit are not uneven and that the foundation is in horizontal position.

The length and width of the foundation should be approx. 20% above the dimensions of the base plate.

The choice of the appropriate attachment anchors for the base plate (dimensions, size and manufacturer) is to be made by the plant planner performing the work.

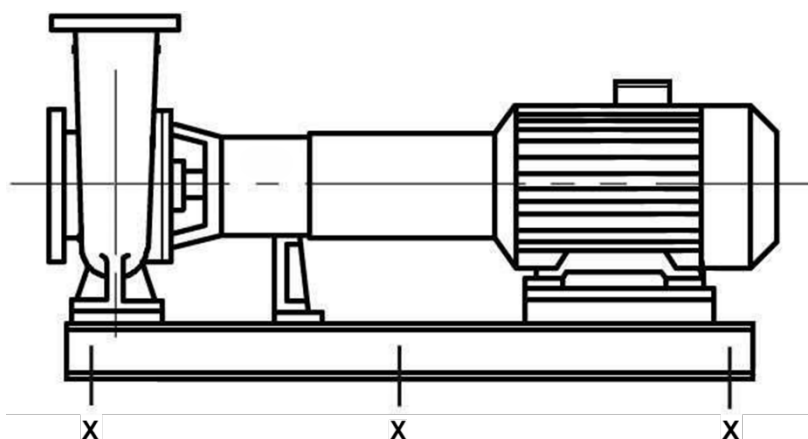
6.1.1.1 Assembly of the pump unit

Deposit the pump unit on the even foundation and check whether the unit is correctly positioned horizontally.

Perform alignment, if necessary, with U-sheets.

Secure the base plate with the anchoring provided at the locations marked with X and grout.

Check the coupling for alignment errors after securing and grouting the base plate.



6.1.2 Piping

After the suction and pressure pipe have been connected, if possible, voltage-free, the alignment of the unit has to be checked once again and the rotor has to be rotated by hand.

Connect the sealing water pipe. When changing the cross-section of the suction line you should use eccentric suction nozzles (special accessories) or eccentric transition pieces Figure 14.

6.1.3 Arrangement of the suction tank under the pump

The Atmos NHD is a normal suction pump and need to have a free floating into the pump. It can not work like a selfpriming or degassing pump.

If you need a selfpriming or degassing pump please contact the local Wilo customer service.

6.1.4 Suction and feed tanks above the pump

Lay the suction pipe evenly descending towards the pump. The product have to flow into the pump.

6.1.5 Reducer

If a cross section is used for the suction line which is larger than the pump inlet flange, an eccentric reducer must be installed upstream of the suction nozzle of the pump. This part serves to prevent turbulence and air pockets.

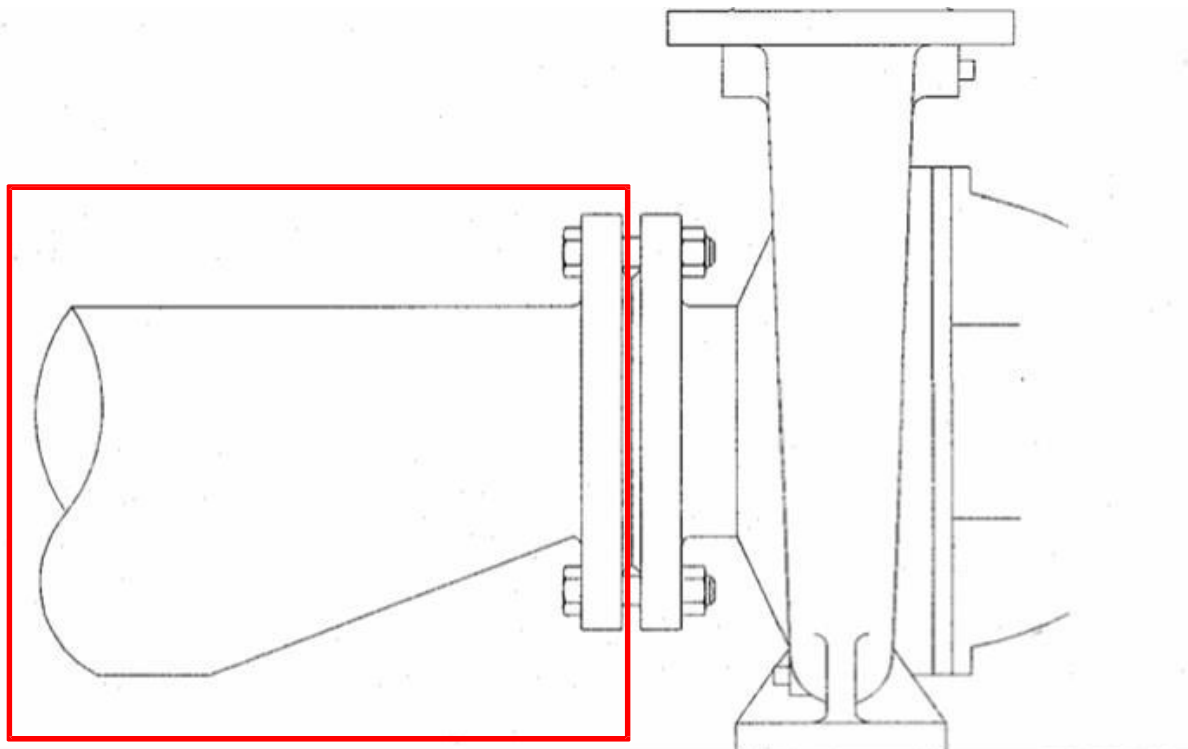


Figure 14 Eccentric reducer for the inlet flange

	<p>NOTE</p>	<p>If a possibly dangerous backflow can arise when the pump is at a standstill, a non-return valve must be installed in the discharge line.</p>
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6.1.6 Pressure line

A shut-off valve must be installed in the pressure line to prevent drainage of the entire piping system during subsequent maintenance and repair work.

6.1.7 Piping shaft seal

With some applications a flushing, sealing or cooling water connection must be installed to ensure the reliable functioning of the shaft seal.

In the case of seals subjected to pressure, the nominal pressure must match the pressure of the pump and the temperature.

In the event of a quench connection the piping must be arranged so that no constricted points can arise which would cause pressure to be produced. V-ring seals are not designed for sealing liquids under pressure.

For using flushing, sealing or cooling water, clean water must always be used to prevent damage to the seal.

Use a sealing water monitor to regulate the required amount and the pressure.

Please take the necessary data from the table in chapter 15 "Sealing water demand and sealing water pressure".

6.1.8 Electrical connection of the motor

	<p>REFERENCE</p>	<p>For the electrical connection of the motor, please observe the operating instructions of the motor supplier.</p>
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6.2 Dismantling and assembly

6.2.1 Dismantling and assembly of the back pull-out unit

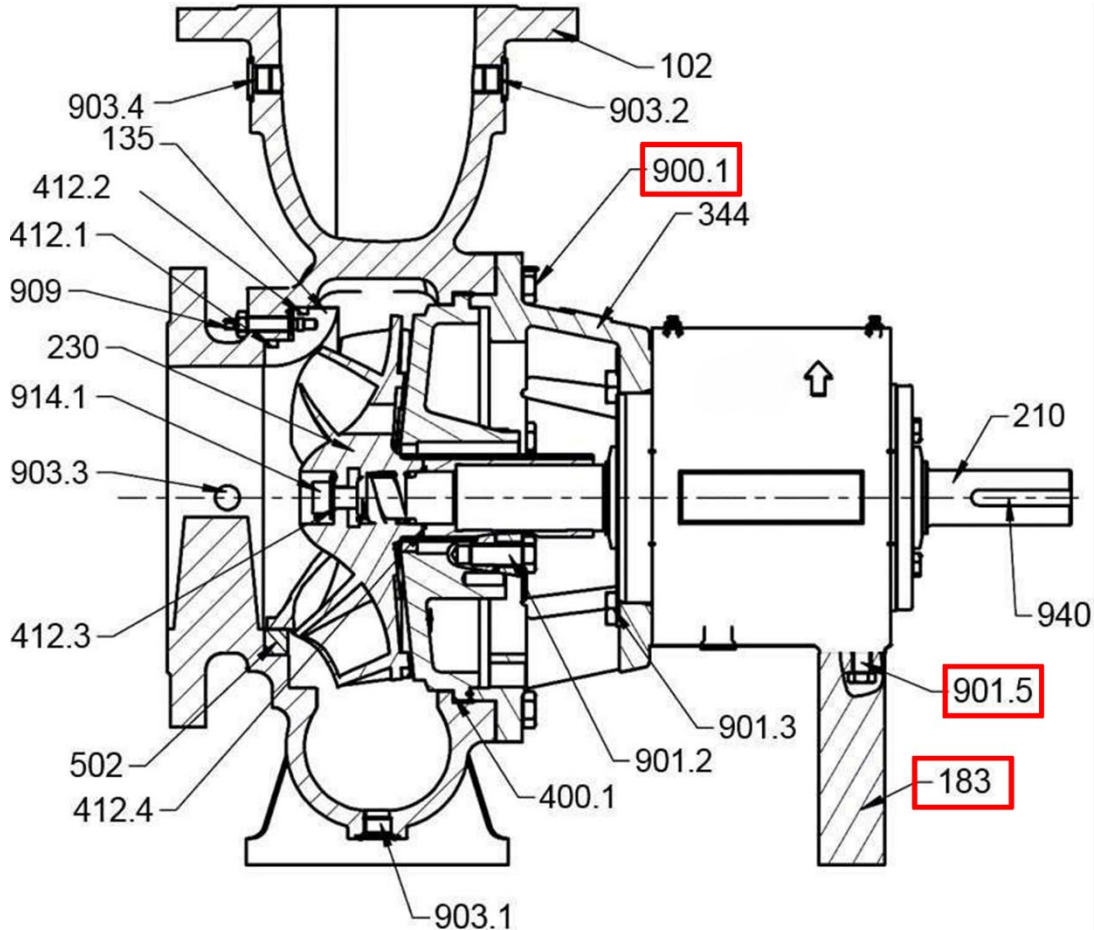


Figure 15 Dismantling of back pull-out unit

Dismantling

1. Remove coupling guard.
2. Loosen the electric motor and remove backwards in the direction of the impeller. If the unit has a spacer-type coupling, remove it.
3. Remove any flushing and/or coolant liquid lines.
4. Undo the hexagon screws (901.5) on the bearing housing support (183) and remove from base plate.
5. Remove the hexagon screws (900.1).
6. Lift the complete bearing housing including the housing internals (impeller) out of the housing.

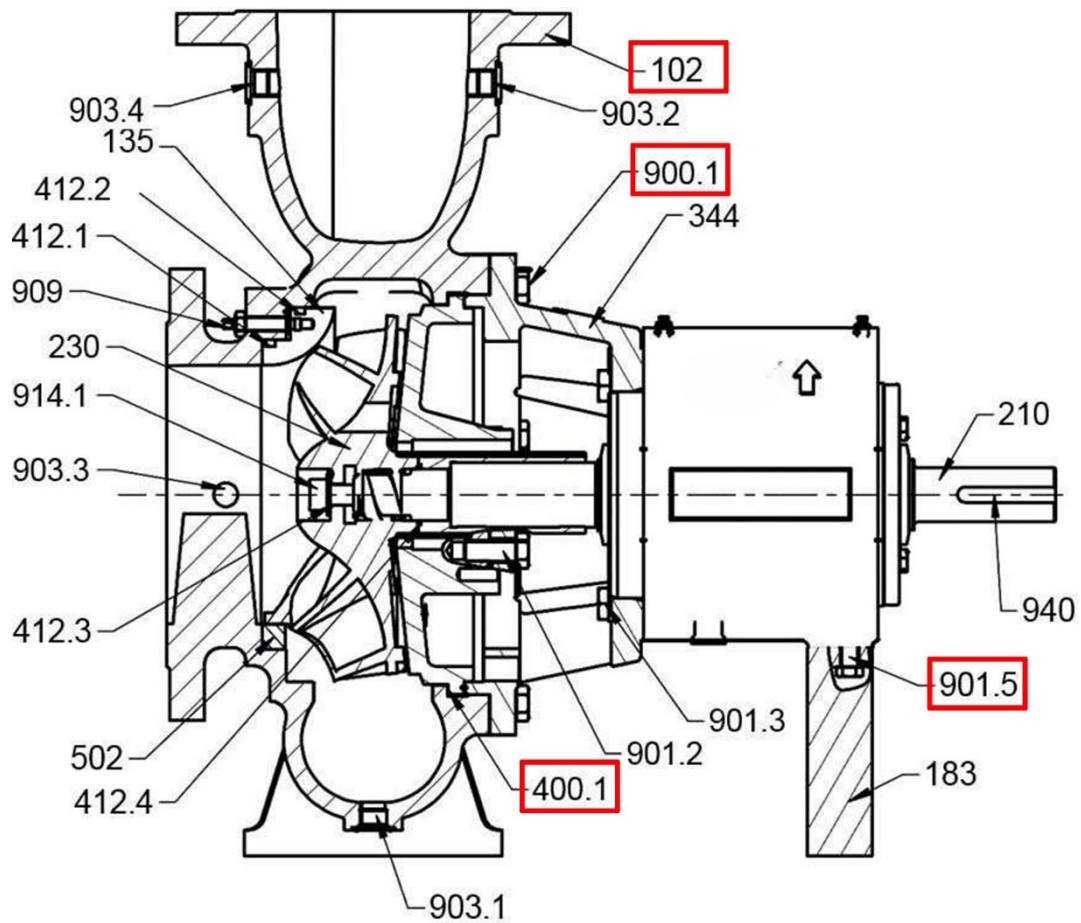


Figure 16 Assembly of back pull-out unit

Assembly

1. Insert a new seal (400.1) into the edge of the pump casing (102).
2. Insert the complete bearing housing into the pump casing and tighten the hexagon screws (900.1) in diametrically opposite order.
3. Attach the bearing housing support to the bearing housing with the hexagon screws (901.5) and install on the base plate.
4. Reconnect flushing and/or cooling lines which may have been detached.
5. Attach, install and align motor and the spacer-type coupling.
6. Check the alignment of the pump and motor in the same way as for initial installation.

6.2.2 Dismantling of the impeller

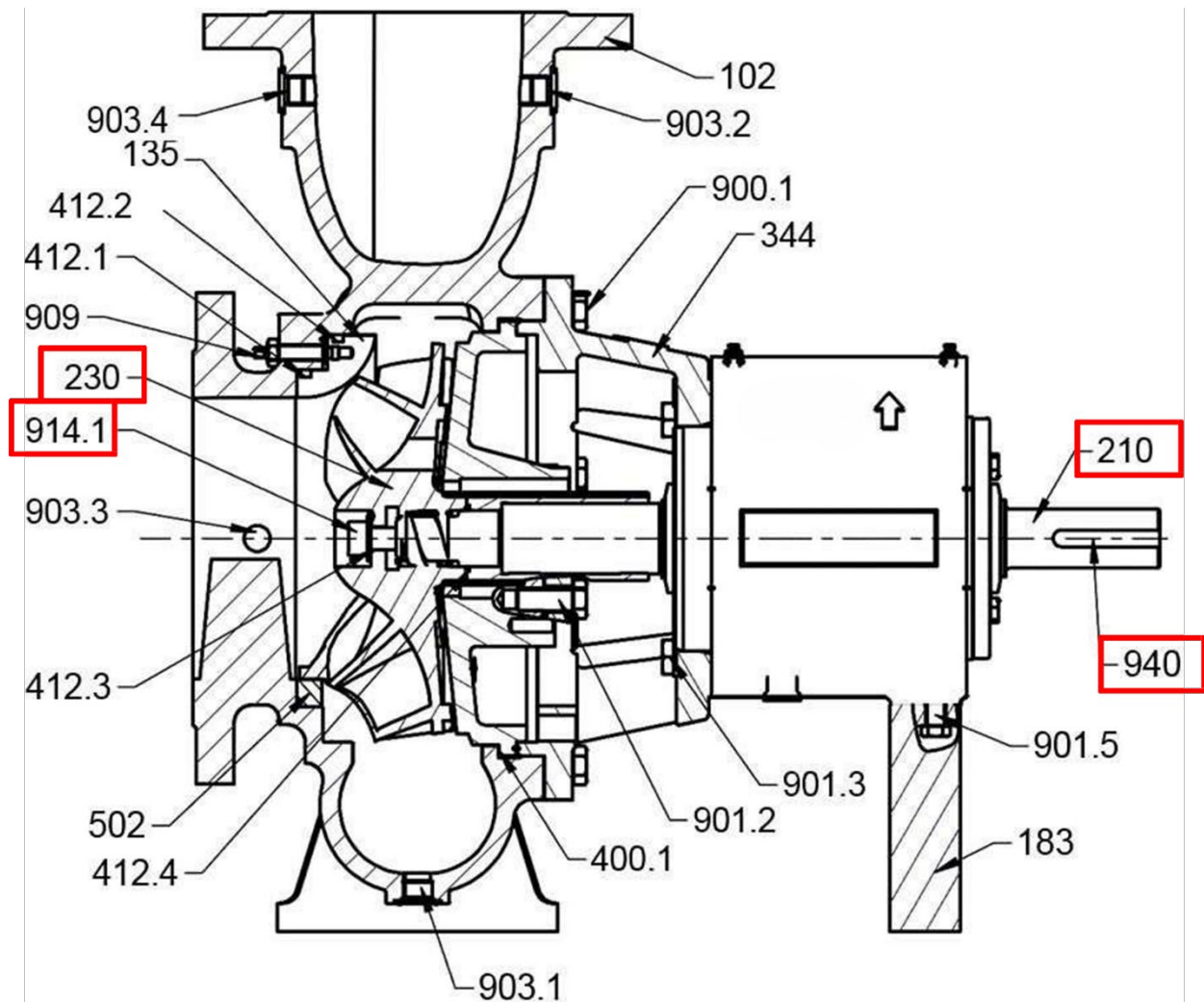


Figure 17 Dismantling of impeller

1. Dismantle the back pull-out unit (see chapter 6.2.1).
2. Remove impeller screw (914.1) from the impeller (230). It may be necessary to heat the screw slightly to undo the Loctite connection.
3. Secure the shaft (210) against turning as well at the end of the coupling (940) - do not use a pipe wrench!
4. Now remove the impeller by turning it counterclockwise off the shaft. If necessary, use a piece of wood to initially detach the impeller vane.

6.2.3 Replacement of the impeller and frame

When the pump is dispatched, the axial play between the impeller and the split ring is 0.3 mm. An axial gap of 0.5-0.7 mm with visible wear requires the replacement of one or both pump parts depending on the degree of wear.

6.2.4 Dismantling and assembly of the dynamic seal

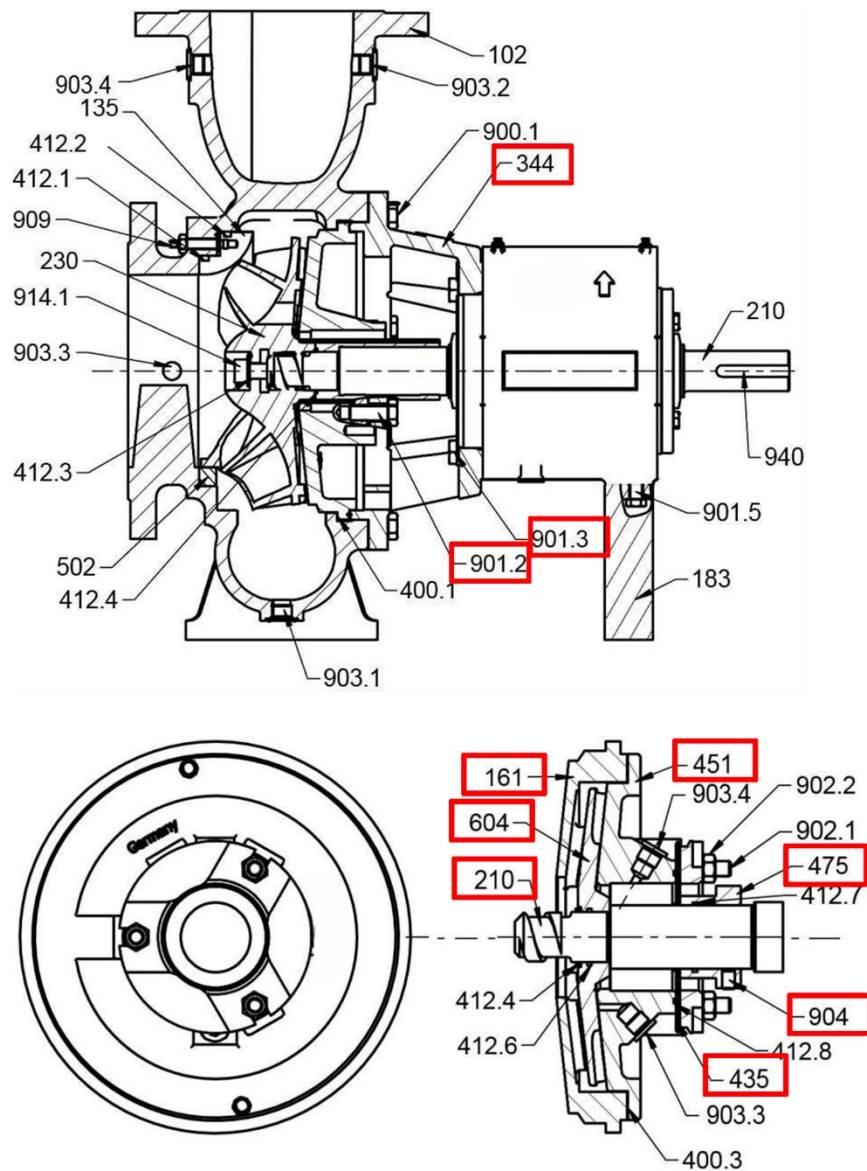


Figure 18 Dismantling of dynamic seal

Dismantling of the dynamic seal

1. Remove the hexagon screw (901.2).
2. Undo the cover (161.2) by positioning a lever between the gap on the cover and the frame adaptor (344).
3. Remove the expeller (604) from the shaft.
4. Use the screws (901.2) to pull the stuffing box housing (451) out of the frame adaptor.
5. The seal cover (471.2) and the static seal (435) can be removed by removing the nuts (920.2).
6. Remove the stud screws (904) and loosen the mating ring (475) from the shaft (210). Undo the hexagon screws (901.3) of the frame adaptor and remove the same.

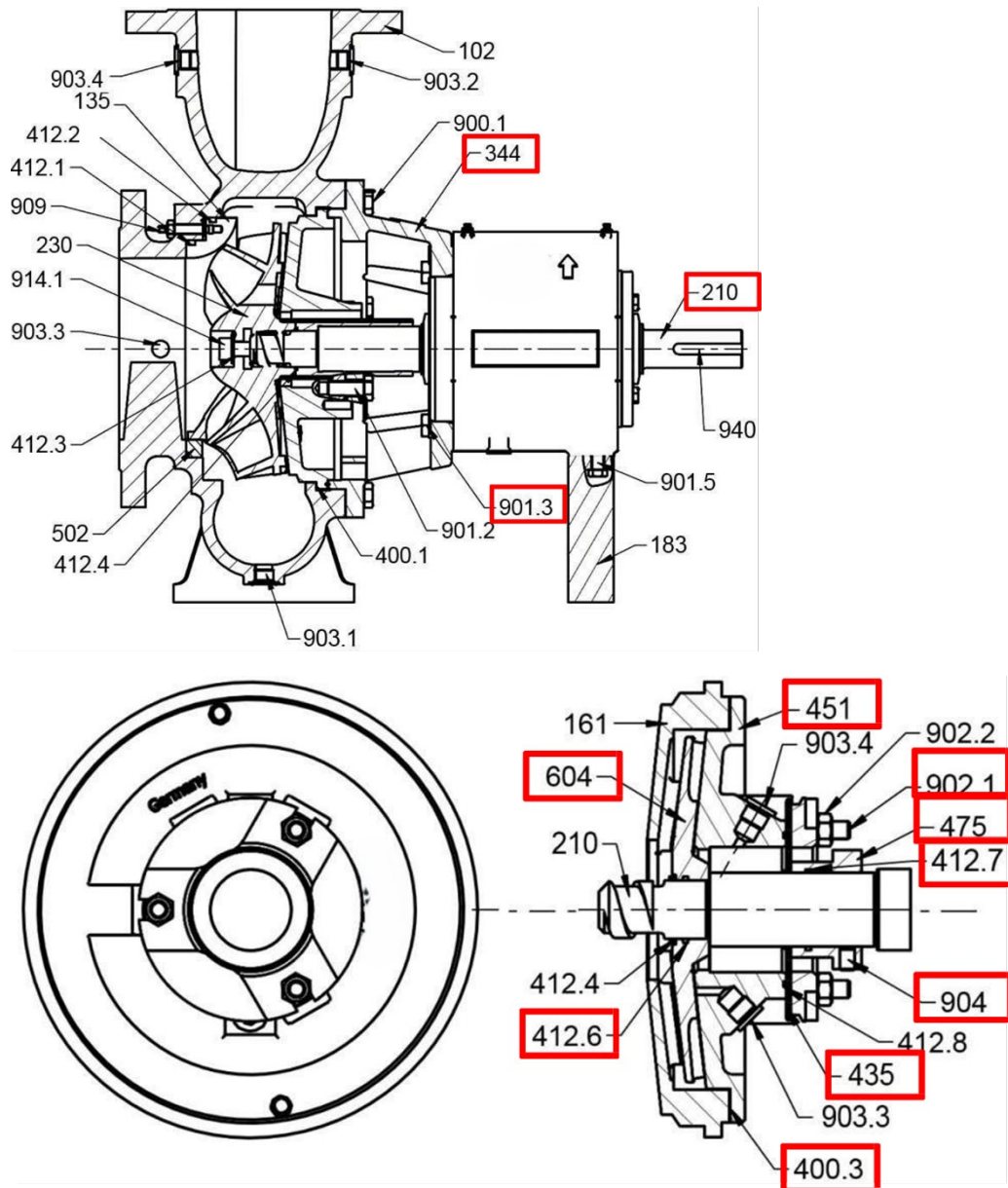


Figure 19 Assembly of dynamic seal

Assembly of the dynamic seal

1. Fix the frame adaptor (344) with the hexagon screw (901.3) to the bearing housing (330).
2. Push the mating ring (475) with the O-ring (412.7) and the studscrews (904) over the shaft (210) into preliminary positions up to the rearmost flange.
3. Mount the O-ring (412.8), the static seal (435) and the seal cover (471.2) onto the stuffing box housing (451). For this purpose, use the screws (902.1) and nuts (902.2).
4. Check whether the static seal is positioned centrally in its adaptor in the stuffingbox housing. Insert the pre-assembled stuffing box housing into the frame adaptor.
5. Press the expeller (604) with the O-ring (412.6) onto the shaft.
6. Mount the flat gasket (400.3) or the O-ring (412.8) into the cover (161), depending on the design.

7. Mount the cover with the hexagon screws (901.2).
8. If the unit has been completely mounted, place the mating ring (475) into the correct position on the shaft and tighten the stud screw (904). The distance between the seal cover and the flange of the mating ring must be 10 mm.

6.2.5 Dismantling and assembly of the mechanical seal

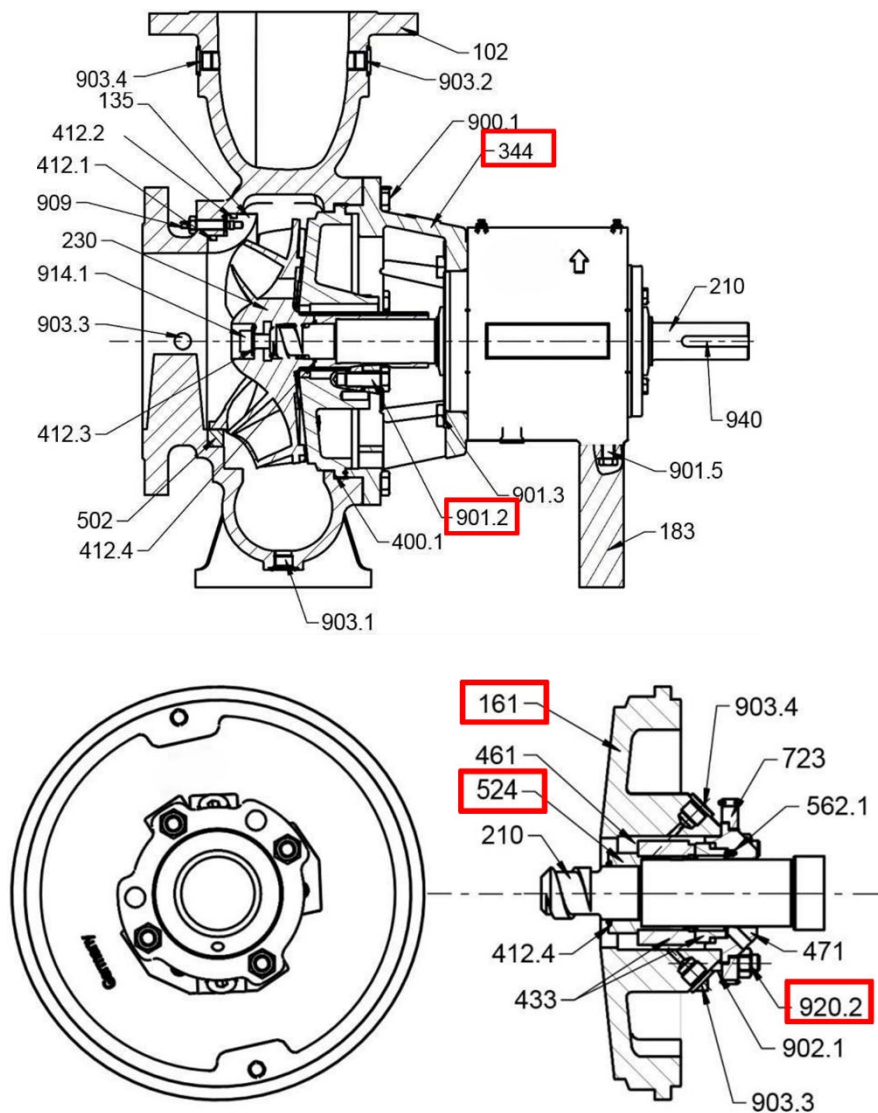


Figure 20 Dismantling of mechanical seal

Dismantling of the mechanical seal

1. Remove the hexagon nuts (920.2).
2. Undo the setscrews of the rotating unit from the shaft sleeve (524).
3. Remove the hexagon screws (901.2).
4. Pull of the cover (161) from the frame adaptor (344).
5. The mechanical seal can now be pulled off from the shaft / shaft sleeve.

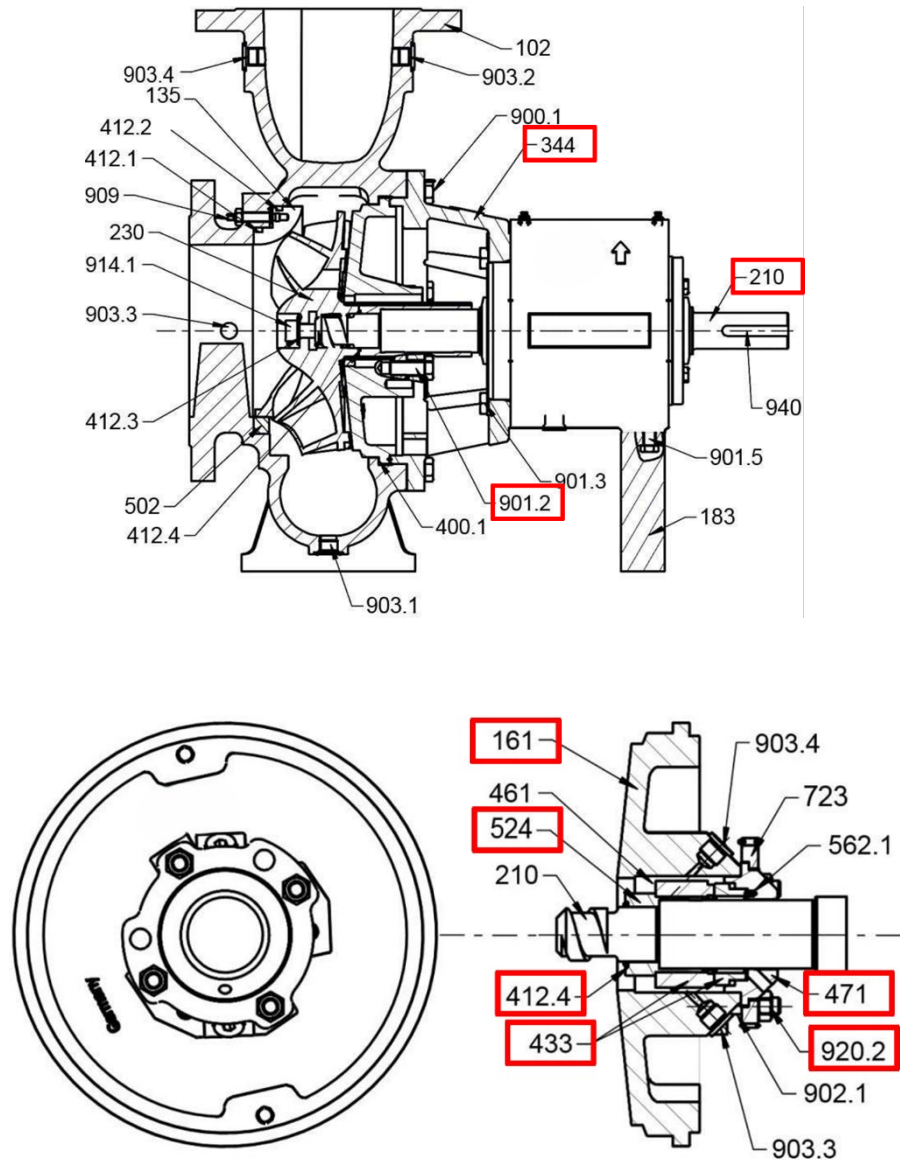


Figure 21 Assembly of mechanical seal

Assembly of the mechanical seal

1. Check the shaft (210) for damages (marks and indents). In case of damages the shaft has to be replaced.
2. The gland (471) is placed evenly and the mating ring of the seal is pressed straight into the snug fitting. If necessary, use an element made of plastic to push it in. Do not drive it in!
3. Push the gland (471) onto the shaft (210) up to the first shaft transition.
4. Place the gasket (400.2) with a slight grease film onto the gland.
5. The rotating part of the mechanical seal is now mounted on the shaft sleeve (524) and fastened by means of the setscrew. Observe sealing and stop side; do not can the mechanical seal.
6. The rotating unit (433, 524) is pushed onto the shaft up to the stop.
7. Insert the O-ring (412.4).
8. The cover (161) is mounted in the correct position into the fitting edge of the frame adaptor (344) and fastened by means of the hexagon screws (901.2).

9. The gland (471) is pushed against the cover and fastened with the hexagon screws (920.2).
10. A bellow-type seal must not roll over the shaft. Apply a slight layer of CHEMOPAC silicone spray first of all. The impeller and the other parts are mounted.

6.2.6 Dismantling and assembly of the soft packing

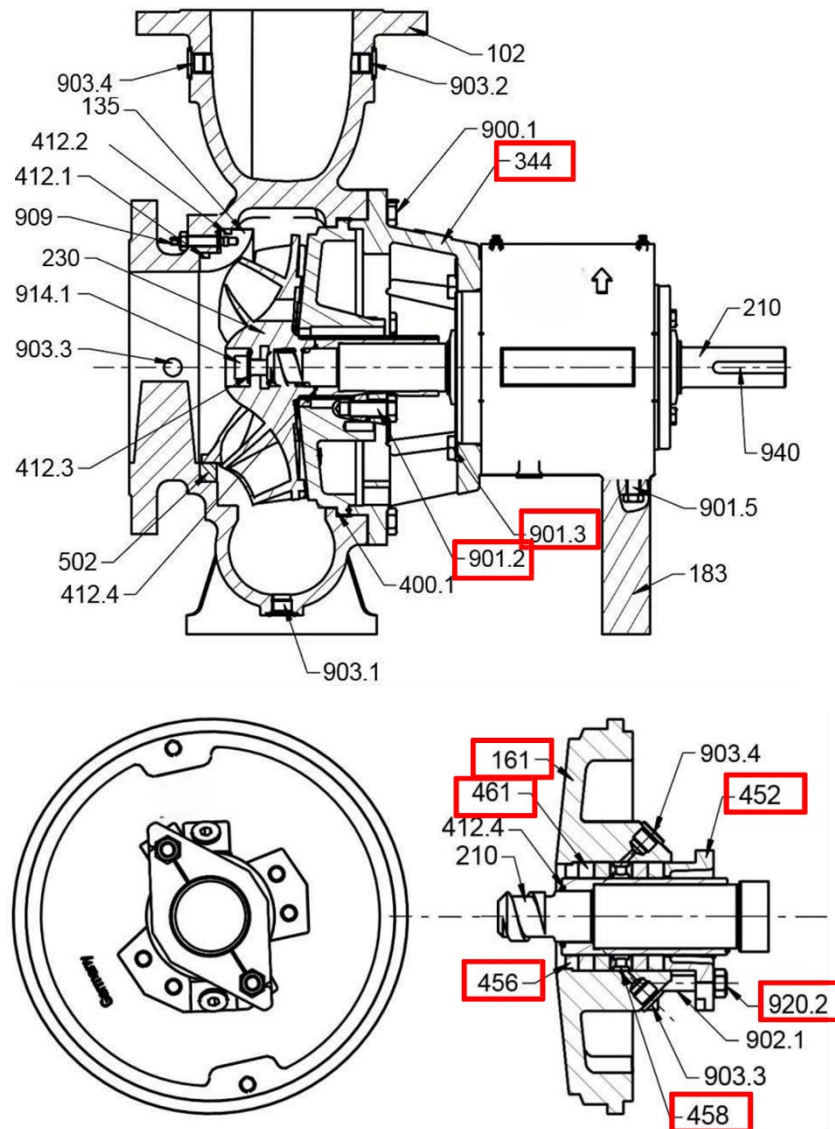


Figure 22 Dismantling of soft packing

Dismantling of the soft packing

1. Remove the hexagon screws (901.2) from the cover (161).
2. After these screws and nuts have been removed, pull off the cover (161) from the frame adaptor (344).
3. All parts belonging to the soft packing, except for the shaft sleeve (524), remain in the cover.

4. Now remove the nuts (920.2) and the packing gland (452).
5. The bushing (456), the soft packings (461) and the lantern ring (458) can now be pulled out of the cover.
6. Pull off the shaft sleeve from the shaft by means of an extractor device.
7. Undo the hexagon screws (901.3) of the frame adaptor and remove the same.

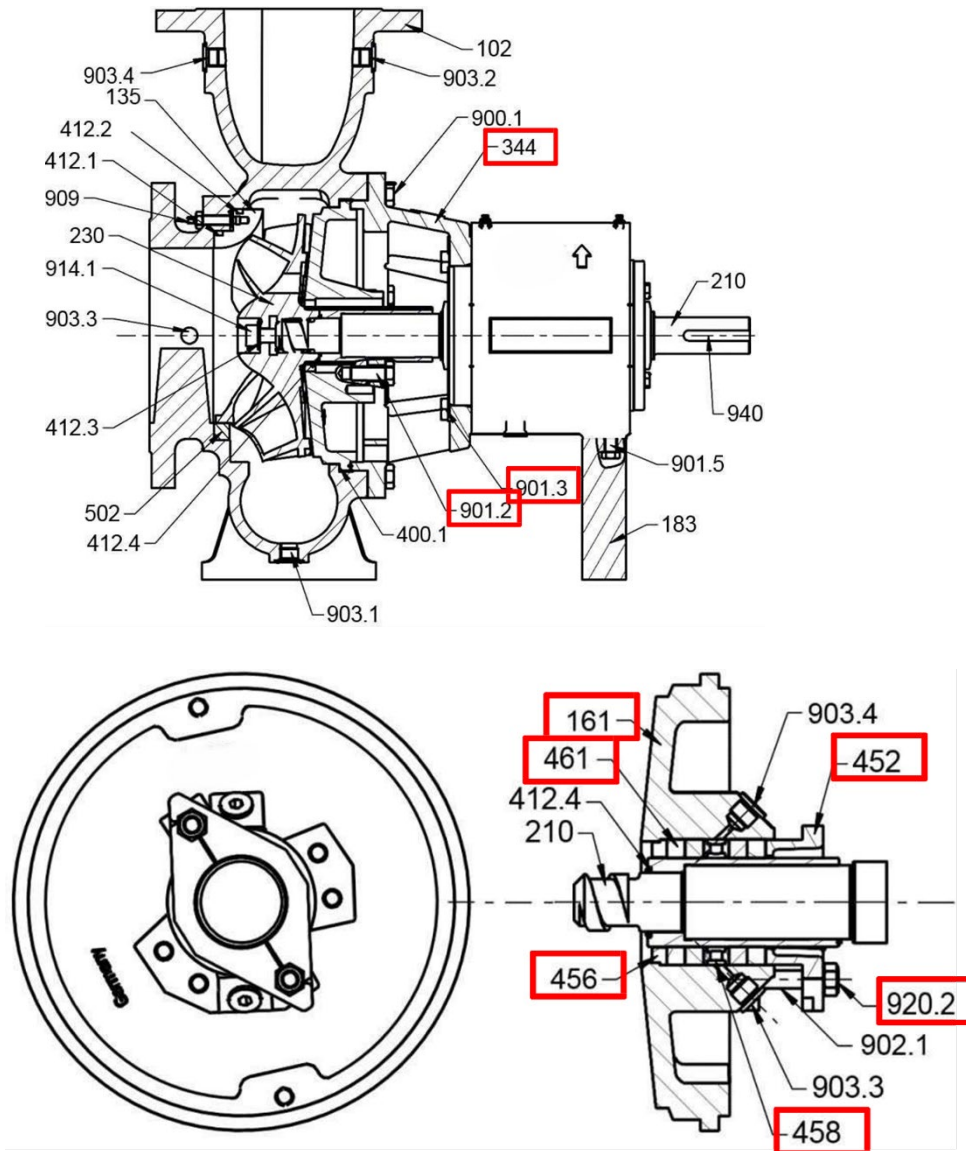


Figure 23 Assembly of soft packing

Assembly of the soft packing

1. Fix the frame adaptor (344) with the hexagon screw (901.3) to the bearing housing (330).
2. Deposit the cover (161) on a horizontal surface with the stuffing box housing facing up. Now place the bushing (456) on the bottom of the stuffing box housing.

3. Mount the shaft sleeve (524) in vertical position in the centre of the stuffing box housing.
4. Now first of all insert two soft packings (461), then the lantern ring (458) and finally the two remaining soft packings and the packing gland (452). Tighten the screws (920.2) by hand.
5. Press the cover with the parts of the soft packing onto the shaft. Check that the shaft sleeve is mounted in direction of the flange of the shaft.
6. Mount the cover with the hexagon screws (901.2).

6.2.7 Dismantling of the bearing housing

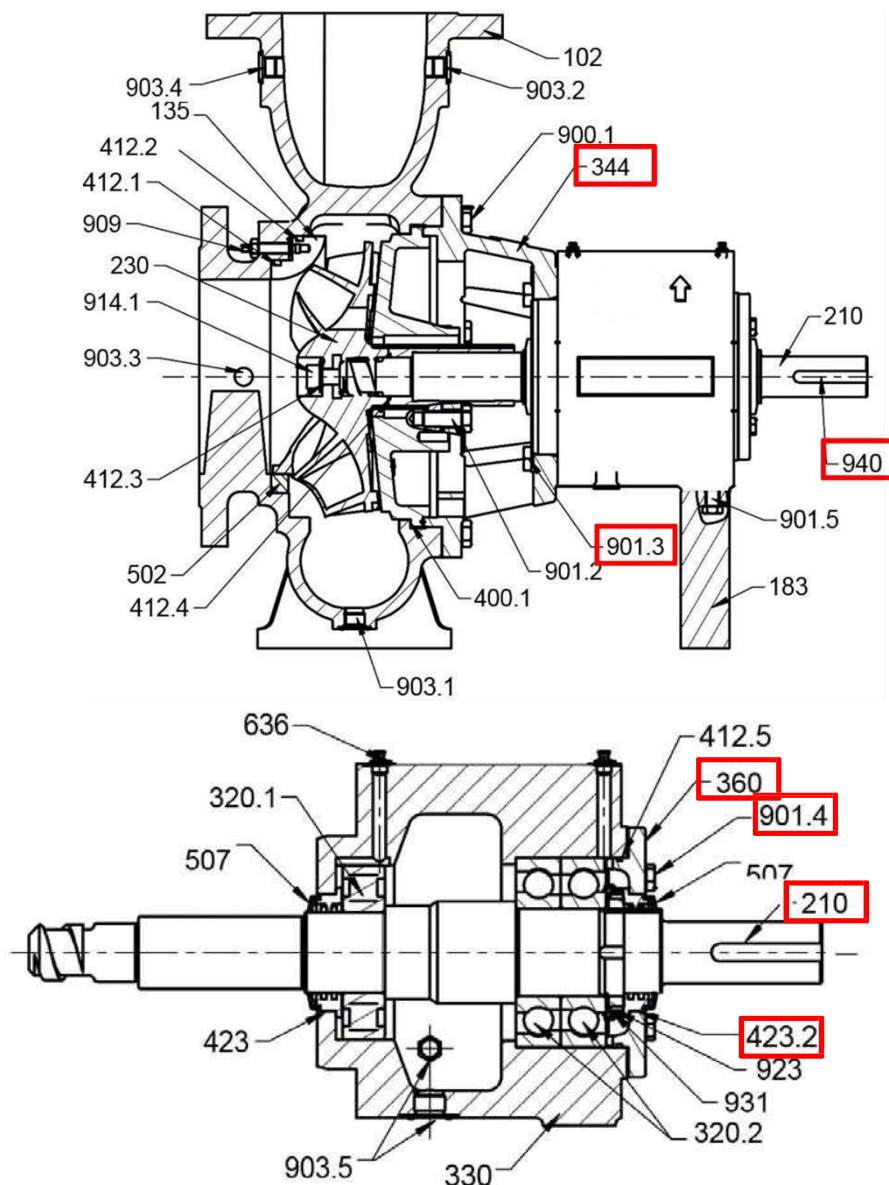


Figure 24 Dismantling/assembly of bearing housing

Further procedure after the dismantling of the mechanical seal

1. Undo hexagon screw (901.3).
2. Remove frame adaptor (344).
3. Undo hexagon screw (901.4).
4. Remove key (940).
5. Remove bearing cover (360) with labyrinth ring (423.2).
6. Dismantle shaft (210) in the direction of the drive side.

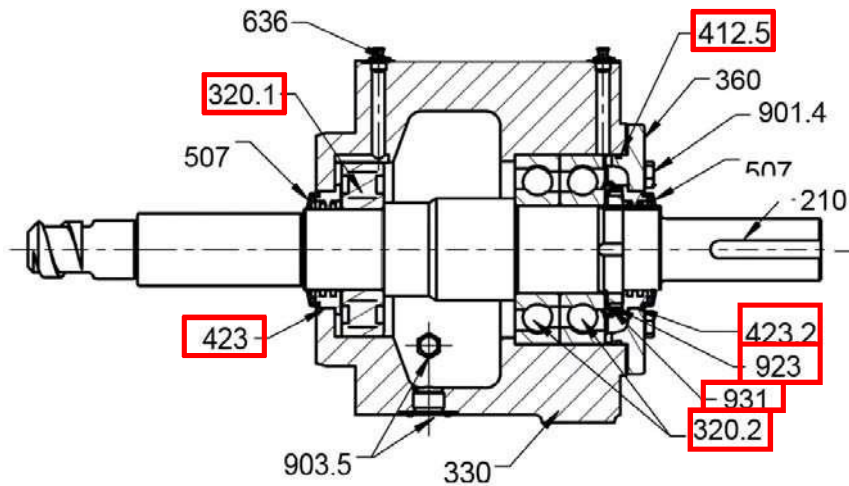


Figure 25 Replacing bearings



Replacing bearings

1. Unlock washer (931) and undo and screw off nut for bearing (923).
2. Remove washer (931).
3. Pull off bearings (320.1, 320.2) with extractor device

The labyrinth rings in the bearing cover (423.2) and the bearing housing (423) can be replaced if necessary.

Assembly is performed in the reverse order. We recommend you to change the seals, item (412.5).


7 Commissioning

	<p>DANGER</p>	<p>Commissioning of the product may solely be carried out by persons, who have participated in detailed instruction about the subject matter.</p>
	<p>ATTENTION</p>	<p>Operating the pump in the wrong direction of rotation results in damage.</p>

Carry out the following tests, before initial commissioning:

1. Check to see whether any foreign matter is in the pump and whether it can freely rotate by turning it by hand.
2. Check to see whether all protective facilities are mounted on the pump,
3. the motor is connected in compliance with the electrical regulations and the direction of rotation is the same as specified,
4. the shut-off devices mounted on the suction and discharge sides are functional,
5. no leaks are visible at standstill with the suction and discharge lines filled,
6. the shaft seal piping is correctly installed in line with the application.
7. Make sure that the bearing unit is filled with oil or has been lubricated with grease.



8 Control and Operation


	<p>ATTENTION</p>	<p>Operation is exclusively allowed by the staff trained by the manufacturer.</p>
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Before switching on, the following checks must be carried out:

- Visual inspection
- Check the levels

8.1 Switching-on the pump

	<p>DANGER</p>	<p>Operation of the product may solely be carried out by persons, who have participated in detailed instruction about the subject matter.</p>
	<p>ATTENTION</p>	<p>Before switching on the pump, the operator has to ensure that</p> <ul style="list-style-type: none"> • personal protective equipment is worn.

	<p>REFERENCE</p>	<p>To turn on the pump refer to the corresponding operating instructions of the connected motor.</p>
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8.1.1 Checks during and after commissioning

- Check the soft packing for temperature and leaks.
- Check the pump for vibrations and abnormal noises.
- Check the bearing housing for temperature and vibrations in the bearing area.
- After a sufficiently long running period, check the temperatures of the pump and motor for excessive heating.
- Check the coupling alignment in accordance with the specifications of the coupling manufacturer.

8.1.2 Noise level

The noise produced by an Atmos NHD pump depends to a considerable extent on the operating conditions.


The sound level will generally be less than 85 dB(A) in normal pump operation driven by an electric motor. If the pump is operated outside its usual field of application or in the event of cavitation, the sound level may exceed 85 dB(A). Then precautions must be taken, e.g. installation of a sound-inhibiting cladding around the pump plant or wearing ear protection.

If the pump plant makes a noise after some time, that could indicate certain problems in the plant.

Rattling could indicate cavitation and excessive motor noise wear to the bearings.



If the noise produced becomes excessive, switch off the plant and look for the cause.

8.2 Switching-off the pump

	<p>REFERENCE</p>	<p>To switch off the pump refer to the corresponding operating instructions of the connected motor.</p>
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9 Servicing

Below you will find important information for troubleshooting and maintenance of the product. Regular maintenance according to the maintenance plan is an essential prerequisite for an efficient use of the machine.




	<p>DANGER</p>	<p>During maintenance work, troubleshooting and installation activities there must be ensured that the machine is shut down safely and secured against switching on again. Not properly carried out maintenance and servicing activities can have serious consequences for people, the environment and the product itself.</p> <p>Therefore, remove the fuses and lock the motor switch!</p>
	<p>ATTENTION</p>	<p>Maintenance work must only be performed by trained and qualified personnel.</p>

The maintenance comprises four areas to ensure the operational state of the product or for the recovery from a failure.

This manual divides the maintenance work into the following areas:

- Maintenance
- Cleaning

9.1 Customer service

	<p>REFERENCE</p>	<p>WILO SE Wilopark 1 44263 Dortmund Germany T +49 (0)231 4102-0 T +49 (0)231 4102-7363 wilo@wilo.com www.wilo.com</p>
	<p>DANGER</p>	<p>This manual covers only work, which cannot be carried out without special knowledge.</p>
	<p>ATTENTION</p>	<p>Operations that are not described must exclusively be carried out by the authorized customer service. For parameter and programme changes, please contact the local Wilo customer service.</p>

9.2 Maintenance

	<p>DANGER</p>	<p>Maintenance operations of the product are exclusively allowed to be carried out by persons, who have participated in detailed instruction about the subject matter.</p>
	<p>CAUTION</p>	<p>The frequency of use and ambient conditions may necessitate deviations of the intervals of the activities described below.</p> <ul style="list-style-type: none"> • Train the persons, who are responsible for the maintenance of the product. • Change the maintenance intervals in this documentation after consultation with the manufacturer.
	<p>REFERENCE</p>	<p>To allow safe and proper use of the product it is essential to keep the intervals, which are described in the chapter Qualification of the staff.</p>

We recommend a periodic maintenance of the product. A prolonged duration of use is possible only by means of preventive and anticipatory maintenance.

It reduces repairs and the frequent need for spare parts.

The maintenance includes the following tasks:

- Monitoring of the shaft seal on possible leakage
- Monitoring the bearing lubrication
- Check the bearing temperatures
- Regular check of the screwed joints
- Monitoring for any noise and vibrations
- Monitoring of the flow capacity and the delivery pressure

9.3 Maintenance intervals

	<p>DANGER</p>	<p>Maintenance operations of the product are exclusively allowed to be carried out by persons, who have participated in detailed instruction about the subject matter.</p>
	<p>REFERENCE</p>	<p>Please also note the information in the chapter Qualification of the staff.</p>

For details about the service intervals listed below, please refer to the corresponding chapters in these instructions.

9.3.1 Seals

Mechanical seals do not generally leak. They are usually maintenance-free but may be damaged if the pump is operated incorrectly.

Soft packings must be regularly checked to ensure slight leakage.

Excessively tightened packings may damage the shaft sleeve and increase the power consumption of the motor.

Owing to its arrangement and construction the dynamic seal is applied as static seal upon standstill only. The function of the dynamic seal is performed by an expeller, which is mounted on the Atmosphere side and which prevents the overflow of liquid.


9.3.2 Bearing lubrication and temperature

Regularly check the oil level on the oil sight glass; it must be filled up to halfway.

Check the bearing temperatures at regular intervals for excessive heating.

A large rise in temperature could indicate the start of bearing damage.

9.3.3 Lubricants

	ATTENTION	<p>Before dispatch of the pump the bearing housing was drained at the manufacturer's.</p> <p>Prior to commissioning the bearing housing must be filled with oil according to the table in the chapter 9.3.6 "Lubrication intervals".</p> <p>Never mix different types of grease. Mixed greases do not guarantee perfect lubrication of the bearings.</p>
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9.3.4 Oil lubrication

After commissioning an oil change must be performed after 180 hours of operation. Subsequently the oil change is to be performed in accordance with the table in the chapter "0 oil change intervals".

Recommended oils according to the classification ISO VG 46 for ambient temperatures above 15°C:

TEBO	Larita Oil 46
KLÜBER	Crucolan 46
ESSO	Teresso 46
NESTE	Paine 46
SHELL	Tellus Oil S46
MOBIL	DTE Oil Medium

9.3.5 Grease lubrication

The use of lubricating greases depends on the respective application and temperature conditions.

The grease-lubricated bearings are already filled with grease when the pump is dispatched.

The lubricant quantity and regreasing are indicated in the following tables in the chapter "9.3.6 lubrication intervals" and "9.3.7 grease lubrication intervals".

Recommended greases in accordance with the classification up to a bearing housing temperature of 80°C:

SHELL	ALVANIA EP 2
NESTE	Yleisrasva 2
ESSO	Beacon 2
SKF	LGMT 2
KLÜBER	Centoplex EP2

Recommended grease in accordance with the classification of a bearing housing temperature exceeding 80°C:

SHELL	Limona LX1
NESTE	Yleisrasva 2
ESSO	Unirex N3
SKF	LGHP 2
KLÜBER	Staburax NBU 8 EP

9.3.6 Lubrication intervals

Support Size	Oil quantity / bearing housing n=	Re-greasing / grease n= 1450 / 2950	
		A	B
BG 1	~ 0.2 ltr.	12 g	20 g
BG 2	~ 0.5 ltr.	18 g	30 g
BG 3	~ 0.6 ltr.	25 g	35 g
BG 4	~ 0.9 ltr.	30 g	45 g
BG 5	~ 2.2 ltr.	45 g	65 g
BG 6	~ 3.7 ltr.	55 g	75 g

9.3.7 Lubrication intervals for grease

Support Size	Pump Side Bearing	Coupling Side Bearing	Lubrication intervals in (h)
	n = 1450 / 2950 A	n = 1450 / 2950 B	n = 1450 / 2950
BG 1	NUP 307 ECJ	BECBM 7308	8000
BG 2	309 ECJ	7310	6500
BG 3	311 ECJ	7312	6000
BG 4	313 ECJ	7314	5000
BG 5	317 ECJ	7318	3500
BG 6	320 ECJ	7322	2000




9.3.8 Oil change intervals

Surface temperature	Cycle n = 1450	Cycle n = 2950
~ 60° C	1 year	6 months
60° – 80° C	6 months	3 months

9.4 Cleaning

	<p>ATTENTION</p>	<p>Cleaning of the product may solely be carried out by persons, who have participated in detailed instruction about the subject matter.</p>
	<p>REFERENCE</p>	<p>Please also note the information in the chapter Qualification of the staff.</p>

10 Fault finding and troubleshooting

	<p>REFERENCE</p>	<p>Please also note the information in the chapter Qualification of the staff.</p>
	<p>REFERENCE</p>	<p>If you are in doubt, please local Wilo customer service (cf. chapter 9.1).</p>
	<p>ATTENTION</p>	<p>Troubleshooting and elimination of faults of the product may solely be carried out by persons, who have participated in detailed instruction about the subject matter and have taken part in a specific training.</p>

10.1 Elimination of faults

	<p>DANGER</p>	<p>Please inform the customer service, if any fault occurs that is not shown in the error message list.</p>
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Faults in a pump plant are generally attributable to the following causes:

- Fault in the pump
- Fault in the piping
- Improper commissioning / Assembly
- Wrong choice of pump

The following overview provides information on faults, their causes and remedies:

Frequent faults	Possible causes
Pump does not convey any liquid	1, 2, 3, 4, 5, 6, 7, 9, 10, 13, 15, 16, 17, 25, 31
Inadequate volume throughput	1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 13, 15, 16, 17, 24, 25, 31
The delivery head is inadequate	2, 9, 10, 13, 31
The pump switches off after commissioning	1, 2, 3, 4, 5, 6, 7
The power consumption of the pump is higher than normal	8, 11, 12, 13, 14, 18, 19, 20, 21, 22, 23, 28, 29, 32
The power consumption of the pump is lower than normal	9, 10, 11, 12, 13, 14, 16, 17, 24, 25
The mechanical seal has to be replaced too often	19, 21, 22, 26, 32, 34
Pump vibrates or makes a noise	1, 3, 5, 6, 7, 11, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 25, 27, 28, 29, 30

Frequent faults	Possible causes
Bearings wear too quickly or become hot	19, 20, 21, 22, 23, 27, 28, 29, 30, 33
Pump runs sluggishly and becomes hot or jams	19, 20, 21, 22, 23, 27, 28, 29, 30, 32, 33, 34

Possible causes

1	Pump or suction line insufficiently filled and vented
2	Air or gas escapes from the liquid
3	Air pocket in the suction line
4	The manometric suction height is too large
5	Suction line or suction basket clogged
6	Foot valve or suction line inadequately immersed during operation
7	Available minimum supply pressure (NPSH) too low
8	Speed too high
9	Speed too low
10	Wrong direction of rotation
11	Pump does not operate at the right operating design point
12	The liquid does not have the calculated specific mass
13	The liquid does not have the calculated viscosity
14	Pump runs at too low a flow rate
15	Wrong choice of pump
16	Clogging in the impeller or pump casing
17	Clogging in the pipe system
18	Wrong installation of the pump plant
19	Pump and motor not correctly aligned
20	Knocking of a rotating component
21	Imbalance in rotating parts (e.g. impeller)

Possible causes

22	Pump shaft knocks
23	Bearings damaged or worn
24	Sealing rings damaged or worn
25	Impeller damaged
26	Running surfaces of the mechanical seal are worn or damaged
27	Axial lock of the impeller or pump shaft damaged
28	Bearings installed incorrectly
29	Too much or too little bearing lubrication
30	Wrong or dirty lubricant
31	Suction line or pump not airtight
32	Pump running dry
33	Too high axial force due to worn back vanes or too high supply pressure
34	Rinsing water line is not switched on

11 Decommissioning

	<p>DANGER</p>	<p>Decommissioning of the product may solely be carried out by persons, who have participated in detailed instruction about the subject matter.</p>
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11.1 Temporary decommissioning

Turn off the product and secure it against being switched on again. In case of transfer to another location, please proceed as follows:

1. Disconnect the product from all energy supply systems
2. Clean the product

	<p>REFERENCE</p>	<p>For the disposal of auxiliary and operating materials, please observe the local regulations and information from the safety data sheets.</p>
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11.2 Storage after temporary decommissioning

	<p>DANGER</p>	<p>Incorrect storage can result in serious damage to the product and people upon re-commissioning</p>
	<p>REFERENCE</p>	<p>Before storing the product, please observe the information on temporary decommissioning in chapter 11.1.</p>
	<p>NOTE</p>	<p>After long-term storage, the grease/oil must be changed before commissioning.</p>
	<p>ATTENTION</p>	<p>Short-term storage: A maximum of 6 months for the pump unit A maximum of 12 months for spare parts made of plastic and rubber.</p>
	<p>ATTENTION</p>	<p>Long-term storage: A maximum of 24 months for spare parts made of metal. In the event of long-term storage of the pump up to 12 months, please contact the local Wilo customer service.</p>

Proper storage ensures a long life. For the storage, the following points are to be taken into account:

- For intermediate, short-term and long-term storage, the pump is to be stored in a clean dry place and must be protected from damage.
- Prior to dispatch the oil lubrication of the bearing unit was removed. Fill the bearing unit with oil or with a rust inhibitor for storage.
- The pump shaft and coupling also have to be protected against rust with the appropriate means.
- Any protective measures of the drive unit can be found in the enclosed description.
- During the storage period the pump shaft has to be turned by hand at least once a week to prevent rusting and jamming of the bearings.
- Do not remove the caps on the suction and pressure nozzles to prevent any debris and dirt getting into the interior of the pump.



11.3 Final decommissioning

Turn off the product and secure it against being switched on again. Please proceed as follows:

1. Disconnect the product from all energy supply systems
2. Clean the product


	REFERENCE	<p>For the disposal of auxiliary and operating materials, please observe the local regulations and information from the safety data sheets.</p>
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12 Disposal

	<p>DANGER</p>	<p>Inappropriate disposal can cause serious damage to people and the environment.</p>
	<p>REFERENCE</p>	<p>For the disposal of auxiliary and operating materials, please observe the local regulations and information from the safety data sheets.</p>

For the proper disposal, the following points are to be observed:

- Dispose of auxiliary and operating materials properly and according to information from the safety data sheets.
- Materials must be separated by types and must be supplied for recycling in accordance with local regulations.

	<p>NOTE</p>	<p>In case of doubt regarding the method of disposal, please contact the manufacturer or your local waste disposal company.</p>
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13 Parts list

Item	Spare Parts List	Quantity
102	Pump casing	1
135	Wear Plate	1
161	Cover for mechanical Seal/ Packing	1
161.2	Cover for dynamical Seal	1
183	Support feet	1
210	Shaft	1
230	Impeller	1
320.1	Bearing	1
320.2	Bearing	2
330	Bearing housing	1
344	Frame Adapter	1
360	Bearing Cover	1
400.1	Gasket	1
400.2	Gasket	1
400.3	Gasket	1
412.1	O- Ring	1
412.2	O- Ring	1
412.3	O- Ring	1
412.4	O- Ring	1
412.5	O- Ring	1
412.6	O- Ring	1
412.7	O- Ring	1
412.8	O- Ring	1
423	Labyrinth ring	1

Item	Spare Parts List	Quantity
423.2	Labyrinth ring	1
433	Mechanical Seal	1
435	Gasket	1
451	Stuffing box Housing	1
452	Packing gland	1
456	Bushing	1
458	Lantern ring	1
461	Soft packing	4
471.2	Gland	1
475	Mating ring	1
507	Deflector	2
524	Shaft sleeve	1
562.1	Pin	1
604	Expeller	1
636	Grease nipple	1
685	Guard end	1
686	Guard end	1
686.3	Guard end	1
723	Flange for mechanical seal	1
840	Coupling	1
890	Base plate	1
901.1	Screw	12
901.2	Screw	2
901.3	Screw	4
901.4	Screw	4
901.5	Screw	2

Item	Spare Parts List	Quantity
901.6	Screw	3
901.7	Screw	4
901.8	Screw	2
901.9	Screw	4
901.10	Screw	4
902.1	Screw	3
903.1	Plug	1
903.2	Plug	1
903.3	Plug	1
903.4	Plug	1
903.5	Plug	1
904	Stud	3
909	Screw	3
914.1	Screw	1
920.2	Nut	3
920.3	Nut	3
923	Nut for bearing	1
931	Washer	1
940	Key	1
918	Screw for base plate	3
920.4	Nut	6

13.1.1 Storage of spare parts

We recommend you to store the following spare parts:

Component	Part Number
Pump casing	120
Wear plate	135
Cover	161
Support feet	183
Shaft	210
Impeller	230
Frame adapter	344
Mechanical seal	433
Stuffing box housing	451
Shaft protection sleeve	524
Expeller	604

When ordering spare parts, please indicate the following:

- Designation and part number according to the main section (see chapter 4.1)
- Type of pump with the pump serial number.
- Material of the part

14 Compatibility list

Type Item	BG/330	102	135	161	183	210	230	344	433	451	524	604
32-200	1	1	1	11	1	1	1	11	1	11	1	1
40-200	1	2	2	11	1	1	2	11	1	11	1	1
50-200	1	3	3	11	1	1	3	11	1	11	1	1
65-200	2	4	4	21	2	2	4	21	2	21	2	2
80-200	2	5	5	21	2	2	5	21	2	21	2	2
32-250	2	6	6	22	2	2	6	22	2	22	2	2
40-250	2	7	7	22	2	2	7	22	2	22	2	2
50-250	2	8	8	22	2	2	8	22	2	22	2	2
65-250	2	9	9	22	3	2	9	22	2	22	2	2
80-250	2	10	10	22	4	2	10	22	2	22	2	2
40-315	2	11	11	23	4	2	11	23	2	23	2	2
50-315	2	12	12	23	4	2	12	23	2	23	2	2
100-250	3	13	13	31	3	3	13	31	3	31	3	3
125-250	3	14	14	31	4	3	14	31	3	31	3	3
150-250	3	15	15	31	5	3	15	31	3	31	3	3
65-315	3	16	16	32	3	3	16	32	3	32	3	3
80-315	3	17	17	32	4	3	17	32	3	32	3	3
100-315	3	18	18	32	4	3	18	32	3	32	3	3
125-315	3	19	19	32	5	3	19	32	3	32	3	3
100-400	3	20	20	33	5	3	20	33	3	33	3	3
125-400	3	21	21	33	6	3	21	33	3	33	3	3
200-250	4	22	22	41	7	4	22	41	4	41	4	4
300-250	4	23	23	41	9	4	23	41	4	41	4	4

		102	135	161	183	210	230	344	433	451	524	604
150-315	4	24	24	42	7	4	24	42	4	42	4	4
200-315	4	25	25	42	7	4	25	42	4	42	4	4
250-315	4	26	26	43	9	4	26	43	4	43	4	4
300-315	4	27	27	43	10	4	27	43	4	43	4	4
150-400	4	28	28	44	7	4	28	44	4	44	4	4
200-400	4	29	29	44	8	4	29	44	4	44	4	4
250-400	5	30	30	51	12	5	30	51	5	51	5	5
300-400	5	31	31	51	12	5	31	51	5	51	5	5
350-500	5	32	32	52	14	5	32	52	5	52	5	5
400-500	5	33	33	52	15	5	33	52	5	52	5	5
100-500	5	34	34	53	11	5	34	53	5	53	5	5
150-500	5	35	35	53	11	5	35	53	5	53	5	5
200-500	5	36	36	53	11	5	36	53	5	53	5	5
250-500	5	37	37	53	12	5	37	53	5	53	5	5
300-500	5	38	38	53	13	5	38	53	5	53	5	5
400-600	5	39	39	54	15	5	39	54	5	54	5	5
500-600	5	40	40	54	16	5	40	54	5	54	5	5
100-600	5	41	41	55	12	5	41	55	5	55	5	5
200-600	5	42	42	55	13	5	42	55	5	55	5	5
250-600	5	43	43	55	15	5	43	55	5	55	5	5
300-600	5	44	44	55	14	5	44	55	5	55	5	5

15 Sealing water demand and sealing water pressure

The required amount of pure water for sealing of the packing is 0.2- 1.0 l/min. Please take the corresponding pressure from the table below.



Bearing size	n = 1500 rpm	n = 3000 rpm
BG 1	1.5 bar + supply pressure	5.0 bar + supply pressure
BG 2	2.5 bar + supply pressure	6.0 bar + supply pressure
BG 3	3.0 bar + supply pressure	8.0 bar + supply pressure
BG 4	3.5 bar + supply pressure	8.0 bar + supply pressure
BG 5	3.5 bar + supply pressure	8.0 bar + supply pressure
BG 6	On request	On request

Please take the required amount of pure water for standard mechanical seals and max.30° C from the table below.

Indications in l/min

Bearing housing	50° C	100° C	150° C	200° C
BG 1	0.6	1.0	1.3	1.6
BG 2	0.8	1.2	1.5	1.8
BG 3	0.9	1.25	1.55	1.9
BG 4	1.0	1.85	1.75	2.15
BG 5	1.25	1.6	2.0	2.5
BG 6	1.5	2.1	2.6	3.0

16 Supplier documentation

	<p>DANGER</p>	<p>The non-observance of information from the documentation of supplier parts can cause severe damage to people, the environment or to the product.</p>
	<p>REFERENCE</p>	<p>If you are in doubt, please contact the customer service or the manufacturer.</p>

Number	Document
1	Documentation of the motor

17 Instruction log

	NOTE	COPY TEMPLATE! Copy first, then fill out!
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Date	Name	Type of training	Training carried out by	Signature

18 Index

Versions	16	Product identification	4
Switching-off	36	Cleaning	42
Operation	34	Residual risks	9
Troubleshooting	43	Protective equipment	9
Manufacturer	1	Safety instructions	8
Commissioning	33	Decommissioning	46
Installation	23	Elimination of faults	43
Servicing	37	Technical data	13
Customer service	37	Transport	19
Staff	11, 38, 42, 43		

19 EC declaration



DECLARATION OF CONFORMITY KONFORMITÄTSERKLÄRUNG

We, the manufacturer, declare under our sole responsibility that the pump types of the series,
Als Hersteller erklären wir unter unserer alleinigen Verantwortung, dass die Pumpenbauarten der Baureihen,

Atmos NHD...-AP
Atmos NHD...-AU

(The serial number is marked on the product site plate)
(Die Seriennummer ist auf dem Typenschild des Produktes angegeben)

in their delivered state comply with the following relevant directives and with the relevant national legislation:
in der gelieferten Ausführung folgenden einschlägigen Bestimmungen entsprechen 'und entsprechender nationaler Gesetzgebung:

_ **2006/42/EC - MACHINERY**
_ **2006/42/EC - MASCHINENRICHTLINIE**

_ **2009/125/EC - ENERGY-RELATED PRODUCTS**
(and according to the regulation 2019/1781 on electric motors and variable speed drives)
_ **2009/125/EC - ENERGIEVERBRAUCHSRELEVANTER PRODUKTE - RICHTLINIE**
(und entsprechend der geänderten Verordnung 2019/1781 über Elektromotoren und Drehzahlregelungen)

_ **2011/65/EU + 2015/863 - RESTRICTION OF THE USE OF CERTAIN HAZARDOUS SUBSTANCES**
_ **2011/65/EU + 2015/863 - BESCHRÄNKUNG DER VERWENDUNG BESTIMMTER GEFÄHRLICHER STOFFE-
RICHTLINIE**

comply also with the following relevant standards:
sowie auch den Bestimmungen zu folgenden harmonisierten europäischen Normen:

EN 809:1998+A1:2009; EN 60034-1:2010; EN 60204-1:2018; EN 60034-30-1:2014; EN IEC 63000:2018;

Person authorized to compile the technical file is:
Bevollmächtigter für die Zusammenstellung der technischen Unterlagen ist:

Dortmund, 2024-12-12

Signiert von:
i. V. Christoph Teschers
6390AFA148A744C...

Christoph TESCHERS
Group Vice President - Product Quality

Declaration n°2224101-rev01

PC As-Sh n°2236063-EU-rev01

WILO SE
Group Quality
Wilopark 1
D-44263 Dortmund, Deutschland

wilo

WILO SE
Wilopark 1
D-44263 Dortmund, Deutschland

<p>EL</p> <p>Επίσημη μετάφραση της Διακήρυξης</p>	<p>Εμείς, ο κατασκευαστής, δηλώνουμε με αποκλειστικά δική μας ευθύνη ότι οι τύποι αντλιών της σειράς, (Ο σειριακός αριθμός σημειώνεται στο ταμπελάκι του προϊόντος) στην κατάσταση παράδοσης συμμορφώνονται με τις ακόλουθες σχετικές οδηγίες και τη σχετική εθνική νομοθεσία:</p> <p> 2006/42/EC - Μηχανήματα 2009/125/EC - Συνδεόμενα με την ενέργεια προϊόντα 2011/65/EU + 2015/863 - για τον περιορισμό της χρήσης ορισμένων επικίνδυνων ουσιών</p> <p>συμμορφώνεται επίσης με εναρμονισμένα πρότυπα:</p> <p>EN 809:1998+A1:2009; EN 60034-1:2010; EN 60204-1:2018; EN 60034-30-1:2014; EN IEC 63000:2018;</p> <p>Πρόσωπο εξουσιοδοτημένο να συντάξει το τεχνικό αρχείο είναι:</p> <p style="text-align: right;">WILO SE Group Quality Wilopark 1 D-44263 Dortmund, Deutschland</p>
<p>ES</p> <p>Traducción oficial de la Declaración</p>	<p>Nosotros, el fabricante, declaramos bajo nuestra exclusiva responsabilidad que las bombas de la(s) serie(s) (El nº de serie está marcado en la placa de características del producto) cumple en la ejecución suministrada las siguientes disposiciones pertinentes y la legislación nacional correspondiente:</p> <p> 2006/42/EC - Máquinas 2009/125/EC - Productos relacionados con la energía 2011/65/EU + 2015/863 - Restricciones a la utilización de determinadas sustancias peligrosas</p> <p>así como las disposiciones de las siguientes normas europeas armonizadas:</p> <p>EN 809:1998+A1:2009; EN 60034-1:2010; EN 60204-1:2018; EN 60034-30-1:2014; EN IEC 63000:2018;</p> <p>Persona autorizada para la recopilación de los documentos técnicos:</p> <p style="text-align: right;">WILO SE Group Quality Wilopark 1 D-44263 Dortmund, Deutschland</p>
<p>FR</p> <p>Traduction officielle de la déclaration</p>	<p>Nous, fabricant, déclarons sous notre seule responsabilité que les types de pompes des séries, (Le numéro de série est inscrit sur la plaque signalétique du produit) dans leur état de livraison sont conformes aux dispositions des directives suivantes et aux législations nationales les transposant :</p> <p> 2006/42/EC - MACHINES 2009/125/EC - PRODUITS LIÉS A L'ENERGIE (et conformément au règlement 2019/1781 amendé relatif aux moteurs électriques et aux variateurs de vitesse) 2011/65/EU + 2015/863 - LIMITATION DE L'UTILISATION DE CERTAINES SUBSTANCES DANGEREUSES</p> <p>sont également conformes aux dispositions des normes européennes harmonisées suivantes :</p> <p>EN 809:1998+A1:2009; EN 60034-1:2010; EN 60204-1:2018; EN 60034-30-1:2014; EN IEC 63000:2018;</p> <p>Personne autorisée à constituer le dossier technique est :</p> <p style="text-align: right;">WILO SE Group Quality Wilopark 1 D-44263 Dortmund, Deutschland</p>
<p>IT</p> <p>Traduzione ufficiale della Dichiarazione</p>	<p>Noi, il costruttore, dichiariamo sotto la nostra esclusiva responsabilità che i tipi di pompa della serie, (Il numero di serie è riportato sulla targhetta del sito del prodotto) allo stato di consegna sono conformi alle seguenti direttive pertinenti e alla legislazione nazionale pertinente:</p> <p> 2006/42/EC - Macchine 2009/125/EC - Prodotti connessi all'energia 2011/65/EU + 2015/863 - sulla restrizione dell'uso di determinate sostanze pericolose</p> <p>rispettare anche le seguenti norme pertinenti:</p> <p>EN 809:1998+A1:2009; EN 60034-1:2010; EN 60204-1:2018; EN 60034-30-1:2014; EN IEC 63000:2018;</p> <p>La persona autorizzata a compilare il fascicolo tecnico è:</p> <p style="text-align: right;">WILO SE Group Quality Wilopark 1 D-44263 Dortmund, Deutschland</p>
<p>PT</p> <p>Tradução oficial da Declaração</p>	<p>Nós, o fabricante, declaramos sob nossa exclusiva responsabilidade que a(s) bomba(s) da(s) série(s), (O nº de série está marcado na placa de características do produto) está em conformidade com a versão fornecida nas seguintes disposições relevantes e de acordo com a legislação nacional</p> <p> 2006/42/EC - Máquinas 2009/125/EC - Produtos relacionados com o consumo de energia 2011/65/EU + 2015/863 - relativa à restrição do uso de determinadas substâncias perigosas</p> <p>assim como as seguintes disposições das normas europeias</p> <p>EN 809:1998+A1:2009; EN 60034-1:2010; EN 60204-1:2018; EN 60034-30-1:2014; EN IEC 63000:2018;</p> <p>Pessoa autorizada para a elaboração de documentos técnicos:</p> <p style="text-align: right;">WILO SE Group Quality Wilopark 1 D-44263 Dortmund, Deutschland</p>

<p>DA</p> <p>Officiel oversættelse af erklæringen</p>	<p>Vi, producenten, erklærer under vores eget ansvar, at pumpetyperne i serien, (Serienummeret er markeret på produktpladen) i deres leverede tilstand overholde følgende relevante direktiver og den relevante nationale lovgivning:</p> <p> 2006/42/EC - Maskiner 2009/125/EC - Energirelaterede produkter 2011/65/EU + 2015/863 - Begrænsning af anvendelsen af visse farlige stoffer</p> <p>også overholde følgende relevante standarder:</p> <p>EN 809:1998+A1:2009; EN 60034-1:2010; EN 60204-1:2018; EN 60034-30-1:2014; EN IEC 63000:2018;</p> <p>Person, der er autoriseret til at udarbejde den tekniske fil, er:</p> <p style="text-align: right;">WILO SE Group Quality Wilopark 1 D-44263 Dortmund, Deutschland</p> <p style="text-align: right;">Atmos NHD...-AP Atmos NHD...-AU</p>
<p>ET</p> <p>Deklaratsiooni ametlik tõlge</p>	<p>Meie, tootja, kuulutame ainuisikulisel vastutusel, et seeria pumbatüübid, (Seerianumber on märgitud toote saidi plaadile) oma tarnitud olekus järgima järgmisi asjakohaseid direktiive ja asjakohaseid siseriiklikke õigusakte:</p> <p> 2006/42/EC - Masinad 2009/125/EC - Energiamõjuga toodete 2011/65/EU + 2015/863 - teatavate ohtlike ainete kasutamise piiramise kohta</p> <p>vastama ka järgmistele asjakohastele standarditele:</p> <p>EN 809:1998+A1:2009; EN 60034-1:2010; EN 60204-1:2018; EN 60034-30-1:2014; EN IEC 63000:2018;</p> <p>Tehnilise toimiku koostamiseks on volitatud isik:</p> <p style="text-align: right;">WILO SE Group Quality Wilopark 1 D-44263 Dortmund, Deutschland</p> <p style="text-align: right;">Atmos NHD...-AP Atmos NHD...-AU</p>
<p>FI</p> <p>Julistuksen virallinen käännös</p>	<p>Valmistaja vakuuttaa yksinomaisella vastuullaan, että sarjan pumpputyypit, (Sarjanumero on merkitty tuotekohtaiseen kilpeen) toimitetussa tilassa noudattavat seuraavia asiaankuuluvia direktiivejä ja asiaa koskevaa kansallista lainsäädäntöä:</p> <p> 2006/42/EC - Koneet 2009/125/EC - Energiaan liittyvien tuotteiden 2011/65/EU + 2015/863 - tiettyjen vaarallisten aineiden käytön rajoittamisesta</p> <p>noudattamaan myös seuraavia asiaankuuluvia standardeja:</p> <p>EN 809:1998+A1:2009; EN 60034-1:2010; EN 60204-1:2018; EN 60034-30-1:2014; EN IEC 63000:2018;</p> <p>Henkilö, jolla on valtuudet koota tekninen tiedosto, on:</p> <p style="text-align: right;">WILO SE Group Quality Wilopark 1 D-44263 Dortmund, Deutschland</p> <p style="text-align: right;">Atmos NHD...-AP Atmos NHD...-AU</p>
<p>IS</p> <p>Opinber þýðing á yfirlýsingunni</p>	<p>Við framleiðandinn lýsum því yfir undir ábyrgð okkar einungis að dælugerðir seríunnar, (Raðnúmerið er merkt á plötunni á vörustaðnum) í afhentu ástandi í samræmi við eftirfarandi viðeigandi tilskipanir og viðeigandi innlenda löggjöf:</p> <p> 2006/42/EC - Vélartilskipun 2009/125/EC - Tilskipun varðandi vörur tengdar orkunotkun 2011/65/EU + 2015/863 - Takmörkun á notkun tiltekiinna hættulegra efna</p> <p>uppfylla einnig eftirfarandi viðeigandi staðla:</p> <p>EN 809:1998+A1:2009; EN 60034-1:2010; EN 60204-1:2018; EN 60034-30-1:2014; EN IEC 63000:2018;</p> <p>Sá sem hefur heimild til að taka saman tækniskrána er:</p> <p style="text-align: right;">WILO SE Group Quality Wilopark 1 D-44263 Dortmund, Deutschland</p> <p style="text-align: right;">Atmos NHD...-AP Atmos NHD...-AU</p>
<p>LT</p> <p>Oficialus deklaracijos vertimas</p>	<p>Mes, kaip gamintojas, savo atsakomybės ribose deklaruojame, kad šios serijos siurblių modeliai, (Serijos numeris pažymėtas ant produkto lentelės) taip kaip pristatyti, atitinka sekančias aktualias direktyvas ir nacionalines teisės normas bei reglamentus:</p> <p> 2006/42/EC - Mašinos 2009/125/EC - Energija susijusiems gaminiams 2011/65/EU + 2015/863 - dėl tam tikrų pavojingų medžiagų naudojimo apribojimo</p> <p>taip pat atitinka sekančius aktualius standartus:</p> <p>EN 809:1998+A1:2009; EN 60034-1:2010; EN 60204-1:2018; EN 60034-30-1:2014; EN IEC 63000:2018;</p> <p>Asmuo įgaliotas sudaryti techninius dokumentus yra:</p> <p style="text-align: right;">WILO SE Group Quality Wilopark 1 D-44263 Dortmund, Deutschland</p> <p style="text-align: right;">Atmos NHD...-AP Atmos NHD...-AU</p>

LV Deklarācijas oficiālais tulkojums	<p>Mēs, ražotājs, ar pilnu atbildību paziņojam, ka sūkņu sērijas,</p> <p>(Sērijas numurs ir norādīts uz izstrādājuma plāksnītes)</p> <p>piegādātāja valstī atbilst šādām attiecīgām direktīvām un attiecīgiem valsts tiesību aktiem:</p> <p> 2006/42/EC - Mašīnas 2009/125/EC - Energiju saistītiem ražojumiem 2011/65/EU + 2015/863 - par dažu bīstamu vielu izmantošanas ierobežošanu 2011/65/UE</p> <p>atbilst arī sekojošiem attiecīgiem standartiem:</p> <p>EN 809:1998+A1:2009; EN 60034-1:2010; EN 60204-1:2018; EN 60034-30-1:2014; EN IEC 63000:2018;</p> <p>Persona pilnvarota sastādīt tehnisko dokumentāciju:</p>	<p>Atmos NHD...-AP Atmos NHD...-AU</p> <p>WILO SE Group Quality Wilopark 1 D-44263 Dortmund, Deutschland</p>
NL Officiële vertaling van de verklaring	<p>Wij, de fabrikant, verklaren onder onze eigen verantwoordelijkheid dat de pomptypes van de serie,</p> <p>(Het serienummer staat vermeld op het naamplaatje van het product)</p> <p>in de geleverde versie voldoen aan de volgende relevante bepalingen en aan de overeenkomstige nationale wetgeving:</p> <p> 2006/42/EC - Machines 2009/125/EC - Energiegerelateerde producten 2011/65/EU + 2015/863 - betreffende beperking van het gebruik van bepaalde gevaarlijke stoffen</p> <p>voldoen ook aan de volgende relevante normen:</p> <p>EN 809:1998+A1:2009; EN 60034-1:2010; EN 60204-1:2018; EN 60034-30-1:2014; EN IEC 63000:2018;</p> <p>De persoon die bevoegd is om het technische bestand samen te stellen is:</p>	<p>Atmos NHD...-AP Atmos NHD...-AU</p> <p>WILO SE Group Quality Wilopark 1 D-44263 Dortmund, Deutschland</p>
NO Offisiell oversettelse av erklæring	<p>Vi som produsent erklærer herved at pumper under type serie,</p> <p>(serienummeret er markert på pumpekilt)</p> <p>I levert tilstand vil produkt overholde følgende direktiver og relevant nasjonal lovgivning</p> <p> 2006/42/EC - Maskindirektiv 2009/125/EC - Direktiv energirelaterte produkter 2011/65/EU + 2015/863 - Begrensning av bruk av visse farlige stoffer</p> <p>Oppfølger også relevante standarder</p> <p>EN 809:1998+A1:2009; EN 60034-1:2010; EN 60204-1:2018; EN 60034-30-1:2014; EN IEC 63000:2018;</p> <p>Vedkommendesom er autorisert til å sammenstille teknisk fil er:</p>	<p>Atmos NHD...-AP Atmos NHD...-AU</p> <p>WILO SE Group Quality Wilopark 1 D-44263 Dortmund, Deutschland</p>
SV Officiell översättning av försäkran	<p>Vi, tillverkaren, försäkrar under eget ansvar att pumparna i serien</p> <p>(Serienumret finns utmärkt på produktens dataskylt)</p> <p>i det utförande de levererades överrenstämmer med följande relevanta direktiv och relevant nationell lagstiftning</p> <p> 2006/42/EC -Maskiner 2009/125/EC - Energirelaterade produkter 2011/65/EU + 2015/863 - begränsning av användning av vissa farliga ämnen</p> <p>överrenstämmer också med följande relevanta standarder:</p> <p>EN 809:1998+A1:2009; EN 60034-1:2010; EN 60204-1:2018; EN 60034-30-1:2014; EN IEC 63000:2018;</p> <p>Person behörig att sammanställa denna tekniska fil är:</p>	<p>Atmos NHD...-AP Atmos NHD...-AU</p> <p>WILO SE Group Quality Wilopark 1 D-44263 Dortmund, Deutschland</p>
GA Eadar-theangachadh oifigeil den Ghairm	<p>Bidh sinn, an neach-dèanamh, a 'foillseachadh fon aon uallach againn gu bheil na seòrsaichean pumpa san t-sreath,</p> <p>(Tha an àireamh sreathach air a chomharrachadh air clàr làrach an toraidh)</p> <p>anns an stàit libhrigidh aca gèilleadh ris na stiùiridhean buntainneach a leanas agus ris an reachdas nàiseanta buntainneach:</p> <p> 2006/42/EC - Innealra 2009/125/EC - Fuinneamh a bhaineann le táirgí 2011/65/EU + 2015/863 - Srian ar an úsáid a bhaint as substaintí guaiseacha acu</p> <p>gèilleadh cuideachd ris na h-inbhean iomchaidh a leanas:</p> <p>EN 809:1998+A1:2009; EN 60034-1:2010; EN 60204-1:2018; EN 60034-30-1:2014; EN IEC 63000:2018;</p> <p>Is e an neach le ùghdarras am faidhle teicnigeach a chur ri chèile:</p>	<p>Atmos NHD...-AP Atmos NHD...-AU</p> <p>WILO SE Group Quality Wilopark 1 D-44263 Dortmund, Deutschland</p>

<p>BG</p> <p>Официален превод на Декларация</p>	<p>Ние, като производител, декларираме на собствена отговорност, че помпите от серията, Серийните номера са обозначени на табелата на продукта В доставения им вид са в съответствие приложимите за държавата директиви и законодателство</p> <p>Atmos NHD...-AP Atmos NHD...-AU</p> <p> 2006/42/EC - Машини 2009/125/EC - Продукти, свързани с енергопотреблението 2011/65/EU + 2015/863 - относно ограничението за употребата на определени опасни вещества</p> <p>Също така отговарят на следните изискуеми норми:</p> <p>EN 809:1998+A1:2009; EN 60034-1:2010; EN 60204-1:2018; EN 60034-30-1:2014; EN IEC 63000:2018;</p> <p>Лицето, упълномощено да състави техническия доклад е: WILO SE Group Quality Wilopark 1 D-44263 Dortmund, Deutschland</p>
<p>CS</p> <p>Oficiální překlad Prohlášení</p>	<p>My, výrobce, prohlašujeme na základě naší jediné odpovědnosti, že typy čerpadel řady, (Sériové číslo je uvedeno na výrobním štítku) ve svém dodaném stavu dodržovat následující relevantní směrnice a příslušnou národní legislativu:</p> <p>Atmos NHD...-AP Atmos NHD...-AU</p> <p> 2006/42/EC - Stroje 2009/125/EC - Výrobků spojených se spotřebou energie 2011/65/EU + 2015/863 - Omezení používání některých nebezpečných látek</p> <p>dodržovat také následující relevantní normy:</p> <p>EN 809:1998+A1:2009; EN 60034-1:2010; EN 60204-1:2018; EN 60034-30-1:2014; EN IEC 63000:2018;</p> <p>Osoba oprávněná sestavit technickou dokumentaci je: WILO SE Group Quality Wilopark 1 D-44263 Dortmund, Deutschland</p>
<p>HR</p> <p>Službeni prijevod Deklaracije</p>	<p>Mi, proizvođač, izjavljujemo pod isključivom odgovornošću da tipovi pumpi serije, (Serijski broj je označen na tipskoj pločici proizvoda) u isporučenom stanju odgovara sljedećim relevantnim direktivama i relevantnom nacionalnom zakonodavstvu:</p> <p>Atmos NHD...-AP Atmos NHD...-AU</p> <p> 2006/42/EC - Smjernica o strojevima 2009/125/EC - Smjernica za proizvode relevantne u pogledu potrošnje energije 2011/65/EU + 2015/863 - ograničenju uporabe određenih opasnih tvari</p> <p>u skladu također i sa sljedećim relevantnim standardima:</p> <p>EN 809:1998+A1:2009; EN 60034-1:2010; EN 60204-1:2018; EN 60034-30-1:2014; EN IEC 63000:2018;</p> <p>Osoba ovlaštena za sastavljanje tehničke dokumentacije: WILO SE Group Quality Wilopark 1 D-44263 Dortmund, Deutschland</p>
<p>HU</p> <p>A Nyilatkozat hivatalos fordítása</p>	<p>Mi, a gyártó, saját felelősségünkre kijelentjük, hogy a sorozat szivattyúi, (A sorozatszámot a termék adattábláján feltüntetjük) leszállított kivitelükben feleljenek meg a következő vonatkozó irányelveknek és a vonatkozó nemzeti irányelveknek</p> <p>Atmos NHD...-AP Atmos NHD...-AU</p> <p> 2006/42/EC - Gépek 2009/125/EC - Energiával kapcsolatos termékek 2011/65/EU + 2015/863 - egyes veszélyes való alkalmazásának korlátozásáról</p> <p>megfeleljen a következő vonatkozó előírásoknak is:</p> <p>EN 809:1998+A1:2009; EN 60034-1:2010; EN 60204-1:2018; EN 60034-30-1:2014; EN IEC 63000:2018;</p> <p>A műszaki dokumentáció összeállítására jogosult személy: WILO SE Group Quality Wilopark 1 D-44263 Dortmund, Deutschland</p>
<p>PL</p> <p>Oficjalne tłumaczenie Deklaracji Zgodności</p>	<p>Producent oświadcza na wyłączną odpowiedzialność, że pompy z serii (Numer seryjny znajduje się na tabliczce znamionowej produktu) w stanie dostarczonym są zgodne z następującymi dyrektywami i przepisami krajowymi mającymi zastosowanie:</p> <p>Atmos NHD...-AP Atmos NHD...-AU</p> <p> 2006/42/EC - Maszyn 2009/125/EC - Produktów związanych z energią 2011/65/EU + 2015/863 - sprawie ograniczenia stosowania niektórych niebezpiecznych substancji</p> <p>są również zgodne z następującymi specyfikacjami technicznymi mającymi zastosowanie:</p> <p>EN 809:1998+A1:2009; EN 60034-1:2010; EN 60204-1:2018; EN 60034-30-1:2014; EN IEC 63000:2018;</p> <p>Osoba upoważniona do sporządzenia dokumentacji technicznej: WILO SE Group Quality Wilopark 1 D-44263 Dortmund, Deutschland</p>

RO	<p>Noi, producătorul, declarăm sub responsabilitatea noastră exclusivă că tipurile de pompe din seria (Numărul serial este marcat pe plăcuta de identificare a produsului) în starea lor livrată, respectă următoarele directive relevante și legislația națională relevantă:</p> <p>Atmos NHD...-AP Atmos NHD...-AU</p> <p> 2006/42/EC - Mașini 2009/125/EC - Produselor cu impact energetic 2011/65/EU + 2015/863 - privind restricțiile de utilizare a anumitor substanțe periculoase</p> <p>sunt conforme, de asemenea, cu următoarele standarde relevante</p> <p>EN 809:1998+A1:2009; EN 60034-1:2010; EN 60204-1:2018; EN 60034-30-1:2014; EN IEC 63000:2018;</p> <p>Persoana autorizată să compileze dosarul tehnic este:</p> <p>WILO SE Group Quality Wilopark 1 D-44263 Dortmund, Deutschland</p>
Traducere oficială a Declarației	
SK	<p>My, výrobca, na vlastnú zodpovednosť vyhlasujeme, že typy čerpadiel radu, (Sériové číslo je uvedené na štítku s výrobkom) v dodanom stave zodpovedajú nasledujúcim relevantným smerniciam a príslušným národným právnym predpisom:</p> <p>Atmos NHD...-AP Atmos NHD...-AU</p> <p> 2006/42/EC - Strojových zariadeniach 2009/125/EC - Energeticky významných výrobkov 2011/65/EU + 2015/863 - obmedzení používania určitých nebezpečných látok</p> <p>spĺňať aj nasledujúce relevantné normy:</p> <p>EN 809:1998+A1:2009; EN 60034-1:2010; EN 60204-1:2018; EN 60034-30-1:2014; EN IEC 63000:2018;</p> <p>Osoba oprávnená zostaviť technickú dokumentáciu je:</p> <p>WILO SE Group Quality Wilopark 1 D-44263 Dortmund, Deutschland</p>
Oficiálny preklad vyhlásenia	
SL	<p>Mi, kot proizvajalci, z polno odgovornostjo izjavljamo, da so črpalke serije, (Serijska številka je označena na napisni tablici izdelka) v stanju dostave ravnaajo v skladu z naslednjimi ustreznimi direktivami in ustrezno nacionalno zakonodajo:</p> <p>Atmos NHD...-AP Atmos NHD...-AU</p> <p> 2006/42/EC - Stroji 2009/125/EC - Izdelkov, povezanih z energijo 2011/65/EU + 2015/863 - o omejevanju uporabe nekaterih nevarnih snovi</p> <p>izpolnjujejo tudi naslednje ustrezne standarde:</p> <p>EN 809:1998+A1:2009; EN 60034-1:2010; EN 60204-1:2018; EN 60034-30-1:2014; EN IEC 63000:2018;</p> <p>Oseba, pooblaščenca za sestavo tehnične datoteke, je:</p> <p>WILO SE Group Quality Wilopark 1 D-44263 Dortmund, Deutschland</p>
Uradni prevod izjave	
TR	<p>Biz üretici olarak, bu seri pompa tiplerinin tamamen kendi sorumluluğumuz altında olduğunu beyan ederiz. Seri numarası ürünün üzerindedir.</p> <p>Atmos NHD...-AP Atmos NHD...-AU</p> <p>teslim edildiği şekliyle aşağıdaki ilgili hükümler ile uyumludur;</p> <p> 2006/42/EC - Makine Yönetmeliği 2009/125/EC - Eko Tasarım Yönetmeliği 2011/65/EU + 2015/863 - Belirli tehlikeli maddelerin bir kullanımını sınırlandıran</p> <p>İlgili uyumlaştırılmış Avrupa standartları;</p> <p>EN 809:1998+A1:2009; EN 60034-1:2010; EN 60204-1:2018; EN 60034-30-1:2014; EN IEC 63000:2018;</p> <p>Teknik dosyayı düzenleyen yetkili kişi;</p> <p>WILO SE Group Quality Wilopark 1 D-44263 Dortmund, Deutschland</p>
CE Uygunluk Beyanı	
MT	<p>Aħna, il-manifattur, niddikjaraw taħt ir-responsabbiltà unika tagħna li t-tipi ta 'pompa tas-serje, (In-numru tas-serje huwa mmarkat fuq il-pjanča tas-sit tal-prodott) fi-istat mogħtija tagħhom jikkonformaw mad-direttivi rilevanti li għejjin u mal-leġislazzjoni nazzjonali rilevanti:</p> <p>Atmos NHD...-AP Atmos NHD...-AU</p> <p> 2006/42/EC - Makkinarju 2009/125/EC - Prodotti relatati mal-enerġija 2011/65/EU + 2015/863 - dwar ir-restrizzjoni tal-użu ta' ċerti sustanzi perikolużi</p> <p>jikkonformaw ukoll mal-istandards rilevanti li għejjin:</p> <p>EN 809:1998+A1:2009; EN 60034-1:2010; EN 60204-1:2018; EN 60034-30-1:2014; EN IEC 63000:2018;</p> <p>Persona awtorizzata biex tiġbor il-fajl tekniku hija:</p> <p>WILO SE Group Quality Wilopark 1 D-44263 Dortmund, Deutschland</p>
Traduzzjoni ufficjali tad-Dikjarazzjoni	

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