Product manual, spare parts
IRB 6620LX

ABB

Product manual, spare parts

IRB 6620LX

IRC5

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Revision: B

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The original language for this publication is English. Any other languages that are supplied have been translated from English.

Table of contents

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Overview of this manual

About this manual

This manual contains spare parts for:

- IRB 6620LX and all its variants.

Usage

This manual shall be used as a complement to the product manual for IRB 6620LX during:

- maintenance work
- repair work.

Who should read this manual?

This manual is intended for:

- maintenance personnel
- repair personnel.

Prerequisites

Maintenance/repair/installation personnel working with an ABB Robot must:

- be trained by ABB and have the required knowledge of mechanical and electrical installation/repair/maintenance work.

Organization of chapters

The manual is organized in the following chapters:

Chapter	Contents
1 Rebuilding robot	Information of rebuilding parts, required when rebuilding the robot to another version.
2 Spare parts and exploded view	Complete spare part list and complete list of robot components shown in exploded views.

References

Reference	Document ID
Product manual - IRB 6620LX	3HAC035737-001
Circuit diagram - IRB 6620 / IRB 6620LX	3HAC025090-001

Revisions

Revision	Description
-	First edition
A	This edition contains the following changes: • Spare part numbers for all motors are updated. • Spare part numbers for axis-1, axis-2 and axis-3 gearboxes are updated. • Spare parts with color Graphite White are added to the spare part lists

Revision	Description
B	Published in release R16.2. The following updates are done in this revision: • Retrofit sets Foundry for wrist and upper arm added. • Spare part number for Felt insert updated (3HAC035461-001-> 3HAC035475-001) • Corrections due to updates in SAP terminology. • Removed spare part numbers and added contact info to Güdel for spare part order of axis-1 gear, coupling and flanges, see *Spare parts-tracks, axis 1 on page 17*. • Updated spare parts due to new standard calibration method (Axis Calibration). • Updated spare parts due to sealing upgrade in the motors: - Motors - Axis 3-4 - Wrist - Axis 6 complete

Product documentation, IRC5

Categories for user documentation from ABB Robotics

The user documentation from ABB Robotics is divided into a number of categories. This listing is based on the type of information in the documents, regardless of whether the products are standard or optional.

All documents listed can be ordered from ABB on a DVD. The documents listed are valid for IRC5 robot systems.

Product manuals

Manipulators, controllers, DressPack/SpotPack, and most other hardware is delivered with a **Product manual** that generally contains:

- Safety information.
- Installation and commissioning (descriptions of mechanical installation or electrical connections).
- Maintenance (descriptions of all required preventive maintenance procedures including intervals and expected life time of parts).
- Repair (descriptions of all recommended repair procedures including spare parts).
- Calibration.
- Decommissioning.
- Reference information (safety standards, unit conversions, screw joints, lists of tools).
- Spare parts list with exploded views (or references to separate spare parts lists).
- Circuit diagrams (or references to circuit diagrams).

Technical reference manuals

The technical reference manuals describe reference information for robotics products.

- *Technical reference manual - Lubrication in gearboxes*: Description of types and volumes of lubrication for the manipulator gearboxes.
- *Technical reference manual - RAPID overview*: An overview of the RAPID programming language.
- *Technical reference manual - RAPID Instructions, Functions and Data types*: Description and syntax for all RAPID instructions, functions, and data types.
- *Technical reference manual - RAPID kernel*: A formal description of the RAPID programming language.
- *Technical reference manual - System parameters*: Description of system parameters and configuration workflows.

Application manuals

Specific applications (for example software or hardware options) are described in **Application manuals**. An application manual can describe one or several applications.

An application manual generally contains information about:

- The purpose of the application (what it does and when it is useful).
- What is included (for example cables, I/O boards, RAPID instructions, system parameters, DVD with PC software).
- How to install included or required hardware.
- How to use the application.
- Examples of how to use the application.

Operating manuals

The operating manuals describe hands-on handling of the products. The manuals are aimed at those having first-hand operational contact with the product, that is production cell operators, programmers, and trouble shooters.

The group of manuals includes (among others):

- *Operating manual - Emergency safety information*
- *Operating manual - General safety information*
- *Operating manual - Getting started, IRC5 and RobotStudio*
- *Operating manual - IRC5 Integrator's guide*
- *Operating manual - IRC5 with FlexPendant*
- *Operating manual - RobotStudio*
- *Operating manual - Trouble shooting IRC5*

1 Spare parts - cable harness

Part List IRB6620LX

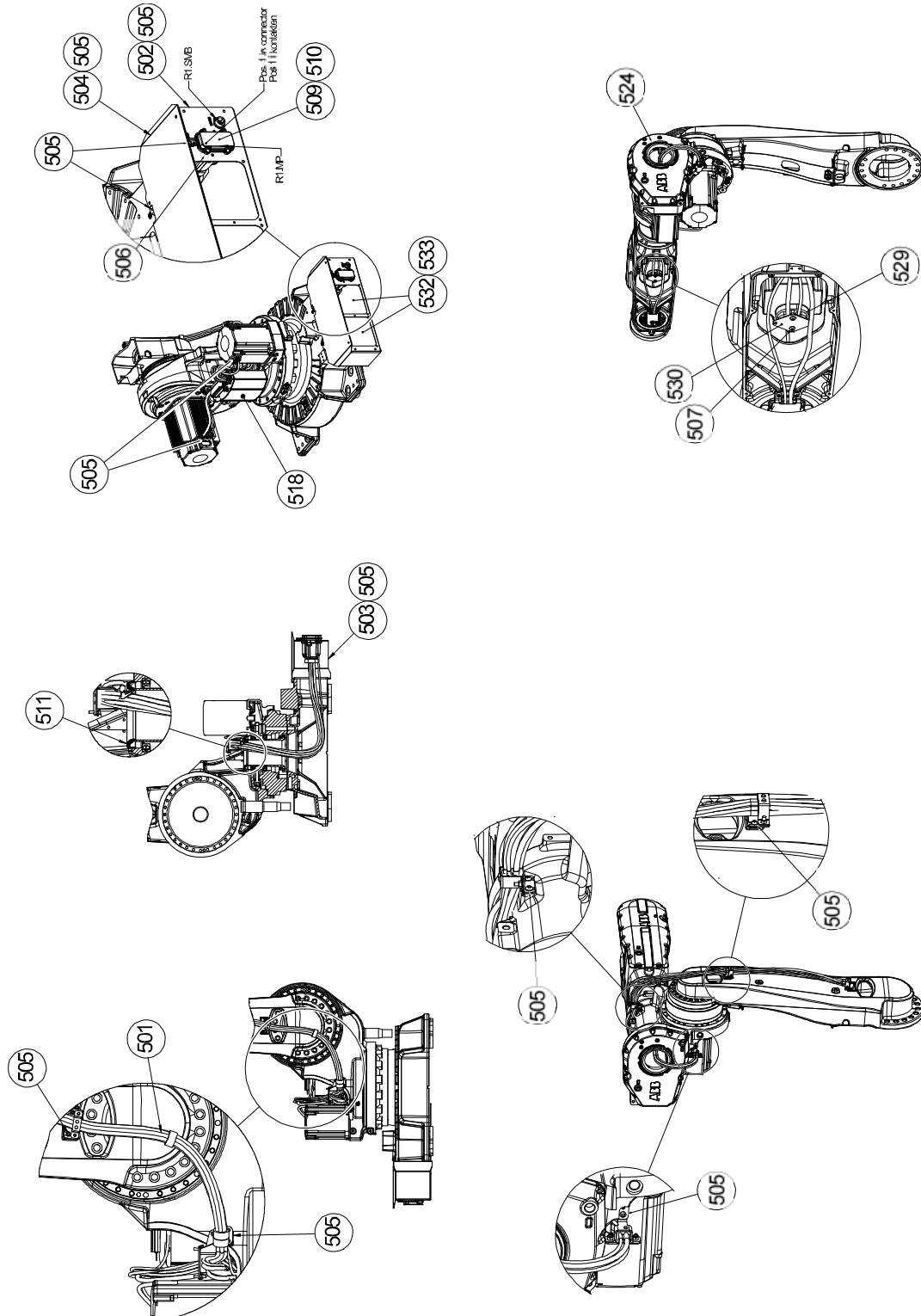| Description	Item	Qty.	Spare part number
Manipulator harness IRB 6620LX	501	1	3HAC033434-001
Torx pan head screw	505	21	9ADA618-56
Torx pan head screw	506	2	9ADA618-58
Torx pan head screw	507	2	9ADA618-59
Torx pan head screw	508	15	9ADA629-56
SMB/BU cover	512	1	3HAC033433-001
SMB/BU box	513	1	3HAC024063-001
Push button guard	514	1	3HAC2744-1
2BU Button Guard Plate	515	1	3HAC026331-001
Torx pan head screw	516	10	9ADA618-44
DSQC 563 Brake release board	517	1	3HAC16035-1
Serial measurement unit DSQC633	518	1	3HAC022286-001
SMB replacement set	-	1	3HAC046686-001
Nut	519	4	9ADA290-1
Lock washer	520	4	3HAB3558-14
Battery pack	521	1	3HAC16831-1
Strap, Velcro	522	2	3HAC12625-1
Torx pan head screw	523	4	9ADA120-11
Cable protection	524	1	3HAC024972-001
Cable, FB7-SMB 1.7	525	1	3HAC15619-1
Protection screw	526	1	3HAC14024-1
Washer	527	1	3HAC17423-1
Nut	528	1	9ADA269-4
Cover	530	1	3HAC025089-001
Hex socket head cap screw	534	2	9ADA183-48
Cable straps, outdoors	535	4	21662055-3
Plain washer	537	2	9ADA312-8

Illustration, base IRB6620LX
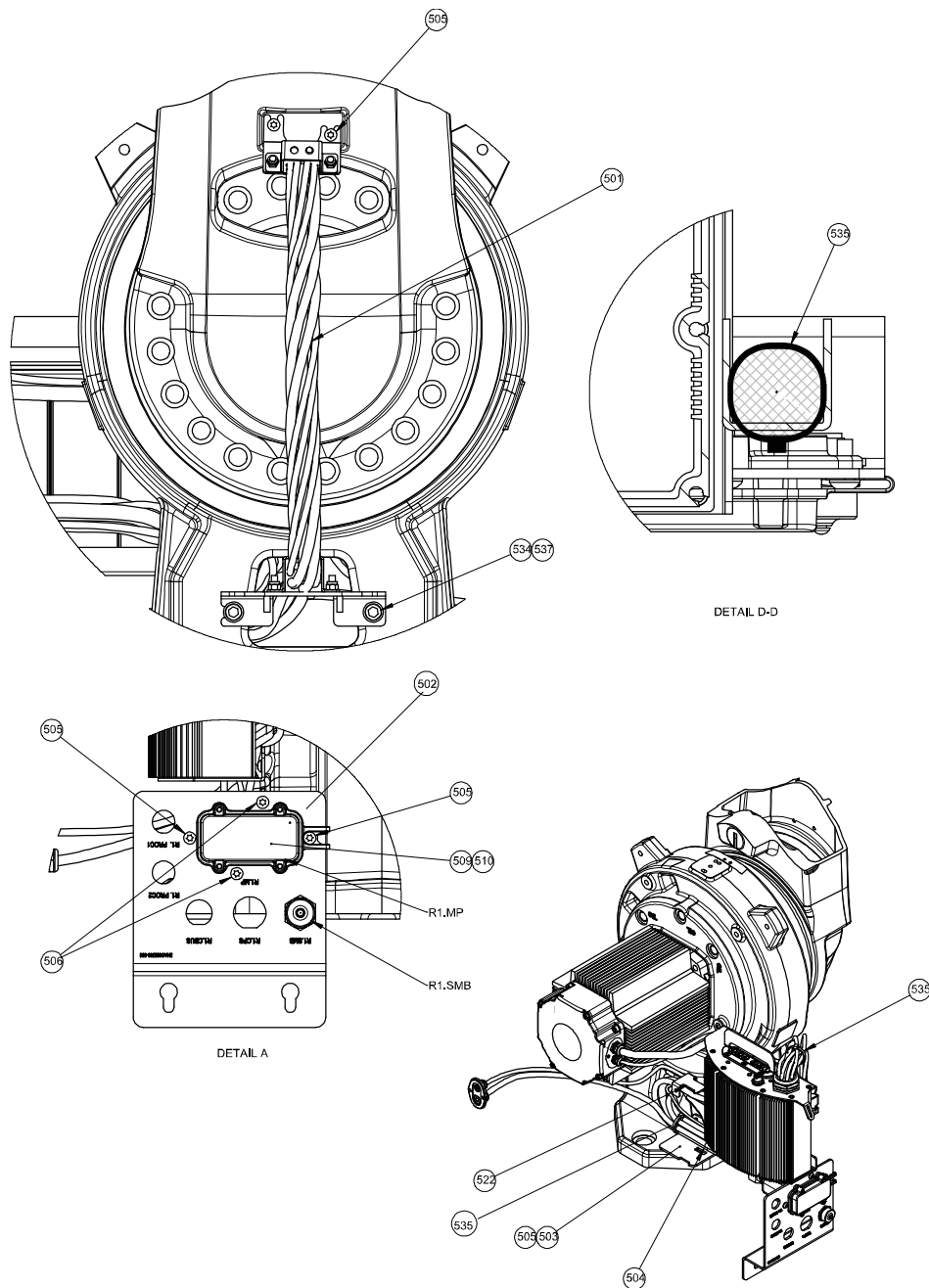
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Illustration upper and lower arm IRB6620/6620LX, Base IRB6620.

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Illustration, SMB box IRB6620/6620LX

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2 Spare parts - frame

Parts list

Description	Item	Qty.	Part number	Color
Frame	102	1	3HAC032866-004	Graphite White
			3HAC032866-005	ABB Orange

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3 Spare parts- tracks, axis 1

Overview

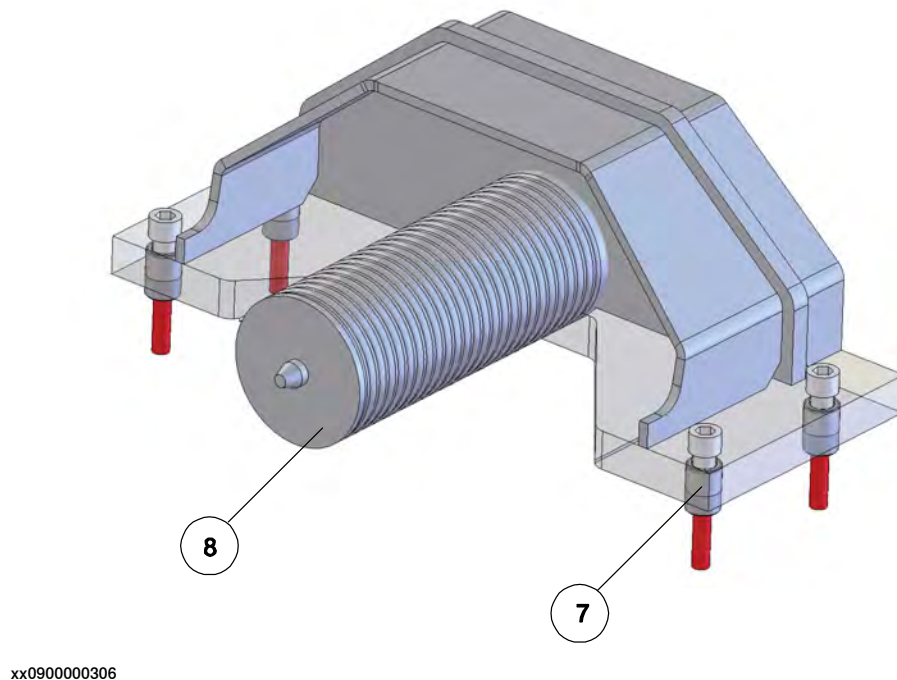| Item	Part	Spare part no.	Description
1	Guideway flat rail	3HAC035447-001	S3080-3/2000mm
1	Guideway flat rail	3HAC035448-001	S3080-3/998mm Z1 right shortened
1	Guideway flat rail	3HAC035449-001	S3080-3/998mm Z1 left shortened
2	Racks module	3HAC035450-001	3.0/A/1000mm/B Z1 helical toothed/hardened and ground drilled
3	Energy chain link	3HAC035452-001	390.20.250.0 IGUS
4	Crash-Element	3HAC035455-001	Ø87.5x107.2
5	Automatic lubrication system	3HAC035456-001	2-6 lubrication points

Illustration overview
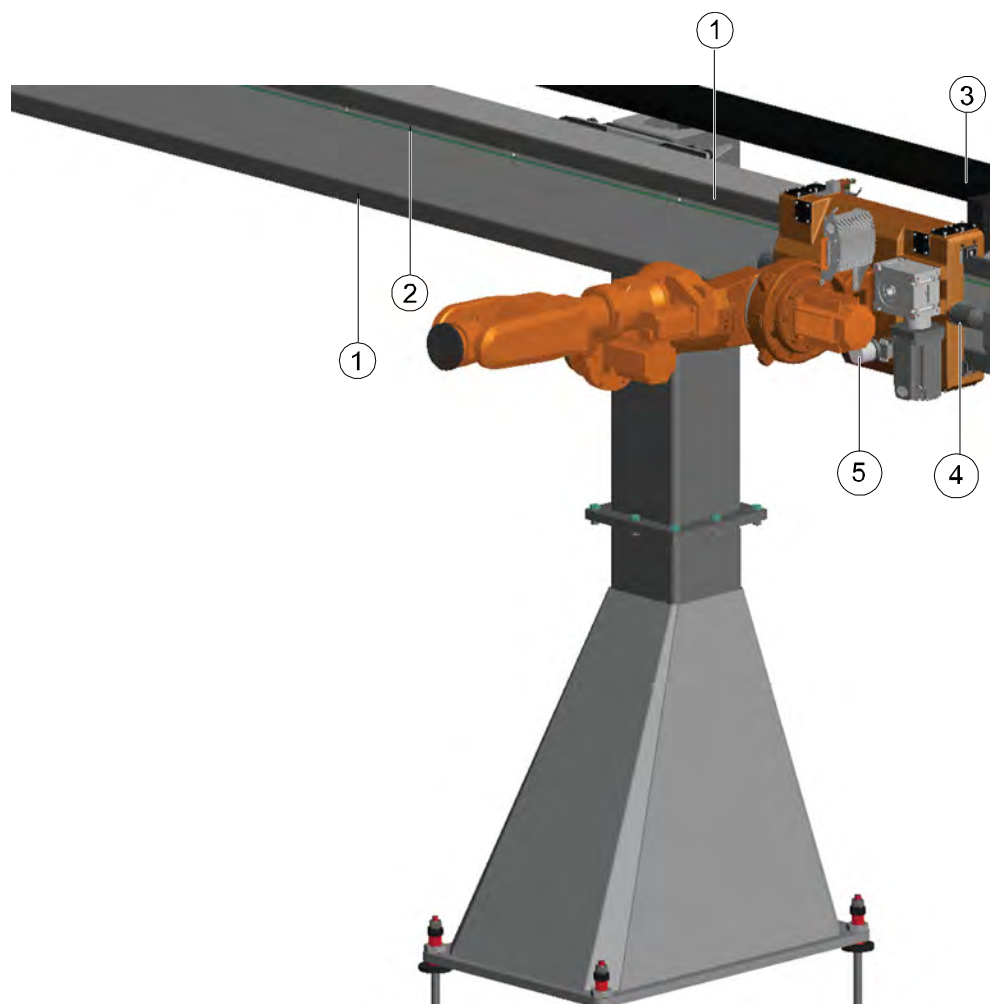
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Spare parts crash element

Item	Part	Spare part no.	Qty.	Description
7	Sleeve	3HAC035457-001	8	TM-72 ø19.7/14x27.5
8	Crash-Element	3HAC035458-001	2	Dzv Ø87.5x212.7

Illustration crash element

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Spare parts carriage

Item	Part	Spare part no.	Qty.	Description
9	Roller holder	3HAC035459-001	8	72 long
10	Roller holder	3HAC035460-001	4	72 short
11	Felt insert	3HAC035475-001	4	RB72
12	Wiper	3HAC035462-001	4	RB72

Illustration carriage
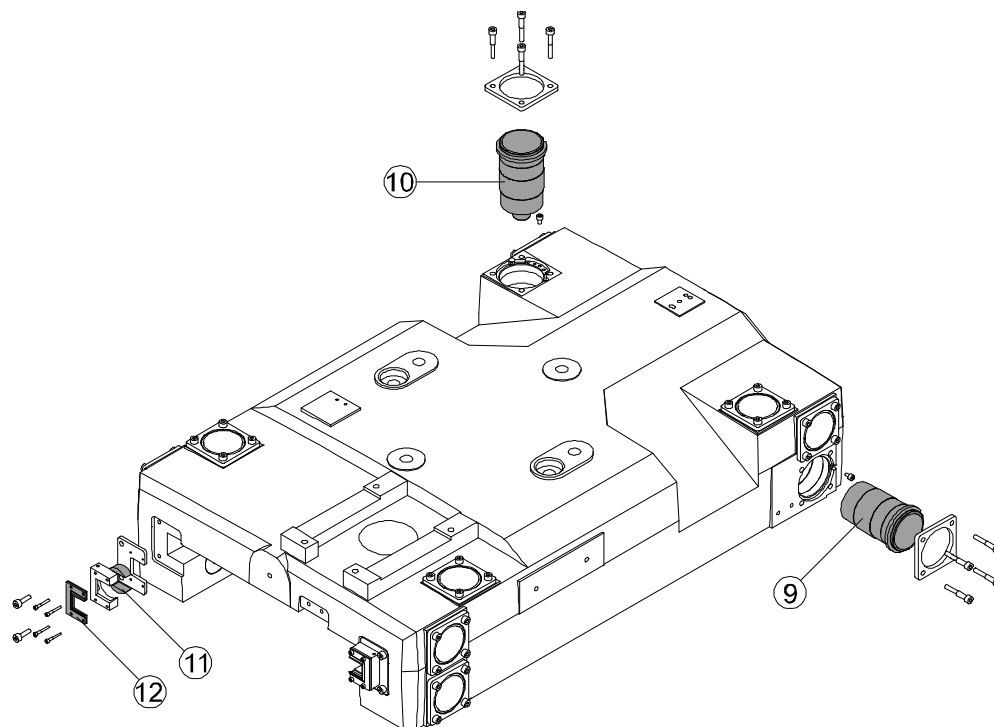
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Spare parts axis-1 motor and gearbox

Item	Part	Qty.	Spare part number	Description
13	Worm gear unit	1	See delivery-BOM	Order this part directly from Gudel, service@ch.gudel.com
14	Output flange	1		
15	Motor flange	1		
16	Coupling for gearbox	1		
25	Motor unit	1	3HAC057977-005	ABB Orange
			3HAC057977-006	Graphite White

Illustration axis-1 motor and gearbox

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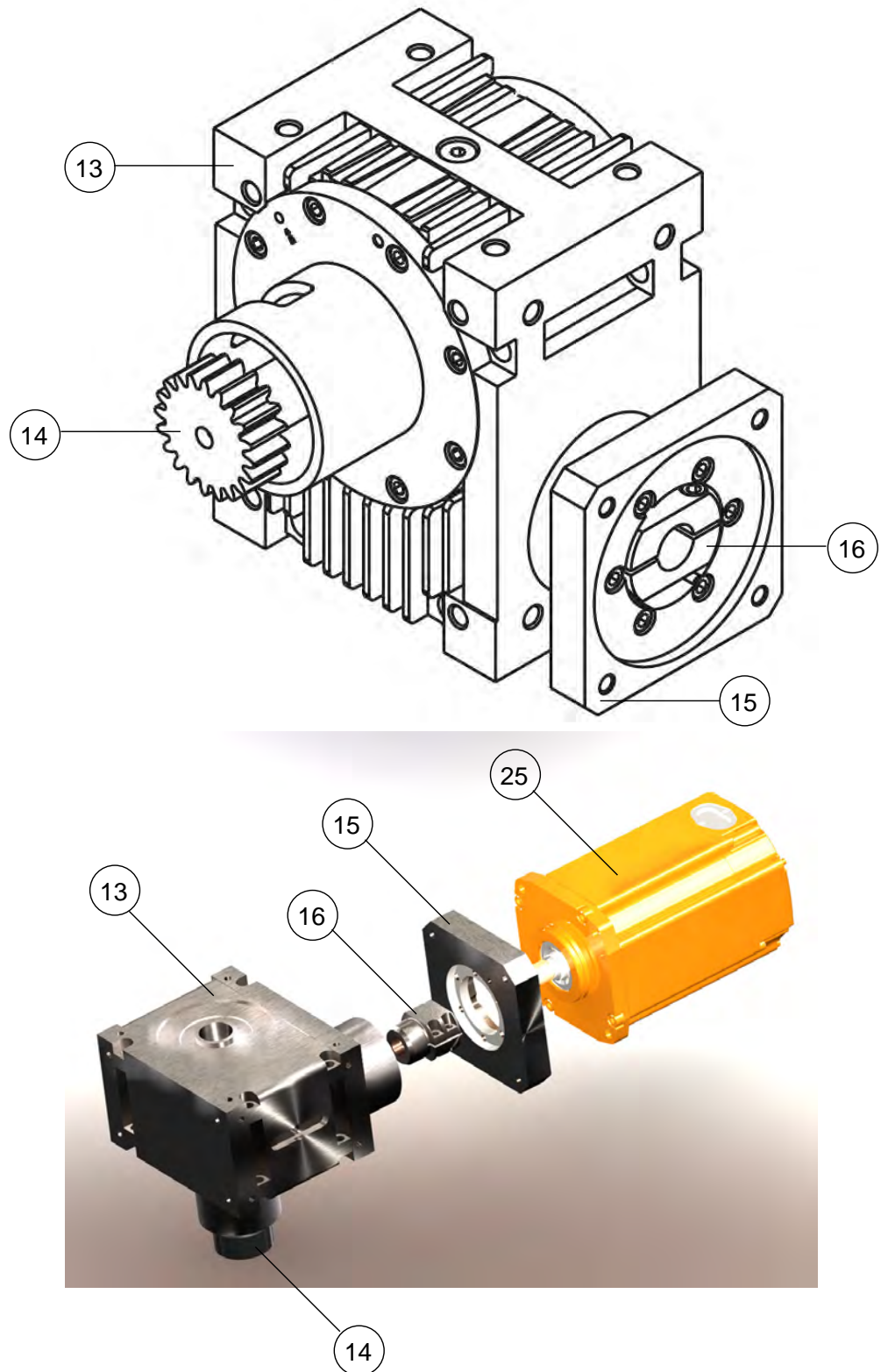
Spare parts auto lubrication

Item	Part	Spare part no.	Qty.	Description
17	Lubrication box	3HAC035468-001	1	Memolub EPS 120ml 24VDC
18	Piston detector	3HAC035469-001	1	Progressive distributor VPBM
19	Oil-bellow	3HAC035470-001	1	Memolub 120ml Mobil Glygoyle 460
20	Progressive distributor	3HAC035471-001	1	VPBM-3
21	Plug connector	3HAC035472-001	6	D4-M6x1
22	Plug connector	3HAC035473-001	6	D4-M6x1 90°

Illustration auto lubrication
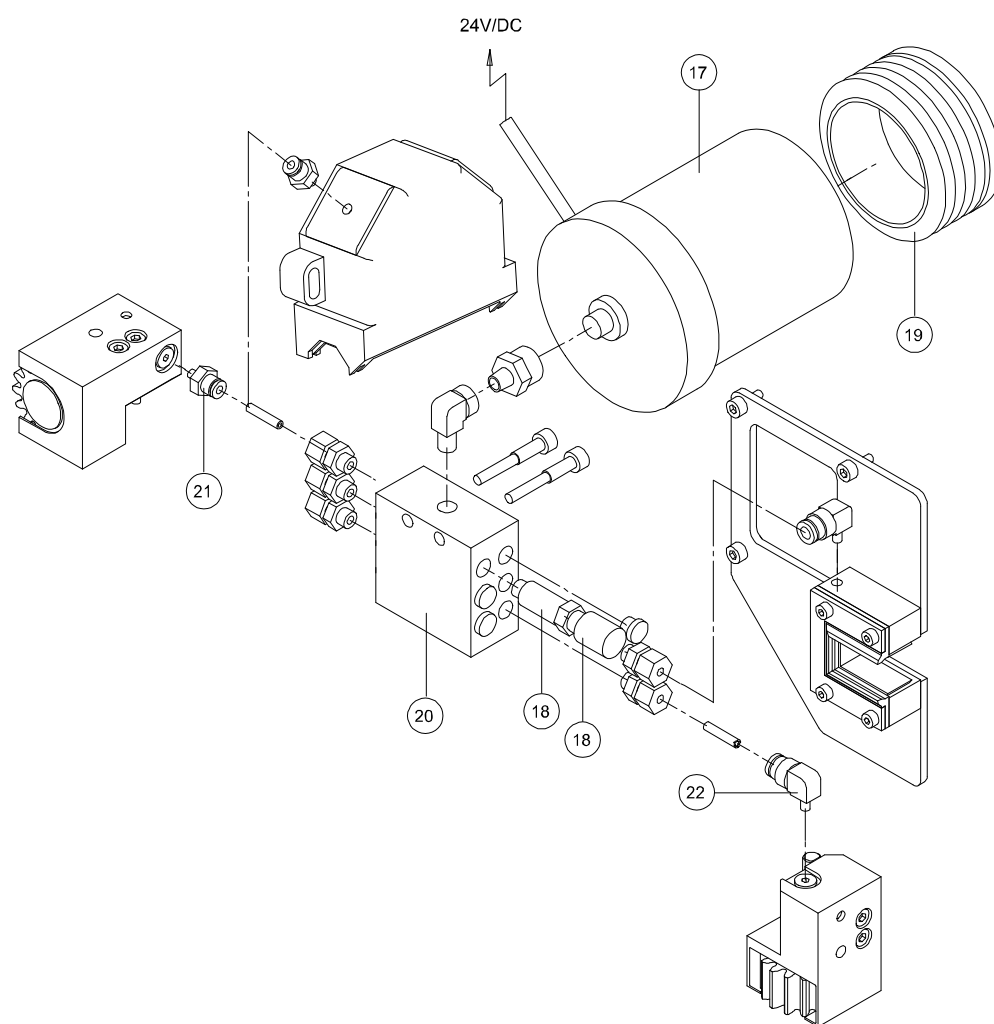
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Spare parts felt pinon lubrication

Item	Part	Spare part no.	Qty.	Description
23	O-ring	3HAC035474-001	1	5x1.5-NBR70
24	Felt pinon for lubrication	3HAC035475-001	1	ø56.9/30x18, Model m=3.0, Z=16 helical tooth

Illustration felt pinon lubrication
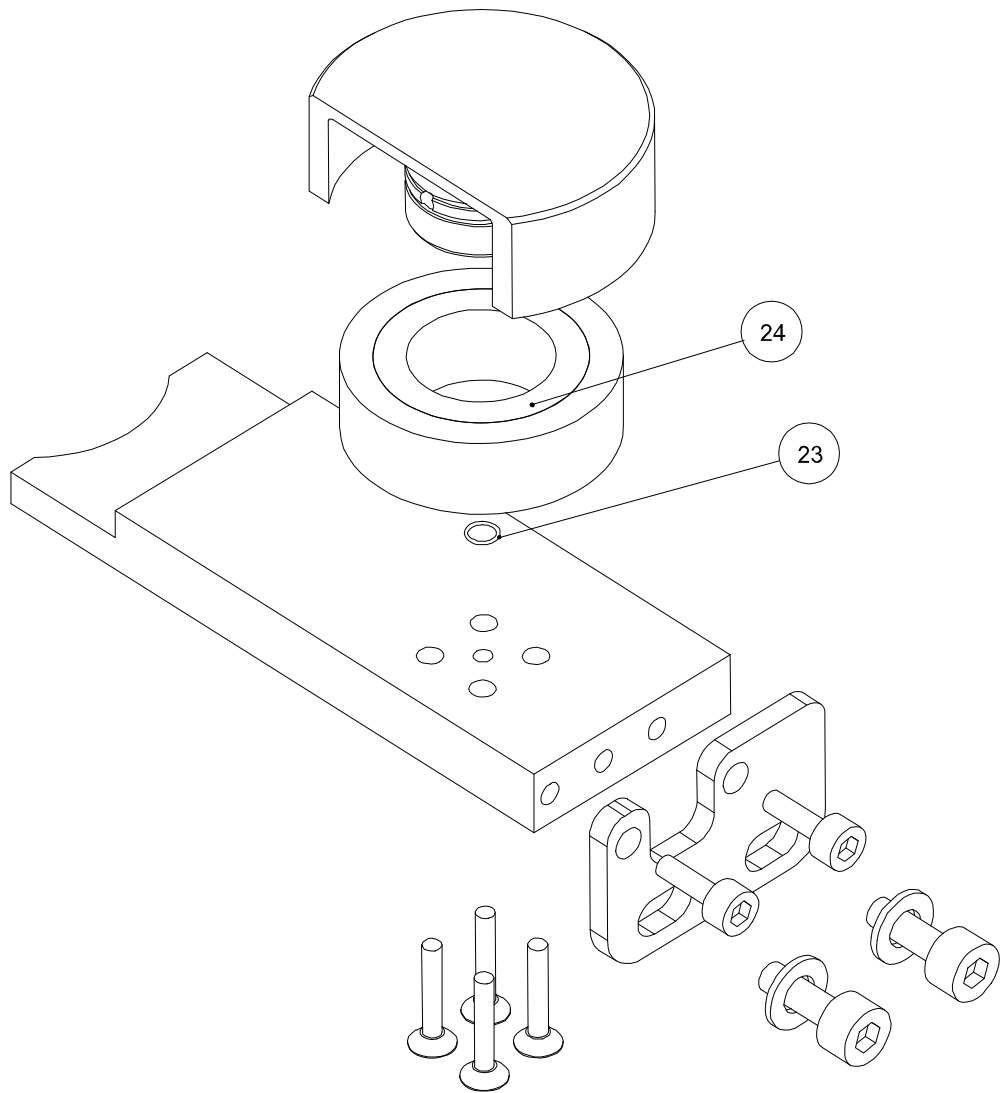
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4 Spare parts - wrist

Parts list

Description	Item	Qty.	Spare part number	Color
Wrist	300	1	3HAC058725-002	ABB Orange
		1	3HAC058725-001	Graphite White
Wrist insulated	300	1	3HAC024540-012	ABB Orange
		1	3HAC024540-013	Graphite White
Rotational AC motor incl. Pinion	1.301	1	3HAC057979-003	ABB Orange
			3HAC057979-004	Graphite White
Gear unit Z2-3/5	1.302	1	3HAC024746-003	
Middle gear unit Z4-5/5	1.303	1	3HAC024715-003	
Gear wheel unit Z6/5	1.304	1	3HAC024719-003	
Support shaft inc. Bearing	1.306	1	3HAC026318-001	
Screw	1.310	4	9ADA183-37	
Plain washer	1.311	4	9ADA312-7	
Screw	1.314	3	9ADA624-56	
Screw	1.314	5	9ADA624-56	
Screw	1.316	6	9ADA183-39	
Screw	1.317	6	3HAB7700-65	
Washer	1.318	6	3HAA1001-632	
Sealing	1.319	1	3HAC024865-001	
Cover right, with gasket	1.320	1	3HAC024841-003	ABB Orange
			3HAC024841-004	Graphite White
Screw	1.321	20	9ADA618-56	
Magnetic plug	1.322	2	3HAC16721-1	
Lubrication oil	1.323	-	For oil type and amount, see *Technical reference manual - Lubrication in gearboxes*.	
Cover left	1.324	1	3HAC024672-004	ABB Orange
			3HAC024672-005	Graphite White
Damper axis 5	1.325	1	3HAC024541-001	
Screw	1.326	2	9ADA618-56	
VK-cover	1.327	1	3HAA2166-23	
Screw	1.329	6	3HAB3409-86	

Description	Item	Qty.	Spare part number	Color
Axis 6 complete	305	1	3HAC058726-001	ABB Orange
		1	3HAC058726-002	Graphite White
Turning disk	305.1	1	3HAC055334-002	
RV 40E-81	305.2	1	3HAC037835-001	
Rotational AC motor incl. Pinion	305.4	1	3HAC057980-003	ABB Orange
			3HAC057980-004	Graphite White
Gasket (protection Standard)	-	1	3HAC048560-001	
Gasket (protection Foundry Plus)	-	1	3HAC033489-001	
Washer	305.7	8	3HAA1001-172	
Magnetic plug	305.8	2	2522122-1	
Lubricating oil	305.9	-	For oil type and amount, see *Technical reference manual - Lubrication in gearboxes*.	
Screw	305.15	8	3HAB7700-55	
RV 40E-81	350.1.2	1	3HAC10828-10	
Magnetic plug	350.1.13	2	3HAC037925-001	
Lubricating oil Kyodo Yushi TMO 150	350.5	-	For oil type and amount, see *Technical reference manual - Lubrication in gearboxes*.	
Sync plate	350.7	1	3HAC025565-001	
Screw M4x8	350.8	2	9ADA618-32	
Cover	350.9	1	3HAC14263-1	
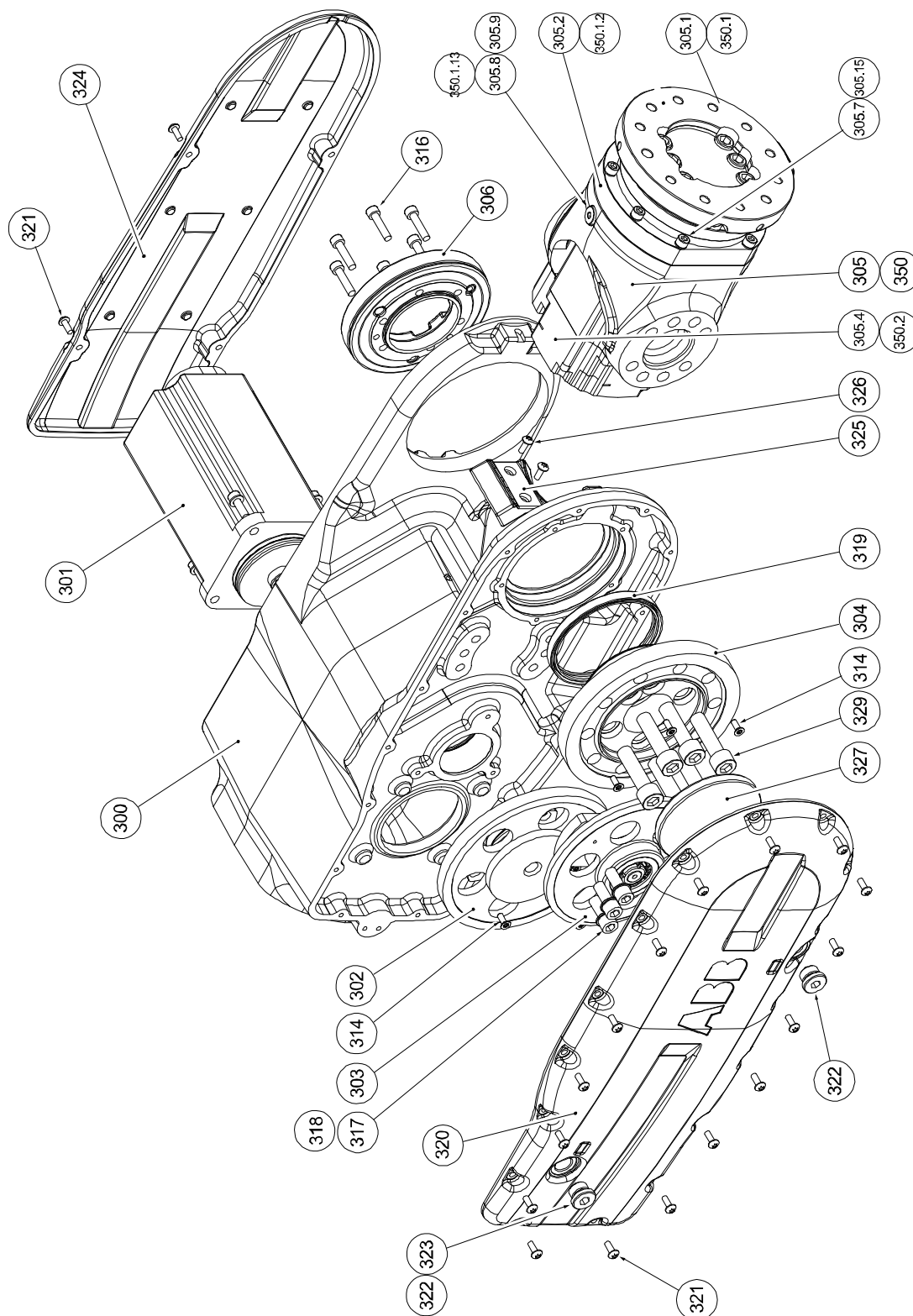
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Illustration

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Retrofit set foundry, wrist

	Note
	It is not possible to order separate parts of the retrofit set. Only the complete retrofit set, can be ordered.

Equipment	Art. no.	Note
Retrofit set foundry, wrist	3HAC052364-001	Assembly instructions included
The set contains:		
Gasket	-	
Washer (8 pcs)	-	
Gasket dowel	-	
Gasket	-	
Cover holder	-	
Cover	-	
Torx pan head screw M6x12 (2 pcs)	-	
Torx pan head screw M6x16 (4 pcs)	-	
Locking liquid	-	Loctite 243
Sealant	-	Loctite 577
Assembly instructions, Foundry sealings	-	

5 Spare parts - upper arm

Parts list

Description	Item	Qty.	Spare part number	Color
Axis 3-4	200	1	3HAC058724-002	ABB Orange
			3HAC058724-001	Graphite White
Reduction gear RV-320E i=201	201.2	1	3HAC025007-004	ABB Orange
			3HAC025007-005	Graphite White
Screw	201.3	16	3HAB3409-69	
Washer	201.4	16	3HAA1001-134	
Rot AC motor incl. Pinion	201.5	1	3HAC057981-003	ABB Orange
			3HAC057981-004	Graphite White
Screw	201.6	4	3HAB3409-50	
Washer	201.7	4	3HAB4233-1	
Magnetic plug	201.8	3	3HAC16721-1	
Rot AC motor incl. Pinion	202	1	3HAC057979-003	ABB Orange
			3HAC057979-004	Graphite White
Wheel unit axis 4	203	1	3HAC024563-003	
Screw	204	4	9ADA183-37	
Plain washer	205	4	9ADA312-7	
Screw	206	6	3HAB3409-71	
Washer	207	6	3HAA1001-632	
Parallel pin	216	1	9ABA107-56	
Cover axis 4 with sealing	217	1	3HAC025196-002	
Gasket	217.1.2	1	3HAC025154-001	
Sealing	217.2	1	3HAA1001-628	
Screw	218	14	9ADA618-56	
Loctite 243	219	14 ml	3HAC7181-1	
Magnetic plug	220	2	3HAC16721-1	
Lubrcating oil	221	-	For oil type and amount, see *Technical reference manual - Lubrication in gearboxes*.	
Lubricating oil (Kyodo Yushi TMO 150)	222	-	For oil type and amount, see *Technical reference manual - Lubrication in gearboxes*.	

Illustration
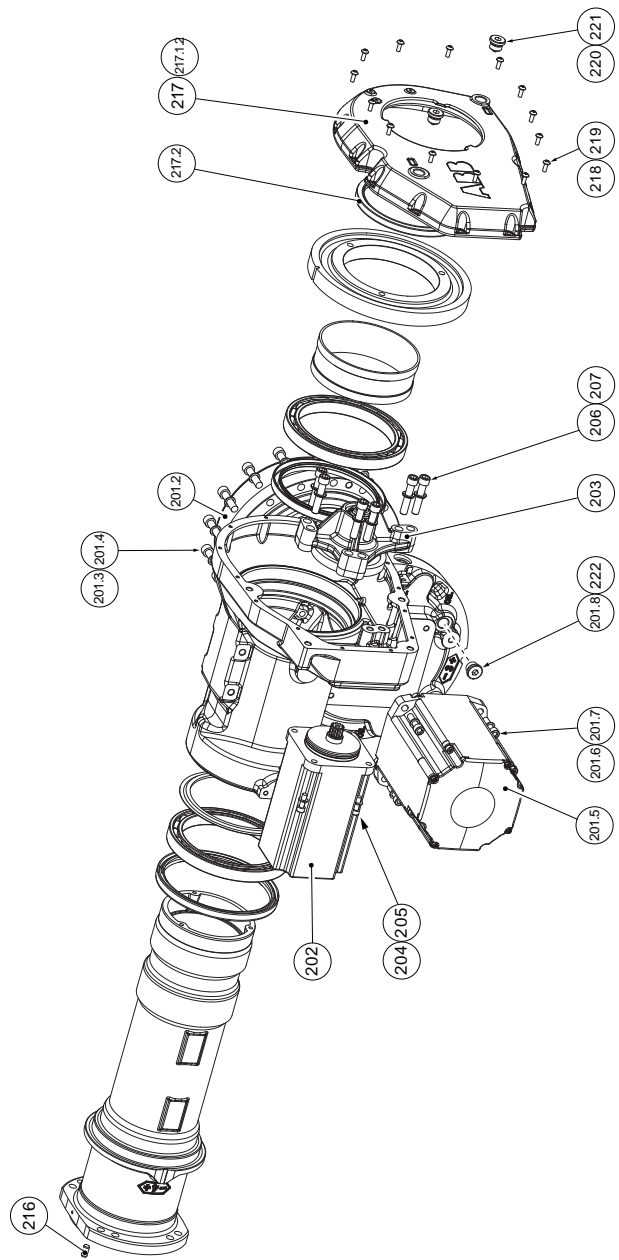
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Retrofit set foundry, upper arm axis 4

> ℹ️ **Note**
>
> It is not possible to order separate parts of the retrofit set. Only the complete retrofit set, can be ordered.

Equipment	Art. no.	Note
Retrofit set foundry, upper arm axis 4	3HAC052366-001	Assembly instructions included

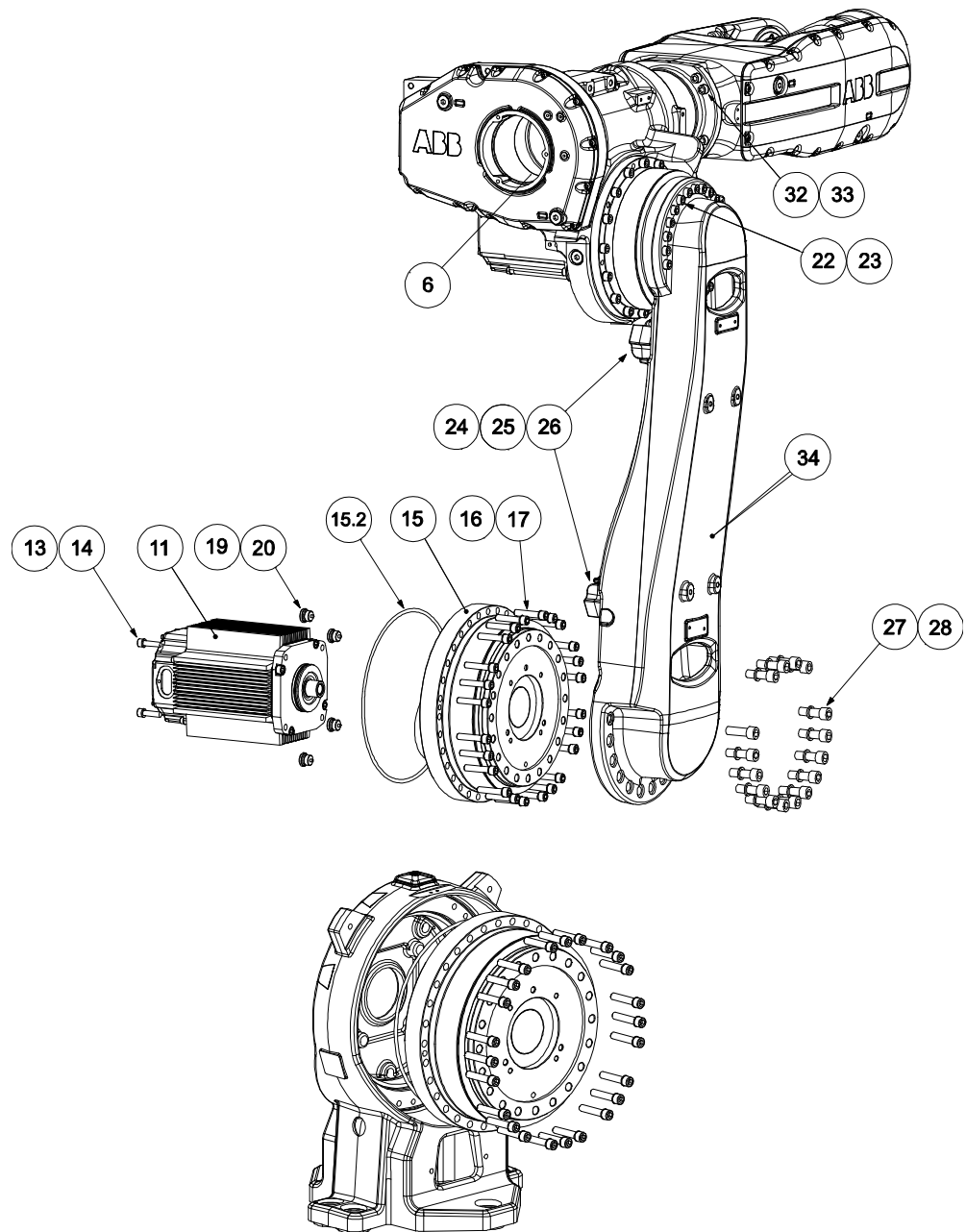| Equipment	Art. no.	Note
The set contains:		
Gasket	-	
Adapter ring	-	
Gasket	-	
Cover	-	
Cover insert	-	
Metal strap (2 pcs)	-	
Cable protection leather	-	
Weatherstrip	-	
Torx pan head screw M5x6 (2 pcs)	-	
Torx pan head screw M6x16 (3 pcs)	-	
Torx pan head screw M6x30	-	
Torx pan head screw M6x16 (2 pcs)	-	
Locking liquid	-	Loctite 243
Flange sealant	-	Loctite 574
Assembly instructions, Foundry sealings	-	

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6 Spare parts - complete robot

Part list

Description	Item	Qty.	Spare part number	Color
Revolution indicator ax. 4	6	1	3HAC026087-001	
Rotational AC motor incl. pinion, axis 2	11	1	3HAC057977-003	ABB Orange
			3HAC057977-004	Graphite White
Rotational AC motor incl. pinion, axis 1	-	1	3HAC057977-005	ABB Orange
		1	3HAC057977-006	Graphite White
Reduction gear RV-550E i=242,73	15	1	3HAC024316-005	
O-ring	15.2	1	3HAB3772-91	
Screw	16	24	3HAB3409-71	
Washer	17	24	3HAA1001-134	
Lubricating oil	18	-	For oil type and amount, see *Technical reference manual - Lubrication in gearboxes*.	
Lubricating oil	19	-	For oil type and amount, see *Technical reference manual - Lubrication in gearboxes*.	
Magnetic plug	20	4	3HAC16721-1	
Screw	22	20	3HAB3409-69	
Washer	23	20	3HAA1001-134	
Damper axis 3	24	4	3HAC12320-1	
Screw	25	4	9ADA624-65	
Spring washer, conical	26	4	9ADA334-7	
Screw	27	16	3HAB3409-84	
Washer	28	16	3HAA1001-186	
Washer	32	8	3HAA1001-134	
Screw	33	8	3HAB3409-69	
Lower arm	34	1	3HAC023618-009	ABB Orange
		1	3HAC023618-008	Graphite White
Plug, plastic	35	1	3HAC025824-001	
Label Calibration Pendulum	-	1	3HAC055559-001	
Label Axis Calibration	-	1	3HAC055558-001	

Illustration

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Contact us

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