

ABB drives

Recycling instructions and environmental information ACx580-07 cabinet-installed drive modules



List of related manuals

Drive hardware manuals and guides	Code (English)
<i>ACx580-01 drives recycling instructions and environmental information</i>	3AXD50000040612
<i>ACS880-04, ACS580-04, ACH580-04 and ACQ580-04 recycling instructions and environmental information</i>	3AXD50000137688
<i>ACx580-07 cabinet-installed drive modules recycling instructions and environmental information</i>	3AXD50000153893
<i>ACH580-07 drives (75...250 kW, 100...350 hp) hardware manual</i>	3AXD50000045816
<i>ACQ580-07 drives (75...250 kW, 100...350 hp) hardware manual</i>	3AXD50000045817
<i>ACS580-07 drives (75...250 kW, 100...350 hp) hardware manual</i>	3AXD50000045815

You can find manuals and other product documents in PDF format on the Internet. See section [Document library on the Internet](#) on the inside of the back cover. For manuals not available in the Document library, contact your local ABB representative.

Recycling instructions and environmental information

ACx580-07 cabinet-installed drive modules

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Introduction to the manual

What this chapter contains

This chapter describes the contents of the manual. It also contains information on the compatibility and intended audience.

Applicability

This document covers the environmental information of the following products:

- drive cabinet
- ACH580-07 cabinet-installed drive modules with option modules
- ACQ580-07 cabinet-installed drive modules with option modules
- ACS580-07 cabinet-installed drive modules with option modules.

Target audience

This document is intended for ABB customers and for professional recyclers.

Contents of the manual

The document contains information for treatment facilities in accordance with the EU directive on waste electrical and electronic equipment (WEEE).

This manual contains the following chapters:

- [Product materials](#)
 - [Manufacturing and use](#)
 - [Product disposal](#)
-

The WEEE directive is implemented through national regulations and therefore requirements vary in each EU member state.

Drives are always parts of other machines or equipment and they are covered by the WEEE directive when the end product is covered. Inclusion or exclusion depends on the application of the drive.

The WEEE directive does not apply to drives which are used in large-scale fixed installations, large-scale stationary industrial tools, means of transport for persons and goods, or non-road mobile machinery made available exclusively for professional use.

We recommend to contact local environmental authorities for up-to-date information about national recycling requirements.

Frame size

This manual covers frame sizes R6 to R11 of the product family. The frame size is marked on the type designation label of the drive. The frame size is also shown in the rating tables for each drive type. The rating tables are in the *drive hardware manual*.

Disclaimer

The information presented in this publication does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice. No liability will be accepted by the publisher for any consequences of its use. Publication thereof does not convey nor imply any license under patent - or other industrial or intellectual - property rights.



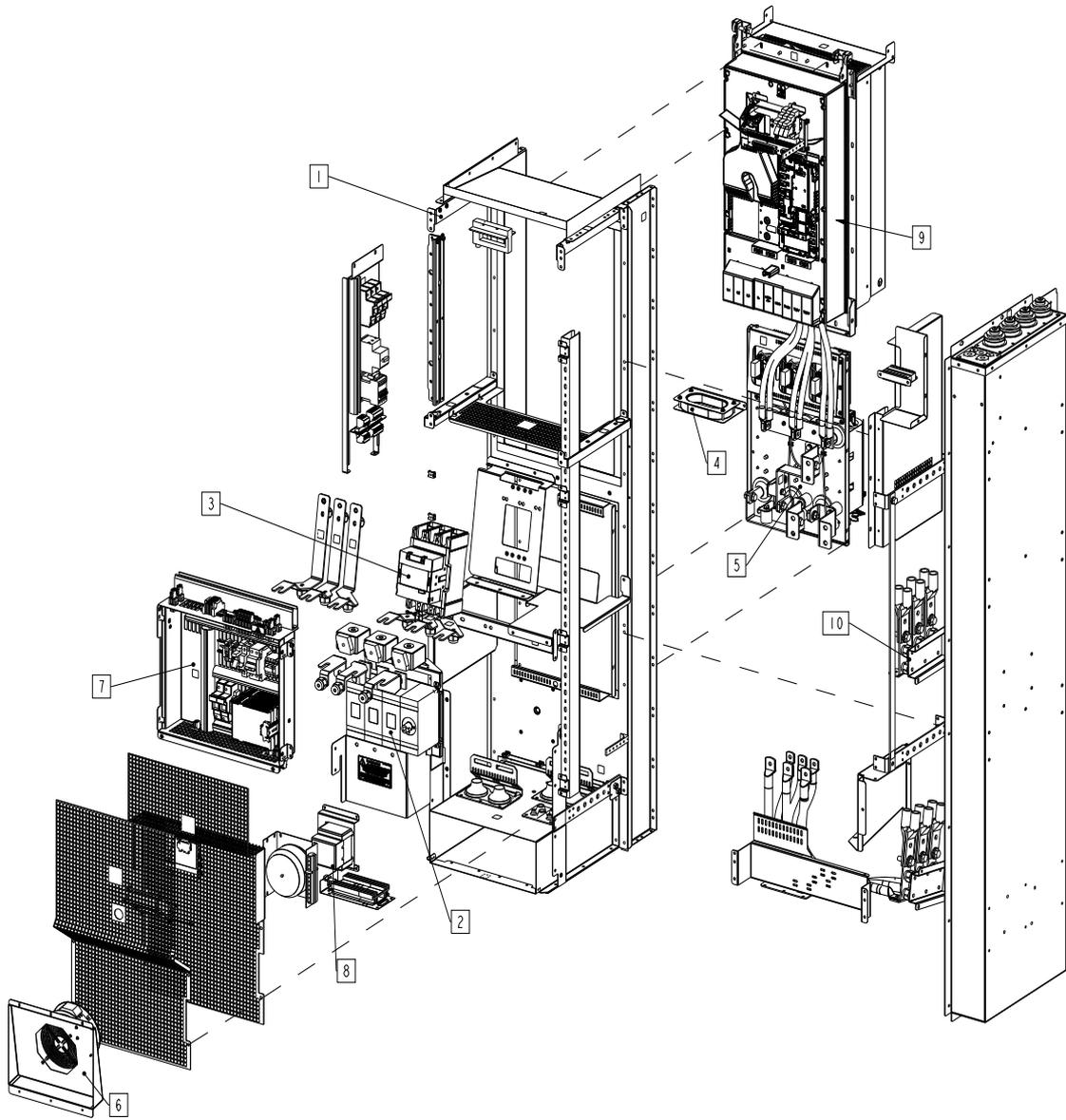
Product materials

Contents of this chapter

This chapter describes the main components and product materials of the drive cabinet and cabinet-installed drive modules ACH580-07, ACQ580-07 and ACS580-07.

ACx580-07 R6 to R9 product materials			Total weight / kg 171 - 321
Part No.	Name	Materials	Weight / kg
1	Sheet metal parts	Zn-coated steel	28 - 34
2	Sheet metal parts painted	Zn-coated steel, polyester powder paint (Teknos CZ 8080®)	46 - 47
3	Gaskets	Rubber: TPE	1.2 - 1.4
4	Plastic parts	ABS PC	0.38
5	Control panel	See subsection Materials of the control panel on page 18.	0.14
6	Electric accessories	Various materials	0 - 0.3

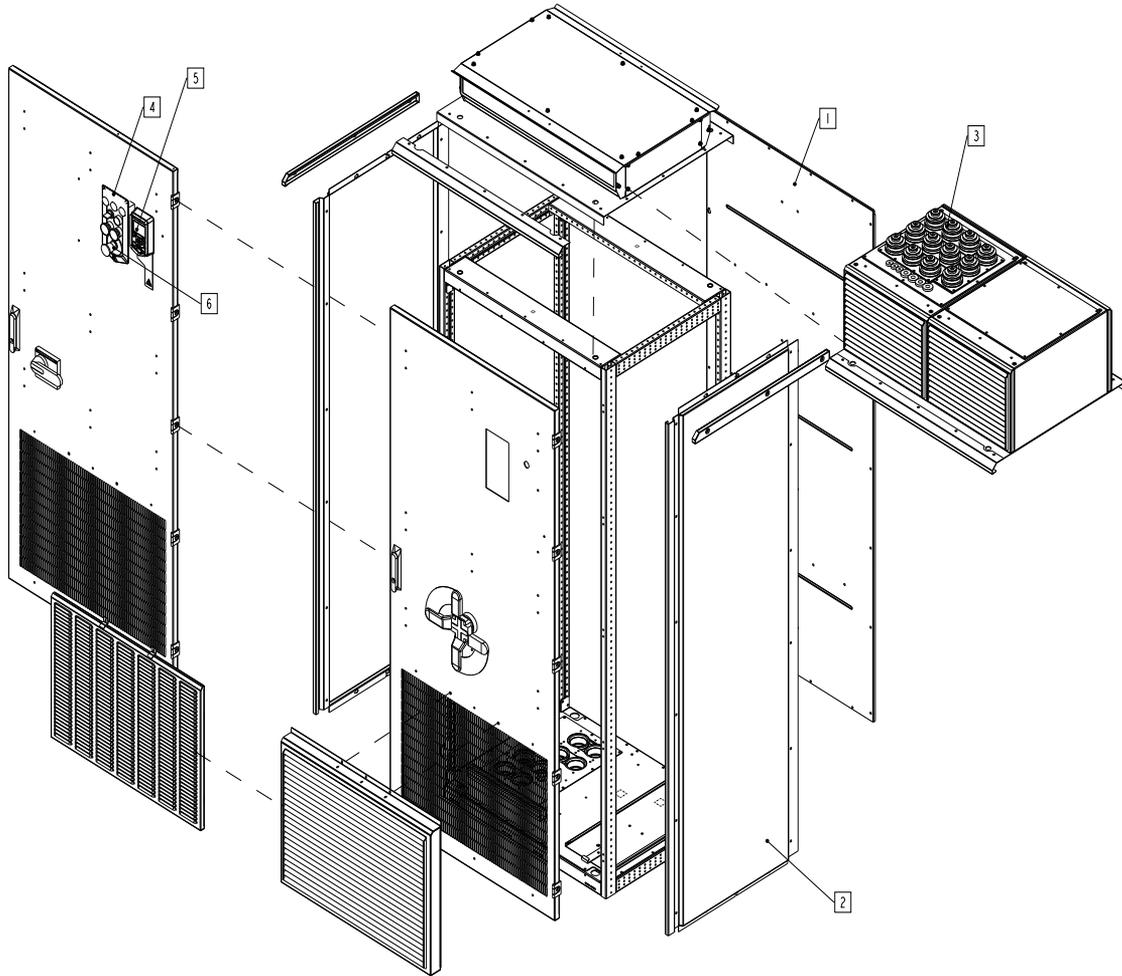
12 Product materials



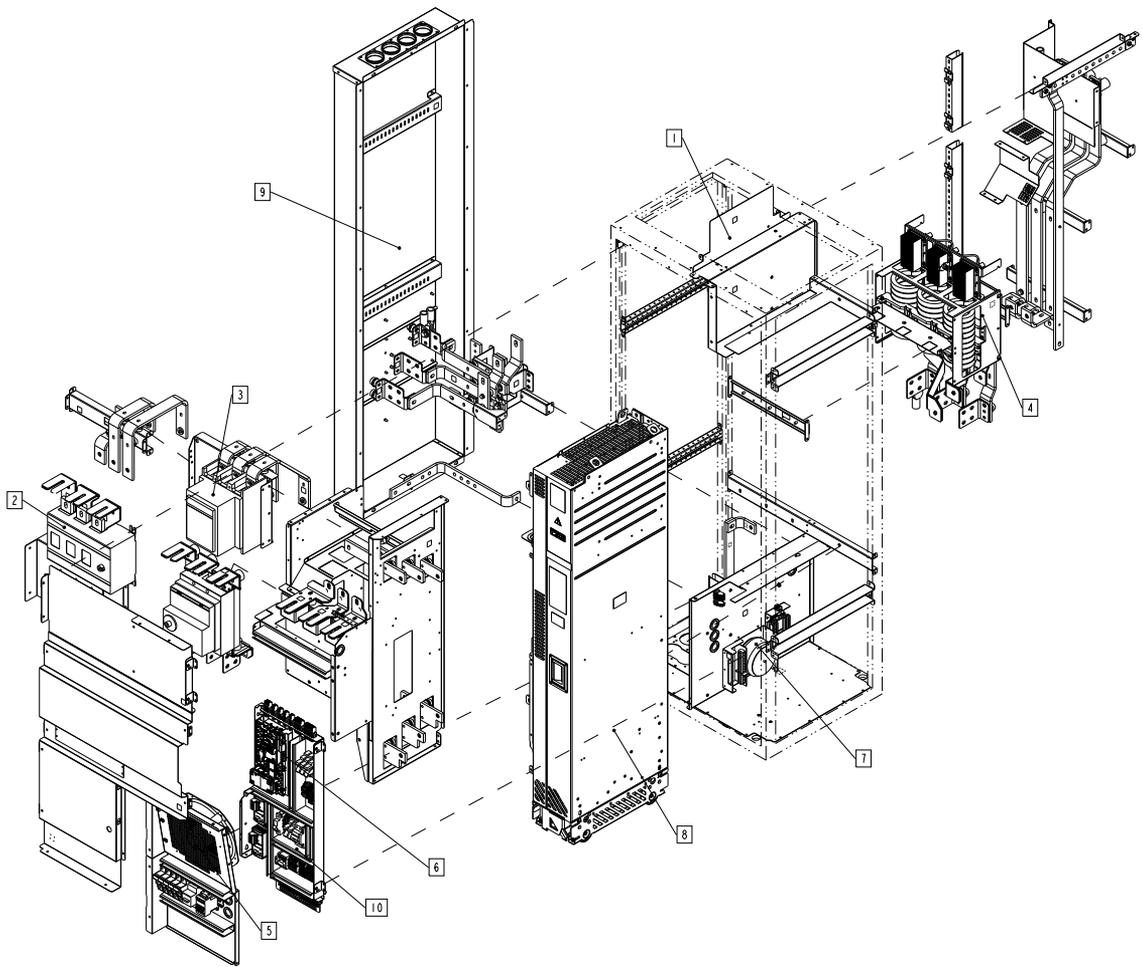
ACx580-07 R6 to R9 product materials			
Part No.	Name	Materials	Weight / kg
1	Sheet metal parts frame	Zn-coated steel	34.0 - 37.0
	Busbars	Sn-coated Cu	0.60
	Plastic parts	PVC, PPE, PS, PC, ABS, PA, GF	0.6 - 0.8
	Gaskets	TPE, EPDM, Neoprene	0.66
2	Switch	Various materials, see manufacturer's instructions	4.5 - 5.7
	Fuses	Ceramics, Cu, Fe, Ag, Sn, various others	1.1 - 2.4
	Busbars	Sn-coated Cu	0.0 - 1.0
	Insulating supports	Epoxy, PC, PA, PS, GF	0.0 - 0.72
3	Contactors	Various materials, see manufacturer's instructions	0.0 - 4.7
	Busbars	Sn-coated Cu	0.0 - 1.0
4	Choke	Fe, Zn-coated steel, various others	0.0 - 0.91
5	Output filter	Zn-coated steel, Sn-coated Cu, Al, enamel, various others	0.0 - 18.0
6	Fan	Various materials, see manufacturer's instructions	0.0 - 1.0
	Supports, grills	Zn-coated steel	0.2 - 1.1
7	Electronic components	Various materials, see manufacturer's instructions	0.1 - 1.1
	Terminal blocks, switches, fuses	Cu, Al, Fe, Ag, Sn, ceramics, various others	0.7 - 1.8
	Assembly plate	Zn-coated steel	4.0
8	Transformer, heater	Fe, Cu, Sn, Al, various others	0.0 - 5.8
9	Module	See <i>Recycling instructions and environmental information for ACx580-01 drives 3AXD50000040612</i> , section Materials of frames R6 to R9	42.0 - 97.0
	Module accessories	Zn-coated steel, various others	3.3 - 5.9
10	Sheet metal parts top entry/exit	Zn-coated steel	0.0 - 30.0
	Busbars	Sn-coated Cu	0.0 - 4.4
	Insulating supports	Epoxy, PC, PA, PS, GF	0.0 - 1.4
	Plastic parts	PC	0.0 - 0.24
	Cables and wires	PVC, Cu, Sn, various others	2.9 - 11.0

Materials of the drive cabinet and cabinet-installed drive modules of frame size R10 and R11

The main components of the drive cabinet and cabinet-installed drive modules of frame size R10 and R11 are shown in the figures below.



ACx580-07 R10 and R11 product materials			Total weight / kg 355 - 480
Part No.	Name	Materials	Weight / kg
1	Sheet metal parts	Zn-coated steel	74 - 88
2	Sheet metal parts painted	Zn-coated steel, polyester powder paint (Teknos CZ 8080®)	56
3	Gaskets	Rubber: TPE	0.2
4	Plastic parts	ABS PC	0.4
5	Control panel	See subsection Materials of the control panel on page 18.	0.14
6	Electric accessories	Various materials	0 - 0.4



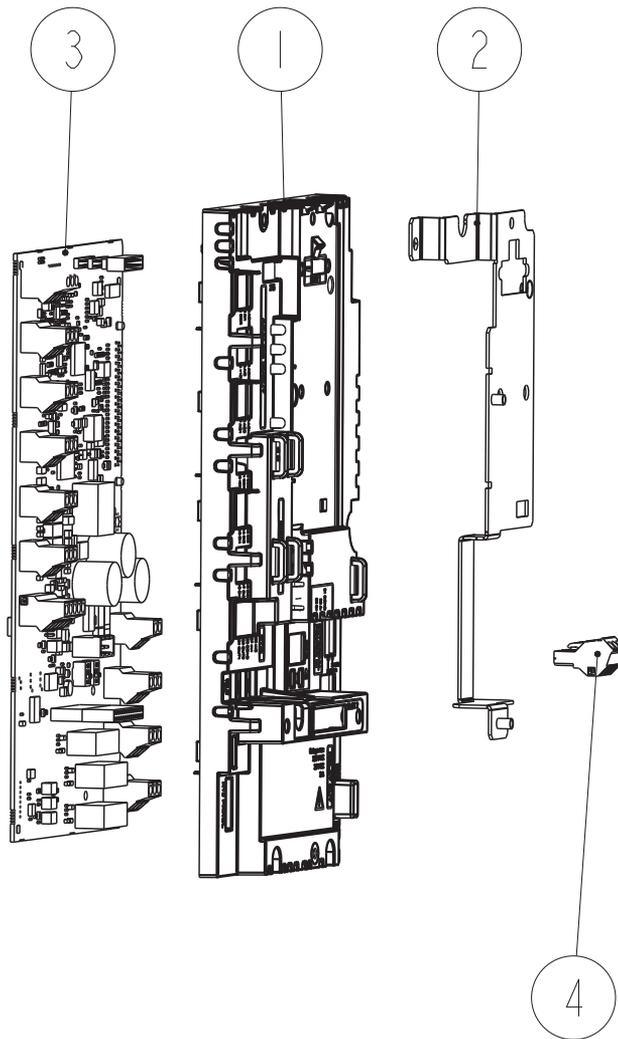
ACx580-07 R10 and R11 product materials				
Part No.	Name	Materials	Weight / kg	
1	Sheet metal parts frame	Zn-coated steel	50	
	Plastic parts	PVC, PPE, PS, PC, ABS, PA, GF	0.8	
	Gaskets	TPE, EPDM, Neoprene	0.6	
2	Switch	Various materials, see manufacturer's instructions	7 - 18	
	Fuses	Ceramics, Cu, Fe, Ag, Sn, various others	2.7	
	Busbars	Sn-coated Al	1.7 - 2.4	
	Insulating supports	Epoxy, PC, PA, PS, GF	1.8	
3	Contactors	Various materials, see manufacturer's instructions	0 - 15.7	
	Busbars	Sn-coated Al	4.3 - 4.4	
	Supports	Zn-coated steel	2.3	
	Insulating supports	PC, PA, PS, GF, epoxy	0.7	
4	Output filter	Zn-coated steel, Sn-coated Cu, Al, enamel, various others	0 - 16	
	5	Fans	Various materials, see manufacturer's instructions	2.3 - 5.6
		Supports, grills	Zn-coated steel	2.2 - 5.3
		Plastic parts	PC, PA, GF	0 - 1.5
		Terminal blocks, switches, fuses	Cu, Al, Fe, Ag, Sn, ceramics, various others	0 - 1
6	Control unit	Various materials, see manufacturer's instructions	0.7	
	Electronic components	Various materials, see manufacturer's instructions	0.1 - 1.2	

16 Product materials

ACx580-07 R10 and R11 product materials			
Part No.	Name	Materials	Weight / kg
	Terminal blocks, switches, fuses	Cu, Al, Fe, Ag, Sn, ceramics, various others	0.7 - 3.2
	Assembly plate	Zn-coated steel	3.7
7	Transformer, heater	Fe, Cu, Sn, Al, various others	5 - 11
	Support	Zn-coated steel	0.1 - 0.6
	Terminal blocks, switches, fuses	Cu, Al, Fe, Ag, Sn, ceramics, various others	0.01
8	Module	See <i>Recycling instructions and environmental information for ACXX80-X4 drives 3AXD50000137688</i>	138 - 145
9	Sheet metal parts top entry/exit	Zn-coated steel	0 - 30
	Busbars	Sn-coated Al	0 - 7.8
	Insulating supports	Epoxy, PC, PA, PS, GF	0 - 1.4
10	Cables and wires	PVC, Cu, Sn, various others	0.54 - 1.42

Materials of the control unit CCU-24

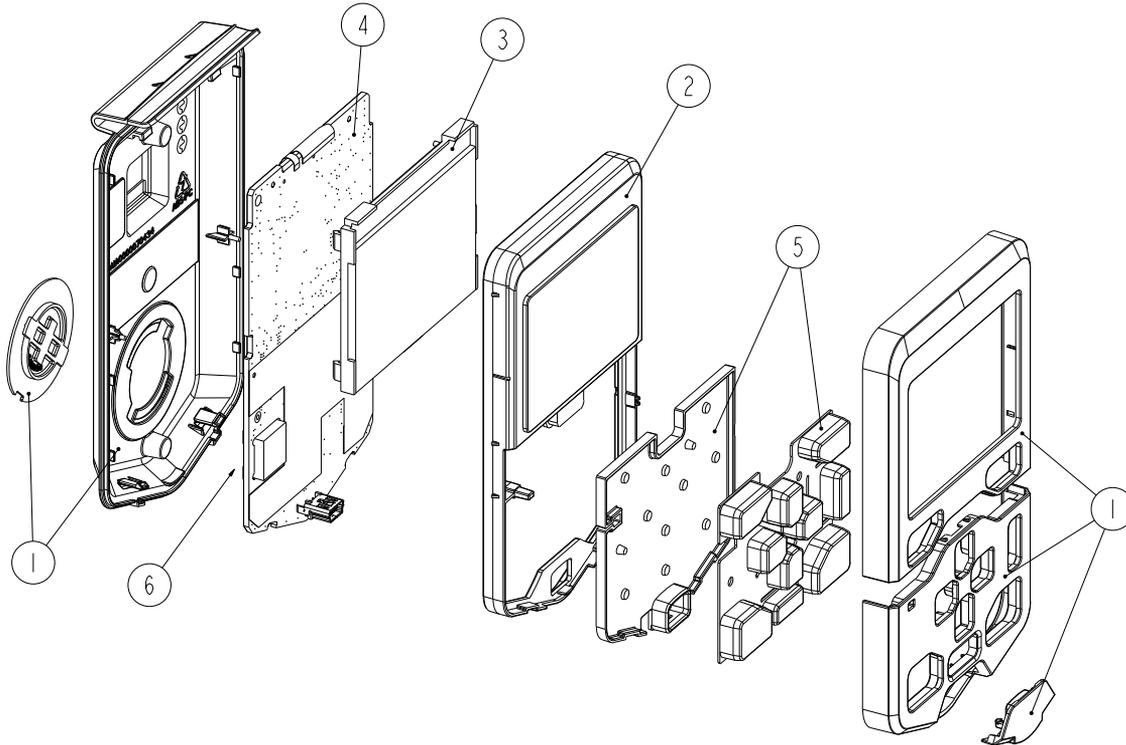
The main components are shown in the figure below.



ACx580-07 control unit product materials				
Part	Category	Qty	Materials	Weight (g)
1	Housing parts	1	Plastic: ABS PC, PUR	120
2	Sheet metal parts	1	Zn-coated Fe	86
3	Printed circuit board	2	Various material, electronic components	320
4	Connector	1	PA, Fe	10
Total weight				536

Materials of the control panel

The main components are shown in the figure below.



ACx580-07 control panel product materials				
Part	Category	Qty	Materials	Weight (g)
1	Housing parts	4	Plastic: ABS PC	40
2	Lens	1	Plastic: PC	15
3	LCD display	1	Various materials	20
4	Printed circuit board	1	Various materials, electronic components	45
5	Keypad	2	Silicone rubber	20
6	CR 2032 lithium battery	1	Various materials	3
Total weight				143

Plastics and rubber:	
ABS	Acrylonitrile-butadiene-styrene
EPDM	Ethylenepropylenerubber
GF	Glass fiber
PA	Polyamide
PC	Polycarbonate
PPE	Polyphenyloxide
PS	Polystyrene
PUR	Polyurethane
PVC	Polyvinyl chloride
TPE	Thermoplastic elastomer

Package

The product package is made of corrugated cardboard, birch plywood and pressed woodchip, glue and nails.

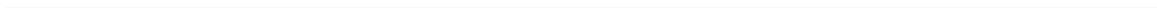
You can recycle all materials used in the package.

To avoid pollution caused by unnecessary transportation, the factory does not take back used packages. The local ABB companies give instructions on the package recycling when necessary.

ABB recommends package recycling as it preserves raw materials and reduces waste being landfilled.

Product manuals and sales brochures

To save natural resources and reduce paper waste, all product manuals are available in ABB Library and on the Internet.





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Manufacturing and use

Manufacturing

ABB Oy (Finland) has a company-wide integrated quality, environmental and occupational health & safety management system. The system is certified in accordance with requirements of the international standards ISO 9001:2015 and ISO 14001:2015.

The Integrated Management System applies to all units of the company.

Use

The use of a drive has several positive environmental impacts, such as:

- Substantial energy savings and reduced operating costs can be reached using a drive. Rather than have an electric motor running continuously at full speed, an electric drive allows the user to slow down or speed up the motor.
 - Process control is optimized. An electric drive enables a process to achieve the right speed and torque while maintaining its accuracy.
 - Need for maintenance is reduced. Being able to vary the speed and torque of an electric motor means there is less wear and tear on the motor and the driven machine.
-



Product disposal

Contents of this chapter

This chapter contains product disposal instructions.

Disposal

The main parts of the drive can be recycled to preserve natural resources and energy. Product parts and materials should be dismantled and separated.

Generally all metals, such as steel, aluminum, copper and its alloys, and precious metals can be recycled as material. Plastics, rubber, cardboard and other packaging material can be used in energy recovery.

Printed circuit boards and DC capacitors need selective treatment according to IEC 62635 guidelines.

To aid recycling, plastic parts are marked with an appropriate identification code.

Contact your local ABB distributor for further information on environmental aspects. End of life treatment must follow international and national regulations.

Dismantling

You can dismantle the drive manually or in a shredding machine. The chapter is divided in two sections on basis of the dismantling method.

■ **Manual dismantling**

Sort the parts of the product according to their material contents as follows:

- ferrous metals (plates, screws)
- aluminum (heatsink)
- plastics
- printed circuit boards
- electrolytic capacitors
- other.

You can recycle metal parts (iron and aluminum) and most of the other materials according to local regulations.

For information on harmful materials, see subsection [ABB list of prohibited and restricted substances](#).

■ **Mechanical shredding**

In this method, a whole product is mechanically shredded into small pieces and materials are sorted using dedicated sorting processes.

Remove the harmful material before shredding the drive in the shredding machine. See subsection [ABB list of prohibited and restricted substances](#).

ABB list of prohibited and restricted substances

The purpose of this list is to comply with legislation to avoid chemical substances that may present hazards to the environment or the health.

This document provides information about “Prohibited substances”, substances that must not be used, and “Restricted substances”, substances whose use should be limited within ABB.

Definitions and regulations of hazardous materials differ from country to country and are likely to change when knowledge of materials increases. The materials used in the product are materials typically used in electrical and electronic equipment.

■ **Reference list**

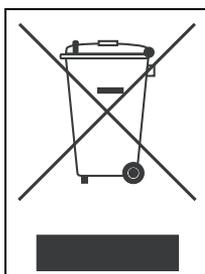
1. Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS II).
 2. Regulation No 1907/2006/EC of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH):
 - Annex XIV: List of substances subject to authorization
 - Annex XVII: Restrictions on use of substances in articles
 - SVHC: Candidate list of substances of very high concern for authorization.
 3. Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE).
-

Recycling information in accordance with the WEEE

The product is marked with the wheelie bin symbol. It indicates that at the end of life the product should enter the recycling system.

You should dispose of it separately at an appropriate collection point and not place it in the normal waste stream.

The figure below shows the wheelie bin symbol indicating separate collection for electrical and electronic equipment (EEE).



The horizontal bar underneath the crossed-out wheelie bin indicates that the equipment has been manufactured after the Directive came into force in 2005.

The wheelie bin symbol is added to the type designation label of the product since 2017.

The figure below shows an example.

ACS355-01E-02A4-2	
PN 0.37 kW (1/2 HP) Frame R0	
S/N J1643F0001	
	
ABB	ABB Oy Hiomotie 13 00380 Helsinki Finland
IP20 / UL Open type	ACS355-01E-02A4-2
UL Type 1 with MUL1 option	
PN 0.37 kW (1/2 HP)	S/N J1643F0001
U1 1~200...240 V	
I1 6.1 A	3AUA0000058166
I1 with ext. choke 4.5 A	RoHS
f1 48...63 Hz	
U2 3~0...U1 V	
I2 2.4 A (150% 1/10 min)	
f2 0...599 Hz	
	

A recycling example

This example complies with typical national regulations valid at the time of publishing this manual.

Materials	Recycling method
Steel	Recycled as material
Aluminum	Recycled as material
Plastics	Energy recovery (incineration)
Printed circuit boards	Recycled as WEEE
Electrolytic capacitors	Recycled as WEEE
Cables	Recycled as material
Ceramics	Landfilled
Other materials	Energy recovery (incineration)

Further information

Product and service inquiries

Address any inquiries about the product to your local ABB representative, quoting the type designation and serial number of the unit in question. A listing of ABB sales, support and service contacts can be found by navigating to www.abb.com/searchchannels.

Product training

For information on ABB product training, navigate to www.abb.com/drives and select *Training courses*.

Providing feedback on ABB Drives manuals

Your comments on our manuals are welcome. Go to www.abb.com/drives and select *Document Library – Manuals feedback form (LV AC drives)*.

Document library on the Internet

You can find manuals and other product documents in PDF format on the Internet. Go to www.abb.com/drives and select *Document Library*. You can browse the library or enter selection criteria, for example a document code, in the search field.

ABB environment policy

You can find ABB's environmental policy on the Internet at new.abb.com/sustainability/environment-policy.

ABB group sustainability objectives

For information on ABB group sustainability objectives, navigate to new.abb.com/sustainability/creating-value/objectives

ABB list of prohibited and restricted substances

You can find the ABB list of prohibited and restricted substances at new.abb.com/sustainability/environment.

ABB end of life services

For information on ABB end of life services, navigate to new.abb.com/service/end-of-life-services.

Contact us

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