

Medium voltage service

2016 Life Cycle Management ABB Italy medium voltage products

Life Cycle process

Product status plan

ABB's products are designed for continuous evolution. It is ABB's goal to protect our customers' investment beyond the life-cycles of the underlying platform products. Life Cycle Management process is split into four steps in order to allow both ABB and the customers to properly manage the transition from Active to Obsolete in a long term way and avoid a too short swap which may generate critical situations.

Scope of this brochure is to provide life cycle status of all products under responsibility of our Service Center:

ABB S.p.A.







Electrification Products Division

Medium Voltage Products

Via Friuli, 4

I-24044 Dalmine

Italy

Status	Name	Product	Type	Current status start date	Next shift	Note
Active  Equipment: available  Spare parts: available	PowerCube/PowerBloc	Cassette	AIS	-	-	
	ADVAC	Circuit-breaker	Vacuum	-	-	
	AMVAC	Circuit-breaker	Vacuum	-	-	
	HD4	Circuit-breaker	SF ₆	-	-	1
	HD4/UniAir-HD4/US	Circuit-breaker	SF ₆	-	01/01/2017	
	VD4	Circuit-breaker	Vacuum	-	-	2
	VD4/UniAir-VD4/US	Circuit-breaker	Vacuum	-	01/01/2017	
	VM1	Circuit-breaker	Vacuum	-	-	
	VMAX	Circuit-breaker	Vacuum	-	-	
	V-Contact VSC	Contactor	Vacuum	-	-	
	GSec	Switch	SF ₆	-	-	
	PR521	Relay	Digital	-	-	
	UniGear ZS1	Switchgear	AIS	-	-	
	UniSwitch version for Belgium	Switchgear	AIS	-	01/01/2017	
	UniSwitch version for France	Switchgear	AIS	-	-	
	UniSec	Switchgear	AIS	-	-	
Classic  Equipment: available  Spare parts: available	HD4/C	Circuit-breaker	SF ₆	01/09/2011	-	
	VD4/C	Circuit-breaker	Vacuum	01/09/2011	-	
	HD4/UniMix	Circuit-breaker	SF ₆	01/01/2016	-	
	VD4/UniMix	Circuit-breaker	Vacuum	01/01/2016	-	
	eVD4	Circuit-breaker	Vacuum	01/01/2016	01/01/2017	
	V-Contact V	Contactor	Vacuum	01/09/2011	-	
	SHS2	Switch	SF ₆	01/07/2014	-	
	UniMix	Switchgear	AIS	01/09/2012	-	
	UniSwitch 24	Switchgear	AIS	01/09/2012	-	-
Limited  Equipment: not ensured  Spare parts: available	UniMotor enclosure	Cassette	AIS	01/09/2011	-	3
	CBE	Cassette	AIS	01/02/2010	-	
	CBF	Cassette	AIS	01/02/2010	01/07/2016	
	VMAX/RU	Circuit-breaker	Vacuum	01/01/2016	-	
	UniAir	Switchgear	AIS	01/01/2014	-	
	UniMotor	Switchgear	AIS	-	-	3
	UniSafe	Switchgear	AIS	01/01/2006	-	
	Univer C	Switchgear	AIS	-	-	
	Univer G12	Switchgear	AIS	-	-	
	HX BEU21	Circuit-breaker	SF ₆	-	-	
	BEU21	Switchgear	GIS	-	-	

Notes:



1. All variants with exception of HD4/C and HD4/UniMix which are Classic
2. All variants with exception of VD4/C and VD4/UniMix which are Classic
3. Replacement of enclosure manufactured after 1985 is available
4. Circuit breakers manufactured before 1984 include asbestos components inside the arc-chutes
5. ZS1 switchgear is different from UniGear ZS1 which is active

Our Service Center is responsible for:

- All designed and manufactured medium voltage products with SACE logo
- Retrofit apparatus for replacing ABB HPA gas insulated circuit breakers designed and manufactured by ABB Sweden for fitting SafeSix switchgear.

The document is updated once per year according to the latest announced shifts.

Special care of the obsolete products is taken in order to support the customers either with spare parts or retrofit solutions with active equipment.

Status	Name	Product	Type	Current status start date	Next shift	Note
Obsolete  Equipment: not available  Spare parts: not ensured	DIARC	Circuit-breaker	Magnetic-air	-	-	1
	RG	Circuit-breaker	Minimum oil	-	-	
	RGE	Circuit-breaker	Minimum oil	-	-	
	RM	Circuit-breaker	Minimum oil	-	-	
	HM1	Circuit-breaker	SF ₆	01/01/2013	-	
	HA/BEU	Circuit-breaker	SF ₆	01/07/2015	-	
	HA1-2-3	Circuit-breaker	SF ₆	31/03/1999	-	
	HAD	Circuit-breaker	SF ₆	-	-	
	HAR	Circuit-breaker	SF ₆	-	-	
	H-Breaking	Circuit-breaker	SF ₆	-	-	
	SFA	Circuit-breaker	SF ₆	-	-	
	SFE	Circuit-breaker	SF ₆	-	-	
	eVM1	Circuit-breaker	Vacuum	01/01/2013	-	
	VRB	Circuit-breaker	Vacuum	-	-	
	SRC	Contactor	SF ₆	01/04/2012	-	
	VRC	Contactor	Vacuum	31/03/1999	-	
	PR512	Relay	Digital	01/01/2013	-	
	PR511	Relay	Digital	-	-	
	REF542plus 1.x	Relay	Digital		-	
	REF542	Relay	Digital	01/01/2010	-	
	S5	Relay	Digital	-	-	
	SCU	Relay	Digital	01/01/2010	-	
	Normal AT	Switchgear	AIS	-	-	
	UniArc	Switchgear	AIS	01/07/2015	-	
	UniSwitch 36	Switchgear	AIS	-	-	
	Univer G36	Switchgear	AIS	01/07/2015	-	
	ZS1	Switchgear	AIS	01/07/2015	-	2
	BEU2	Switchgear	GIS	-	-	
	BEU3	Switchgear	GIS	01/07/2015	-	
	CSF1	Switchgear	RMU	-	-	
	CSF2	Switchgear	RMU	-	-	
	CSFU	Switchgear	RMU	-	-	

Notes:

1. Circuit breakers manufactured before 1984 include asbestos components inside the arc-chutes
2. ZS1 switchgear is different from UniGear ZS1 which is active

Spare parts and retrofit solution availability

Products details

We maintain a comprehensive stock of certified ABB parts, guaranteeing their availability throughout the product life time (active, classic and limited stages). We also support our long term installed base taking care of the obsolete products providing either spare parts or making available retrofit solution with active products.

Spare parts have been categorized into groups as per the following:

- Poles: assembly parts in which main interruptive components are installed in
- Mechanism: operating mechanism which drives the interruptive parts
- Auxiliary equipment: LV equipment onboard the operating mechanism (spring charging motor, coils, magnets, contacts, etc.)
- Tulip contacts: moving contacts onboard the apparatus arms
- Complete device: for those products which cannot be split into sub-assemblies
- Monoblocs: spouts, shutters and branches
- Earthing switch: earthing switch and relevant accessories
- Line disconnecter: line disconnecter and relevant accessories
- LV compartment devices: protection relay, auxiliary relays, MCB and terminal board.

The following charts give an overview of the currently available spare parts in our stock and retrofit solutions for replacing phased-out equipment with active products. Spare parts in “Not ensured” status could become “Not available” during the year depending on requests. Please contact ABB for checking availability.

See relevant 2016 Life Cycle Management for marine application.

Obsolete products			Active products	Spare parts					Note
Name	Product	Type	Retrofit solution	Poles	Mechanism	Auxiliary equipment	Tulip contacts	Complete device	
DIARC	Circuit-breaker	Magnetic-air	HD4, VD4						1,4
RG	Circuit-breaker	Minimum oil	HD4, VD4						4
RGE	Circuit-breaker	Minimum oil	OHB				n.a.		3
RM	Circuit-breaker	Minimum oil	HD4, VD4						
HM1	Circuit-breaker	SF6	n.a						
HA/BEU	Circuit-breaker	SF6	HD4/BEU for some versions						
HA1-2-3	Circuit-breaker	SF6	HD4, VD4						
HAD	Circuit-breaker	SF6	HD4, VD4						
HAR	Circuit-breaker	SF6	HD4, VD4						
H-Breaking	Circuit-breaker	SF6	HD4, VD4						
SFA	Circuit-breaker	SF6	HD4, VD4						
SFE	Circuit-breaker	SF6	OHB				n.a.		3
eVM1	Circuit-breaker	Vacuum	VM1+met.&prot.						
VRB	Circuit-breaker	Vacuum	HD4, VD4						2
SRC	Contacteur	SF6	V-Contact VSC						3
VRC	Contacteur	Vacuum	V-Contact family						2,3
PR512	Relay	Digital	REF601, REJ603						3
PR511	Relay	Digital	PR521, REF601						3
REF542plus release 1.x	Relay	Digital	REF542plus release 3.0, Relion® family						3
REF542	Relay	Digital	REF542plus release 3.0, Relion® family						3
S5	Relay	Digital	PR521, REF601						3
SCU	Relay	Digital	REF542plus release 3.0, Relion® family						3

Notes:
1. Arc chambers are not available
2. Vacuum interrupters are not available
3. Replacement with site adaptations
4. AE mechanism and its components are not available

	Not available
	Not ensured
	Available

Obsolete products			Active products	Spare parts					Note
Name	Product	Type	Replacement solution	Monoblocs	Earthing switch	Line disconnector	LV compartment devices	Circuit breaker or retrofit solution ^(*)	
Normal AT	Switchgear	AIS	UniSec						1
UniArc	Switchgear	AIS	UniGear/UniSec			n.a			1
UniSwitch 36	Switchgear	AIS	UniGear						1
UniVer G36	Switchgear	AIS	UniGear ZS2						1
ZS1	Switchgear	AIS	UniGear ZS1						1
BEU2	Switchgear	GIS	ZX family						1
BEU3	Switchgear	GIS	ZX family						1,2
CSF1	Switchgear	RMU	SafeRing, SafePlus						1,2
CSF2	Switchgear	RMU	SafeRing, SafePlus						1,2
CSFU	Switchgear	RMU	SafeRing, SafePlus						1,2

Notes:
1. Replacement with site adaptations
2. Line disconnector and earthing switch are included in the inox compartment
(*) Please refer to previous tables for checking availability of circuit breakers and relevant spare parts or retrofit solutions

	Not available
	Not ensured
	Available

Lyfe cycle services

Tailor-made services for every life cycle stage

The whole world of ABB services hereby represented is at your disposal for making the best use of ABB medium voltage assets at every life cycle stage:

Active

- Long-term support thanks to Power Care customer support agreements
- Extended warranty application
- Worldwide Service competence, ready for prompt actuation
- Certified ABB spare parts ready in stock to guarantee their availability throughout the product life time (Active, Classic and Limited stages)

Classic

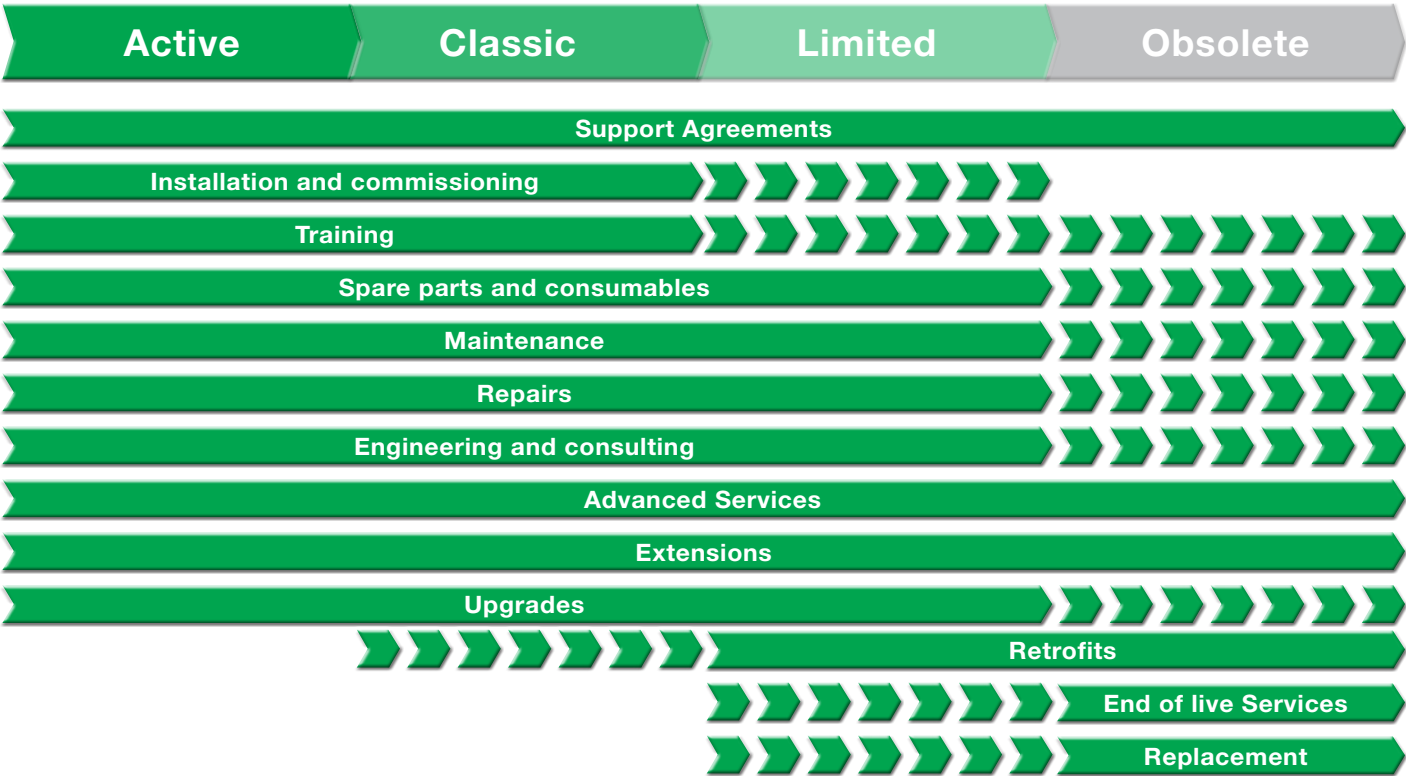
- “Last Buy” opportunity of complete equipment
- Good chance to obtain spare parts as per active products conditions
- Best time to keep equipment healthy via Power Care customer support agreements
- Call for training with wide coverage thanks to worldwide footprint still available.

Limited

- Spare parts fully available
- Retrofit solutions can already be applied
- Power Care customer support agreements designed to keep the service experience as per active products

Obsolete

- Spare parts could be still accessible on request.
- Retrofit solutions are usually available. The use of active products allows a new life to be given to the plants.
- Our consultancy services are always available for supporting cost-effective and optimized investments. Special care is given to obtain a soft shift to new applications and solutions.



Notes

Handwriting practice lines consisting of multiple rows of dotted lines on a white background.

Contact us

For more information please visit our website www.abb.com/mediumvoltage selecting Service or contact Service Center at:

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Supporting your top performance

ABB is always available for you, so you and your company can deliver the best to your clients.

The ABB service centers and its global team of specialists can help you succeed in your field of business.

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