

Custom Engineered Solutions

Product guide – Underground drilling and rock reinforcement





Different needs, different solutions

If you need to solve difficult challenges, replacing parts is not always enough. Custom Engineered Solutions offer a unique possibility to order something more than a part number. Based on your request we offer:

Complete component replacement

This is the basics of Custom Engineered Solutions, allowing a quick plug-and-play replacement. It will improve your productivity and safety, while minimizing machine downtime.

Configuration conversions

In many mining and rock excavation operations the equipment requirements can change from site to site. We can offer a solution to adapt your equipment to new configurations, with a custom engineered conversion kit.

New development

Some specifications may go beyond what is applicable for your machine. We can redesign existing components to suit your machine or develop something entirely new for you.

Epiroc component adaptation

We can adapt Epiroc components to suit usage outside of their original area of application. This solution also covers the conversion of Epiroc components to upgrade machines from other manufacturers.

Boom replacements and upgrades

Product	Description
CES components	BUT 45M, BUT 45L
Applicable machine models	Boomer E1C, Boomer E2C, Boomer XE3C, Boomer WE3C
Description	<ol style="list-style-type: none"> 1. Boom dressed with hoses, cables and sensors 2. Fasteners and boom stops included 3. Delivered on transport fixture
Features and benefits	<ol style="list-style-type: none"> 1. "Plug-and-play" 2. Can be used as standby unit
Bom (high level)	Boom, feed holder, hoses, cables, sensors, fasteners, boom stops, transport fixture
Estimated kit installation time	6-8 hrs
Weight and dimension included in CES solution	18 m ³ and up to 4 000 kg



BUT 45 series, Face drilling

Boom replacements and upgrades

Product	Description
CES components	BUT 45PD, BUT 45S, BUT45M
Applicable machine models	Simba ME7C, E7C, Boltec EC, Cabletec EC
Description	<ol style="list-style-type: none"> 1. Boom dressed with hoses, cables and sensors 2. Fasteners and boom stops included 3. Delivered on transport fixture
Features and benefits	<ol style="list-style-type: none"> 1. "Plug-and-play" 2. Can be used as standby unit
Bom (high level)	Boom, feed holder(Simba, Cabletec), drill setting(Boltec), hoses, cables, sensors, fasteners, boom stops, transport fixture
Estimated kit installation time	6-8 hrs
Weight and dimension included in CES solution	16.5 m ³ and up to 4 300 kg



BUT 45 series, Production drilling and Rock reinforcement

Boom replacements and upgrades

Product	Description
CES components	BUT 36S
Applicable machine models	Boomer M2D, Boomer M2C
Description	<ol style="list-style-type: none"> 1. Boom dressed with hoses, cables and sensors (if applicable) 2. Fasteners and boom stops included 3. Delivered on transport fixture
Features and benefits	<ol style="list-style-type: none"> 1. "Plug-and-play" 2. Can be used as standby unit
Bom (high level)	Boom, feed holder, hoses, cables, sensors, fasteners, boom stops, transport fixture
Estimated kit installation time	6-8 hrs
Weight and dimension included in CES solution	10 m ³ and up to 3 000 kg



BUT 36S, Face drilling

Boom replacements and upgrades

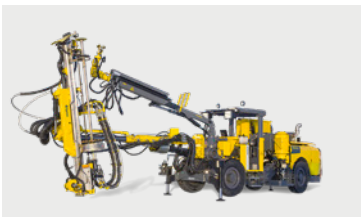
Product	Description
CES components	BUT 35M, BUT 35L, BUT 35SL
Applicable machine models	Boomer M2D, Boomer M2C, Boomer L1C, Boomer L2D, Boomer L2C, Boomer XL3D, Boomer L3C, Boomer L1D, Boomer L1C
Description	<ol style="list-style-type: none"> 1. Boom dressed with hoses, cables and sensors (if applicable) 2. Fasteners and boom stops included 3. Delivered on transport fixture
Features and benefits	<ol style="list-style-type: none"> 1. "Plug-and-play" 2. Can be used as standby unit
Bom (high level)	Boom, feed holder, hoses, cables, sensors, fasteners, boom stops, transport fixture
Estimated kit installation time	6-8 hrs
Weight and dimension included in CES solution	12 m ³ and up to 3 200 kg



BUT 35 Series, Face drilling

Boom replacements and upgrades

Product	Description
CES components	BUT 35BS, BUT 35 M, BUT35HBE
Applicable machine models	Simba M7C, Boltec 235, Boltec MC, Boltec LC, Cabletec LC
Description	<ol style="list-style-type: none"> 1. Boom dressed with hoses, cables and sensors (if applicable) 2. Fasteners and boom stops included 3. Delivered on transport fixture
Features and benefits	<ol style="list-style-type: none"> 1. "Plug-and-play" 2. Can be used as standby unit
Bom (high level)	Boom, feed holder(Simba, Cabletec), drill setting(Boltec), hoses, cables, sensors, fasteners, boom stops, transport fixture
Estimated kit installation time	6-8 hrs
Weight and dimension included in CES solution	13 m ³ and up to 3 000 kg



BUT 35 Series, Production drilling and Rock reinforcement

Boom replacements and upgrades

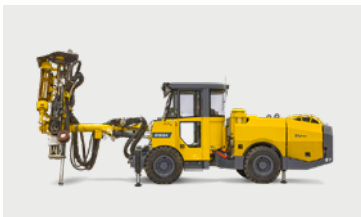
Product	Description
CES components	BUT 32
Applicable machine models	Boomer M2D, Boomer M2C
Description	<ol style="list-style-type: none"> 1. Boom dressed with hoses, cables and sensors (if applicable) 2. Fasteners and boom stops included 3. Delivered on transport fixture
Features and benefits	<ol style="list-style-type: none"> 1. "Plug-and-play" 2. Can be used as standby unit
Bom (high level)	Boom, feed holder, hoses, cables, sensors, fasteners, boom stops, transport fixture
Estimated kit installation time	6-8 hrs
Weight and dimension included in CES solution	25,5 m ³ and up to 6 050 kg



BUT 32, Face drilling

Boom replacements and upgrades

Product	Description
CES components	BUT 32PD, BUT 32
Applicable machine models	Simba S7D, Simba S7C, Boltec S, Cabletec M
Description	<ol style="list-style-type: none"> 1. Boom dressed with hoses, cables and sensors (if applicable) 2. Fasteners and boom stops included 3. Delivered on transport fixture
Features and benefits	<ol style="list-style-type: none"> 1. "Plug-and-play" 2. Can be used as standby unit
Bom (high level)	Boom, feed holder(Simba, Cabletec), drill setting(Boltec), hoses, cables, sensors, fasteners, boom stops, transport fixture
Estimated kit installation time	6-8 hrs
Weight and dimension included in CES solution	25,5 m ³ and up to 6 050 kg



BUT 32 Series, Production drilling and Rock reinforcement

Boom replacements and upgrades

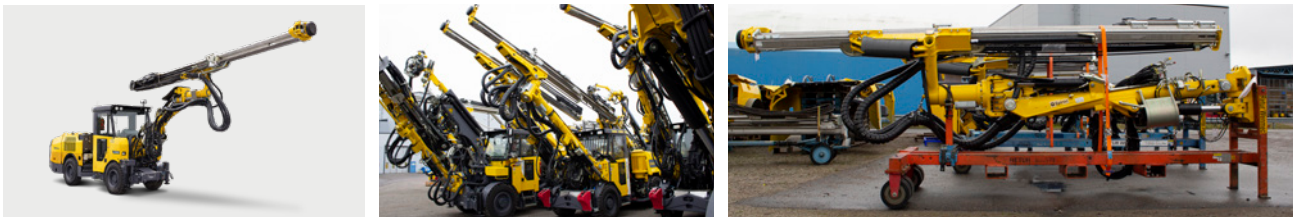
Product	Description
CES components	BUT S
Applicable machine models	Boomer S2
Description	<ol style="list-style-type: none"> 1. Boom dressed with hoses, cables and sensors 2. Fasteners and boom stops included 3. Delivered on transport fixture
Features and benefits	<ol style="list-style-type: none"> 1. "Plug-and-play" 2. Can be used as standby unit
Bom (high level)	Boom, feed holder, hoses, cables, sensors, fasteners, boom stops, transport fixture
Estimated kit installation time	4-8 hrs
Weight and dimension included in CES solution	9 m ³ and up to 2 400 kg



BUT S, Face drilling

Boom replacements and upgrade

Product	Description
CES components	BUT29, BUT29HD
Applicable machine models	Boomer S1D, Boomer S2, Boomer M1L
Description	<ol style="list-style-type: none"> 1. Boom dressed with hoses, cables and sensors (if applicable) 2. Fasteners included 3. Delivered on transport fixture
Features and benefits	<ol style="list-style-type: none"> 1. "Plug-and-play" 2. Can be used as standby unit
Bom (high level)	Boom, feed holder, hoses, cables, sensors, fasteners, boom stops, transport fixture
Estimated kit installation time	4-8 hrs
Weight and dimension included in CES solution	10 m ³ and up to 2 500 kg



BUT 29 Series, Face drilling

Boom replacements and upgrades

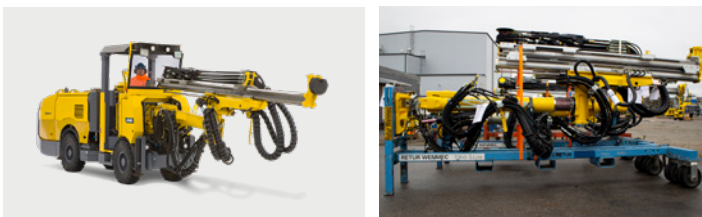
Product	Description
CES components	BUT 28, BUT 28SL
Applicable machine models	Boomer 281, Boomer 282, Boomer S1L
Description	<ol style="list-style-type: none"> 1. Boom dressed with hoses 2. Fasteners included 3. Delivered on transport fixture
Features and benefits	<ol style="list-style-type: none"> 1. "Plug-and-play" 2. Can be used as standby unit
Bom (high level)	Boom, feed holder, hoses, fasteners, boom stops, transport fixture
Estimated kit installation time	4-8 hrs
Weight and dimension included in CES solution	9 m ³ and up to 2 400 kg



BUT 28 Series, Face drilling

Boom replacements and upgrades

Product	Description
CES components	BUT 4
Applicable machine models	Boomer 104, Boomer T1D
Description	<ol style="list-style-type: none"> 1. Boom dressed with hoses 2. Fasteners included 3. Delivered on transport fixture
Features and benefits	<ol style="list-style-type: none"> 1. "Plug-and-play" 2. Can be used as standby unit
Bom (high level)	Boom, feed holder, hoses, fasteners, boom stops, transport fixture
Estimated kit installation time	2-6 hrs
Weight and dimension included in CES solution	6 m ³ and up to 2 600 kg



BUT 4 Series, Face drilling and long hole drilling

Boom replacements and upgrades

Product	Description
CES components	Compacta+
Applicable machine models	Meyco ME5
Description	<ol style="list-style-type: none"> 1. Boom including spray unit, dressed with hoses 2. Fasteners included
Features and benefits	<ol style="list-style-type: none"> 1. "Plug-and-play", 2. Can be used as standby unit.
Bom (high level)	Boom, spray unit, hoses, lubrication system, slide system
Estimated kit installation time	4-8 hrs
Weight and dimension included in CES solution	23 m ³ and up to 2 500 kg



Compacta +, Rock Reinforcement

Boom replacements and upgrades

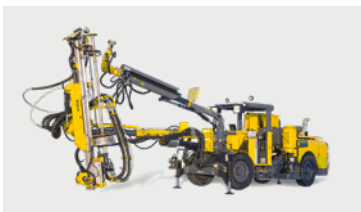
Product	Description
CES components	Mezza 6
Applicable machine models	Meyco ME3
Description	<ol style="list-style-type: none"> 1. Boom including spray unit, dressed with hoses 2. Fasteners included
Features and benefits	<ol style="list-style-type: none"> 1. "Plug-and-play" 2. Can be used as standby unit
Bom (high level)	Telescopic boom, spray unit, hoses, lubrication system with slide system
Estimated kit installation time	2-8 hrs
Weight and dimension included in CES solution	15 m ³ and up to 900 kg



Mezza 6, Rock Reinforcement

Boom replacements and upgrades

Product	Description
CES components	Screen handler PK6501, Rock mesha handler PK6501
Applicable machine models	Boltec MC, Boltec EC
Description	<ol style="list-style-type: none"> 1. Screen handler with gripper for welded net or rock mesha roll handler 2. Fasteners included
Features and benefits	<ol style="list-style-type: none"> 1. "Plug-and-play" 2. Can be used as standby unit
Bom (high level)	Screen handler, hydraulic set, valve attachment, lubrication set, boom bracket
Estimated kit installation time	2-8 hrs
Weight and dimension included in CES solution	5 m ³ and up to 1 300 kg



Screen Handler, Rock Reinforcement

Underground drilling and rock reinforcement

Feed replacements and upgrades

Product	Description
CES components	BMH 2X00, BMHT 2X00, BMHS 2X00, BMH 2X00, BSH110, BMHT 2X00, BSHXS
Applicable machine models	Boomer 104, Boomer T1D, Boomer 281, Boomer 282, Boomer S1D, Boomer S1L, Boomer M1L, Boomer S2
Description	Feed built close to "plug-and-play" (including sliding pieces)
Features and benefits	<ol style="list-style-type: none"> 1. "Plug-and-play", can be used as standby unit 2. Change of configuration due to change of site or conditions 3. Built according to latest and greatest standard
Bom (high level)	Feed, hose nipple set, attachment set, counterweight and boom stops (if required)
Estimated kit installation time	2-8 hrs
Weight and dimension included in CES solution	5 m ³ and up to 1 500 kg



BMH(T)(S) 2X00 Series, For COP 1800 Series

Feed replacements and upgrades

Product	Description
CES components	BMH 2700, BMHT 2700, BMH 2700, BSH110, BMHT2700, BSHXS
Applicable machine models	Boomer T1D, Boomer S1D, Boomer S2
Description	Feed built close to "plug-and-play" (including sliding pieces)
Features and benefits	<ol style="list-style-type: none"> 1. "Plug-and-play", can be used as standby unit 2. Change of configuration due to change of site or conditions 3. Built according to latest and greatest standard
Bom (high level)	Feed, hose nipple set, attachment set, counterweight and boom stops (if required)
Estimated kit installation time	2-8 hrs
Weight and dimension included in CES solution	5 m ³ and up to 1 500 kg



BMH(T)(S) 2700 Series, For COP MD20 Series

Feed replacements and upgrades

Product	Description
CES components	BMH 6X00(HD), BMHT 6X00(HD), BMHS 6X00, BMH 6X00, BSH110, BMH 6X00 RAS, BMH 6X00 RHS
Applicable machine models	Boomer M2D, Boomer M2C, Boomer E1C, Boomer E2C, Boomer L2D, Boomer L2C, Boomer XL3D, Boomer L3C, Boomer XE3C, Boomer WE3C, Boomer L1D, Boomer L1C
Description	Feed built close to "plug-and-play" (including sliding pieces).
Features and benefits	<ol style="list-style-type: none"> 1. "Plug-and-play", can be used as standby unit 2. Change of configuration due to change of site or conditions 3. Built according to latest and greatest standard
Bom (high level)	Feed, hose nipple set, attachment set, counterweight and boom stops (if required)
Estimated kit installation time	2-8 hrs
Weight and dimension included in CES solution	5 m ³ and up to 1 500 kg



BMH(T)(S) 6X00 Series, For COP 1800 Series

Feed replacements and upgrades

Product	Description
CES components	BMH 6700(HD), BMHT 6X00(HD), BMH 6700 BSH110, BMH 6700 RAS, BMH 6700 RHS
Applicable machine models	Boomer M2D, Boomer M2C, Boomer E1C, Boomer E2C, Boomer XE3C, Boomer WE3C
Description	Feed built close to "plug-and-play" (including sliding pieces).
Features and benefits	<ol style="list-style-type: none"> 1. "Plug-and-play", can be used as standby unit 2. Change of configuration due to change of site or conditions 3. Built according to latest and greatest standard
Bom (high level)	Feed, hose nipple set, attachment set, counterweight and boom stops (if required)
Estimated kit installation time	2-8 hrs
Weight and dimension included in CES solution	4 m ³ and up to 800 kg



BMH(T)(S) 6700 Series, For COP MD20 Series

Feed replacements and upgrades

Product	Description
CES components	BMH 6900, BMHT 6900, BMH 6900, BSH110, BMH 6900, RAS, BMH 6900 RHS
Applicable machine models	Boomer E2C, Boomer XE3C, Boomer WE3C
Description	Feed built close to "plug-and-play" (including sliding pieces).
Features and benefits	<ol style="list-style-type: none"> 1. "Plug-and-play", can be used as standby unit 2. Change of configuration due to change of site or conditions 3. Built according to latest and greatest standard
Bom (high level)	Feed, BSH, RAS, RHS, hose nipple set, attachment set, counterweight and boom stops (if required)
Estimated kit installation time	2-8 hrs
Weight and dimension included in CES solution	3 m ³ and up to 850 kg



BMH(T) 6900 Series, For COP 3038/4038 Series

Feed replacements and upgrades

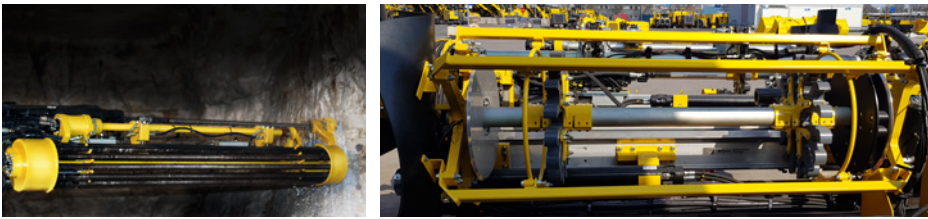
Product	Description
CES components	BMHP 6804-ME/MUX, BMHP 6805-ME/MUX, BMHP 6806-ME/MUX, BMHP 6804-ME-DCT, BMHP 6804-MUX-DCT, BMHP 6805-ME-DCT
Applicable machine models	Simba S7D, Simba S7C, Cabletec M
Description	Feed built close to "plug-and-play" (including sliding pieces).
Features and benefits	<ol style="list-style-type: none"> 1. "Plug-and-play", can be used as standby unit 2. Change of configuration due to change of site or conditions 3. Built according to latest and greatest standard
Bom (high level)	Feed, BSH, RHS10, hose nipple set, attachment set
Estimated kit installation time	2-8 hrs
Weight and dimension included in CES solution	3 m ³ and up to 1100 kg



BMHP 6800 Series, Production drilling and Rock reinforcement

Feed replacements and upgrades

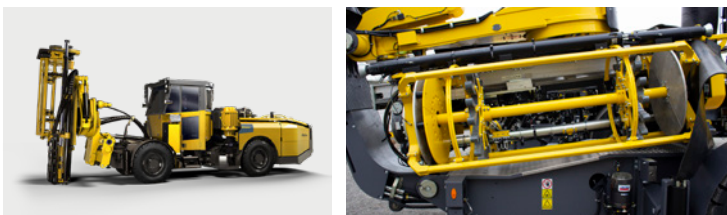
Product	Description
CES components	BMH 2_4(X), BMH 2_5(X), BMH 2_6(X), BMH 2_4X-DCT, BMH 2_5X-DCT, BMH 235W, BMH 236W, BMH 235-SLOT, BMH 236-SLOT
Applicable machine models	Simba 1250, Simba 1354(ITH), Simba M4C(ITH), Simba M6C(ITH), Simba ME7C(ITH), Simba E7C(ITH), Simba W6C, Simba WL6C, Simba W7C, Cabletec LC, Cabletec EC
Description	Feed built close to "plug-and-play"
Features and benefits	<ol style="list-style-type: none"> 1. "Plug-and-play", can be used as standby unit 2. Change of configuration due to change of site or conditions 3. Built according to latest and greatest standard
Bom (high level)	Feed, BSH, hose nipple set, attachment set
Estimated kit installation time	2-8 hrs
Weight and dimension included in CES solution	5 m ³ and up to 1 500 kg



RHS E – Feed replacements and upgrades

Rod handling system replacements and upgrades

Product	Description
CES components	RHS 10, RHS 17D, RHS 17E, RHS 27D, RHS 27E, RHS 35D, RHS 35E
Applicable machine models	Simba 1250, Simba 1354(ITH), Simba S7D, Simba S7C, Simba M4C(ITH), Simba M6C(ITH), Simba ME7C(ITH), Simba E7C(ITH), Simba W6C, Simba WL6C, Simba W7C, Cabletec M, Cabletec LC, Cabletec EC
Description	RHS replacement and conversion for Simba
Features and benefits	<ol style="list-style-type: none"> 1. "Plug-and-play", can be used as standby unit 2. Change of configuration due to change of site or conditions 3. D version to E version conversion benefits.
Bom (high level)	Rod magazine, rod handling arm, lubrication system
Estimated kit installation time	2-8 hrs
Weight and dimension included in CES solution	1.2 m ³ and up to 1 050 kg



RHS, Production drilling and Rock reinforcement

Production unit replacements and upgrades

Product	Description
CES components	Complete feed module and positioning unit
Applicable machine models	Simba M4C(ITH), Simba M6C(ITH), Simba W6C, Simba WL6C
Description	Complete feed module or together with positioning unit as "Pin on-Pin off" front part of the machine.
Features and benefits	<ol style="list-style-type: none"> 1. Stand by unit 2. Configuration change 3. "Plug-and-play"
Bom (high level)	Feed, RHS, hammer magazine, bit changer, Collar pipe installer, stingers, hydraulics, RCS components, feed holder, pendulum, travers, l-frame etc.
Estimated kit installation time	2-8 hrs
Weight and dimension included in CES solution	10 m ³ and up to 2 600 kg



Production unit

Feed module replacements and upgrades

Product	Description
CES components	Mesh handling tool
Applicable machine models	Boltec S
Description	<ol style="list-style-type: none"> 1. Mesh handler gripper tool for welded net, mounted on feed (not a separate boom/crane) 2. Fasteners included.
Features and benefits	1. To be used for manipulating welded sheet mesh for installation
Bom (high level)	Screen handling set and hydraulic set
Estimated kit installation time	2-5 hrs
Weight and dimension included in CES solution	0.5 m ³ and up to 220 kg



Mesh handling tool, Rock reinforcement

Feed module replacements and upgrades

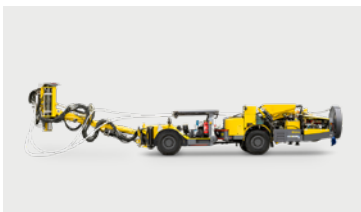
Product	Description
CES components	SBU (Small Bolting Unit)
Applicable machine models	Boltec MC, Boltec E, Boltec S
Description	Feed built according to original specification or with new options
Features and benefits	1. "Plug-and-play", can be used as standby unit 2. Conversion from MBU to SBU
Bom (high level)	Assembled feed with magazine, hoses, nipples, etc.
Estimated kit installation time	2-8 hrs
Weight and dimension included in CES solution	14 m ³ and up to 2 800 kg



SBU (Small Bolting Unit), Rock Reinforcement

Complete rebuild/overhaul kits

Product	Description
CES components	Front section for Boltec
Applicable machine models	Boltec SL
Description	See BOM (high level)
Features and benefits	"Plug-and-play", can be used as standby unit
Bom (high level)	The entire section should include feed, rock drill, boom complete with boom controls, electric motor and main pumps
Estimated kit installation time	60 to 80 hrs (including calibration of the machine to ensure all settings are accurately adjusted)
Weight and dimension included in CES solution	19 m ³ and up to 3 300 kg



Cabletec SL cable bolting rig

Underground drilling and rock reinforcement

Pipe roof system

Product	Description
CES components	Retrofit kits for 12/14 foot feeds, Rock drill conversions
Applicable machine models	Boomer E2C, XE3C, XE4C, WE3C
Description	Is a method for pre-supporting bad ground in tunnels prior to the excavation face reaching the area
Features and benefits	<ol style="list-style-type: none"> 1. Plug-and-play* retrofit kits, can be used as standby unit 2. Change of configuration due to change of site
Bom (high level)	Feed, hose nipple set, rock drill, boom, attachment set
Estimated kit installation time	2-8 hrs
Weight and dimension included in CES solution	0.5 m ³ and up to 300 kg (rock drill)



Pipe roof system, Boomer

Technology option upgrades

Product	Description
CES components	MWD (Measure While Drilling)
Applicable machine models	Boomer M, Boomer L, Boomer E, Boomer XE, Boomer WE (with RCS control system)
Description	The technique to extract rock mass properties while drilling
Features and benefits	<ol style="list-style-type: none"> 1. MWD technology gives an objective and consistent mapping of the geology and the rock properties along the whole tunnel
Bom (high level)	Flow meters, system kit RCS, cables, hoses, rig program update
Estimated kit installation time	40 hrs (including calibration of the machine to ensure all the sensors are accurately adjusted)
Weight and dimension included in CES solution	0.3 m ³ and up to 60 kg



Measure while drilling, Face drilling

Technology option upgrades

Product	Description
CES components	ABC (Advanced Boom Control) upgrades
Applicable machine models	All RCS Boomer and Simba
Description	Option upgrades for increased productivity
Features and benefits	<ol style="list-style-type: none"> 1. Better precision 2. Automation
Bom (high level)	Cables, hoses, rig program update (depending on option)
Estimated kit installation time	40 hrs (including calibration of the machine to ensure all the sensors are accurately adjusted)
Weight and dimension included in CES solution	0.1 m ³ and up to 20 kg



ABC upgrades, Face drilling and Production drilling

Production unit replacements and upgrades

Product	Description
CES components	MBU (1.5 m to 2.4 m bolts), BMHP 6000
Applicable machine models	Boltec 235, Boltec MC, Boltec LC
Description	Feed built close to "plug-and-play" (including sliding pieces)
Features and benefits	<ol style="list-style-type: none"> 1. "Plug-and-play", can be used as standby unit 2. Conversion from MBU to SBU
Bom (high level)	Assembled feed with magazine, hoses, nipples, etc.
Estimated kit installation time	2-8 hrs
Weight and dimension included in CES solution	5 m ³ and up to 1 100 kg



MBU (Medium bolting unit), Rock reinforcement

Underground drilling and rock reinforcement

Screen Handler

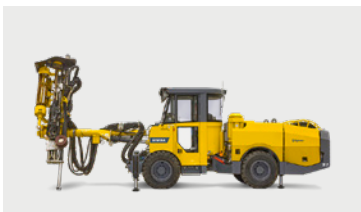
Product	Description
CES components	Screen handler
Applicable machine models	Boltec 235
Description	Customized screen handler
Features and benefits	<ol style="list-style-type: none"> 1. Pre-assemble before delivery from factory 2. Ensure all necessary checks and testing are performed before shipment 3. Quick and easy installation giving reduced workshop downtime 4. Need welding the structure parts to Boom on customer site
Bom (high level)	Hardware, hydraulic components
Estimated kit installation time	16 hrs
Weight and dimension included in CES solution	5.1 m ³ and up to 1 300 kg



Screen handler, Rock reinforcement

Technology option upgrades

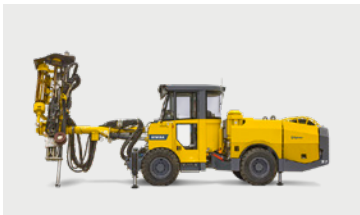
Product	Description
CES components	TSN (Total Station Navigation)
Applicable machine models	All RCS Boomer and Simba
Description	Option upgrade for drill rig navigation
Features and benefits	<ol style="list-style-type: none"> 1. Safer, faster and more accurate than other methods of navigation
Bom (high level)	Theodolite, prisms, RCS cables, application module, rig program update, attachments
Estimated kit installation time	40 hrs (including calibration of the machine to ensure all the sensors are accurately adjusted)
Weight and dimension included in CES solution	0.7 m ³ and up to 95 kg



TSN, Face drilling and Production drilling

Technology option upgrades

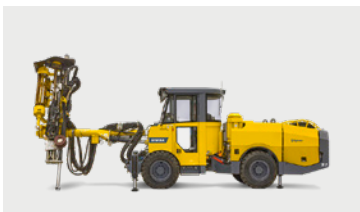
Product	Description
CES components	Drill plan handling
Applicable machine models	All RCS Simba
Description	Automatic angle adjustment, basic navigation, automatic parallel holding
Features and benefits	1. Drill unit will work according to pre-set angles, boom positioning will be made manually by the operator
Bom (high level)	Software, memory unit
Estimated kit installation time	40 hrs (depending on option)
Weight and dimension included in CES solution	0.06 m ³ and up to 5 kg



DPH, Production drilling

Technology option upgrades

Product	Description
CES components	ARI (Angle Reading Instrument)
Applicable machine models	Simba 1250, Simba 1354(ITH), Simba S7D
Description	Option upgrades for increased productivity
Features and benefits	1. More and better data 2. Higher accuracy 3. Better precision
Bom (high level)	Cables, application module, rig program update, attachments
Estimated kit installation time	40 hrs (depending on option)
Weight and dimension included in CES solution	0.8 m ³ and up to 134 kg



ARI, Production drilling

Underground drilling and rock reinforcement

Technology option upgrades

Product	Description
CES components	Bolt Plan Navigation
Applicable machine models	Boltec MC, Boltec E, Boltec EC
Description	Including total station Navigation, Rig is navigated into mine / tunnel coordinate system and all installed bolts will be displayed on screen with bolt distance and row distance. Bolt positions, resin amount / cement volume and more will be logged and saved to file
Features and benefits	See above
Bom (high level)	Theodolite instrument, system kit, cables, software update
Estimated kit installation time	40 hrs (including calibration of the machine to ensure all the sensors are accurately adjusted)
Weight and dimension included in CES solution	0.5 m ³ and up to 68 kg



Bolt plan navigation, Rock reinforcement

Cabin replacements

Product	Description
CES components	Complete cabin
Applicable machine models	All underground drill rigs
Description	1. Cabin replacement (including interior components) 2. Close to "plug-and-play"
Features and benefits	1. Replacement if cabin damaged 2. FOPS/ROPS certified (depending on machine)
Bom (high level)	Cabin body, interior components, cabin options
Estimated kit installation time	16 hrs
Weight and dimension included in CES solution	8 m ³ and up to 1 800 kg



TME – Cabin

Hose kit for total overhaul

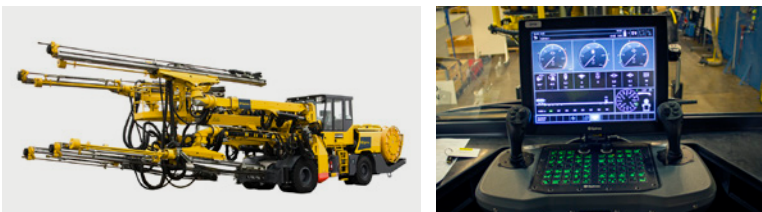
Product	Description
CES components	All models
Applicable machine models	Available for all underground machines
Description	An entire package of hoses to support the rebuild project
Features and benefits	<ol style="list-style-type: none"> 1. Every hose is marked with correct codification, Easy to find the right hose and assemble correctly. Improve the workshop's efficiency and save the labors 2. Every hose is decontaminated, capped and packaged to be protected from transit damage and recontamination. 3. Separately packaged by system, Convenient to stock and conduct the overhaul. Only take out the right hoses according to the plan
Bom (high level)	Hoses, O rings, based on original machine configuration
Estimated kit installation time	40-160 hrs (depending on model)
Weight and dimension included in CES solution	3.5 m ³ and up to 700 kg



Hose kit, Underground drilling & rock reinforcement

RCS upgrades

Product	Description
CES components	RCS2 or RCS3 to RCS4, RCS4 to RCS5
Applicable machine models	All underground RCS drill rigs
Description	Upgrade from RCS2 or RCS3 to RCS4, from RCS4 to RCS5
Features and benefits	<ol style="list-style-type: none"> 1. Additional software option availability 2. Increased spare parts availability
Bom (high level)	RCS4 upgrade: RCS system modules, OP unit, cables, rig program RCS5 upgrade: Display(s) and operation unit(s), chair (if 3-boom machine)
Estimated kit installation time	40 hrs
Weight and dimension included in CES solution	2 m ³ and up to 400 kg



Boomer XE4 – Rig Control System

Safety solutions

Product	Description
CES components	Drill stop
Applicable machine models	All underground drill rigs
Description	Warning or stopping the drill if someone enters front of the machine
Features and benefits	1. Increased safety
Bom (high level)	Laser sensors, cables, application modules, hydraulic components (DCS rigs), rig software update.
Estimated kit installation time	8 hrs
Weight and dimension included in CES solution	0.3 m ³ and up to 40 kg



Drill stop, Underground drilling & rock reinforcement

COP replacements

Product	Description
CES components	COP replacements kit
Applicable machine models	All underground drill rigs
Description	Configuration change from one rock drill to another
Features and benefits	<ol style="list-style-type: none"> 1. Configuration change as per application. 2. Higher productivity, less power consumption 3. Longer service intervals
Bom (high level)	Rock drill, hydraulic components
Estimated kit installation time	8-16 hrs (including calibration to ensure parameters are accurately adjusted)
Weight and dimension included in CES solution	0.7 m ³ and up to 465 kg



COP replacement, Underground drilling

TBM packages

Product	Description
CES components	DCS drilling unit for TBM
Applicable machine models	TBM (Tunnel boring machine)
Description	Complete drilling unit for probe drilling or roof drilling
Features and benefits	<ol style="list-style-type: none"> 1. Water inflow risk mitigation by probe drilling 2. Personnel and TBM protection through roof bolting
Bom (high level)	Rock drill, feed, DCS control panel, and power pack
Estimated kit installation time	TBD
Weight and dimension included in CES solution	5.5 m ³ and up to 2 700 kg



DCS drilling unit for TBM, Underground drilling

TBM packages

Product	Description
CES components	Shotcrete unit
Applicable machine models	MEYCO SE20
Description	Wet-mix concrete spraying pump used in rock support applications
Features and benefits	<ol style="list-style-type: none"> 1. Accuracy as the admixture dosing system ensures the right amount at the right time 2. Quality by providing a homogenous mixture of concrete, accelerator and compressed air 3. Plug and spray
Bom (high level)	Pump /hydraulic cylinder, feeding hopper, electric motor MEYCO SE20
Estimated kit installation time	2-8 hrs
Weight and dimension included in CES solution	5.2 m ³ and up to 3 000 kg



Shotcrete unit, Rock reinforcement

United in performance. Inspired by innovation.

Performance unites us, innovation inspires us, and commitment drives us to keep moving forward. Count on Epiroc to deliver the solutions you need to succeed today and the technology to lead tomorrow.
epiroc.com

