

## Modifications The Beco program

For modification of each type  
of excavators.

**Smart. Solid.**



**BE C**omplete,  
**opt for Beco**

**For every job  
the right  
machine.**

**Beco can  
modify your  
machine.**

We are specialized in modifying construction machinery to make it ready for your (specific) job. For every modification we are your partner from design to installation. We offer custom-built solutions, including CE marking if required, to meet your requirements. For each brand we are your partner.

**BEComplete: opt for Beco**



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**Modification of booms and arms**

- Modification of existing booms and/or arms
- Increased lifting height / reach
- Machine operating weight up to 200 t



«« **Example 1 - Extension of mono boom, Kobelco SK260**

- Additional length of 1,5 m
- Extension of hydraulic piping
- Painting (primer and final colour)
- CE marking

**Example 2 - Extension of mono boom and arm, Hitachi ZX470** »»

- Additional length mono boom 2,5 m
- Additional length arm 3,0 m
- Extension of hydraulic piping
- Painting (primer)
- CE marking



«« **Example 3 - Console at mono boom, Hitachi ZX 250**

- Increased lifting height 1,1 m
- Painting (primer)
- CE marking

**Long reach booms and arms**

- Completely new manufactured Long Reach mono booms
- Completely new manufactured Long Reach arms
- Machine operating weight up to 200 t



«« **Example 1 - Long reach mono boom and arm, Hitachi EX1200**

- Reach at ground level (pin) 26,0 m
- Max. lifting capacity at max. reach 4,5 t
- 3rd boom cylinder for additional lifting capacity
- Hydraulic piping for arm cylinder and bucket cylinder
- Additional counterweight 15 t
- Painting (primer and final colour)
- Assembly to base machine
- CE marking

**Example 2 – long reach mono boom and arm, Caterpillar 390** »»

- Reach at ground level (pin) 19,4 m
- Max. lifting capacity at max. reach 6,5 t
- Hydraulic piping for arm - and bucket cylinder and breaker
- BECO CW40 quick coupler
- Additional counterweight 7 t
- Painting (primer and final colour)
- CE marking



«« **Example 3 – Semi-long reach arm, Liebherr 984**

- Length 7,0 m
- Hydraulic piping for bucket cylinder, breaker and greasing
- BECO HD bucket 8,0 m³ (SAE 1:2)
- Painting (primer and final colour)
- CE marking



## Two piece booms / triple fronts

- Completely new manufactured triple fronts (base boom, top boom and arm)
- Completely new manufactured 2p booms
- Modification of existing mono boom into 2p booms
- Machine operating weight up to 200 t



« Example 1 – triple front, Caterpillar 375

- Reach at ground level (pin) 21,0 m
- Max. lifting height (pin) 20 m at 12 m reach
- Max working depth (pin) 15 m at 5,5 m reach
- Modification of hydraulic system of base machine
- BECO CW40 quick coupler
- Painting (primer and final colour)
- CE marking

» Example 2 – triple front with boom quick coupler, Hitachi ZX870

- Modification of original mono boom into 2p boom with quick coupler
- New manufactured second part base boom, top boom and arm
- Modification of hydraulic system of base machine
- Modification of hydraulic piping at base boom
- Painting (primer and final colour)
- CE marking



« Example 3 – 2P boom, Kobelco SK230SR

- Completely new manufactured base boom and top boom
- Modification of hydraulic system of base machine for control of adjustment cylinder and tiltrotator
- New manufactured hydraulic piping at boom
- Painting (primer and final colour)
- CE marking



## High reach demolition fronts

- Completely new manufactured high reach demolition fronts
- Base boom with boom quick coupler system (optional)
- 2D or 3D stability monitor systems
- Machine operation weight up to 150 t



« Example 1 – High reach demolition front, Volvo EC300

- Working height at 19,0 m (pin)/Tool weight max. 2,5 t
- Boom quick coupler system for high reach demolition front and digging front
- Hydraulically tiltable cab with safety guards
- Additional counterweight 2,5 t
- Side Impact Protection profiles at uppercarriage
- Heavy duty bottom plates at uppercarriage
- Modification of hydraulic circuit and controls of base machine
- Painting (primer and final colour)
- CE Marking

» Example 2 – High reach demolition front, Caterpillar 385

- Working height at 33,6 m (pin)
- Tool weight max. 5,0 t
- Transport brackets for transport in disassembled position
- Painting (primer and final colour)
- CE Marking



« Example 3 – Four piece high reach demolition front, ETEC 333

- Working height at 21,5 m (pin)/Tool weight max. 2,5 t
- Hydraulically tiltable cab with safety guards
- Hydraulically adjustable undercarriage
- Modification of hydraulic circuit and controls of base machine
- Painting (primer and final colour)
- CE marking



**Boom quick couplers**

- Completely new manufactured base boom with quick coupler system
- Modification of existing mono boom into base boom with quick coupler system
- Mechanically or hydraulically operated quick coupler systems
- Original retrofit or custom specific design
- Machine operating weight up to 150 t



« Example 1 – Boom quick coupler, Volvo EC series

- For digging front and high reach demolition front
- Mechanically operated
- Hydraulic piping with multi connection quick couplers

» Example 2 – Boom quick coupler, Hitachi ZX870

- For digging front with 2P boom and high reach demolition front
- Hydraulically operated
- Hydraulic piping with multi connection quick couplers



« Example 3 – Boom quick coupler, Caterpillar 385

- For digging front and high reach demolition front
- Hydraulically operated with force-free cylinder assembly
- Hydraulic piping with multi connection quick couplers



**Boom/arm extension adapters**

- Adapters for booms or arms for additional working height, reach and/or digging depth
- Original retrofit or custom specific design
- Machine operating weight up to 150 t



« Example 1 – Boom adapter, Volvo EC700 with digging front

- For digging front / high reach demolition front
- Length 4,0 m
- 1 position at base boom side

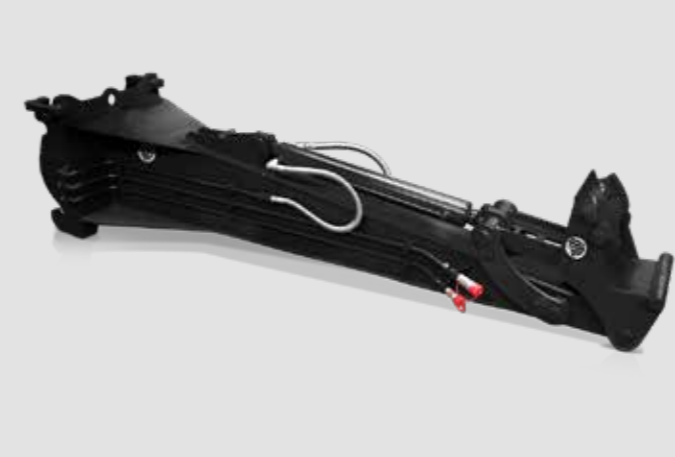
» Example 2 – Boom adapter Volvo EC700 with HRD front

- For high reach demolition front
- Length up to 5 m
- 2 positions at base boom side



« Example 3 – Extension arms

- Length 1.0 – 5.0 m
- Hydraulic piping for additional circuits
- Bucket linkage and bucket cylinder
- All type of mountings



**Sheet piling fronts and piling frames**

- Sheet piling front for excavators and piling frame for cranes
- Working heights up to 50,0 m
- Machine operating weight up to 150 t



« Example 1 – Four piece sheet piling front, Hitachi ZX470

- Working height 20 m / tool weight 5 t
- Power pack for powering vibrator
- Hydraulically adjustable undercarriages
- Tilttable cab



Example 2 – Telescopic sheet piling front, Etec 880

- Max. working height 24 m / tool weight 5 t
- Telescopic main boom
- Hydraulically adjustable undercarriages
- Tilttable cab



« Example 3 – Piling frame, Liebherr HS895HD

- Max. working height 50 m
- Max tool weight 40 t / max pole weight 40 t, both at 0,9 m from vertical piling frame
- Standard hanging leader
- Swinging leader optional

**Material handling fronts**

- Material handling front for tracked and wheeled excavators
- Modification of existing mono booms and/or arms.
- Completely new manufactured material handling booms/arms.
- Machine operating weight up to 150 t



« Example 1 – Material handling front, Caterpillar 365

- Max. reach at ground level (bucket pin) 15 m
- Including elevated cab with platform

Example 2 – Material handling front, Hitachi EX1200

- »
- Max reach at ground level (bucket pin) 18 m
  - Including elevated cab with platform
  - Including BECO hydraulic clamshell bucket type HBN5000



« Example 3 – Material handling front, Hitachi ZX670

- Max reach at groundlevel (bucket pin) 18 m
- Max lifting capacity at max. reach 7 t
- Including elevated cab with platform
- Including BECO hydraulic clamshell bucket HBN5000

**Elevating cabs and tiltable cabs**

- Fixed up to 5,0 m
- Hydraulically elevating cabs up to 4,0 m lifting height
- Hydraulically tiltable cabs up to 45° tilting angle
- Machine operating weight up to 150 t



« Example 1 – Fixed elevating cab, Hitachi ZX670

- Elevating cab 0,8 m
- Including access platform and stairs
- CE Marking

» Example 2 – Hydraulically elevating cab, Hyundai 360

- Elevation height 1,4 m
- Emergency lowering system
- CE marking



« Example 3 – Hydraulically tiltable cab, Volvo EC300

- Tilting angle 30°
- Emergency lowering system
- CE marking



**Protection components**

- Protection components e.g. demolition and/or hazardous applications
- Machine operating weight up to 150 t



« Example 1 – Cab protection guards, Volvo EC300

- Front window protection guard with hinges
- Roof protection guard

» Example 2 – Side Impact Protection (SIP), Volvo EC300

- Bolt-on heavy duty profiles at uppercarriages



« Example 3 – Cylinder protection profiles

- Heavy duty profiles with slides for protection of bucket cylinder



**Undercarriages**

- Modification of existing undercarriages
- Manufacturing of complete new undercarriages
- Machine operating weight up to 150 t



«« **Example 1 – Hydraulically adjustable undercarriage, Etec 880**

- Outside width retracted 3,5 m
- Outside width extracted 5,6 m
- Wheel base / track length 5,3 m
- Shoe width 0,8 m

**Example 2 – Amphibious undercarriage** »»

- Track width 1,6 m
- Machine weight up to 35 t
- Hydraulically driven



«« **Example 3 – Length extension, Hitachi EX1200**

- Additional length 1,12 m
- CE marking



**Counterweights**

- Modification of existing counterweights for improved stability
- Machine operating weight up to 150 t



«« **Example 1 – Top mounted removable counterweight, Volvo EC700**

- Additional weight 3 t

**Example 2 – Sandwich mounted fixed counterweight, Hitachi ZX250** »»

- Additional weight t
- Including extension of counterweight brackets



«« **Example 3 – Sandwich mounted removable counterweight, Volvo EC700**

- Additional weight 5,5 t
- Vertical sliding brackets
- Lifting eyes





**Modification of and trailers for Articulated Dump Trucks**

- Custom-built bodies and/or installations for Articulated Dump Trucks
- Trailer solutions for 5th wheel application
- Loading capacity up to 80 t



«« Example 1 – Scrap body, Volvo A30G

- 40 m³ capacity (water)
- Hydraulically non-spill tailgate
- Axle locking of rear axles for load distribution to front-axle

Example 2 – Multi functional heavy duty trailer, »» Volvo A40F

- For transport/hauling of tubes and/or ISO containers
- Loading capacity 40 t
- Max. loading length 36 m
- Tyres 29.5R25
- Completely demountable for shipment by container



«« Example 3 – Semi dump trailer for 40 t articulated dump truck Volvo A40F

- For transport/hauling of material up to 2,2 t/m³
- Loading capacity 80t / 42,8 m³ SAE 1:2
- Tyres 29.5R25
- Air brakes
- Mechanically operated tailgate



**Our quality standards**

- Custom-built design to meet your requirements
- Quality assured by ISO 9001 certified Quality Assurance and Quality Control system
- Quality based on in-house knowledge and long term experience



«« Example 1 – Welding

- High quality preparation of the welds
- Welding by highly qualified welders
- Workmanship

Example 2 – Hydraulic piping »»

- High quality material for hydraulic pipes
- Pipe connections by flair method
- Brackets and mounting of the pipes according to design of the original machine

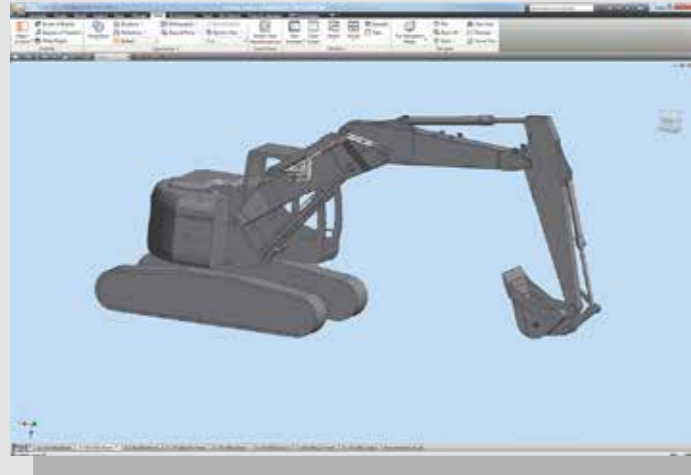


«« Example 2 – Conservation

- All construction parts will be shot blasted
- Painting of all parts/components in disassembled position
- High quality 2 component painting
- Custom specific painting systems available

**Our design method**

- 3D design with Inventor
- Stress and displacement analysis by FEM (Finite Element Method)
- 100% custom built design

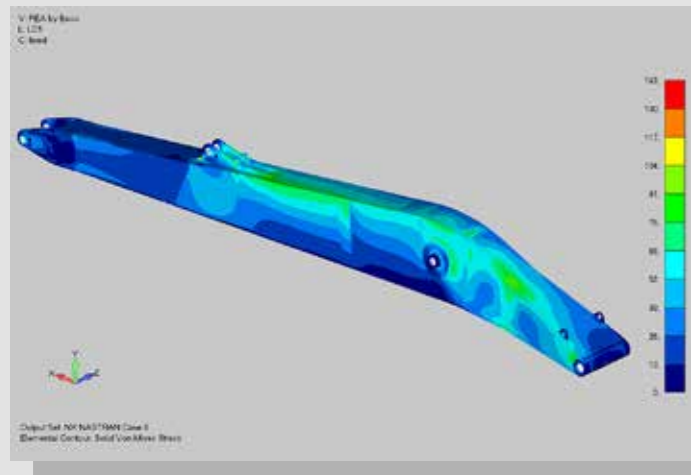
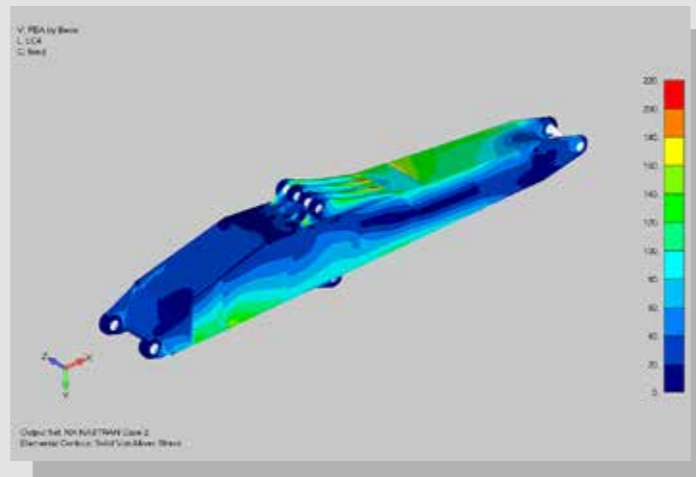


« Example 1 – 3D design

- 3D design by Inventor
- For every application the right design
- All movements/positions can be checked during design

Example 2 – Stress and displacement analysis »

- Stress and displacement analysis by FEM, Finite Element Method
- Optimized material selection based on position and loads



« Example 3 – CE marking

- Design according to 2006/42/EG
- BECO CE marking for complete (modified) machine if required



**BE C O m p l e t e ,  
o p t f o r B e c o**

**The exact work  
tools for your  
equipment.**

**Beco has them.  
Guaranteed.**

**Complete standard product range. Customization if required.**

For more than 35 years already, we have been developing and manufacturing a wide range of equipment and work tools, to enable more efficient use of your construction-, earthmoving- and mining equipment. The mix of our client-oriented approach, experienced in-house engineers and our own production facilities always enables us to provide what your equipment needs.

Beco is a reliable and pleasant partner for:

- Sound advice
- A complete range of standard equipment and attachments at competitive prices
- Client-specific customized solutions with a good price-quality ratio

**BE C O m p l e t e : o p t f o r B e c o**





**Smart. Solid.**

**BECO | TRANSPORT**

Tipper trailers and hooklift carriers for agricultural, earthmoving, landscaping and industry.

**BECO | ATTACHMENTS**

Equipment and attachments for excavators, wheel loaders and cranes.

**BECO | MODIFICATIONS**

Modifications and components for excavators, wheel loaders, dump trailers and construction machines.

**BECO | GRABS**

Grabs for material handling, contractor, waste processing, dredging, recycling and industry.

**BECO | STEEL STRUCTURES**

Customized steel structures for onshore, offshore and industry.

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