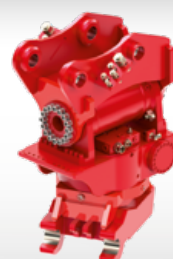
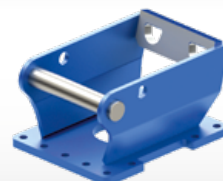
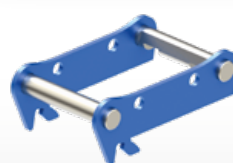


Quickcoupler for compact excavators



 6 - 12 t



Quickcoupler for compact excavators from 6 to 12 t



One system concept - two components.
An idea born over 25 years ago has since become standard equipment in over 160,000 excavators.
With the quickcoupler on excavators and the adapter on the attachments, Lehnhoff has created a universal interface which allows the use of all attachments on different excavator makes.

p.04

Lehmatic MS (mechanical)



p.06

Lehmatic HS (hydraulic)



p.10

Variolock VL (fully hydraulic)



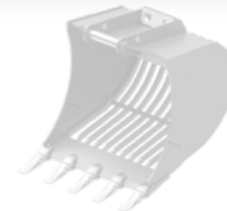
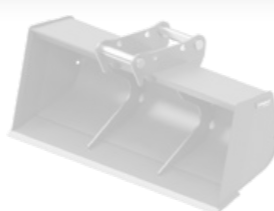
p.14

Power tilt, Rotator, Tiltrotator



p.08

Adapter



p.16

LSC



Lehmatic Safety Control LSC, optional for all hydraulic Lehnhoff quickcoupler systems

Compact excavators as a multifunctional device

Lehnhoff quickcoupler systems significantly extend the usage range of excavators. Hydraulic excavators are transformed into multifunctional equipment carriers for all buckets, grapples or demolition tools which are available for its class. The quick tool change of all attachments including the hydraulics allows a new, optimised way of working on construction sites. Lehnhoff quickcoupler systems are available for all excavator makes.



Since 2010, all Lehnhoff quickcoupler systems are Euro Test-certified by BG Bau.

Adapter for a stable partnership

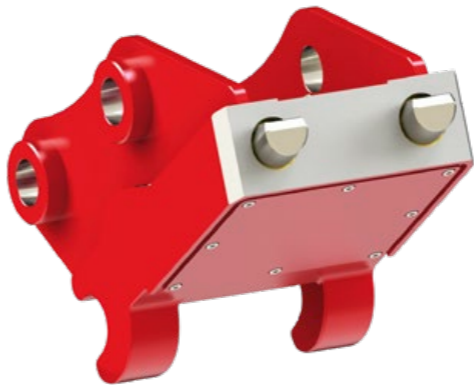
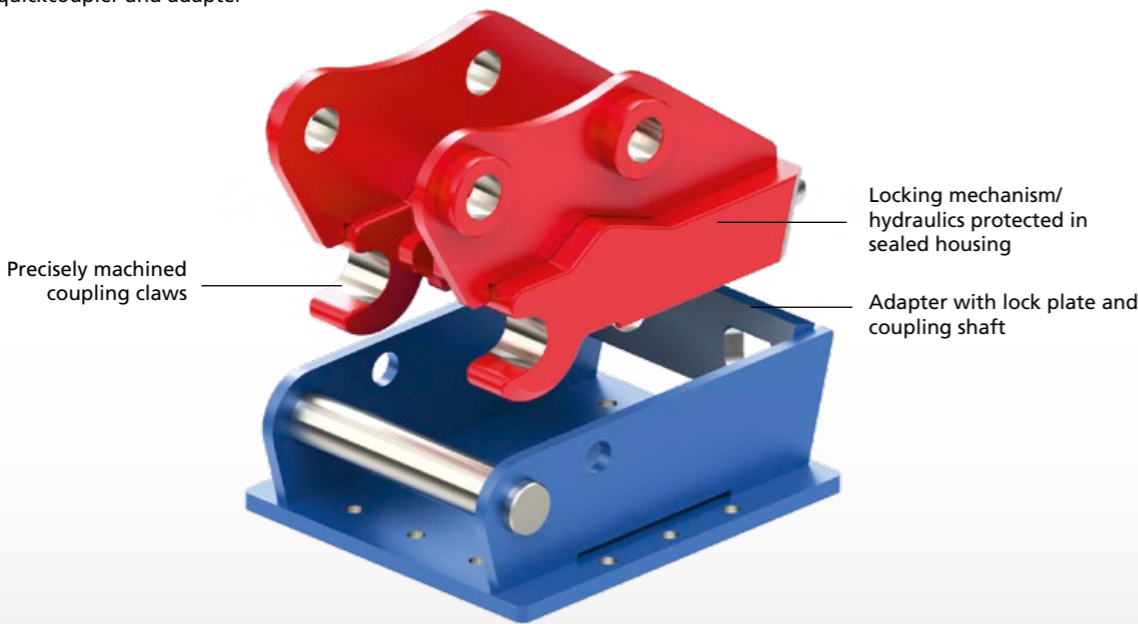
It's the counterpart to the quickcoupler with excavator-specific mounting: the adapter. All Lehnhoff attachments for hydraulic excavators are equipped with the suitable adapter as standard. In addition, the Lehnhoff adapter is available for all attachments on the market – advantages which make the universal Lehmatic adapter system a cost-efficient and future-proof investment.

Lehmatic quickcoupler systems for solid connections



Solid connection:
Lehmatic quickcoupler and adapter

- Long service life thanks to robust cast steel housing, all contact surfaces precisely CNC-processed
- Reliable and durable: automatic adjustment for backlash-free connection between quickcoupler and adapter
- Minimum loss of tensile strength through low build height
- Long service life and low maintenance thanks to sealed locking mechanism
- Available for all excavator makes and all suspensions



Long service life and high functional safety
through selected materials and precise
mechanical processing



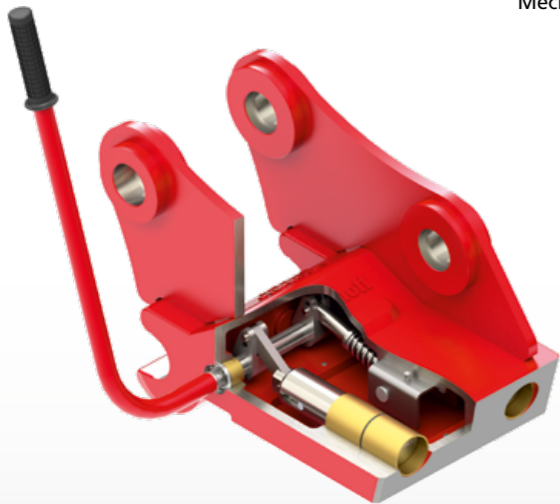
All Lehmatic quickcouplers are optionally available
with load hooks (3-5 t perm. load capacity)

With the Lehmatic quickcoupler systems, the excavator drivers can refit their hydraulic excavator by themselves in less than 1 minute, from one attachment to another, with hydraulic actuation, even directly from the driver's cab.

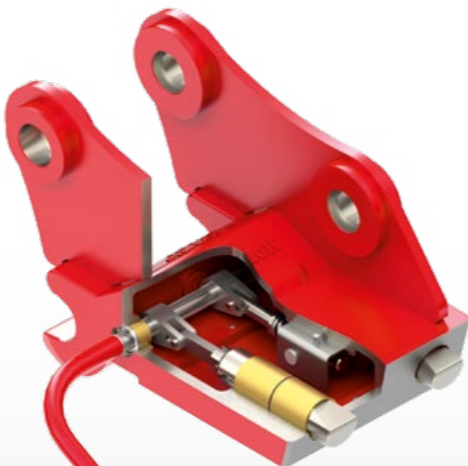




Mechanical quickcoupler MS 08



Unlocked - locking pins retracted



Socket wrench rotated by 120°, quickcoupler safely locked over deadpoint

MS mechanical quickcoupler

- Easy, quick and safe locking via manual socket wrench
- Long service life of the quickcoupler system through automatic adjustment in adapter
- High functional safety by locking via the deadpoint
- Long service life and low maintenance due to sealed locking mechanism
- Optionally with 1 load hook

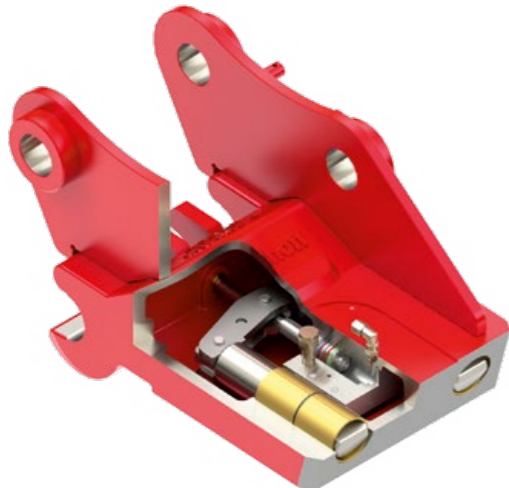
MS mechanical quickcoupler	
	MS 08
Excavator class (t)	6 - 12 t
Length (mm)	400
Width (mm)	290
Weight (kg)	75
Lehmatic adapter	SW 08
for coupling shaft (mm)	60
Load hook capacity (t)	3 / 5



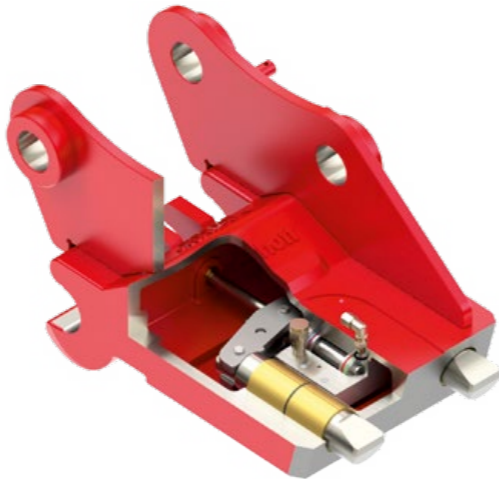
Hydraulic quickcoupler HS 08

Optical locking indicator, visible from driver's cab, indicator pin extended

Optical locking indicator, indicator pin retracted



Unlocked - locking bolts retracted



Safely locked – hydraulic cylinder with integrated safety valve and constant pressurisation

HS hydraulic quickcoupler

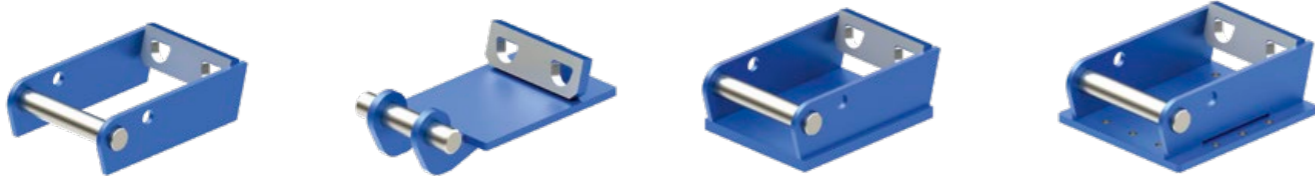
- Convenient, quick and safe locking from driver's cab
- Driver activates the control valve and unlocks/locks the quickcoupler at the touch of a button via lockable toggle switch
- The quickcoupler is always secure and locked playfree through permanent spring-force actuation
- High functional safety due to sealed locking mechanism/hydraulics
- Optional Lehmatic Safety Control (LSC) safety assistant system

HS hydraulic quickcoupler	
	HS 08
Excavator class (t)	6 - 12 t
Length (mm)	400
Width (mm)	290
Weight (kg)	80
Lehmatic adapter	SW 08
for coupling shaft (mm)	60
Load hook capacity (t)	3 / 5



Lockable push button for actuation, protected against accidental unlocking. Locking control via indicator pin on quickcoupler

Lehmatic adapter for all attachments



Adapter frame for backhoe buckets and bucket conversion Adapter plate with internal suspension for narrow bucket up to 300 mm wide Weld adapter for welding onto attachments Screw adapter for demolition tools, such as hammers, etc.



Screw adapter for special hole patterns/hose laying Grapple adapter to accommodate all sorts of grapples Special adapter, e.g. for load hooks

This ensures that attachments of all makes fit

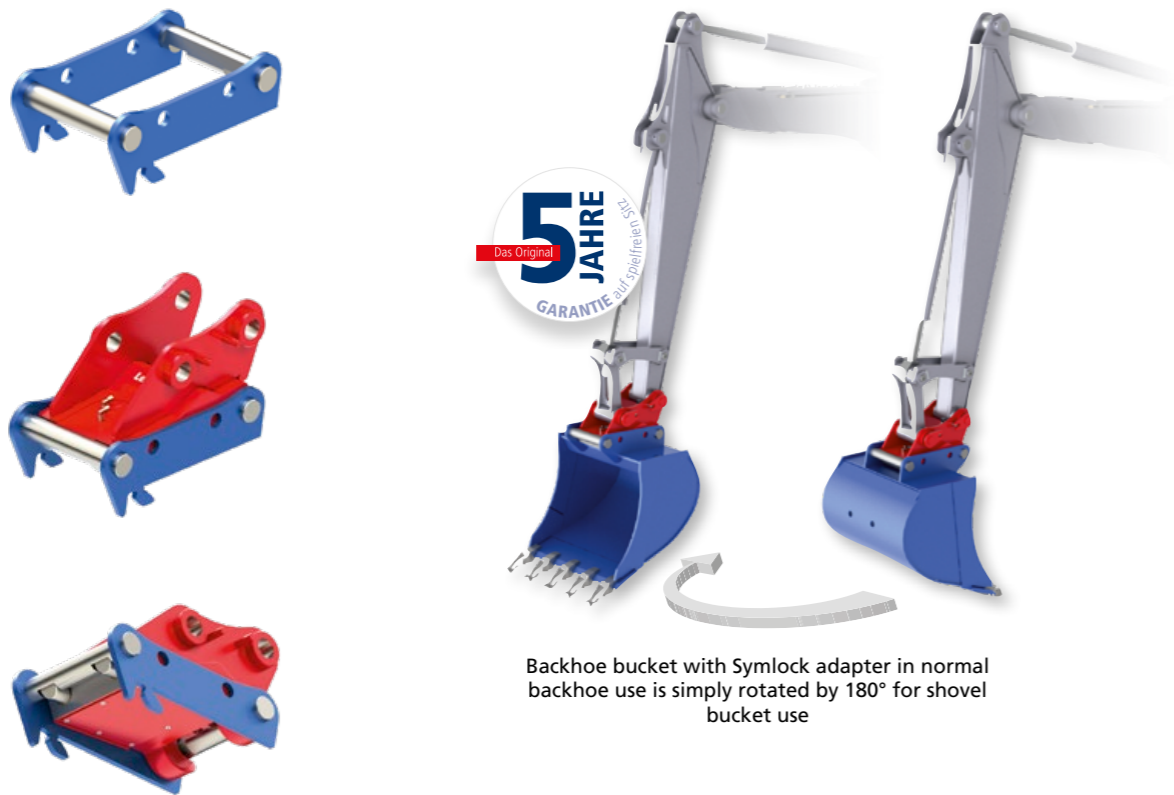
No matter which brand of attachment you want to connect to your excavator: the Lehmatic adapter brings them together. Lehnhoff offers a suitable Lehmatic adapter for all current tools and attachments.

- Front: coupling shaft for the coupling claws of the quickcoupler
- Rear: highly precise lock plate with the two characteristic holes
- Guaranteed secure connection

Lehmatic adapter for all attachments

	SW 08
Excavator class (t)	6 - 12 t
suitable for all Lehmatic quickcouplers	MS 08
	HS 08
	VL 80

Symlock, the adapter with added value



Backhoe bucket with Symlock adapter in normal backhoe use is simply rotated by 180° for shovel bucket use

* 5-year warranty on clearance-free fit of the quickcoupler in the Symlock adapter. Only applies for the use of original Lehnhoff quickcoupler components..

Simple conversion of the backhoe bucket into a shovel bucket

Using the Symlock adapter, you can turn a backhoe bucket into a shovel bucket in a flash and vice versa – by rotating the bucket by 180°. The characteristic lock plate and the coupling shaft on the adapter are replaced by two symmetrically arranged coupling shafts with flat surfaces for the lock plate and locking bolts of the quickcoupler. This enable both the conventional position in the adapter as well as a fit rotated by 180°.

- All advantages of the Lehmatic quickcoupler system are retained
- Ideal for limited range
- for material loading or for filling in front of walls
- when digging ditches
- for obstacles

Symlock adapter for many attachments

	SY 08
Excavator class (t)	6 - 12 t
suitable for all Lehmatic quickcouplers	MS 08
	HS 08
	VL 80



Variolock VL 80 - the fully hydraulic quickcoupler for compact excavators

2 load hooks as standard

Quickcoupler with integrated valve block (S-block)

Seal protects the valves from dirt when using non-hydraulic attachments

Locking process

When locking the quickcoupler with the adapter, the valves are opened automatically. The extremely short stroke of 0 - 3.5 mm allows a full flow of oil immediately. The quickcoupler is always safe and locked without backlash through permanent pressurisation.

Valve block in the adapter of the attachment (A-block)

Each attachment safely in use, in just seconds

The fully hydraulic Variolock energy circuit coupling system makes changing all attachments easy, safe and quick. The driver can comfortably change all tools including the hydraulic connection at the press of a button from the cab, without having to leave the cab and without having to depend on other personnel.

Very economical thanks to time and cost savings

- More effective working: tool change makes sense also with short work cycles
- More safety and convenience for the driver
- Cost reduction due to preservation of machine and attachments
- Prevention of hose ruptures
- Less contamination of the hydraulic system, environmentally friendly



S-block: valve block in quickcoupler

- Flexibly and centrally stored on the underside in the quickcoupler
- With five short stroke valves
- Including leakage oil lines
- Integrated hydraulic tension support ensures a solid hydraulic connection between S-block and A-block



S-block

A-block: valve block in the attachment

- Mounted in the attachment adapter
- Short stroke valves are flush with the block surface and thus easy to maintain
- Valves optimally adapted to the respective tool:
 - Two valves: e.g. tilt bucket, hammer
 - Three valves: e.g. drum cutter, rigid compactor
 - Four valves: e.g. rotatable grapple
 - Five valves: e.g. rotatable compactor



A-block

Five short stroke valves enable all functions of all tools, including the leakage oil line



Tilt bucket:
2 valves

Sorting grab:
4 valves

Hammer:
2 valves

Drum cutter:
3 valves

Rotatable attachment
compactor: 5 valves

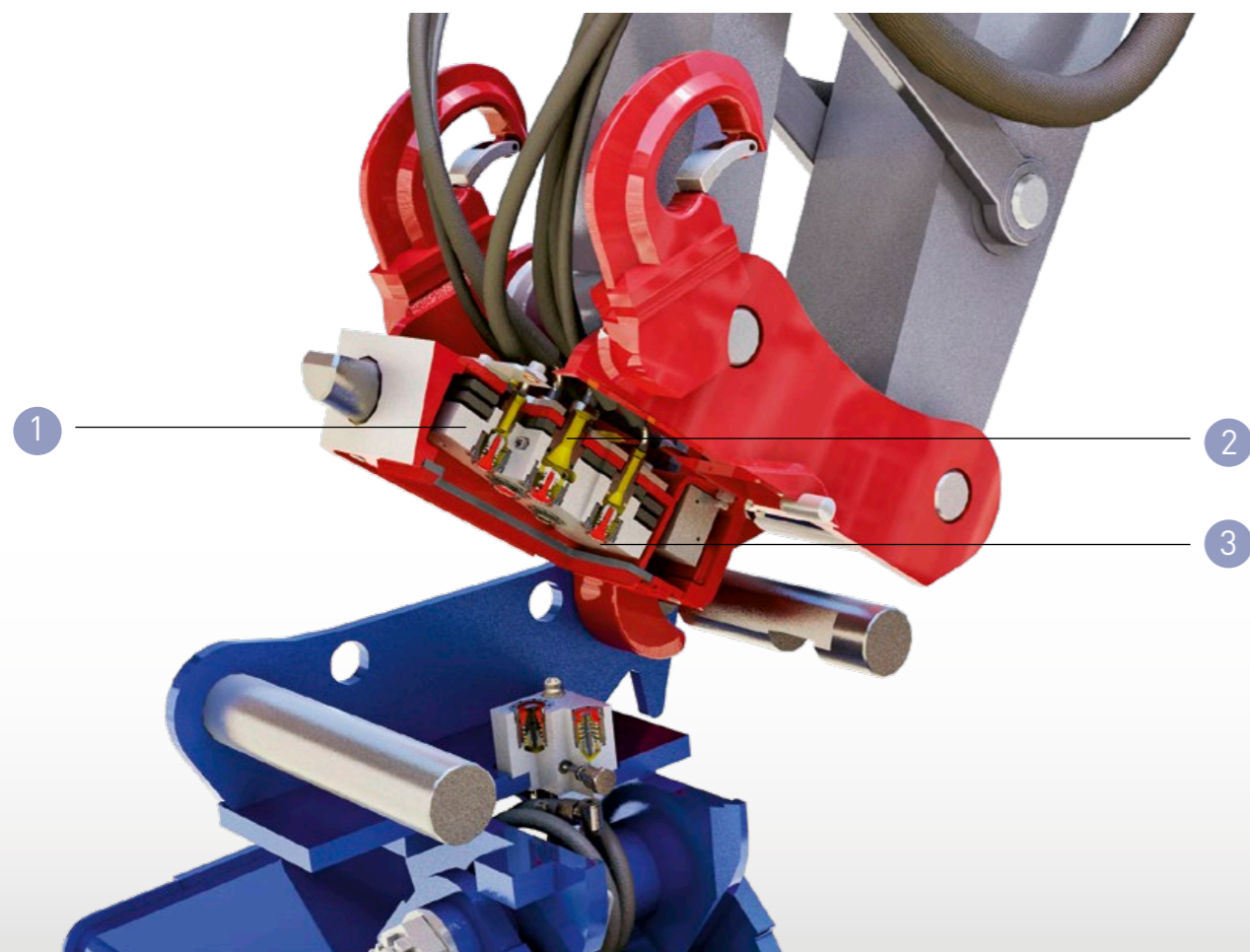
Cobble stone grapple:
4 valves

Cone wood splitter:
3 valves

Backhoe bucket on Powertilt
Variolock: no valves

Stump cutter:
3 valves

Variolock VL 80 – Technical highlights



Variolock VL 80

	VL 80
Excavator class (t)	6 - 12 t
Length (mm)	570
Width (mm)	335
Weight (kg)	90
Lehmatic adapter	SW 08
Load hook (2 hooks) capacity	à 5 t

Proven technology for the highest productivity

- Compatible with all Lehmatic attachments, such as backhoe buckets, ripper teeth, etc.
- Functionally-safely integrated into Lehnhoff quickcoupler system
- Precise hydraulic connection through patented valve tensioning technology
- Minimum pressure loss and low heating from large oil flow
- Robust, easy to clean and service

1 Internal block depressurisation unit

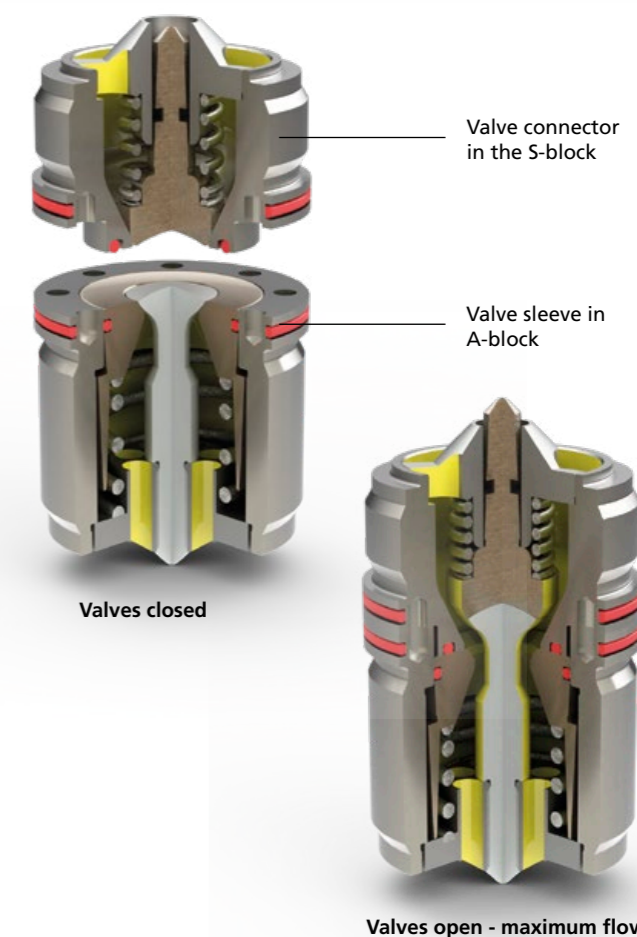
- The work line and the grapple rotary line are depressurised for the unlocking process
- Increased service life of the valves
- Integrated into valve block, thus making costly and time-intensive installation on excavator unnecessary
- The installation effort thus corresponds to that of a conventional hydraulic quickcoupler

2 Secure locking/bracing (HTD)

- The short stroke valves are mechanically opened for the locking process
- Extremely short stroke of 0 to 3.5 mm immediately enables a full flow of oil
- Safe, backlash-free locking at all times through permanent pressurisation
- Hydraulic tensioning support ensures that the valve blocks are kept firmly pressed together

3 Patented short stroke valves

- Connect attachments to working hydraulics safely and leak-free
- Optimally designed for excavator and attachments with maximum oil flow
 - ✓ Minimum dynamic pressure
 - ✓ Low heating
 - ✓ Less fuel consumption
 - ✓ Higher efficiency
- Easy to clean and service



Internal block depressurisation unit (BID)

Pressure is dissipated via the leakage oil line

All four working valves are depressurised via this line when opening the quick-coupler

Controller for depressurisation valve for QC unlocking

Lehnhoff short stroke valves

			VL 80
Excavator class (t)			6 - 12 t
Des.	Size	Flow (l/min)	Number of valves
KV1	> DN12 $\pm \frac{1}{2}$ "	110	3
KV2	> DN16 $\pm \frac{1}{2}$ "	160	2

Quickcoupler with Lehnhoff tilt motor



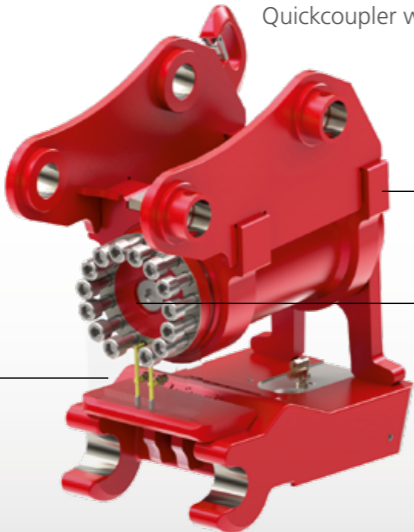
The tried and tested classic, optionally with load hook.

Lehmatic Powertilt: Quickcoupler with tilt motor

Combines all benefits of a quickcoupler with a tilt motor. Works flexibly with all sorts of buckets and can also accommodate narrow buckets, in particular. The Lehmatic Powertilt is the ideal solution for, e.g.:

- Pipe-lining construction
- Targeted material filling

Quickcoupler with Powertilt motor



Two lines are used for opening and closing the quickcoupler

Large swivel angle of 2 x 90°, high retention forces, low-maintenance

Rotary feedthrough for two hydraulic lines. Simplest installation, compact design, protected hydraulic line, as it is no longer installed above the rotary axis

Advantages:

- Huge work range:
 - Up to 2 x 90° swivel range on both sides (180°)
- Including rotary feedthrough for hydraulics (NG)
- Tilt motor sealed and protected against damage
- High retention forces and robust design for toughest applications
- Can be combined with all Lehnhoff quickcouplers

Lehnhoff-Tilt

	PTS 70	PTS 100
Excavator class (t)	6 - 7 t	7 - 10 t
Weight (kg)	160-185	190-220
Swivel angle	2x90°	2x90°
Lehmatic or Variolock	MS/HS 08	MS/HS 08
Operating pressure (bar)	210	210

Powertilt

	LTS 6.8	LTS 9.0
Baggerklasse (t)	6 - 6.8 t	7 - 9 t
Weight (kg)	175-205	210-240
Swivel angle	2x87°	2x87°
Lehmatic or Variolock	MS/HS 08	MS/HS 08
Operating pressure (bar)	210	210



Rotator with QC suspension (sandwich) on excavator side



Lehmatic Rotator

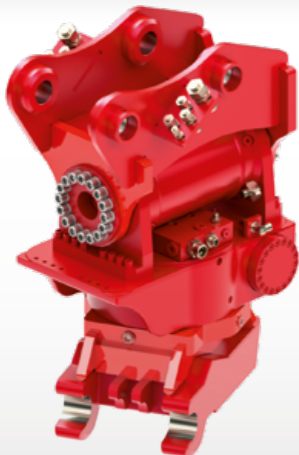
Extends the action radius of the attachments by 360° through continuous left/right rotation. By simply rotating by 180°, a backhoe bucket quickly becomes a shovel bucket, for example.

- More flexibility thanks to more working positions
- Low build height of the rotary drive, therefore more breakout force
- Optional oil feed-through
- Optionally with direct suspension or quickcoupler suspension on excavator side

Lehmatic Rotator

	RB 120
Excavator class (t)	5 - 12 t
Lehmatic or Variolock	MS/HS 08
Weight (kg)	from 110
Operating pressure (bar)	175

Tiltrotator with direct suspension on excavator side



Lehmatic Tiltrotator

Compact Tiltrotator with grab rotating motor for quick and precise spatial positioning and therefore larger action radius and movement of the attachments.

- 360° endlessly rotatable, can be swivelled 55° to both sides
- Precise working through proportional control system
- Ideal for digging out especially narrow pits
- With direct suspension or quickcoupler suspension

Lehmatic Tiltrotator

	TR 90	TR 120
Excavator class (t)	5,5 - 9 t	8 - 12 t
Lehmatic or Variolock	MS/HS 08	MS/HS 08
Weight (kg)	from 220	from 220
Operating pressure (kg)	210	210

LSC Safety Assistance System

Full control at all times over all operating states of the quickcoupler from the driver's cab. Faulty locking of the quickcoupler is immediately detected and displayed. The driver can react immediately.

- Permanent monitoring of the operating condition via integrated sensors
- Illuminated optical display and acoustic signals
- Control of the operating states via operating and display unit in driver's cab
- Safe two-finger operation of the unlocking function
- Optional for all new hydraulic Lehmatic and Variolock quickcoupler systems



Quickcoupler
unlocked, not yet
fully in adapter

Quickcoupler correctly
and completely in
adapter, locking bolts
still retracted

Quickcoupler
correctly locked

Quickcoupler
incorrectly locked



Surpasses the safety
requirements of SUVA
from Jan. 2016

Corresponds to
- Machinery Directive
2006/42/EC
- Safety Product Standard
EN 474-1 Appendix B
- ISO/DIS 13031/2015
edition



Detailed info in video:
www.goo.gl/SUdaGJ

* Assistance systems only work within system boundaries and support the driver. The responsibility and needed attention during the process of changing an attachment and during works remains with the driver.

www.lehnhoff.de

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