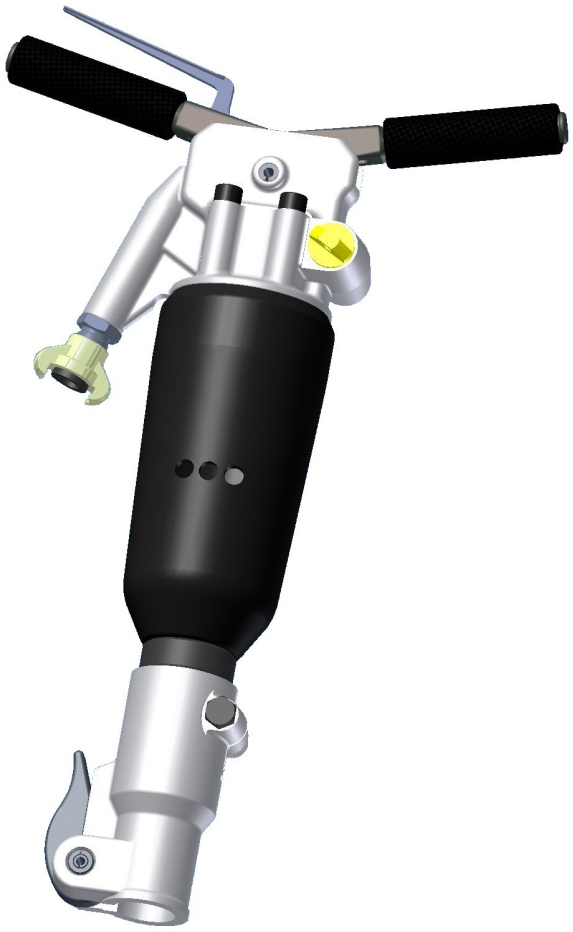
OPERATION AND MAINTENANCE MANUAL
K20V, K25V, K30V
BKA 20, BKA 25, BKA 30, BKA40



IMPORTANT SAFETY INFORMATION ENCLOSED. READ THIS MANUAL BEFORE OPERATING TOOL.
IT IS THE RESPONSIBILITY OF THE EMPLOYER TO PLACE THE INFORMATION IN THIS MANUAL INTO THE HANDS OF THE OPERATOR.
FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY.

K20V, K25V, K30V, BK40 Paving Breakers are designed for the disintegration of low to medium strength materials (e.g. concrete, masonry bituminous asphalt etc). The tool is intended for vertical or inclined downward breaking.

W. Durstmüller GmbH is not responsible for customer modifications of tools for applications on which W. Durstmüller GmbH was not consulted.

PLACING TOOL IN SERVICE

• Always operate, inspect and maintain this tool in accordance with all regulations (local, state, federal and country), hat may apply to hand held/hand operated pneumatic tools.
• For safety, top performance, and maximum durability of parts, operate this tool at 7.0 bar/700 kPa maximum air pressure at the inlet with 3/4" (19 mm) inside diameter air supply hose.
• Always turn off the air supply and disconnect the air supply hose before installing, removing or adjusting any accessory on this tool, or before performing any maintenance on this tool.
• Do not use damaged, frayed or deteriorated air hoses and fittings.
• Be sure all hoses and fittings are the correct size and are tightly secured.
• Always use clean, dry lubricated air at 7.0 bar/700 kPa maximum air pressure. Dust, corrosive fumes and/or excessive moisture can ruin the motor of an air tool.
• Do not lubricate tools with flammable or volatile liquids such as kerosene, diesel or jet fuel.
• Do not remove any labels. Replace any damaged label.

USING THE TOOL

• Always wear eye protection when operating or performing maintenance on this tool.
• Always wear hearing protection when operating this tool.
• Keep hands, loose clothing and long hair away from rotating end of tool.
• Anticipate and be alert for sudden changes in motion during start up and operation of any power tool.
• Keep body stance balanced and firm. Do not overreach when operating this tool.
• Tool accessories may continue to impact briefly after throttle is released.
• Air powered tools can vibrate in use. Vibration, repetitive motions or uncomfortable positions may be harmful to your hands and arms. Stop using any tool if discomfort, tingling feeling or pain occurs. Seek medical advice before resuming use.
• Use accessories recommended by W. Durstmüller GmbH.
• This tool is not designed for working in explosive atmospheres.
• This tool is not insulated against electric shock.

The use of other than genuine DULA replacement parts may result in safety hazards, decreased tool performance, and increased maintenance, and may invalidate all warranties.
Repairs should be made only by authorised trained personnel. Consult your nearest DULA authorised service center.

SPECIFIC WARNINGS

• Always wear eye protection when operating or performing maintenance on this tool.
• Always wear hearing protection when operating this tool.
• Always turn off the air supply and disconnect the air supply hose before installing, removing or adjusting any accessory on this tool, or before performing any maintenance on this tool.
• Do not use damaged, frayed or deterlorated air hoses and fittings.
• Air powered tools can vibrate in use. Vibration, repetitive motions or uncomfortable positions may be harmful to your hands and arms. Stop using any tool is discomfort, tingling feeling or pain occurs. Seek medical advice before resuming use.
• Do not carry the tool by the hose.
• Keep body stance balanced and firm. Do not overreach when operating this tool.
• Operate at 7.0 bar/700 kPa maximum air pressure)
• When wearing gloves and operating models with inside trigger, always be sure that the gloves will not prevent the trigger from being released.
• Wear safety shoes, hard hat, safety goggles, gloves, dustmask and any other appropriate protective clothing while operating the tool.

• Do not indulge in horseplay. Distraction can cause accidents.
• Keep hands and fingers away from the throttle lever until it is time to operate the tool.
• Never rest the tool or chisel on your foot.
• Never point the tool at anyone.
• Compressed air is dangerous. Never point an air hose at yourself or co–workers.
• Never blow clothes free of dust with compressed air.
• Be sure all hose connections are tight. A loose hose not only leaks but can come completely off the tool and while whipping under pressure, can injure the operator and others in the area. Attach safety cables to all hoses to prevent injury in case a hose is accidentally broken.
• Never disconnect a pressurised air hose. Always turn off the air supply and bleed the tool before disconnecting a hose.
• The operator must keep limbs and body clear of the chisel. If a chisel breaks, the tool with the broken chisel projecting from the tool will suddenly surge forward.
• Do not ride the tool with one leg over the handle. Injury can result if the chisel breaks while riding the tool.
• Know what is underneath the material being worked. Be alert for hidden water, gas, sewer, telephone or electric lines.
• Use only proper cleaning solvents to clean parts. Use only cleaning solvents which meet current safety and health standards. Use cleaning solvents in a well-ventilated area.
• Do not flush the tool or clean any parts with diesel fuel. Diesel fuel residue will ignite in the tool when the tool is operated, causing damage to internal parts. When using models with outside triggers or throttle levers, take care when setting the tool down to prevent accidental operation.
• Do not operate the tool with broken or damaged parts.
• Never start the tool when it is lying on the ground.
• This tool is not designed for working in explosive atmospheres.
• This tool is not insulated against electric shock.

OPERATION

Lubrication
This tools are fitted with built-in oilers to ensure propper lubrication. Refill the oil reservoir beginning of each shift and every 4 hours working with the tool.
- Switch off the air outlet of the compressor. Disconnect the hammer from the air hose.
- Slowly (in the oiler reservoir can be a certain residual pressure) screw out oil fill plug (39) and pour oil into the reservoir (about 25 mm under reservoir top margin).
- Check sealing O-ring (38) and replace it if damaged. Screw in the oil fill plug (39) and tighten it properly.

Recommended environmentally friendly oils:
SETUZA PRIMOL EKO PNEU
BP BIOHYD SE46
ÖMV BIOHYD M 32
TOTAL HYDROBIO 46

Before storing the tool or if the tool is to be idle for a period exceeding twenty-four hours, pour about 3 cc of mineral oil into the air inlet and operate the tool for 5 seconds to coat the internal parts with oil.

Air Supply and Connections
Always use clean, dry air. Dust, corrosive fumes and/or excessive moisture can ruin the motor of an air tool. An air line filter can greatly increase the life of an air tool. The filter removes dust and moisture.
Make sure all hoses and fittings are the correct size and are tightly secured.
The tool is shipped from the factory with 3/4” G male inlet thread.

Accessory Installation
Always turn off the air supply and disconnect the air supply hose before installing, removing or adjusting any accessory on this tool or before performing any maintenance on this tool. Failure to do so could result in injury.

1. Operate the Latch until it is approximately 90 degrees to the body of the tool and clicks into position.
2. Insert the accessory into the tool until the collar of the accessory is past the Latch.
3. Operate the Latch until it is parallel to the tool and it clicks into position.
4. 15 – 20 kg is the recommended amount of downforce to apply to the tool when working. The amount of downforce is correct when the tool hits rhythmically, is comfortable to hold and works efficiently.

• Do not repair the tool at the work site. Always take the tool to a repair shop. Never drag the tool on the ground. The air port and other openings will become clogged with dirt and debris.
• Compressed air is dangerous. When blowing the line clear of dirt, wear eye protection and keep the air line directed toward a safe, clear area.
• Always blow out the air line before using to clear the line of dirt.
• Do not operate the tool unless the chisel is against the work since this will cause premature wear of parts and reduce the vibration isolation properties of the tool.
• Always break material to the point of “give.” Cracking does not result in a complete break. Clear away rubble as it is broken since uncleared rubble blocks the point of “give.”
• Always take the right size “bite” with the tool. When working new material, experiment to find the right size “bite” required for breaking that material efficiently.
• If “bites” are too big, the operator will try to pry with the tool. This could break the chisel.
• The tool is designed for demolition, not prying. Always use a pick for prying. If “bites” are to small, the operator will be working too slowly.
• If the chisel or accessory should become stuck, do not use excessive force or mechanical means on the tool to pull out the chisel. Doing so will damage the vibration isolation unit. Break out the stuck chisel with a spare chisel or tool.

DISASSEMBLING THE PAVING BREAKER

General Instructions
• Clean the breaker outer surface.
• Do not disassemble the breaker any further than necessary to replace or repair damaged or worn parts.
• Whenever grasping a breaker or a part in a vice, always use leather or copper-covered vice jaws to protect the surface of the part and help prevent distortion. Take extra care with threaded parts and housings.
• Do not remove any part that is a press fit in or on a subassembly unless the removal of the part is necessary for repairs or replacement.
• Do not disassemble the breaker unless a complete set of and O-rings is available for replacement.

Fronthead disassembly
Remove nut (25) and fronthead pinch bolt (24) from the fronthead (3). Lightly tap the fronthead (using a hide mallet if necessary) from the cylinder (1).
Press or drift out the two fronthead spring pins (22, 23) and remove the latch (6).
The plunger (20) and the plunger spring (21) can be removed from the fronthead.
Handle Disassembly
Using a hide mallet tap loose and remove the muffler (29) and the muffler ring (32) from the cylinder.
Firmly grip the cylinder upright in a vice with leather or copper covered jaws.
Loosen the four-handle nuts (27), unscrew and remove the four handle screws (26).
Lift the handle assembly (5) or (42) from the cylinder (1) (tap with a hide mallet if necessary).
For BKA (vibration damped) models only:
Press or tap out the handle pivot pin (12), remove both handle levers (8 and 9) from the handle body (5) together with the trigger (7). Tap out the sleeve (13) to detach the handle levers from each other. Remove the handle springs (11) from the handle body (5). If it is necessary to remove the handle lever stop (14), use a punch of a suitable size (15 – 19 mm) and drift the stop out from the cylinder side.
It is possible to remove the trigger pin (15) at this stage if required.
Unscrew the inlet bushing (18), and remove trigger spring (17) the trigger ball (16) and throttle pin (15).
Unscrew and remove the oiler plug (39) and sealing washer (38) and drain the oil in the reservoir into a suitable receptacle for safe disposal.

Pry out the wick plug (37) from the base of the handle casting. Inspect the wick (36) and wick holder (35) if clean and remove if necessary.
Cut off the old handle grips (10) if they are to be replaced.
For BK (standard handle) models only: Drift or press out the spring pin (45) and remove the trigger lever (44) The trigger pin (46) may be removed at this stage if required.
Removal of the handle bar (43) from the casting (42) should not normally be necessary. If it is necessary cut off the handle grips (10) and drift or press out spring pin (48). Securely support the handle body (42) beneath a press and using a suitably sized pressing bar press out the handle bar (43) from the handle body (42).
Unscrew the inlet bushing (18), and remove trigger spring (17), trigger ball (16) and trigger pin (46).
Unscrew and remove the oiler plug (39) and sealing washer (38) and drain the oil in the reservoir into a suitable receptacle for safe disposal.
Pry out the wick plug (37) from the base of the handle casting. Inspect the wick (36) and wick holder (35) if clean and remove if necessary.
Remove the handle grips (10) if they are to be replaced it may prove easier to cut the grips off.

Cylinder Disassembly

Remove the spacing washer (30) and valve plate (31). Slide valve ring (34) from cylinder (1). Remove sealing ring (28).
Release the cylinder from the vice, invert and allow the piston (4) to slide out and be caught.
The nozzle (2) is pressed in the cylinder and retained with Loctite 601 – do not disassemble unless replacement is necessary.
The cushion bushing (33) is pressed in the cylinder – do not disassemble unless replacement is necessary.

ASSEMBLY OF THE PAVING BREAKER

General Instructions

• Before assembly of the breaker, clean all parts thoroughly and lubricate surfaces with a thin film of recommended oil (see Lubrication).
• Apply a film of O-ring lubricant to all O-rings before final assembly.
• It is recommended that the assembling of the nozzle (2) should be carried out by the manufacturer or authorised distributor.
• The existence of a piston air cushion should be determined. Hold the cylinder vertically and allow the piston to drop down the bore small diameter first. An air cushion is present if the piston “bounces” at the bottom of the cylinder and no metal to metal contact noise can be heard. If a cushion is not present contact your authorised Permon repair centre for advice.

Cylinder Assembly

Grip the cylinder (1) vertically in a vice protected with leather or copper covered vice jaws.
Lubricate and insert the piston (4) small end first into the bore. - Check for cushion.
Lubricate and slide the valve ring (34) onto the cylinder (1) and replace valve cover (31).
Position the valve spacer (30) on top of the valve cover (31).
Replace the sealing ring (28).

Handle Assembly

BKA (vibration damped) models only:

If the handle stop (14) was removed during disassembly it should be replaced with a new part as the retaining feature is destroyed upon removal. Locate the stop in the hole in the handle casting and tap the stop sharply into place using a soft drift and hammer.
If the hand grip rubbers (10) were removed these may now be replaced. Lubricate the inside of the rubber with soapy water and slide the new rubbers into position.
Assemble left and right hand grips (8 and 9), trigger (7) together with sleeve (13) , lubricate around the pivot area with oil, and position the sub-assembly in the slot in the handle body (5).
Locate the handle springs (11) in place beneath the hand grip assembly, compress the springs slightly and fix the whole assembly in place by drifting or pressing the handle pivot pin (12).
Lubricate and slide trigger pin (15) into position in the handle casting, replace trigger ball (16) trigger spring (17) and replace air inlet bushing (18) apply thread retainer (Loctite 243, or similar) to the threads.
Tighten the inlet bushing to a torque of 200Nm (147ft.lbs) torque.

Note. The trigger pin has a reduced diameter, which is placed next to the trigger ball.
Check that the handles and trigger move freely.
Assemble wick (36) in wick holder (35) and slide the assembly into position in the handle body casting.
Retain the assembly in position by pressing in the wick plug (37).
Refill the oil reservoir with clean air tool lubricant and replace the seal (38) and oil fill plug (39) hand tighten only.

BK (standard handle) models only:

If the handle bar (43) was disassembled from the handle body (42) it should now be replaced. Securely support the handle body (42) beneath a press and position the handle bar (43) in the mating hole.
Note: Ensure that the handle bar has the correct orientation and is aligned to accept the trigger pin (45) when pressed home.
Press the handle bar home to depth until the lock pin hole is aligned.
Press or drift in the lock spring pin (48).
Lubricate and slide the trigger pin (46) into position in the handle casting, replace trigger ball (16), trigger spring (17) and replace inlet bushing (18) apply thread retainer (Loctite 243, or similar) to the threads.
Tighten the inlet bushing to a torque of 200Nm (147ft.lbs) torque.
Note. The trigger pin has a reduced diameter, which is placed next to the trigger ball.
Position trigger lever (44) and secure in place with spring pin (45) Check the trigger moves freely.
Assemble wick (36) in wick holder (35) and slide the assembly into position in the handle body casting.
Retain the assembly in position by pressing in the wick plug (37).
Refill the oil reservoir with clean air tool lubricant and replace the seal (38) and oil fill plug (39) hand tighten only.
If the hand grip rubbers (10) were removed these may now be replaced. Lubricate the inside of the rubber with soapy water and slide the new rubbers into position.

Main Assembly

Lightly grip the cylinder assembly vertically in a vice and position the handle assembly in place.
Note that it is usual to orientate the trigger lever and air inlet 180 degrees from the fronthead bolt groove in the cylinder.
Replace the four handle screws (26) use new handle nuts (27) and tighten down evenly to a torque of 90 Nm torque.
Remove the cylinder and handle assembly from the vice.
Assemble muffler ring (32) in muffler (29) and replace the assembly by tapping the muffler fully home using a hide mallet.

Fronthead Assembly

Apply a coating of grease, then replace spring (21) and plunger (20) in position in fronthead (3).
Position the latch (6) in its slot and secure in place by drifting or pressing in outer spring pin (23). Position then press or drift home inner spring pin (22).
Replace fronthead assembly onto cylinder and aligning pinch bolt hole with the cylinder groove.
Replace pinch bolt (24) and nut (25) and tighten a torque of 90 Nm (66.4 lb.ft) torque.

Assembly Checks

Following service the breaker should be checked for correct operation prior to being released back to the job site.
Fit the correct size accessory into the breaker and connect to an airline. Using air at low pressure 2 bar, check that the breaker is free from air leaks around the inlet connection and that the breaker does not automatically start to operate without the trigger being depressed.
Increase the air pressure to 6 bar and run the tool in short bursts to check the tool operates correctly and stops and starts cleanly without hesitation.

SPECIFICATIONS:

		BKA 20	BKA 25	BKA 30	BKA 40
Weight	*kg*	21	25	30	40
Length	*mm*	640	640	730	800
Width	*mm*	455	455	455	455
Max. Working Pressure	*bar*	7		7	7
Air Consumption	m^3/min	1,4	1,4	1,8	2,0
Impact Rate	*1/min*	1320	7	1200	960
Chuck Size	*mm*	25 hex. x 108 28 hex. x 160	25 hex. x 108 28 hex. x 160 32 hex. x 160	28 hex. x 160 32 hex. x 160	28 hex. x 160 32 hex. x 160
Vibration Level	m/s^2	2,5	3,4	3,5	3,5
Guarranteed Noise Level	L_{WA}	105	106	110	110

		BK 20	BK 25	BK 30	BK 40
Weight	kg	21,5	25,5	30,5	40,5
Length	mm	640	640	730	800
Width	mm	441	441	441	441
Max. Working Pressure	bar	7	7	7	7
Air Consumption	m^3/min	1,4	1,4	1,8	2,0
Impact Rate	1/min	1320		1200	960
Chuck Size	*mm*	25 hex. x 108 28 hex. x 160	25 hex. x 108 28 hex. x 160 32 hex. x 160	28 hex. x 160 32 hex. x 160	28 hex. x 160 32 hex. x 160
Vibration Level	m/s^2		11,5	11,1	8,8
Guarranteed Noise Level	L_{WA}	105	106	110	110

Ref.		Part No.			Part Name	Qty.
	x				Breaking Hammer BK 20	
		x			Breaking Hammer BK 25	
			x		Breaking Hammer BK 30	
				x	Breaking Hammer BK 40	
40	0911710	-	-	-	Washer	4
40	-	-	311079	311079	Steel Washer	2
47	-	-	722015	722015	Plastic Washer	2
41	9950120	9950120	9950120	9950120	Latch Kit	0
6	5256083	5256083	5256083	5256083	Latch	1
20	0900570	900570	0900570	0900570	Pin	1
21	315138	315138	315138	315138	Spring	1
22	311409	311409	311409	311409	Pin Inner	1
23	311407	311407	311407	311407	Pin Outher	1
24	309332	309332	309332	309332	Screw	1
25	311327	311327	311327	311327	Nut	1