

### **Product Catalog BTS 2022/23**

EVERYTHING - AROUND CONCRETE SURFACE TECHNOLOGY



#### **About us**

#### BTS Betontechnik Schumacher GmbH

The company BTS Betontechnik Schumacher GmbH was founded in 1988 by Mr. Sigfried Soldner. More than 3,200 satisfied customers benefit from our many years of experience.

Become a member of our constantly growing "construction family" and convince yourself.

We offer you highest safety, best quality, a competent workshop service and of course our know-how.

New innovations and constant updating to the latest state of the art ensure that you are always "up to date".



For more information on our diverse product portfolio, please contact your BTS customer advisor.

Our transporter including trailer will also be happy to visit your company for demonstrations on request.

We look forward to a good cooperation and wish you much success with our machines.

#### **Content**

Save time and energy with our expert instruction on the use of our products.

Please note that when operating machines with combustion engines, a fresh air supply must always be provided in order not to endanger your health and that of your employees. Equip these machines with catalytic converters, we will gladly inform you about the funding possibilities of the employers' liability insurance association.

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### Battery Ride-On Trowels A 536-2S

#### **Benefits**

- Quick charging system with exchangeable battery for "non-stop operation"
- up to 5 years warranty
- Sustainable
- Low noise
- · Emision-free
- · Extremely high rotation
- Protected chassis
- Stable powder-coated frame



#### **Description**

The A536-2S is the first interchangeable battery-powered dual trowel machine in the world. The interchangeable system has allowed us to ensure that the machine can operate continuously and the customer has no interruption of charging time. As we build light trowel machines considering the machine guidelines, it was possible for us to produce this machine with rechargeable batteries. With this machine you can work even more economically

and flexibly than ever before. With a continuous sound pressure level of just 60 dB(A) and no emissions, you can use the machine without any restrictions! The driver's seat, which is positioned in the direction of travel, gives the driver an optimum all-round view of the area to be worked. Due to the integrated chassis, one person can easily transport the machine and change trowel blades or trowel discs.





Plenty of space with new control system



Automatic charging station 32 AH



Battery boxes lithium IP54



LED spotlight with 50W 4000lm



Accelerator pedal 0-200 1/min



Integrated undercarriage for easy transport and wear replacement

Drive	V-belt	
Working width	2000 x 1000 mm	
Width (mm)	2000	
Length (mm)	1000	
Height (mm)	1650	
Battery	200 Ah Lithium	
Charging cycles	5000	
Drive time	up to 2.5 hours	
Charge time 1 hour		
Continuous sound pressure level dB(A)	60	
Speed 1/min	40-200	
Application	Concrete, screed	
weight	470 kg	
charge	32 A plug	
power kW/PS	12/16,3	
motor	48 low voltage system	
safety	2x dead man's switch/gas pedal/protection cage	



### Battery Ride-On Trowels A 436

#### **Benefits**

- Quick charging system with exchangeable battery for "non-stop operation"
- Sustainable
- · Low noise
- Emision-free
- Extremely high rotation
- Stable powder-coated frame



#### **Description**

As a counterpart to our battery-powered double trowel, BTS now also offers a drawbar trowel in a battery-powered version. The concrete trowel with 4 blades offers a large surface capacity for troweling due to its working width of 970 mm and has all the advantages of the proven BTS tiller trowel. In addition, however, the battery-powered trowel is low-noise and produces no emissions. It can therefore be used indoors without any problems. The tiller

ensures ergonomic working and is equipped with a hand throttle switch for stepless speed control. The machine is equipped with a quick-wing adjustment. You also have an 11-inch display in the tiller arm, which shows all other relevant driving data in addition to the battery status. In addition, you can completely control the machine at the control unit (tiller arm) and also activate the automatic system.





11 inch display with battery indicator and remaining driving time



Quick battery change



Hand throttle for stepless speed control



Quick pull wing adjustment

Drive	direct	
Working width	970 mm	
Battery	60V/52Ah	
Charge cycles battery	2. 500	
Continuous sound level	55 db(A)	
Application	Concrete, screed	
Charge time	up to 2.5 hours	
Drive time	up to 3 hours	
Weight machine/battery	87/20kg	
Charge current	220V	
Power kW	60V/1.2	
Motor	Battery, electric	
Safety	Dead man's switch/Protective cage	



### Battery Edger Power Trowels A430

#### **Benefits**

- Quick charging system with exchangeable battery for "non-stop operation"
- Sustainable
- · Low noise
- Emision-free
- · Extremely high rotation
- Stable powder-coated frame



#### **Description**

As a counterpart to our battery-powered trowel, BTS now also offers an edge trowel in a battery-powered version. The concrete trowel with 4 blades offers a large surface capacity for troweling due to the working width of 760 mm and has a typical roll-off ring for edge trowels, which makes work in the edge area extremely easy. In addition, the battery-powered edger is quiet and produces no emissions. It can therefore be used indoors without any prob-

lems. The tiller ensures ergonomic working and is equipped with a hand throttle switch for stepless speed control. The machine is equipped with a quick wing adjustment. You also have an 11-inch display in the tiller arm, which shows all other relevant driving data in addition to the battery status. In addition, you can completely control the machine at the control unit (tiller arm) and also activate the automatic system.



11 inch display with battery indicator and remaining driving time



Pull-wing adjustment



Quick battery change



Hand throttle for stepless speed control

Drive	direct	
Working width	760 mm	
Battery	60V/52Ah	
Charge cycles battery	2. 500	
Continuous sound level	55 db(A)	
Application	Concrete, screed	
Charge time	up to 2.5 hours	
Drive time	up to 3.5 hours	
Weight machine/battery	87/20kg	
Charge current	220V	
Power kW	60V/1.2	
Motor	Battery, electric	
Safety	Dead man switch/Protective cage	



## **Battery Powered Wetscreed**

LA 1,5

#### **Benefits**

- Completely cordless processing due to 18V battery system
- Equipped with speed regulator as standard
- Operation 5 Ah battery with 30 to 50 minutes capacity (depending on speed setting)
- Optional Sortimo case for safe storage and stackable
- Batteries interchangeable with other 18V machines (e.g. cordless vibrators, cordless concrete vibrators)
- Standard delivery with 2 batteries and charger (optional with 3 batteries)



#### **Description**

The battery-operated concrete spatula is a further development of the concrete spatula. All the positive features of these two machines have been reinforced and all practical experience has been implemented. The LA 1.5 is 27 percent lighter and thus weighs just

11 kg and operates with the familiar 18-volt battery system. Due to this electric motor, you do not suffer from exhaust fumes. This makes the machine perfect for use in (small) indoor spaces and contributes to the goal of building as emission-free as possible.



Interchangeable battery with charge indicator



Sortimo case for safe storage and stacking



Charger with 220V



Interchangeable battery with 5Ah

Drive unit	18V BLDC 750W	
Vibration	2,500-7,000 per min.	
Battery charging time	up to 75 min.	
Battery operating time	5 Ah with 30 - 50 min. capacity	
Working width	1.5 m	
Weight	11 kg	



# Battery Powered Wetscreed A 1,5 / 2,0

#### **Benefits**

- Completely cordless operation due to 18V battery system
- Equipped with speed controller as standard
- Operation 5 Ah battery with 30 to 50 minutes capacity (depending on speed setting)
- Optional Sortimo case for safe storage and stackable
- Batteries interchangeable with other 18V machines (e.g. cordless concrete paw, cordless concrete vibrator)
- Standard delivery with 2 batteries and charger (optional with 3 batteries)



#### **Description**

The A 1.5 / 2.0 is a vibrating vibrating screed powered by an 18V motor and a battery. The machine can operate for up to 30 to 40 minutes on one battery charge and comes standard with 2 batteries and a charger. The battery vibratory ratchet is equipped with an aluminum lightweight profile, which makes it very easy to create smooth, flat floors. By turning the control lever, it is possible to work both forward and backward. This is made possible by the advanced angle adjustment device. Thanks to this system, it is also possible to work with 3 interconnected control levers, which gives a reach of 4.5 meters. This allows the machine to be used without standing in the concrete.





Hollow chamber profile for self-floating capability



Interchangeable battery with charge indicator



Charger with 220V



Interchangeable battery with 5Ah



Sortimo case for safe storage and stacking

Drive unit	18V BLDC 750W	
Vibration	2,500-7,000 per min.	
Battery charging time	up to 75 min.	
Battery operating time	5 Ah with 30 - 50 min. capacity	
Working width	1.5/2.0 m	
Weight	16/18 kg	



## **Battery Powered Poker Vibrator**

#### **Benefits**

- Freedom of movement
- Very strong pendulum system
- · Very light weight for extreme ease of use
- · Brushless electric motor reduces maintenance
- One drive unit for different bottle sizes (Ø28 / Ø38 / Ø45)



The battery concrete vibrator is a new generation of concrete vibrators. The machine is equipped with a rechargeable battery and a lightweight, shock-resistant housing containing a brushless electric motor that drives our well-known pendulum system. This unique composition provides unprecedented freedom of movement and ease of use combined with tremendous compaction performance.







vibrator with quick coupling in the sizes Æ 28 / 38 / 45 mm with 1.0 m or 1.5



Sortimocase for safe storage and stowage



Charger with 220V



Interchangeable battery with 5Ah

Motor	18V 450W - brushless DC motor	
Vibrations/min.	12,000	
Hose length	1.0 m / 1.5 m	
Bottle diameter	Ø28 / Ø38 / Ø45	
Weight	1.55 kg drive unit / 2.25 kg (including battery!)	
Battery operating time	30 min. up to 25 m <sup>3</sup> concrete	
Battery charging time	up to 75 min.	



## Ride-On Trowels 36 inch with and without catalyst

B 436-2S, B 536-2S, B 636-2S

#### **Benefits**

- GS approved safety by the German Employer's Liability Insurance Association
- BG approved exhaust catalytic converter / eligible for subsidies
- Extralong blade arms for full support of the trowel blades
- Fine, light control system
- Protected chassis
- Adjustable LED work lights
- Stable and powder-coated frame
- Exceptionally high gear ratio/revolution
- Up to 5 years warranty on gearbox



#### **Description**

The BTS Double Trowel is a low-wear ride-on trowel with a high surface capacity for the shearing and troweling of concrete and screed. Equipped with a gas system or a 4-stroke gasoline engine including catalytic converter, it can also be used in closed buildings if sufficient ventilation (supply and exhaust air) is provided. Two parallel, non-overlapping blade crosses with a total working width of 2000 mm are driven by high-quality, powerful engines. With a working performance of up to 30 m<sup>2</sup>/min, the BTS trowel impresses with optimum results in compaction and the production of high-quality surfaces.

The operator's work-friendly seating position and adjustable comfort seat provide a good all-round view of the working surface and safe operation of the control levers for precise guidance of the machine. The blade adjustment, which can be operated by two hand cranks for stepless change of the trowel blade angle, can be reached effortlessly in the seated position. The integrated support wheels ensure mobility on firm ground and easy changing of the trowel blades or trowel discs by one person. To prevent injuries and accidents, the machine is equipped with the appropriate safety devices.

Standardly equipped with two crane lugs and a set of blades (set = 4 blades), the BTS super smoother is indispensable for processing large areas. The extensive standard equipment includes LED headlights for optimal illumination of the work surface, bucket holder, trowel holder, bottle holder, fuel gauge and much more. Optionally, you can get a spray system for surface moistening, hour counter, trowel blades (different versions) and trowel plates (different versions). On request, the engine can be replaced with an electric motor (battery version), gas engine or other 4-stroke versions with or without catalytic converter.



Gas trowel with grinding splash guard



Lightweight Sturdy Compacked Construction



Automatic V-belt tensioner for permanent tensioned V-belts



Electric water sprayer with large spraying angle



Battery box for permanent protection of the battery



Plastic fuel tank with fuel gauge

Engine	Kohler CH730	Kohler CH740	Honda GX690
Displacement (cm³)	725	725	688
Power kW/PS	18.3/23.5	19.9/25	16, 5/24
Fuel		gasoline (12 I)	
Working width	2000 x 1000 mm		
Speed 1/min	40-180		
Drive	V-belt centrifugal clutch		
Safety	protective frame, Throttle cable		
Continuous sound level	95 dB(A) 95 dB(A) 92 dB(A)		
Length mm	1000		
Width mm	2000		
Height mm	1650		
Electric starter	12 volts		
Weight	300 kg		



## Ride-On Trowels 46 inch with and without catalyst

B 446-2S, B 546-2S, B 646-2S

#### **Benefits**

GS approved safety by the German Employer's Liability Insurance Association

BG approved exhaust catalytic converter / eligible for subsidies

Extralong blade arms for full support of the trowel blades

- Fine, easy control
- Protected chassis
- Adjustable LED work lights
- Stable and powder-coated frame
- Exceptionally high gear ratio/revolution
- Up to 5 years warranty on gearbox



#### **Description**

The BTS Double Trowel is a low-wear ride-on trowel with a high surface capacity for the screeding and smoothing of concrete and screed. Equipped with a gas system or a 4-stroke gasoline engine including catalytic converter, it can also be used in closed buildings if sufficient ventilation (supply and exhaust air) is provided. Two parallel, non-overlapping blade crosses with a total working width of 2400 mm are driven by high-quality, powerful engines. With a working performance of up to 30 m<sup>2</sup>/min, the BTS trowel impresses with optimum results in compaction and the production of high-quality surfaces.

The operator's work-friendly seating position and adjustable comfort seat provide a good all-round view of the working surface and safe operation of the control levers for precise guidance of the machine. The blade adjustment, which can be operated by two hand cranks for stepless change of the trowel blade angle, can be reached effortlessly in the seated position. The integrated support wheels ensure mobility on firm ground and easy changing of the trowel blades or trowel discs by one person. To prevent injuries and accidents, the machine is equipped with the appropriate safety devices.

Standardly equipped with two crane lugs and a set of blades (set = 4 blades), the BTS super smoother is indispensable for processing large areas. The extensive standard equipment includes LED headlights for optimal illumination of the work surface, bucket holder, trowel holder, bottle holder, fuel gauge and much more. Optionally, you can get a spray system for surface moistening, hour counter, trowel blades (different versions) and trowel plates (different versions). On request, the engine can be replaced with an electric motor (battery variant), gas engine or other 4-stroke variants with and without catalytic converter.



Gas pedal stepless adjustment 40-180 rpm



Electric water sprayer with large spraying angle



Everything thought of - bucket, ladle and drink holders



Lightweight stable compact body



Maintenance free transmission with up to 5 years warranty



Mechanical control with optimal bearing for easy control

Engine	Kohler CH730	Kohler CH740	Honda GX690
Displacement (cm³)	725	725	688
Power kW/PS	18.3/23.5	19.9/25	17, 65/24
Fuel		gasoline (12 I)	
Working width	2400 x 1200 mm		
Speed 1/min	40-180		
Drive	V-belt centrifugal clutch		
Safety	protective frame, Throttle cable		
Continuous sound level	95 dB(A) 95 dB(A) 92 dB(A)		92 dB(A)
Length mm	1200		
Width mm	2400		
Height mm	1650		
Electric starter	12 volts		
Weight	380 kg		



## Walk Behind Power Trowels with or without catalyst

B/E 436, B/E 536, B/E 636

#### **Benefits**

- GS approved safety by the German Employer's Liability Insurance Association
- BG approved exhaust catalyst / eligible for subsidies
- Folding drawbar for optimum handling and easy transport
- Extralong blade arms for full support of the trowel blades
- Chassis for easy transport and change of wear
- Stable and powder-coated frame
- Exceptionally high gear ratio/revolution
- Up to 5 years warranty on gearbox



#### **Description**

The tiller blades from BTS Betontechnik are resistant concrete smoothing machines with a high surface capacity for smoothing. Due to their extremely high working capacity, BTS tiller blades provide you with uniform surface compaction and high-quality working results. They are characterized by their easy handling and high technical level. The folding tiller ensures comfortable and ergonomic work, even under adverse conditions. The extended wing arms of this tiller produce an even texture and surface on concrete and screed. The rich support of the trowel blades results in even wear of the blades. You can get different wing crosses for 4, 5 or 6 wings. The wings, which are optionally equipped with a protective ring, can be easily adjusted mechanically. Our tiller trowels are also suitable for smaller areas and narrow places in residential construction. Protective grids and covers help to avoid the risk of injury (tested safety by the Bau-Berufsgenossenschaft). The electric trowels can be used indoors. The same applies to the trowels with gasoline engines, provided they have a catalytic converter and the rooms are at least 5 m high and sufficiently ventilated.



Tiller height adjustment for optimal operation and space saving transport



Optional undercarriage for easy transport and wear and tear replacement



Catalyst for carbon monoxide reduction



2 in 1 dead man switch with throttle grip for easy handling



5-piece cast iron cross



4-piece cast iron cross

Engine	HONDA	HONDA	Real
•			
Туре	GX200	GX270	Real400V
Capacity (cm³)	196	270	-
Power (hp)	6.5	9.0	2.6/3, 2
Fuel	gasoline	16A	16A
Speed (rpm)	40-140	40-140	70/140
Permanent sound pressure level	89 db (A)	89 db (A)	77 db (A)
Tank capacity (liters)	3, 1	5,3	-
Wing adjustment	mechanical		
Length mm	1850		
Width mm	980		
Height mm	970		
Weight	80@85	80	80 kg



# **Edger Power Trowels 24 inch** B/E 424, B/E 624

#### **Benefits**

- BG approved exhaust catalyst / eligible
- Folding drawbar for easy transport
- · Durable and powder coated frame
- Exceptionally high gear ratio/revolution
- Up to 5 years warranty on gearboxes



#### **Description**

Our edge trowels are equipped with a roll-off ring that allows the machine to be guided precisely on wall and edge areas for concrete and screed. As a result, difficult edges are mastered safely, better and faster. The speed is regulated by the hand throttle, so it can be adjusted to the appropriate strength. The same hand is

also used to operate the electric safety switch (dead man's switch), which provides the operator with the necessary safety. This leaves the second hand free. For easy transport and safe lifting and moving, a crane handle is attached. The blade cross is available with 4 or even 6 trowel blades - for even more uniform structure.



2 in 1 dead man's switch with gas handle for easy handling



Switch for rotation speed 70/140 with electrical rotation direction control



Catalyst for carbon monoxide reduction

Engine	HONDA	real tone	
Туре	GX160	400V	
Capacity (cm³)	163	-	
Power (hp)	5.5	1.4/1.8	
Fuel	gasoline	16A	
Speed (rpm)	40-140	70/140	
Permanent sound pressure level	84 db (A)	79 db (A)	
Tank capacity (liter)	3, 1	-	
Vane adjustment	mechanical		
Length mm	1490		
Width mm	610		
Height mm	910		
Weight	53	55	
Safety	Dead man's switch, throttle lever (internal combustion)		



## **Edger Power Trowels 30 inch** B/E 430, B/E 630

#### **Benefits**

- BG approved exhaust catalyst / eligible for subsidies
- Folding drawbar for easy transport
- · Stable and powder-coated frame
- Exceptionally high gear ratio/revolution
- Up to 5 years warranty on gearboxes



#### **Description**

Our edge trowels are equipped with a roll-off ring that allows precise guidance of the machine on wall and edge areas for concrete and screed. As a result, difficult edges are mastered safely, better and faster. The speed is regulated by the hand throttle, so it can be adjusted to the appropriate strength. The same hand is also used

to operate the electric safety switch (dead man's switch), which provides the operator with the necessary safety. This leaves the second hand free. For easy transport and safe lifting and moving, a crane handle is attached. The wing cross is available with 4 or even 6 smoothing wings - for even more uniform structure.





Folding drawbar for compact and easy transport



Switch for rotation speed 70/140 with electrical rotation direction control



Crane bracket for safe crane use

Engine	HONDA	real	
type	GX200	real400V	
capacity (cm³)	196	270	
power (hp)	6.5	2.6/3.2	
fuel	gasoline	16A	
speed (rpm)	40-140	70/140	
continuous sound pressure level	89 db (A)	77 db (A)	
tank capacity (liter)	3, 1	-	
Wing adjustment	mechanical		
Length mm	1490		
Width mm	760		
Height mm	910		
Weight	73	75	
Safety	Dead man's switch, throttle lever (internal combustion)		



# Screed Power Trowels Colibri with and without water

UFO 60 / 75

#### **Benefits**

- Extra light machine
- Extendable tiller
- · Water spray system
- Good handling



#### **Description**

The COLIBRI' orbital polishing machine, belonging to the latest generation, has been designed and realized exclusively for drawing, grinding and surface finishing of subfloor screeds in level or sloping, also with reduced working space. Also suitable for finishing concrete floors, such as industrial floors, garages, basements, vaults, corridors and all other surfaces, also with reduced working space or quartz finishing.

The COLIBRI'UFO has been realized with concepts and construction technologies unusual for this type of machine. High quality and extremely light materials have been used to reduce weight while ensuring increased resistance.

COLIBRI' is available in two versions, with and without water.





compact lightweight screed trowel with 22 / 30 kg



Height and length adjustable drawbar



Optional water spray system

Article	UFO 60	UFO 75
Engine	Honda	
Туре	GX35	
Displacement (cm³)	33. 5	
Power (kW/hp)	1/1.3 at 7000min-1	
Weight (kg)	22	30
Speed (rpm)	30-80	
Working dimensions (mm)	600 x 3800 X 500	750 x 3800 X 500
Transport dimensions (mm)	600 x 1650 x 500	750 x 1650 x 500
Tank capacity (L)	0, 65 L	
Water tank (L)	31	
Continuous sound level	84 dBA	
Vibration level	< 2.5 m/s2	



## Screed Power Trowels Colibri UFO 90

#### **Benefits**

- · Extra light machine
- Extendable drawbar
- · Water spray system
- Good handling



#### **Description**

The COLIBRI' orbital polishing machine, belonging to the latest generation, has been designed and realized exclusively for drawing grinding, sanding and surface finishing of subfloor screeds in level or sloping, also with reduced working space. Also suitable for finishing concrete floors, such as industrial floors, garages, basements, vaults, corridors and all other surfaces, also with reduced

working space or quartz finishing.

The COLIBRI'UF090 has been realized with concepts and construction technologies unusual for this type of machine. High quality and extremely light materials have been used to reduce weight while ensuring increased resistance.



compact light screed trowel with 25 kg and height / length adjustable drawbar

Engine	Honda
Туре	GX35
Displacement (cm <sup>3</sup> )	33. 5
Power (kW/hp)	1/1.3 at 7000min-1
Weight(kg)	25
Speed (rpm)	30-80
Working dimensions (mm)	900 x 3800 X 500
Transport dimensions (mm)	900 x 1650 x 500 m
Tank capacity(L)	0.65 L
Continuous sound level	84 dBA
Vibration level	< 2.5 m/s2



### Vibra Concrete Screed

#### **Benefits**

- Hollow chamber profile for self-floating
- · Height adjustable guide rod
- Low wear



#### **Description**

The Vibra concrete spatula ensures fast, effortless stripping with uniform and optimum surface compaction.

The Vibra concrete spatula has proven its worth with the laser paving method as well as with steel fiber concrete. You can, for ex-

ample, remove thinner filigree slabs in the shortest possible time and without the need for vibrators with these patches.

Working widths of 1500, 2000 or 3000 mm - individual working widths possible.



Compact engine with durable throttle

Engine	2-stroke Kawasaki	4-stroke Honda
Туре	TJ27E GX25	
Capacity (cm³)	26.3 25	
Power (kW/hp)	0.77/1.03 0.70 / 1.00	
Speed (rpm)	7,500 7. 000	
Starting device	Reversing starter	
Fuel	1:50 mixture	Normal gasoline
Tank capacity (L)	0.5 0.58	
Weight complete (kg)	from 11.6 from 11.9	
Length (mm)	378	
Height (mm)	340	
Width (mm)	1500/2000/3000	1500/2000/3000



### MCD Multi Screeds

#### **Benefits**

- Can be equipped with different profiles
- · Easy to transport due to delivery in 2 components
- Equipped with height-adjustable operating handles, foldable for transport or storage
- Depending on concrete consistency and profile length, the centrifugal force is quickly and easily adjustable in 4 stages



#### **Description**

Fast, efficient and economical method to precisely lay a concrete floor. Fully adjustable handles for maximum operator comfort and machine control. The combination of high-frequency vibration, in harmony with the curved trailing edge of the blade, rolls back the concrete for easy and accurate leveling. Vibration along the profile

brings fine material to the surface, which is important for finishing or texturing. Vertical drive system with clutch for smooth drive lift-off. No flexible shafts. Light enough to slide over concrete without interruption. Profiles are interchangeable with those of other manufacturers.



interchangeable profiles from 1,2 to 4,9m



Stop button for easy operation and throttle for stepless adjustment



Stable reliable 4-stroke Honda GX35 engine

Engine	Honda
Туре	GX35
Power (kW/hp)	1.0/1.3
Fuel	gasoline
Working width (mm)	1200 to 4900
Speed (rpm)	500 - 7000
Safety	stop button
Permanent sound pressure level	dB(A) 50
Starter	reversing starter
Working depth	up to 10 cm
Precompaction speed	approx. 800 m²/h
Weight (kg)	Drive unit 12.7 - profile 2.9 - 11.6



### Vibra Screed Libellula LB4J

#### **Benefits**

- Easy to transport due to delivery in 2 components
- Fast and efficient processing
- · Reliable motor
- · Ergonomic working
- Vibrating screed for leveling, compaction and surface processing of concrete



#### **Description**

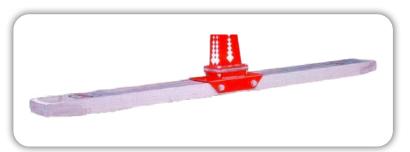
This new design of a highly versatile vibratory screed has been developed for leveling, compacting and surface finishing of concrete pours. It can be used both in foundations and on pavements, level or inclined. It is also suitable for grading aggregates of small and medium particle sizes. The vibratory screed is equipped with a component that converts the driving energy into a horizontal rotary motion, which, through the vibratory movement, generates a micro-vibration that can be adjusted according to the density of

the concrete. The machine guarantees the application of an entire concrete load (8  $\text{m}^3$ ) in only 4/5 minutes.

The LIBELLULA is supplied as standard with a screed of 1500 mm. On request, screeds of different sizes are available as accessories: 1000 mm/ 1500 mm/ 2000 mm/ 2500 mm/ 3000 mm. For special needs, specific product sizes can be manufactured, which differ from the production standard.



Ergonomic design for pre / post compaction and leveling



Hollow chamber exchangeable profile in sizes from 1,0 to 3,0 m  $\,$ 

Engine	Honda
Туре	GX25
Displacement (cm <sup>3</sup> )	25
Power (kW/PS)	0.7/ at 7000 min-1
External dimensions (mm)	1600 x 1500 x 700
Tank capacity (L)	0.5
Continuous sound level	84 dBA
Vibration level	< 2.5 m/s2
Working rate	80/100 m²/h
Weight (kg)	Drive unit 16 - Profile 2.5



### Broom finish spatula spring steel-narrow & magnesium blade

#### **Benefits**

- Easy handling
- up to 3 operations in one
- · optimal machine selection for each surface



magnesium blade



spring steel-narrow

#### **Description**

Our high quality broom finish patches are used as re-smoothing patches for fresh concrete surfaces. In addition, our wide spring steel patches as well as the magnesium patches are suitable for concrete coating "fresh in fresh", i.e. they can be used for curing the surface immediately after placing and compacting the concrete

BTS broom finish patches correct unevenness and transitions and ensure a uniform appearance of the broom finish due to the optimal contact with the surface. Re-smoothing results in a much better surface appearance than with a conventional skid blade and brings fine material to the surface. The broom finish patches

are equipped with brooms and a lockable holder (swivel joint with worm thread). The brooms are available with normal and fine bristles. Our broomstick paws come with a 1800 mm long guide rod. The highlight: up to 5 guide rods can be combined with each other. This means that the broom patches can handle working widths of up to 12 m (or up to 18 m with access from both sides) without working platforms and trailing brushes.

Without brooms, the concrete patches can also be used as pure post-smoothing patches.









Guide rod 1,8 m for extension up to 10 m  $\,$ 



Extra soft horsehair broom

Version	Small	Magnesium
Width (mm)	120	200
Weight 900mm (kg)	8,3	9,7
Weight 1200mm (kg)	9,2	11
Weight 1500mm (kg)	10,1	12,3



# Broom finish ratchet spring steel wide blade

### **Benefits**

- Easy handling
- up to 3 operations in one
- · optimal machine selection for any surface



### **Description**

Our high quality broom finish patches are used as re-smoothing patches for fresh concrete surfaces. In addition, our wide spring steel patches as well as the magnesium patches are suitable for concrete coating "fresh in fresh", i.e. they can be used for curing the surface immediately after placing and compacting the concrete.

BTS broom finish patches correct unevenness and transitions and ensure a uniform appearance of the broom finish due to the optimal contact with the surface. Re-smoothing results in a much better surface appearance than with a conventional skid blade and brings fine material to the surface. The broom finish patches

are equipped with brooms and a lockable holder (swivel joint with worm thread). The brooms are available with normal and fine bristles. Our broomstick paws come with a 1800 mm long guide rod. The highlight: up to 5 guide rods can be combined with each other. This means that the broom paddle can handle working widths of up to 12 m (or up to 18 m with access from both sides) without the need for working platforms or trailing brushes.

Without brooms, the concrete paddles can also be used as pure finishing paddles.



Optional battery vibration extension with up to 18 hours of operation



Guide rod 1.8 m for extension up to 10 m  $\,$ 



Swivel joint for stepless adjustment

Version	Wide
Width (mm)	300
Weight 900mm (kg)	9.7
Weight 1200mm (kg)	11.0
Weight 1500mm (kg)	12.3



# Petrol engine vibrator

### **Benefits**

- The simple and unique design ensures maintenance-free operation without the need for lubrication
- Low shaft speed and high vibration frequency enable optimum compaction
- Consists of a rubber hose with steel belt and spring steel spiral, insensitive to water, oil and chemicals



# **Description**

This compact concrete vibrator from BTS is a bottle vibrator or internal vibrator, which is particularly suitable for concrete floor and floor builders. It is very handy and offers you independence and freedom when working. For safety, a convenient stop button is attached. It is started with a reversing starter and the speed is continuously regulated by hand throttle.

For even easier transport, the machine can be quickly disassembled into two parts.





Compact operation with stepless throttle and comfortable carrying strap



Stable and reliable 4-stroke Honda GX35 engine

Engine	Honda
Туре	GX-35
Power (kW/hp)	1.0/1, 3
Fuel	gasoline
Speed (rpm)	700
Hose length (mm)	545
Vibration bottle Ø (mm)	44
Vibration bottle length (mm)	390
Frequency (vibration/min)	9000
Amplitude (Air)	2.8 mm
Continuous sound level (dbA)	85
Weight (kg)	11



# Material Spreader HSG 800 / HSI 1000

### **HSG 800**

The HSG 800 metering spreader allows precise and uniform incorporation of dry hard material. Depending on the operation, 2-3 kg can be spread. The device has a working width of 800 mm.



Model	HSG 800
Length (mm)	880
Width (mm)	750
Height (mm)	930
Weight without material (kg)	40
Fill quantity (kg)	50



# **Our Spreading devices**

The robust BTS spreaders ensure precise and uniform metering and incorporation of the hard materials into the moist concrete. The stable shape enables safe working and ensures optimal distribution. The bedding trolleys are equipped with a practical tearopen aid for the hard material bags.



### **HSI 1000**

With this HSI 1000 hard material spreading trolley, you can spread the amount of dry hard material steplessly. A criterion that is required, for example, in the production of colored floors. The bedding capacity is 6 kg/m². Due to the wide, treadless tires, the weight of the bedding device is optimally distributed on the concrete.

Model	HSI 1000
Length (mm)	600
Width (mm)	1000
Height (mm)	760
Weight without material (kg)	60
Fill volume (kg)	75



# Material Spreader HSI 2000

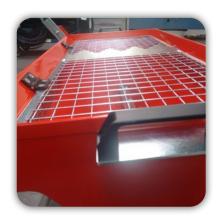
### **Benefits**

With our hard aggregate bedding weighers you can infinitely adjust the amount of dry hard aggregate to be bedded. A criterion that is required, for example, in the production of colored floors. The bedding capacity is  $6~kg/m^2$ . Due to the wide, treadless tires, the weight of the bedding device is optimally distributed on the concrete.

### **Description**

The robust BTS spreaders ensure precise and uniform dosing and incorporation of the hard materials into the moist concrete. The stable shape enables safe working and ensures optimum distribution. The bedding trolleys are equipped with a practical tear-open aid for the hard material bags.





Protective grille with bag tear opener



Foldable stand



Dosage setting from 1 to 6 kg/m<sup>2</sup>



Closed bearings for more reliability



Cast iron bearings for high sliding stability



Ergonomic and stable construction

Model	HSI 2000
Length (mm)	979
Width (mm)	1307
Height (mm)	1027
Weight without material (kg)	62
Fill quantity (kg)	100



# BTS - Floor Leveler

### **Benefits**

- · Competent contact persons with many years of experience
- Cost-effective optimization of the tramlines
- · Improvement of the driving behavior of the forklift trucks
- Reduction of maintenance and repair costs
- Optimization of goods handling
- · Increased driving comfort for man and machine

### **Description**

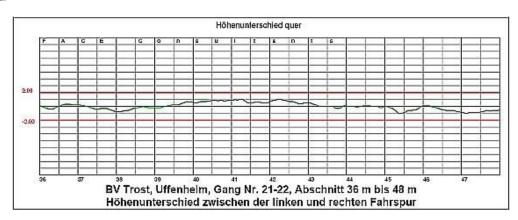
As a specialized manufacturer of floor levelers, we offer a technology that optimizes tramlines and high-bay warehouses cost-effectively and sustainably. With our BTS-Floor-Leveler it is possible to grind the differences between the lanes to the zero line and to achieve the required evenness.

With our technology we not only achieve the required standards DIN 15185, DIN EN 15620 and the VDMA-Guideline, but also increase the driving comfort and reduce the maintenance and repair costs of the forklift trucks.

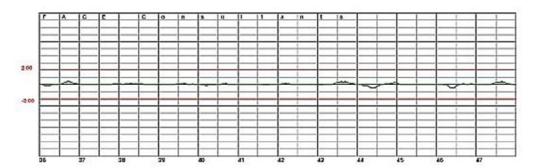
Our technology has led to the greatest satisfaction of our customers and to the optimization of the performance of their narrow aisle trucks. The execution is dry and low-dust with suction, so that the goods can remain in the racks during the execution. There is no need for cost-intensive relocation. For the execution, our customers have to provide a power supply (380 V /63 Ah) and organize the disposal of the grinding dust.







Floor before grinding

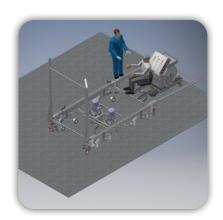


Floor after sanding

### **BTS Floor Leveler**



Short wave grinding



Generation 4 "Diamant"



Track after grinding the high points



Detail picture high point grinding



# Beton Wide Floor Truss Screed

## **Description**

With the BTS high-frequency concrete surface paver, you can profile, compact and strip large areas of concrete and screed with precision fit. Our concrete surface paver can be set up in a "modular system", thus ensuring maximum flexibility. All common concrete floors (tunnels, roadways, sidewalks, bridge concrete) are smoothed in one pass. Self-supporting from 0.61 m to 25 m span. Compressed air vibrators at 100 cm intervals ensure uniform compaction of the concrete across the entire working width. You can change the compaction rate during the take-off or adjust it to the respective concrete width.



### Boom

Rail adjustable in 4 positions: 100 mm, 150 mm, 200 mm, 250 mm

### **Vibration**

Compressed air vibrators at intervals of 100 cm ensure uniform compaction of the concrete over the entire working width. Furthermore, it is possible to change the compaction power during the screeding process, i.e. to adapt it to the respective concrete width, in order to achieve a uniform surface closure.

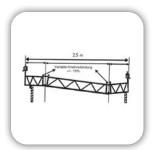
# **Propulsion**

The high-frequency concrete paver is pulled over the concrete with a hand winch at both ends of the machine in order to achieve a uniform propulsion movement and to prevent any wave formation in the surface. The advance rate is max. 1.2 m to 1.4 m per minute.

## **Pavement supports**

Pavement supports are used to support the pavement rails, which provide the high-frequency concrete paver with the guidance it needs to produce a perfect formation.





Span with several bending points





Electric screed with W profiling - 3 inclination changes



Oil fogger with vibration intensity control



Compression resistant rehabilitation concrete processing



Bridge concreting with 18.5 m span

Drive					
Propulsion speed		1.2-1.4m/min			
Compaction depth		up to 30 cm			
Controllable frequency		0-4,500 rpm (air)			
@0-3,000 rpm (electric)	0-3.000 U./min (Elektro)				
Air consumption per linear meter	0.31 cbm (m)				
Power supply	16 A / 400V (electric)				
Sections					
Working width (mm)	610 1524 2286				
Number of vibrating cylinders	1 2 3				
Weight (kg) cpl. ready for operation	16 35 48				

We will be pleased to assemble the sections for your desired working width.



# Concrete construction accessories



Broom finish with 900 mm working width and 6 m fiberglass telescopic rod



Concrete spreader
- 1500 mm handle length
- 460 x 1200 mm spring steel blade
- Robust, light and very handy



smoothing shoes for man
- no shoe sole imprints in screed or concrete



Concrete ratchet with hollow aluminum profile with dimensions of 100 x 25 mm, closed on both sides and slightly raised on the outer sides so that no transitions occur





Smoothing shoes for smoothing machines - can be taken as a replacement for smoothing discs



Cup wheel for smoothing discs
- different grain size
- special for grinding concrete
with smoothing machines



Cup brush for smoothing discs



Rubber slide
Lengths 1000 to 2000 mm
Extra stable with water gutter
Foam rubber double strips



# **Float Pans**

### **Benefits**

- BTS wear parts (trowel blades, trowel shoes, trowel discs) are suitable for trowel machines from:
- Wacker
- · Norton Clipper
- Barikell
- Tremix
- BTC
- Betontrowel
- Whiteman
- Bartell
- Dynapac
- Besto
- Husqvarna
- Atlas Copco
- Sattelberger
- B-MAC
- Schwamborn



## **Description**

All trowel discs have a high material quality for long service life in the thickness of 3 mm or 2.5 mm and fit most common hand and double trowel machines - see list of manufacturers.

The trowel discs have a slight curvature (concave) towards the center to ensure minimum suction effect on the floor and maximum movement of the concrete.

BTS trowel discs are available with different edge profiles: flat, radius or  $90^{\circ}$ . They are suitable for both right- and left-handed troweling machines and are equipped with 2, 3, 4, 5 or 8 drivers/lugs.

For fastening, we offer threaded bolts and sleeves for screwing or a bayonet fitting.

Furthermore, we offer plastic troweling discs (plastic discs) for exposed screed/shielded concrete, colored and light-colored design floors.

As an alternative for troweling discs, we also supply troweling shoes, which are slid over the mounted troweling blades. Possible sizes: 14", 18".





Smoothing disc 965 mm with 3 mm thickness for 4 wing cross



special production 900mm with 5 and 4 wing crosses



Plastic disc in all sizes for colored and light floors

Diameter	inch	thickness	toho/toko un	o a for trough
Diameter	IIICII	Unickness	tabs/take-up	e.g. for trowel
600 mm	24"	2.5 mm	2/4	BTS B424/624
715 mm	28"	2.5 mm	2/4	Schwamborn STR 701, 702, 703
750 mm	30"	2.5 mm	2/4	BTS B430/B630
836 mm	33"	3, 0 mm	2/4	Dynapac BG 33
915 mm	36"	3.0 mm	4/6	Norton Clipper MTA 36
942 mm	37"	3.0 mm	3/4/5	BTS B436/536 and BTS B436-2S/536-2S
980 mm	38"	3, 0 mm	3/4/5/6	BTS B436/536 and BTS B436-2S/536-2S
995 mm	39"	3,0 mm	3/4/5/6	BTS B436/536 and BTS B436-2S/536-2S Barikel MK90
1117 mm	44"	3, 0 mm	3/4/5/6	BTS B546-2S/B646-2S
1170 mm	46"	3.0 mm	3/4/5/6	BTS B546-2S/B646-2S Wacker CTR 46
1230 mm	48.5"	3.0 mm	@3/4/5/6	Wacker CTR 46



# Trowel Blades

### **Benefits**

- BTS wear parts (trowel blades, trowel shoes, trowel discs) are suitable for trowel machines from:
- Wacker
- Norton Clipper
- Barikell
- Tremix
- BTC
- Betontrowel
- Whiteman
- Bartell
- Dynapac
- Besto
- Husqvarna
- Atlas Copco
- Sattelberger
- B-MAC
- Schwamborn



## **Description**

BTS smoothing blades are available as fine smoothing blades (polishing blades) and combination blades with permissible adhesion.

All BTS smoothing blades are made of high-strength spring steel and have a very long service life.

A distinction is made between smoothing blades that can be used on both sides and those that can be used on one side:

Our fine smoothing blades (polishing blades, finishing blades) and the new combi blades can be used on both sides The somewhat wider combi blades can be used on one side The fastening is done with screw connections with M6, M8, M10 threads or with U-profiles with spring cotter pins.

Furthermore, we offer plastic smoothing wings for colored and light-colored design floors.

A set of smoothing wings always consists of 4 pieces. Exception: edge machines 6 pieces.

Other trowel blade types and sizes are available on request.

Our trowel blades are not only perfectly suitable for trowel machines from BTS, but also for a variety of other brands such as Wacker, Husgvarna and many more - see list.



Fine smoothing wing

Also called "polishing wing". Absolutely smooth surface, thus particularly slip-proof. Suitable only for dry used surfaces.



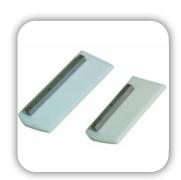
Combi wings (old)

Smooth but with adhesion allowed.
These wings are usable on one side, because the bar is 1/2 2/3 offset.
Especially for the production of rough surfaces (driving surfaces, warehouses, outdoor surfaces)



Combination wing **NEW** 

Can be used on both sides with a very high area performance.



**Plastic wings** 

are needed for light and colored floors. They are especially used for design floors.

roommour auta			
Dimensions in inches	wing number per set	machine diameter (mm)	e.g. suitable for trowels
3.9/4x8"	4	610	Level 63
4.3/4x9"	4	600	BTS B424, MOS 4, Hus
4.3/4x8"	6	600	BTS624, MOS 6
5x9.1/4"	4	600	Dynapac BG21, Multiquip C24, BG245
4. 3/4x11"	4	750	BTS B430
4,7/5x10"	6	750	BTS B630
33"	4	831	BG/BT 33
5,1x13"	4	900	Level 100
8x13"	4	915	Norton Clipper MTA 36
6x14"	4	980	BTS B436/536/636, Wacker
8x14"	4	2000	BTS B436-2S/536-2S/636-2S, B-MAC
6x18"	4	1200	BTS B446/546/646, Allen



# PE foams PE edge insulation strips Floor and curing foil

# **Description**

The primary field of application of the lcutec PE edge strip is the sound-bridge-free laying of floating screeds, as separation of the screed from the masonry or other

installations. The Icutec PE edge strip consists of a closed-cell, extruded polyethylene foam. Thermal conductivity 0,045, temperature resistant up to 80  $^{\circ}$ C, fire protection class B2 according to Din 4102

Universal for industrial floors, polyethylene foam elastic, -water and acid resistant.



Thickness (mm)	Height (mm)	Roll length (m)	Roll VPE	Application
5	100	50	600	Screed / Concrete
5	150	50	400	Screed / Concrete
8	100	50	600	Screed / Concrete
8	150	50	400	Screed / Concrete
8	200	50	300	Concrete / Rolled concrete
8	250	50	250	Concrete / Rolled concrete
8	300	50	300	Concrete / Rolled concrete
10	200	50	300	Concrete / Rolled concrete
10	250	50	250	Concrete / Rolled concrete
10	300	50	200	Concrete / Rolled concrete



# **Description**

Important note:

The PE film for concrete is made of LDPE and is available in the following qualities: TRANSPARENT, TRANSLUZENT and OPAK COLORED.

The construction film is not UV resistant and not suitable for other purposes than floor construction.



Thickness (mm)	Film width (mm)	Roll length (m)	Pallet content (pieces)	Use
0.033	2000	100	80	Post-treatment
0.040	2000	100	80	Post-treatment
0. 040	6000	100	24	Post-treatment
0.040	4000	50	70	Post-treatment
0.040	4000	100	30	Post-treatment
0.100	2000	100	28	Bottom foil
0.200	4000	50	28	Bottom foil



# **General terms and conditions**

#### 1. genera

Our deliveries, services and offers are made exclusively on the basis of these terms and conditions. These terms and conditions shall be deemed accepted at the latest upon acceptance of the goods or services - also with regard to future business relations.

Deviations from these terms and conditions and other conditions of the customer are only binding for us if we confirm this in writing.

#### 2. offers

Our offers are subject to change and non-binding. Orders shall only be deemed accepted when we confirm the order in writing. The same applies to additions, changes and subsidiary agreements.

#### 3. prices

Prices are ex delivery warehouse and do not include VAT, freight, packaging or insurance. If the list prices or the statutory sales tax change between the conclusion of the contract and delivery, the sales price shall increase accordingly.

#### 4. packin

The type of packaging shall be in accordance with our proper determination. The packaging will be charged at cost price. It will only be taken back if we demand its return, for which we reserve the right to charge a deposit.

#### 5. dispatch

Shipment is always at the expense of the purchaser. Unless otherwise agreed, we shall determine the means of transport and the transport route without being responsible for choosing the fastest and cheapest option. Special requests of the purchaser (e.g. accelerated mode of shipment, special packaging, commissioning of a specific carrier) will be taken into account as far as possible against payment of any additional costs.

#### 6 Transfer of risk

The risk shall pass to the customer as soon as the goods have been handed over to the person carrying out the transport or have left our warehouse for the purpose of shipment.

If the shipment is delayed due to circumstances for which the purchaser is responsible, the risk shall pass to the purchaser from the date of readiness for shipment. Delivered items are to be accepted by the purchaser, even if they have minor defects.

### 7. delivery

Delivery dates are only binding if agreed in writing. The delivery period shall be deemed to have been complied with if the delivery item has left our warehouse or notification of readiness for dispatch has been given by the time the delivery period expires. If compliance with the delivery period is not possible as a result of circumstances beyond our control, such as natural disasters, war, riot, intervention by public authorities, energy shortages or industrial action, the period shall be extended accordingly.

This shall also apply if these circumstances occur at our suppliers. Should the impeding circumstances last longer than four weeks, each contractual partner shall be entitled to withdraw from the contract.

If we are responsible for the failure to meet the delivery deadline, the purchaser is entitled to withdraw from the contract after setting a reasonable grace period.

### 8. complaints and notices of defects

Complaints due to recognizably incomplete or incorrect delivery must be made to us in writing immediately, at the latest 8 days after receipt. Other defects must be notified to us in writing immediately after discovery. In the event of failure to notify us in good time, the Purchaser's claims shall be governed by Clauses 9. and 10. Return shipments may only be made in agreement with us.

### 9. warranties

We provide warranty for warranted characteristics and for freedom from defects in accordance with the respective state of the art. We reserve the right to make changes to the construction or design that do not affect the functionality or value of the ordered item and do not entitle the customer to make a complaint. The assurance of characteristics requires in any case our written declaration or confirmation. If the delivered item lacks a warranted quality as a result of a circumstance occurring prior to the transfer of risk, or if it is defective in a way that significantly impairs its value or usability, we shall be obligated to remedy the defect within a reasonable period of time and free of charge, at our discretion, either by repair or replacement. Multiple rectifications are permissible. If the rectification or the replacement delivery fails after a reasonable period of time, the customer may, at his option, demand a reduction of the purchase price or rescission of the contract. These provisions shall not apply to utility machines delivered under exclusion of any warranty. All statutory and contractual claims of the Purchaser based on a defect in the Supplies shall become time-barred six months after delivery.

# These General terms and conditions are translated by a maschine and therefore not valid. Please always refer to the original version in german.

#### 10. rented objects

The Lessee shall report any occurrence of damage immediately after handover. The Lessee shall be responsible for any damage occurring to the rented equipment provided, even in the event of simple negligence. The lessee must repair any damage at his own expense. Only original spare parts are to be used for repairs at the expense of the lessee. The lessee shall insure the equipment against all possible insurable risks, in particular against theft, loss, destruction or damage. The lessee shall assign claims against the respective insurance company to the lessor. However, this assignment shall not have a discharging effect for the Lessee.

The lessor shall not be liable for any downtimes of the equipment and any consequential damages and losses or other disadvantages of the lessee resulting therefrom.

### 11. manufacturer's warranty

Warranty claims are made conditional on prior recourse to the manufacturer's warranty services in accordance with the applicable warranty provisions as per the warranty card.

### 12. reservation of proprietary rights

We deliver only on the basis of the reservation of title described in more detail below. This shall also apply to all future deliveries, even if we do not always expressly refer to this. 1.

1. we reserve the right of ownership of the delivered item until full payment of all claims arising from the delivery contract. We are entitled to take back the object of sale if the purchaser acts in breach of contract. 2.

2. the buyer is obligated, as long as the property is not yet transferred to him, to treat the purchase thing carefully. In particular, he is obliged to insure it at his own expense against theft, fire and water damage at its replacement value. If maintenance and inspection work has to be carried out, the purchaser must carry this out in good time at his own expense. As long as ownership has not yet been transferred, the purchaser must inform us immediately in writing if the delivered item is seized or exposed to other interventions by third parties. Insofar as the third party is not in a position to reimburse us for the court and out-of-court costs of an action in accordance with § 771 of the German Code of Civil Procedure (ZPO), the purchaser shall be liable for the loss incurred by us. 3.

The purchaser shall be entitled to resell the goods subject to retention of title in the normal course of business. The Buyer hereby assigns to us the Buyer's claims arising from the resale of the reserved goods in the amount of the final invoice amount agreed with us (including value added tax). This assignment shall apply regardless of whether the purchased goods have been resold without or after processing. The buyer shall remain authorized to collect the claim even after the assignment. Our authority to collect the claim ourselves shall remain unaffected. However, we shall not collect the claim as long as the Buyer meets his payment obligations from the proceeds collected, is not in default of payment and, in particular, no application for the opening of insolvency proceedings has been filed or there is no cessation of payments.

4. the treatment and processing or transformation of the object of sale by the buyer shall always be carried out in our name and on our behalf. In this case, the purchaser's expectant right to the object of sale shall continue to apply to the transformed object. If the object of sale is processed with other objects not belonging to us, we shall acquire co-ownership of the new object in the ratio of the objective value of our object of sale to the other processed objects at the time of processing.

The same shall apply in the event of mixing. If the mixing is carried out in such a way that the Buyer's item is to be regarded as the main item, it shall be deemed agreed that the Buyer transfers co-ownership to us on a pro rata basis and shall hold the sole ownership or co-ownership thus created in safe custody for us. In order to secure our claims against the purchaser, the purchaser shall also assign to us such claims as accrue to him against a third party as a result of the combination of the reserved goods with a plot of land; we hereby accept this assignment. 5.

We undertake to release the securities to which we are entitled at the request of the Buyer insofar as their value exceeds the claims to be secured by more than 20%.

### 13. payment

Our invoices for deliveries are payable net upon receipt of the invoice (within 8 days) or according to the payment term on the invoice. Payments shall always be offset against the oldest invoice. Repair invoices are payable net upon receipt. If the term of payment is exceeded, we are entitled to charge interest from the date of default in the amount of 4% above the respective discount rate of the European Central Bank (ECB), but at least 8%. For each reminder, an additional  $\epsilon$  15.00 processing fee / reminder fee will be charged. We reserve the right to process orders with a value of less than  $\epsilon$  50.00 and orders from customers unknown to us by cash on delivery. In case of dishonor of checks or bills of exchange, in case of suspension of payment as well as in case of initiation of proceedings serving the settlement of debts, all our claims – even in case of a deferment – shall become due immediately. Such circumstances also entitle us to send outstanding deliveries cash on delivery or to demand advance payment or the provision of security for these. Payments by bill of exchange require prior agreement. No discount shall be granted for payments by bill of exchange. Payments may only be made to us or to persons expressly authorized in writing or by power of collection. The purchaser may only offset such claims as are undisputed or have been established by a court of law.

### 14. other claims

Claims for damages on the part of the purchaser arising from positive breach of contract, from breach of duties during contract negotiations and from tort are excluded. This shall not apply if, for example, in the case of personal injury or damage to privately used property, liability is mandatory under the Product Liability Act or in cases of intent or gross negligence. Similarly, liability for damage caused by unsuitable or improper use, faulty assembly or commissioning by the Purchaser or third parties, natural wear and tear or negligent acts by the Purchaser or third parties, etc. is excluded.

### 15. place of iurisdiction

The place of performance for deliveries and services is the location of the respective delivering warehouse. Place of jurisdiction is Stuttgart.

### As a not

Place of performance Sachsenheim, transfer of risk Sachsenheim. Our personnel is not authorized to assemble delivered goods, should this be expressly requested, the assembly is to be ordered separately against invoice.

If operating or assembly instructions are missing from the goods delivered by us, these can be requested from us and will be transmitted electronically.

# **Operating conditions vibrating beam**Instructions

In order to avoid discrepancies during the vibrating screed briefing, the following points must be observed:

- Our instruction personnel are provided with 2 helpers to whom the assembly of the vibrating screed is explained. These helpers assemble the screed under the instruction of our personnel.
- Our instruction personnel will explain all functions of the vibrating screed relevant for concreting.
- After assembly, the vibrating screed is placed on the formwork, roadway or lath guide provided for this purpose.
- The client now specifies how the vibrating screed is to be set (inclination, height, etc.). Our staff explains to the helpers how to make adjustments. This adjustment is accepted by the client.
- The instruction personnel will recommend a complete dry run
  of the area to be concreted (i.e. without concrete) in order
  to identify and clarify any final discrepancies regarding the
  concrete cover, slopes, etc.
- We recommend that a constant spreading dimension F2 or in F3 of the concrete should be placed in a constant concrete quality.

- Different concrete consistencies lead to different working procedures and changes regarding the "handling" of the vibrating screed (increase or decrease of speed, increase or decrease of winch rotation).
- In order to achieve an optimum surface quality, the vibrating beam should be operated without major interruptions. The course of concreting should be adjusted so that the vibrating screed is operated at a continuous pulling speed. In case of permanent "stop and go" operation and if the concrete is too stiff, longitudinal grooves cannot be avoided.
- When starting up the vibrating screed, the winch ropes should be in tension so that the screed moves quickly away from the standing position. This can avoid transverse grooves.
- IMMEDIATELY after completion of the vibrating screed operation, the screed must be cleaned from concrete residues and impurities with a high-pressure cleaner and sprayed with suitable oil or wax !!!!
- The storage of spare or small parts during the standing times have to be carried out by the client in a secured box / container to protect against loss.





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