





Formwork Anchor GFK DW15



Formwork Sleeve ALU and Steel



Anchors EHS 45° DW15 / DW20



Anchor Hercules DW26.5



Adhesive Sleeve ALU and Steel





Grounding Tape Dispenser



Tensile load permitted: F_h 26,3 kN at concrete compressive strength 17 N/mm² F_h 39,1 kN at concrete compressive strength 20 N/mm² including safety factors according ETAG-001

IFBT & Prüfbericht Nr. 06-117

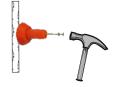
	order numb	er pcs/unit
Formwork Anchor GFK DW15 / L 12,5 cm	401512	unit: 100 pcs
Cone Plug Ø 42 mm, for installation in wood formwork concrete cover 12 mm, assemblies with Double-Headed Nail 75 mm, zinc-plated, reuseable	401518	unit: 100 pcs
Sealing Plug PVC ∅ 31 mm	131518	unit: 100 pcs
Facing Concret Cone Plug SBK 15/10 made of casted concrete optimal solution to exposed concrete construction	411510	unit: 1 pcs
Cone Plug DW15 Stainless Steel made of 1.4301 for closing the anchorage, makes visual accents	411511	unit: 1 pcs

The use for mounting suspend scaffolds is not allowed!

Tensile Load: F, permitted 26,3 kN / B25 / 17 N/mm²; F, max 39,1 kN / B25 / 17 N/mm²

A - Installation to formworks

1 Inmeasure achor point and nail Cone Plug (order number 401518) to formwork panel using provided double head nail. Edge distance minimum 10 cm



2 Stick on achor to cone plug's socket. Tie it to reinforcement if required. Position is now ready for concrete casting.



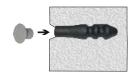
3 When required concrete proberty is achieved strip formwork. By that cone plug will be pulled of the anchor. The double head nail can be easily pulled out. Cone plug and nail can be reused.



4 The Thread rod now can be screwed in conveniently due to anchor's threadless fitting tube.



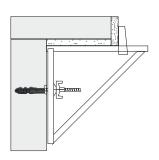
5 S e a l i n g: using Sealing Plug PVC (order number 131518) The position can be finished with mortar and grinded on demand.



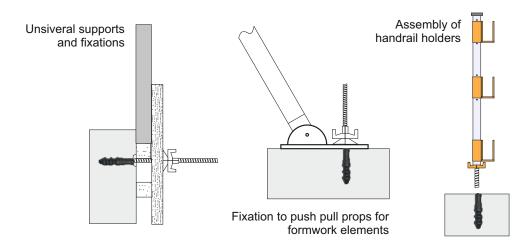
6 for exposed concrete construction use Concrete Cone Plug SBK 15/10 (order number 415110) for sealing in perfect optics



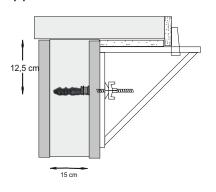
B - Applications



Fixation to slap stopend bars, trestless bars, angels, supports etc.

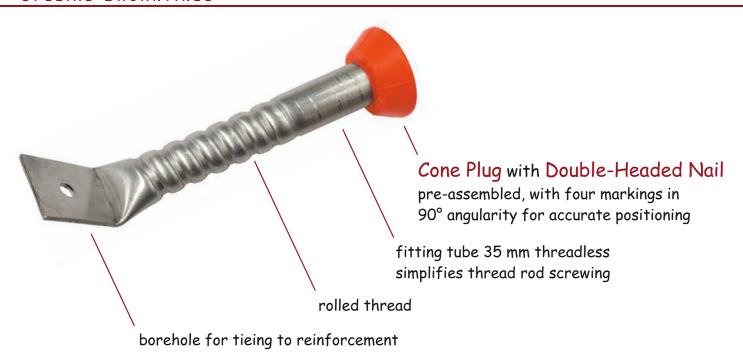


Application to Hollowchamber Walls:



Operations befor concrete casting:

- 1. Calibrate anchor position, edge distances minimum 12,5 cm.
- 2. Perform a drilling ø 22 mm in correct position through the concrete shell.
- 3. Insert the GFK-HK into the hollowchamber to the bore hole and screw in a thread rod DW15 through the concrete shell. Care for screwing in full length.
- Fix the bracket using a flange nut DW15. The GFK now is tightened to the inner side of the concrete shell and sealed against concrete foam.
- The anchor position can already loaded now before concreting according to the shell's bearing.



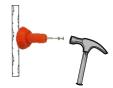
Tensile load permitted: F_h 30,5 kN at concrete compressive strength 17 N/mm 2 F_h 37,0 kN at concrete compressive strength 20 N/mm 2 including safety factors according ETAG-001

IFBT Prüfbericht
Nr. 02-103

•		order numb	er pcs/unit
HARITATA	Formwork Sleeve ALU DW15 / L 15 cm F _h 30,5 kN at concrete compressive strength 17 N/mm ² F _h 37,0 kN at concrete compressive strength 20 N/mm ²	401515	unit: 100 pcs
HAMILIAN THE TANK	Formwork Sleeve ALU DW15 / L 19 cm F _h 28,0 kN at concrete compressive strength 10 N/mm ² F _h 45,0 kN at concrete compressive strength 20 N/mm ²	401519	unit: 100 pcs
	Cone Plug ∅ 42 mm, for installation in wood formwork concrete cover 12 mm, assemblies with Double-Headed Nail 75 mm, zinc-plated, reuseable	401518	unit: 100 pcs
	Sealing Plug PVC ∅ 31 mm	131518	unit: 100 pcs
	Facing Concret Cone Plug SBK 15/10 made of casted concrete optimal solution to exposed concrete construction	411510	unit: 1 pcs
	Cone Plug DW15 Stainless Steel made of 1.4301 for closing the anchorage, makes visual accents	411511	unit: 1 pcs

A - Installation to formworks

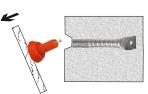
1 Inmeasure achor point and nail Cone Plug (order number 401518) to formwork panel using provided double head nail. edge distance minimum 10 cm



2 Stick on achor to cone plug's socket. Tie it to reinforcement if required. Position is now ready for concrete casting.



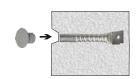
3 When required concrete proberty is achieved strip formwork. By that cone plug will be pulled of the anchor. The double head nail can be easily pulled out. Cone plug and nail can be reused.



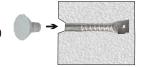
4 The Thread rod now can be screwed in conveniently due to anchor's threadless fitting tube.



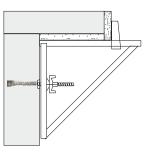
5 Sealing: using Sealing Plug PVC (order number 131518) The position can be finished with mortar and grinded on demand.



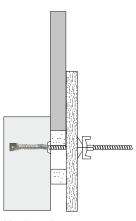
6 for exposed concrete construction use Concrete Cone Plug SBK 15/10 (order number 415110) for sealing in perfect optics



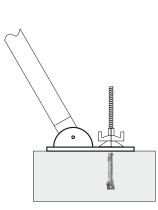
B - Applications



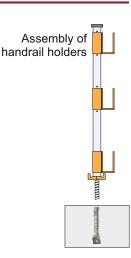
Fixation to slap stopend bars, trestless bars, angels, supports etc.

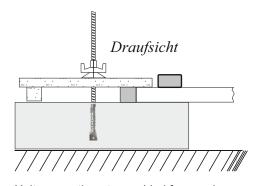


Unsiveral supports and fixations

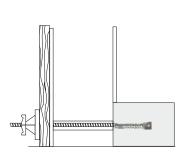


Fixation to push pull props for formwork elements

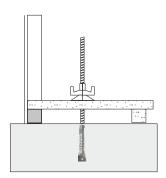




Unit connection at one sided formwork sleeve application 2 - 3 times (depending on the height of concrete)



Anchoring at various foundation heights



Used as tie down anchor advantageous specially to ready grinded surface

The use for mounting suspend scaffolds is not allowed!

The optimal reanchoring system to support frames for one-sided wall formwork!



Due to stricter static requirements reinforcements in floor slabs are being placed closer increasingly. Installing loop anchors or similar inlets is becomming more difficult and time consuming.

Our Anchors EHS DW15 / DW20 are the solution!

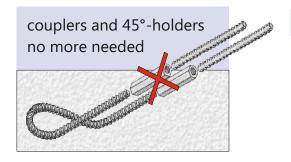
- Benefits: Installation into meshes more than 70 mm without any problem
 - no opening or welding reinforcements subsequently
 - one pieced anchor no additional couplers or holders requested
 - position can be treated by a finishing trowel or a screed board and recognized again
 - quick and simple installation done by 1 person only within less than one minute
 - no removing protruding tie rods a minimum of refinishing only
 - reanchoring out of walls, installation in wall formwork without drilling

This anchorage EHS delivered ready for installation is consisting of one or two thread sleeves DW15 or DW20 made of steel connected with welded mounting bowl in requested axle distance an in angularity 45°. Components are Trowel Caps PE 45° for an unhindered treating by screed board or a

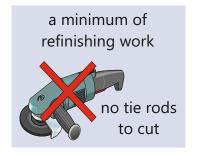
finishing trowel and an easy recognize. After removing the recesses a suitable cavity for filling compound is formed.

Reanchoring out of walls

No more thrilling through formwork panels as required previously because of using the Trowel Cap PE 45°.

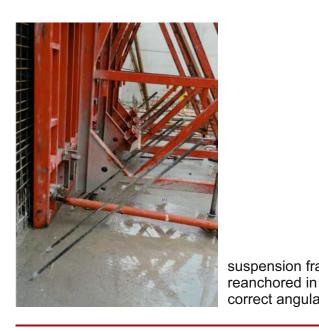




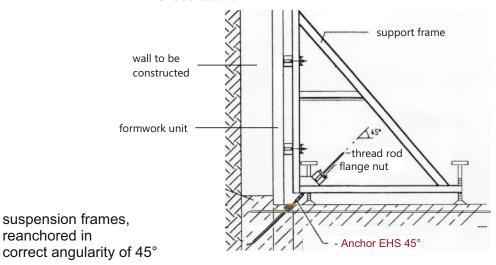


Trowel Cap PE-45°

Anchors EHS 45° DW15 / DW20



Cross section:





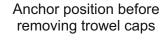
Application in slabs without hindrance to screed board and power float

staplessly variable to concrete cover 30 - 60 mm



Recess leveled by a string









Installation in wall formork for reanchoring out of walls

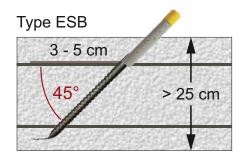
no more drilling through the formwork panel



Anchor DW15 Standard for installing in concrete plates greater than 25 cm







order number



Solo DW15 GLB Standard, for ready grinded surfaces delivered with one Trowel Cap PE-45° permitted load:

501502G

501503G

501504G

501502E

501503E

501504E

1 x 85 kN at 17 N/mm² concrete compressive strength 1 x 90 kN at 30 N/mm² concrete compressive strength

7

Twin DW15 GLB Standard red, for ready grinded surfaces

with axle distance 23 cm delivered with two Trowel Caps PE-45° permitted load:

2 x 85 kN at 17 N/mm² concrete compressive strength 2 x 90 kN at 30 N/mm² concrete compressive strength

7

Twin DW15 GLB Standard blue, for ready grinded surfaces

with axle distance 30 cm delivered with two Trowel Caps PE-45° permitted load:

2 x 85 kN at 17 N/mm² concrete compressive strength 2 x 90 kN at 30 N/mm² concrete compressive strength



Solo DW15 ESB Standard, for screed coated slabs

delivered with mounted duct tube and sealing cap permitted load:

1 x 85 kN at 17 N/mm² concrete compressive strength 1 x 90 kN at 30 N/mm² concrete compressive strength



Twin DW15 ESB Standard red, for screed coated slabs

with axle distance 23 cm delivered with mounted duct tubes and sealing caps

delivered with mounted duct tubes and sealing caps permitted load:

2 x 85 kN at 17 N/mm² concrete compressive strength 2 x 90 kN at 30 N/mm² concrete compressive strength



Twin DW15 ESB Standard blue, for screed coated slabs

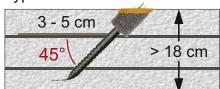
with axle distance 30 cm

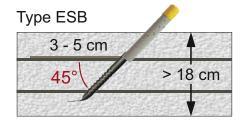
delivered with mounted duct tubes and sealing caps permitted load:

2 x 85 kN at 17 N/mm² concrete compressive strength 2 x 90 kN at 30 N/mm² concrete compressive strength

Anchor DW15 short for installing in concrete plates greater than 18 cm







order number



Solo DW15 GLB short, for ready grinded surfaces delivered with one Trowel Cap PE-45°

501518G

permitted load: 1 x 60 kN at 17 N/mm² concrete compressive strength

1 x 60 kN at 17 N/mm² concrete compressive strength 1 x 80 kN at 30 N/mm² concrete compressive strength



Twin DW15 GLB short red, for ready grinded surfaces

501505G

with axle distance 23 cm delivered with two Trowel Caps PE-45° permitted load:

2 x 60 kN at 17 N/mm² concrete compressive strength 2 x 80 kN at 30 N/mm² concrete compressive strength



Twin DW15 GLB short blue, for ready grinded surfaces

501506G

with axle distance 30 cm delivered with two Trowel Caps PE-45° permitted load:

2 x 60 kN at 17 N/mm² concrete compressive strength 2 x 80 kN at 30 N/mm² concrete compressive strength



Solo DW15 ESB short, for screed coated slabs

501518E

delivered with mounted duct tube and sealing cap Zulässige Belastung:

1 x 60 kN at 17 N/mm² concrete compressive strength 1 x 80 kN at 30 N/mm² concrete compressive strength



Twin DW15 ESB short red, for screed coated slabs

501505E

with axle distance 23 cm

delivered with mounted duct tubes and sealing caps permitted load:

2 x 60 kN at 17 N/mm² concrete compressive strength 2 x 80 kN at 30 N/mm² concrete compressive strength



Twin DW15 ESB short blue, for screed coated slabs

501506E

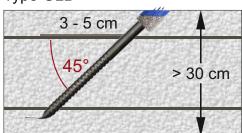
with axle distance 30 cm

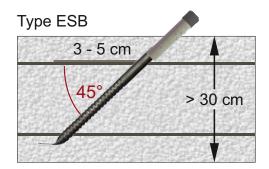
delivered with mounted duct tubes and sealing caps permitted load:

2 x 60 kN at 17 N/mm² concrete compressive strength 2 x 80 kN at 30 N/mm² concrete compressive strength

Anchor DW20 Standard for installing in concrete plates greater than 30 cm







order number

502003G



Solo DW20 GLB Standard, for ready grinded surfaces delivered with one Trowel Cap PE-45° permitted load:

1 x 140 kN at 30 N/mm² concrete compressive strength

s 502001G



Twin DW20 GLB Standard, for ready grinded surfaces

with axle distance 35 cm delivered with two Trowel Caps PE-45° permitted load:

2 x 140 kN at 30 N/mm² concrete compressive strength

502003E



Solo DW20 ESB Standard, for screed coated slabs delivered with mounted duct tube and sealing cap permitted load:

1 x 140 kN at 30 N/mm² concrete compressive strength

502001E



Twin DW20 ESB Standard, for screed coated slabs

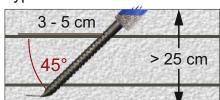
with axle distance 35 cm delivered with mounted duct tubes and sealing caps

permitted load:

2 x 140 kN at 30 N/mm² concrete compressive strength

Anchor DW20 short for installing in concrete plates greater than 25 cm







order number

502004G

502005G

502004E



Solo DW20 GLB short, for ready grinded surfaces delivered with one Trowel Cap PE-45° permitted load:

1 x 120 kN at 30 N/mm² concrete compressive strength



Twin DW20 GLB short, for ready grinded surfaces with axle distance 35 cm

delivered with two Trowel Caps PE-45° permitted load:

2 x 120 kN at 30 N/mm² concrete compressive strength



Solo DW20 ESB short, for screed coated slabs delivered with mounted duct tube and sealing cap permitted load:

1 x 120 kN at 30 N/mm² concrete compressive strength



Twin DW20 ESB short, for screed coated slabs with axle distance 35 cm

delivered with mounted duct tubes and sealing caps permitted load:

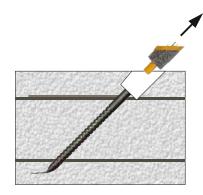
2 x 120 kN at 30 N/mm² concrete compressive strength

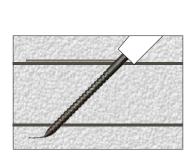
502005E

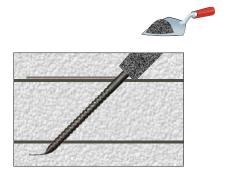
- On Application of anchor types GLB for ready grinded surfaces stick in the Trowel Cap PE 45° into thread sleeve and align it. The recess can be moved in axial line referring to the concrete cover requested with 30 mm to 60 mm.
 With upper reinforcement constructed to far down additional spacer bars have to be installed.
- 2. At anchor position stick anchor through the reinforcement, align it and tie it to the meshes. Care for edge distance minimum 25 cm.
- 3. After adjusting trowel cap using a level string the anchor position is ready for concrete casting.
- 4. Care for sufficient and careful vibrating. On application of EHS-Types screed fresh concrete surface close around to the duct tubes. On application of GLB-Types treat the anchor position with the finishing trowel without hindrance. It can be recognized easily.
- 5. Remove sealing cap or trowel cap with a suitable tool.
- 6. Reanchor the support frame with thread rods. Care for screwing in at full length. Use rods in faultless condition only.
- 7. After achieving the necessary concrete pressure strength the anchor can be stressed according to the product overview.
- 8. After stripping the formwork system remove the thread rod. On application of EHS-Types saw off the duct tube flush to the concrete surface. In use of GLB-Types refill the cavity with filling compound and grind the position.

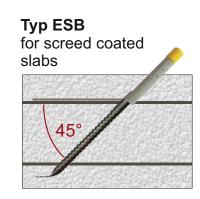
Type GLB for ready grinded surfaces

3 - 5 cm









The powerful and quick reanchoring to support frames for single sided formwork!

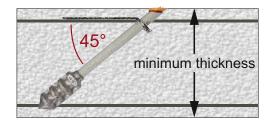
The anchor is consisting of an anchor head designed specially with low weight and small diameter. Ist duct tube sealed against concrete foam is preventing contact of metallic components to concrete sufrace.

Benifits:

- Quick, simple and correct assembly with the Holder 45° fastening at the upper meshes
- Variable adjustment to concrete cover
- Short and slim shaped, light weight, ø 75 mm only
- Tie rods DW26.5 reuseable
- Minimises refinishing
- Expensive couplers no more needed
- Determinded axle distance of 35 cm with Twin Holder 45°

The slim shaped anchor can be installed easily and quickly installed evenly through tight reinforce meshes in contrast to plate anchors and similars. This way the Hercules enables an installation in shortest time with a few refinishing.

Type GLB for ready grinded surfaces



The anchor position can be treated with a finishing trowel and well recognized again.

order number



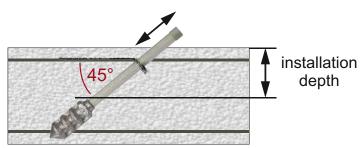
Anchor Hercules GLB, for ready grinded surfaces plates greater than 45 cm with Recess PE-45° permitted load:
275 kN at 18 N/mm² concrete compressive strength 290 kN at 20 N/mm² concrete compressive strength 325 kN at 25 N/mm² concrete compressive strength

Ohter lengths on request.



502652

Type ESB for screed coated slabs



Because of its variable installation the anchorage can be used in slab of different thickness. The minimum installation depth is to be noted.

order number

502651

502661

502663

502670



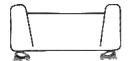
Anchor Hercules ESB

with sealing cap permitted load at installation depth 20 cm: 275 kN at 18 N/mm² concrete compressive strength 290 kN at 20 N/mm² concrete compressive strength 325 kN at 25 N/mm² concrete compressive strength



Holder 45° Solo

Holder Solo required for installation in correct angularity 45°. Variable adjustment to concrete cover and installation depth.



Holder 45° Twin, axle distance 35 cm

Required for installation two anchors in angularity 45° in determinded axle distance 35 cm. Variable adjustment to concrete cover and installation depth.



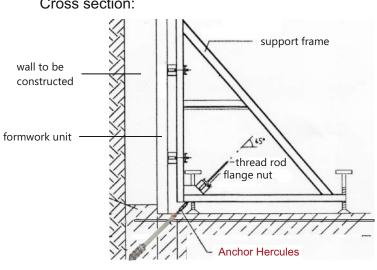
Sealing Plug

for sealing the duct tube and trapping the filling compound

Other lengths on request.



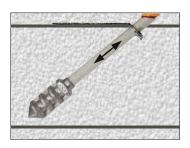
Cross section:

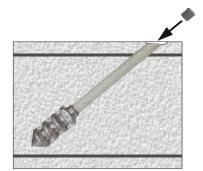


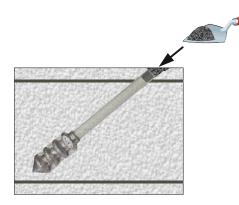
- 1. Insert the anchor with its duct tube into holder's clamp and screw down it. The clamp of the installation bowl is directed downwards. During this the level can be aligned infinited variable refering the concrete cover requested. The trowel cap of the GLB-Type is adjusted flushing to concrete surface.
 - The sealing cap of the ESB-Type should protrude approximately 5 cm over concrete surface.
- 2. At anchor position stick the anchor through the upper reinforcement, align it and tie it to the meshes. Care for edge distance minimum 40 cm.
- 3. On application the GLB-Typ adjust the trowel cap's level using a level string and the anchor position is ready for concrete casting.
- 4. Care for sufficient and careful vibrating. On application of ESB-Type screed fresh concrete surface close around to the duct tube.

 In use of GLB-Type treat the anchor position with finisching trowel without hindrance.
- 5. Remove the sealing cap or the trowel cap with a suitable tool.
- 6. Reanchor the support frame with thread rods. Care for screwing in at full length. Use rods in faultless condition only.
- 7. After achieving the necessary concrete pressure strength the anchor can be stressed accordingly.
- 8. After stripping the formwork system remove the thread rod. On application of EHS-Types saw off the duct tube flush to the concrete surface. In use of GLB-Types refill the cavity with filling compound and grind the position.

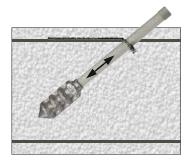
Type GLB for ready grinded surfaces







Type ESB for screed coated slabs



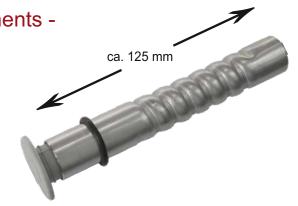
- installation into existing concrete components -

for screwing in tie rod DW15 and fastening of:

- slab stop end formwork
- fall protection holders
- push pull props, supports, ...

permitted load of F_h 40 kN at application of injection grout mortar

The instructions for use of the adhesive manufacturer must be observed!



		order number	er pcs/unit
- nations	Adhesive Sleeve ALU DW15 / L 12,5 cm für bore hole ø 26 mm, with Sealing Plug	401513	unit: 100 pcs
	Sealing Plug PVC ø 31 mm	131518	unit: 100 pcs

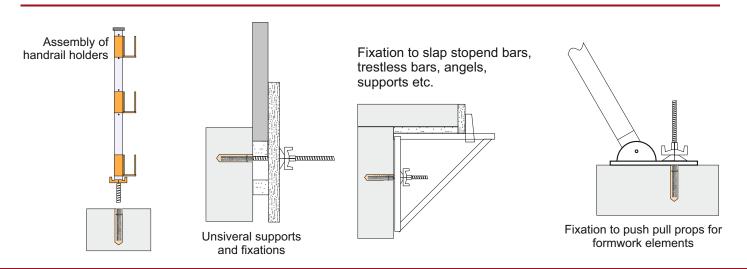
Application Instructions:

- 1. Drill a bore hole ø 26 mm, 130 mm depth in correct position. Don't use any bore crown!
- 2. Blow out the bore hole twice, brush out twice and blow out twice again.
- 3. Fill in approximately 12 ccm injection grout mortar and **screw** in the sleeve by turning the sealing plug. The sealing ring cares for evenly spreading the adhesive.
 - Pay attention to the prescribed eye and skin protection ! -
- 4. After achieving the mature time required remove the sealing plug and screw in an tie rod DW15.
- 5. The usage of the sleeve the sealing plug can be used as final closure.

There are no general load perfomance specifications!

The tensile load is depending on the individual installation situation:

Concrete quality, concrete age, temparature and injection grout mortar mature time!



- for subsequent installation -

for reanchoring single sided formwork in existing concrete components or rocks

- An alternative shell anchor: quick installation no pretensioning
- Small bore hole diameters:
 Ø 26 mm for DW15 / Ø 32 mm for DW20
- Installation with concrete cover up to 60 mm
- Solution to anchorage forgotten to be installed
- Minimum of refinishing
- Thread rods reusable

Tensile load permitted at application of injection grout mortar:

Adhesive Anchor Steel DW15: 85 kN after curing and concrete compressive strength 30 N/mm² Adhesive Anchor Steel DW20: 120 kN after curing and concrete compressive strength 30 N/mm²

If the anchor ground is unknown tensile loads test are required.

The instructions for use of the adhesive manufacturer must be observed!

		order numbe	er pcs/unit
\$000000	Adhesive Anchor STEEL DW15 / L 20 cm for bore hole ø 26 mm	501619	unit: 100 pcs
	Adhesive Anchor STEEL DW15 / L 32 cm with duct tube PVC, for bore hole ø 26 mm	401615	unit: 100 pcs
	Adhesive Anchor STEEL DW20 / L 28 cm for bore hole ø 32 mm	502128	unit: 100 pcs
	Adhesive Anchor STEEL DW20 / L 42 cm with duct tube PVC, for bore hole ø 32 mm	401620	unit: 100 pcs
	Sealing Plug DW15, PVC Ø 31 mm für adhesive anchors without duct tube	131518	unit: 100 pcs
	Sealing Plug DW20, PVC ∅ 32 mm für adhesive anchors without duct tube	340012	unit: 50 pcs

Formwork Sleeves STEEL DW15 / DW20

Formwork Sleeves STEEL DW15		order nun	nber pcs/unit
- AUGUSTUS	Formwork Sleeve Steel DW15 / L 19 cm F _h 46,9 kN at concrete compressive strength 20 N/mm ² F _h 51,5 kN at concrete compressive strength 24 N/mm ²	501519	VE: 100 Stück
- STREET, STRE	Schalungshülse Stahl DW15 / L 29 cm F _h 85,0 kN at concrete compressive strength 17 N/mm² F _h 90,0 kN at concrete compressive strength 30 N/mm²	501529	VE: 100 Stück
	Cone Plug Ø 42 mm, for installation in wood formwork concrete cover 12 mm, assemblies with Double-Headed Nail 75 mm, zinc-plated, reuseable	401518	VE: 100 Stück
	Sealing Plug PVC ∅ 31 mm	131518	VE: 100 Stück
Formwork Sleeves STEEL DW20		order number pcs/unit	
- Indicate of the last of the	Formwork Sleeve Steel DW20 / L 28 cm F _h 120 kN at concrete compressive strength 30 N/mm ²	502028	unit: 100 pcs
Manual Control	Formwork Sleeve Steel DW20 / L 36 cm F _h 140 kN at concrete compressive strength 30 N/mm ²	502036	unit: 100 pcs
	Cone Plug DW20 ∅ 42 mm, for installation in wood formwork, concrete cover 12 mm	340011	unit: 100 pcs
	Sealing Plug PVC DW20 Ø 32 mm	340012	unit: 100 pcs
	Fixation Cone 45° DW15 for mounting the Formwork Sleeves DW15	401551	unit: 100 pcs

The ideal tool for quickly bending of Round Steel Bars up to \emptyset 12 mm in angularity 90° by hand.

Use these advantages:

- Employment also at existing ceiling formworks
- Stepless raise and lower for reinforcement 10 - 35 cm
- Expensive measuring and finishing is unnecessary

Original TEB 12 only real with its Unginal TEB 12 only real with its Bending Abutment acc. to DIN 1045 Round Steel Bars have no more to be mounted in pre-bent position and therefore do not disturb at formwork.

TEB12 robust construction, galvanized order number 801201

Bending Round Reinforcement Bars: or this way? That way ...







By the TEB12 in shortest time the best result for contractors and structural engineers!

Application - Always start from the left side:

- 1. Measure the reinforcement level to the Bending Abutment and adjust by twisting the Thread Bar and lock the Wing Nut.
- 2. Flip the Retaining Bar in the horizontal position and put the TEB12 at the round bar to be bended. The Retaining Bar is on the front side of the next round bar to the right. It prevents canting the rods to each other.
- 3. Push down Bending Lever until the round bar has reached the required position and simultaneously press towards the Adjusting Peace.

The practical device for

- Installation
 - Transport
 - Storage

for Rolled Grounding Tapes.

- 2 crane lugs for easy transportation
- hot zinc dipped
- ball bearing rollers for easy unrolling
- suitable to steel tapes up to 50 mm width and 750 mm roll diameter



Type with **Runners** for moving on the reinforcement

order number 704004



Type movable with **Wheels** on level grounds and a foldable handgrip

order number 704005

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