

fischer Catalogue





A brand and its promise to perform

Whoever chooses fischer receives more than a range of safe products. The aim is to always develop the best solutions for our customers across the globe.

Besides the innovative products, this predominantly concerns support that is focused on the customer, and services designed to improve customer benefit.

With the fischer ProcessSystem (FPS), we ensure that we are adapting and optimising our processes in line with customer requirements in a flexible manner and on a continuous basis. Therefore we are very pleased having been awarded with the 1st place “Excellent Production System” of the ambitious competition “Global Excellence in Operations”.



Always with its finger on the pulse of the times

At fischer, innovation is more than just a sum of the patents. We are open to new things and are prepared for change – always with the aim of offering our customers the greatest possible benefits. Over the years, our own development and production sites have been developing numerous fixing solutions for the most wide-ranging applications.

Be it new production procedures or materials, such as renewable raw materials: We are carrying out the research for your safety and will continue to do so in the future. This gives us such great flexibility that we can even develop tailor-made customer solutions. This power to innovate has seen fischer become market leader in anchor technology and the fixing industry.

Safety that connects – Decisive quality

We don't make any compromises when it comes to the safety of our products. A whole host of our products are distinguished by comprehensive, up-to-date and international approvals. The fischer product range is well-positioned in all sectors of fixing technology – Steel, Nylon and Chemical fixings. In award-winning quality which continues to impress both professional clients and private customers with equal measure.





We take responsibility

Our active environment management policy means that we are helping to maintain an intact environment for our generation and for those that follow. The environment management policy at the Tumlingen site has been certified in line with DIN EN ISO 14001. We are a member of the German Sustainable Building Council (DGNB), and our products have been successively certified in line with the guidelines provided by the Institute for Construction and the Environment (IBU). With the UX GREEN, we have introduced the first anchor in the market, based on over 50% of regrowing raw materials.



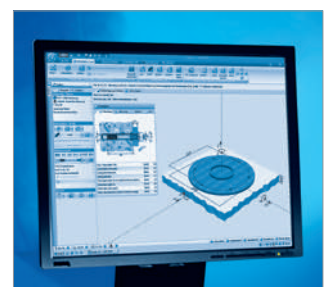
Institut Bauen und Umwelt e.V.



Our service to you

We are a reliable partner, one that will stand at your side and address your individual requirements with advice and action:

- Our products range from chemical systems to steel anchors through to plastic anchors.
- Competence and innovation through own research, development and production.
- Global presence and active sales service in over 100 countries.
- Qualified technical consulting for economical and compliant fastening solutions. Also on-site at the construction site requested.
- Training sessions, some with accreditation, at your premises or at the fischer ACADEMY.
- Design and construction software for demanding applications.



The powerful injection mortar for rebar connections and cracked concrete



Rail fastenings



Rebar connections

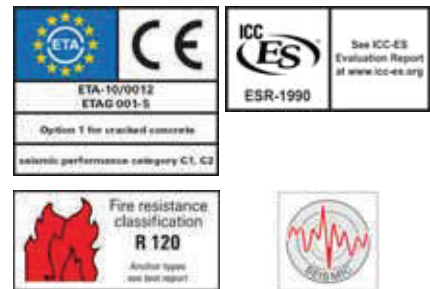
BUILDING MATERIALS

- Approved for anchorings in:
- Concrete C20/25 to C50/60, cracked and non-cracked
 - Rebar connections

Also suitable for:

- Natural stone with dense structure

ASSESSMENT/APPROVAL



ADVANTAGES

- High bond strengths and minor mortar shrinkage allow maximum load application in cracked and non-cracked concrete, even with large threaded rod diameters of up to M42, and rebar connections up to \varnothing 40mm
- Variable anchorage depths from 4x to 20x the threaded rod diameter allow for ideal adaptation to the load to be applied, and ensure an optimised installation time and use of materials.
- FIS EM is also approved for diamond-drilled holes and water-filled drilled holes, thus ensuring more flexibility on the construction site.
- The Epoxy mortar FIS EM is approved for seismic applications C2, which ensures safety even under extreme conditions.

APPLICATIONS

- Heavy steel constructions
- Silo installations
- Tall shelving
- Sound barriers
- Joints for concrete layers
- Rim beam anchorings
- Anchorings in diamond-drilled drill holes
- Fixings in waterfilled drill holes
- Seismic applications
- Post-installed concrete steel bars, e.g. for overlap connections, end anchorings, starter bars, crack stitching etc.



FUNCTIONING

- The injection system, comprising the epoxy resin mortar FIS EM combined with the FTR threaded rod, is suitable for pre-positioned and push-through installation.
- Resin and hardener are stored in two separate chambers and are not mixed and activated until extrusion through the injection capsule in the static mixer.
- The mortar is injected bubble-free from the drill hole base.
- The mortar bonds the entire surface of the anchor rod with the drill hole wall and seals off the drill hole.
- The anchor rod is set manually by lightly rotating it until it reaches the drill hole base.
- During push-through installation, the annular gap between the anchor rod and attachment is filled with FIS EM.
- Anchoring as with cast-in reinforcement bars in line with Eurocode 2 and DIN 1045-1 and ACI 318 concrete splitting design concept.

20 cartridges and 20 nozzles in a reusable bucket.



Item	Description	Per box
93049	FIS EM 390 S c/w 2 mixers per tube	6
521246	FIS EM 390 S Bucket version (1 mixer per tube)	20

The versatile injection mortar system for anchorings in masonry and cracked concrete



BUILDING MATERIALS

Approved for anchorings in:

- Concrete C20/25 to C50/60, cracked and non-cracked
 - Hollow blocks made from light-weight concrete
 - Hollow blocks made from concrete
 - Vertically perforated brick
 - Perforated sand-lime brick
 - Solid sand-lime brick
 - Aerated concrete
 - Solid brick
 - AAC block / wall
- Approved for:
- Rebar connections

APPROVALS



ADVANTAGES

- The FISV injection mortar has numerous system approvals, such as in non-cracked concrete, masonry and for rebar connections. FISV is thus the universal injection mortar family with guaranteed reliability for practically all areas of application.
- FISVW HIGH SPEED has a significantly shorter curing time than FISV, thus also ensuring swift work progress even at low temperatures.
- FISVS LOW SPEED with extended gelling time prevents premature curing of the mortar at higher temperatures and is ideally suited to large drill hole depths.
- The extensive range of accessories is ideally suited to the FISV injection mortar family, increases the great flexibility of the system and thus allows for a broad range of applications.

APPLICATIONS

- Steelwork constructions
- Timber constructions
- Guard rails
- Façades
- Staircases
- Steel brackets
- Machines
- Masts
- Awnings
- Canopies
- Gates
- Consoles
- Pipelines
- Gratings
- Satellite antennas
- Starter bar planting

FUNCTIONING

- The FIS V is a 2-component injection mortar based on vinyl ester hybrid.
- Resin and hardener are stored in two separate chambers and are not mixed and activated until extrusion through the static mixer.
- The injection cartridges are quick and easy to use with the fischer dispensers.
- Partially used cartridges can be reused, simply by changing the static mixer.
- Related accessories for the various applications are available.



Item	Description	Per box
78664	FIS V 360 S c/w 2 mixers per tube	6

The reliable injection mortar for anchorings in masonry



BUILDING MATERIALS

- Vertically perforated brick
- Hollow block
- Perforated sand-lime brick
- Solid sand-lime brick
- Aerated concrete
- Solid brick made from light-weight concrete
- Solid brick



ADVANTAGES

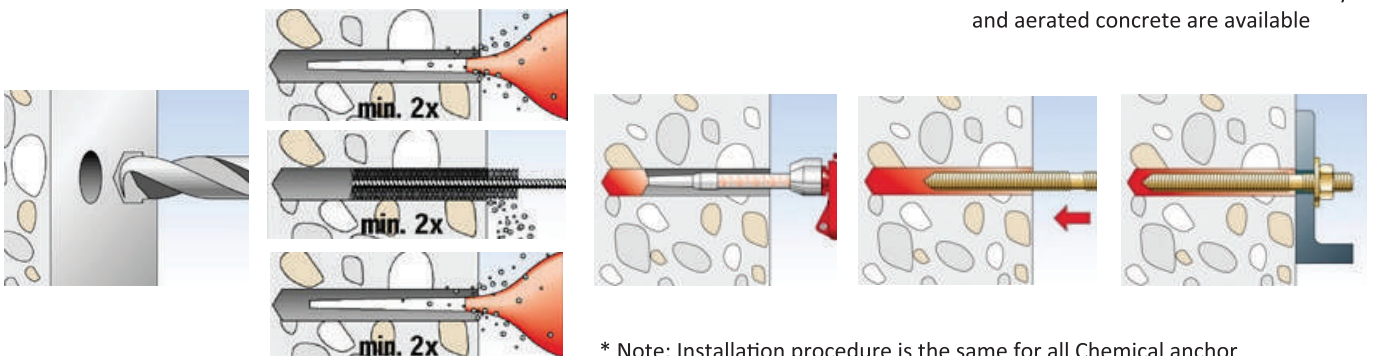
- The FIS P is the economical solution for anchorings in masonry that do not require approvals.
- The FIS P 300 T can be used with stable, standard silicone injection dispensers. No special equipment is required. This helps to reduce procurement costs.

APPLICATIONS

- Use in concrete and masonry with rods
- Small rebar fastening
- Fastening in light weight concrete
- Brick ties
- Threaded rods

FUNCTIONING

- The FIS P is a 2-component injection mortar based on polyester resin.
- Resin and hardener are stored in two separate chambers and are not mixed and activated until extrusion through the static mixer.
- Partially used cartridges can be reused, simply by changing the static mixer.
- Related accessories for use in masonry and aerated concrete are available



* Note: Installation procedure is the same for all Chemical anchor



Item	Description	Per box
93175	FIS P 300 T c/w 2 mixers per tube	12

FTR anchor rod

- Galvanized high tensile grade 5.8
- Complete with 1 nut 1 washer
- Depth of embedment indicator with a fischer sign
- Also available in Stainless Steel & HDG version



Item	Description	Rod length	Thread size	Hole dia (mm)	Box content
45809	FTR M8x110	110mm	M8	10	10
45810	FTR M10x130	130mm	M10	12	10
45812	FTR M12x160	160mm	M12	14	10
45813	FTR M16x190	190mm	M16	18	10
45814	FTR M20x260	260mm	M20	24	10
45815	FTR M24x300	300mm	M24	28	5
45816	FTR M30x380	380mm	M30	35	5

Dispensers

Item	Description	Use for	Box content
58026	FIS AK Premium Manual Dispenser	EM390S, VS360, P300	1
58000	FIS AM Manual Dispenser	EM390S, VS360, P300	1
513423	FIS DC S Battery dispenser	EM390S, VS360, P300	1
58027	FIS AP Pneumatic dispenser	EM390S, VS360, P300	1



FIS AK



FIS AM



FIS AP



FIS MR Static mixer, item code : 96448

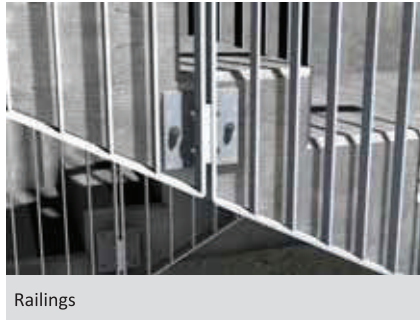
Blow Out Pump

- Effective hole cleaning for chemical anchor
- 1 way air inlet prevents dust stuck in pump
- Less pumping pressure, thus less tiring



Item	Description	Unit
543059	ABG 1 way air inlet blow out pump	1

The push-through anchor for fixings with sophisticated design in cracked concrete



Railings



Protection barrier

VERSIONS

- zinc-plated steel
- stainless steel

BUILDING MATERIALS

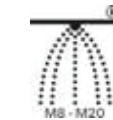
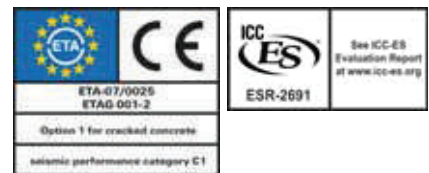
Approved for:

- Concrete C20/25 to C50/60, cracked
- Concrete C20/25 to C50/60, non-cracked

Also suitable for:

- Concrete C12/15
- Natural stone with dense structure

ASSESSMENT/APPROVAL



ADVANTAGES

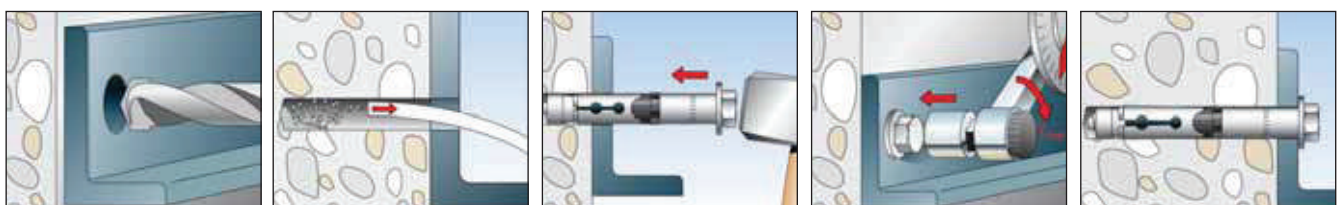
- The anchor construction allows for wide-ranging head shapes for fixing points with sophisticated design.
- The ideal interaction of screw shank and sleeve allows for a high shear load. Thus fewer fixing points are required.
- The international approvals guarantees maximum safety and the best performance. These approvals even cover use in earthquake zones (seismic).
- The optimised geometry reduces the energy required for installation.

APPLICATIONS

- Guard rails
- Staircases
- Consoles
- Steel constructions
- Ladders
- Cable trays
- Machines
- Gates
- Façades
- Gratings

FUNCTIONING

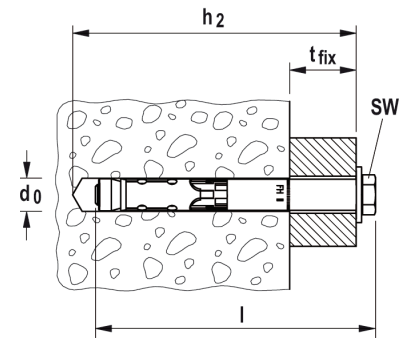
- The FH II is suitable for push-through installation.
- When applying the torque, the cone is pulled into the expansion sleeve and expands it against the drill hole wall.
- The black plastic ring prevents rotation when tightening the anchor, and acts as a crumple zone to take the torque slippage so that the fixture is pulled onto the anchor base.
- Available head shapes for flexible design solutions: Countersunk head (type SK), hexagon head (type S), bolt version with nut and washer (type B) and cap nut (type H).



TECHNICAL DATA



High performance anchor FH II-S
- with hexagonal head



*Others anchor heads available upon request

Item	zinc-plated steel	stainless steel	Approval		Seismic-Approval	Drill hole diameter d_0 [mm]	Min. drill hole depth for through fixings h_2 [mm]	Anchor length l [mm]	Max. fixture thickness t_{fix} [mm]	Thread M	Width across nut $\varnothing SW$ [mm]	Sales unit [pcs]
	Art.-No.	Art.-No.	ETA	ICC								
	gvz	A4										
FH II 10/10 S	503133	—	■	—	—	10	65	70	10	M 6	10	50
FH II 10/10 S	—	510923	■	—	—	10	65	69	10	M 6	10	50
FH II 10/25 S	503134	—	■	—	—	10	80	85	25	M 6	10	50
FH II 10/25 S	—	510924	■	—	—	10	80	84	25	M 6	10	50
FH II 10/50 S	503135	—	■	—	—	10	105	110	50	M 6	10	50
FH II 12/10 S	044884	—	■	▲	C1	12	90	90	10	M 8	13	50
FH II 12/10 S	—	510925	■	—	—	12	90	90	10	M 8	13	50
FH II 12/25 S	044885	—	■	▲	C1	12	105	105	25	M 8	13	50
FH II 12/25 S	—	510926	■	—	—	12	105	105	25	M 8	13	20
FH II 12/50 S	044886	—	■	▲	C1	12	130	130	50	M 8	13	25
FH II 15/10 S	044887	—	■	▲	C1	15	100	106	10	M 10	17	25
FH II 15/10 S	—	510927	■	—	—	15	100	107	10	M 10	17	50
FH II 15/25 S	044888	—	■	▲	C1	15	115	121	25	M 10	17	25
FH II 15/25 S	—	510928	■	—	—	15	115	122	25	M 10	17	20
FH II 15/50 S	044889	—	■	▲	C1	15	140	146	50	M 10	17	25
FH II 18/10 S	046847	—	■	▲	C1	18	115	118	10	M 12	19	20
FH II 18/25 S	044894	—	■	▲	C1	18	130	132	25	M 12	19	20
FH II 18/25 S	—	510929	■	—	—	18	130	133	25	M 12	19	10
FH II 18/50 S	044896	—	■	▲	C1	18	155	157	50	M 12	19	20
FH II 24/25 S	044898	—	■	▲	C1	24	150	160	25	M 16	24	10
FH II 24/25 S	—	502711	■	—	—	24	150	160	25	M 16	24	8
FH II 24/50 S	044900	—	■	▲	C1	24	175	185	50	M 16	24	10
FH II 28/30 S	044901	—	■	▲	C1	28	185	192	30	M 20	30	4
FH II 28/60 S	044902	—	■	▲	C1	28	215	222	60	M 20	30	4
FH II 32/30 S	044903	—	■	▲	C1	32	210	215	30	M 24	36	4
FH II 32/60 S	044904	—	■	▲	C1	32	240	245	60	M 24	36	4

LOADS

High performance anchor FH II - S

Highest permissible loads for a single anchor¹⁾ in concrete C20/25⁴⁾

For the design the complete approval ETA - 07/0025 has to be considered.

Type	Effective anchorage depth h_{ef} [mm]	Min. member thickness h_{min} [mm]	Installation torque T_{inst} [Nm]	Cracked concrete				Non-cracked concrete			
				Permissible tensile load $N_{perm}^{3)}$ [kN]	Permissible shear load $V_{perm}^{3)}$ [kN]	Min. spacing $s_{min}^{2)}$ [mm]	Min. edge distance $c_{min}^{2)}$ [mm]	Permissible tensile load $N_{perm}^{3)}$ [kN]	Permissible shear load $V_{perm}^{3)}$ [kN]	Min. spacing $s_{min}^{2)}$ [mm]	Min. edge distance $c_{min}^{2)}$ [mm]
FH II 10 S	40	80	10,0	3,6	4,3	40	40	6,1	6,1	40	40
FH II 12 S	60	120	22,5	5,7	15,9	50	50	11,2	18,9	60	60
FH II 15 S	70	140	40,0	7,6	20,1	60	60	14,1	28,2	70	70
FH II 18 S	80	160	80,0	11,9	24,5	70	70	17,2	34,4	80	80
FH II 24 S	100	200	160,0	17,1	34,3	80	80	24,0	48,1	100	100
FH II 28 S	125	250	180,0	24,0	47,9	100	100	33,6	67,2	120	120
FH II 32 S	150	300	200,0	31,5	63,0	120	120	44,2	88,4	160	180

¹⁾ The partial safety factors for material resistance as regulated in the approval as well as a partial safety factor for load actions of $\gamma_L = 1,4$ are considered. As an single anchor counts e.g. an anchor with a spacing $s \geq 3 \times h_{ef}$ and an edge distance $c \geq 1,5 \times h_{ef}$. Accurate data see approval.

²⁾ Minimum possible axial spacings resp. edge distance while reducing the permissible load.

³⁾ For combinations of tensile loads, shear loads, bending moments as well as reduced edge distances or spacings (anchor groups) see approval.

⁴⁾ For higher concrete strength classes up to C50/60 higher permissible loads may be possible.

For highest demands. Powerful and flexible.



Balcony railings



Steel girders

VERSIONS

- zinc-plated steel
- stainless steel
- highly corrosion-resistant steel

BUILDING MATERIALS

Approved for:

- Concrete C20/25 to C50/60, cracked
- Concrete C20/25 to C50/60, non-cracked

Also suitable for:

- Concrete C12/15
- Natural stone with dense structure

ASSESSMENT/APPROVAL



ADVANTAGES

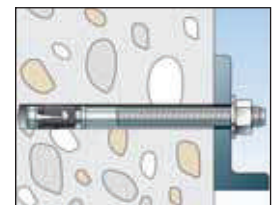
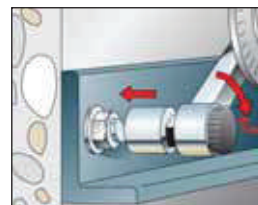
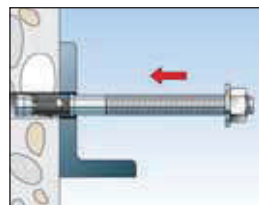
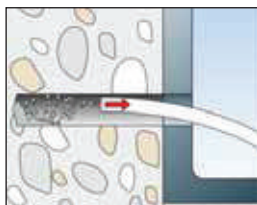
- The FAZ II tried and tested expansion clip enables the highest load bearing capacity. Thus fewer fixing points and smaller anchor plates are required.
- The reduced anchorage depth allows for significantly reduced drill hole depths and reduces the number of reinforcement hits. This allows for a noticeably quicker installation.
- Fewer hammer blows when hammering in the anchor, together with the low torque slippage, ensure a noticeably simple and comfortable setting process.
- The international approvals guarantee maximum safety and the best performance. These approvals even cover use in earthquake zones (seismic C1 + C2). ICC approval only with standard embedment depth.

APPLICATIONS

- Steel constructions
- Guard rails
- Consoles
- Ladders
- Cable trays
- Machines
- Staircases
- Gates
- Façades / curtain wall
- Timber constructions

FUNCTIONING

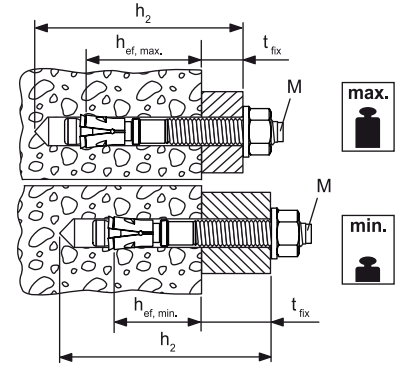
- The FAZ II is suitable for pre-positioned and push-through installation and is also ideal for stand-off installation thanks to the long thread.
- When applying the torque, the cone bolt is pulled into the expansion sleeve and expand it against the drill hole wall.
- The anchor is set in line with the approval once the preset installation torque is achieved.
- In the case of series installation, we recommend using the FABS anchor bolt setting tool.



TECHNICAL DATA



Bolt anchor FAZ II



Item	zinc-plated steel	stainless steel	highly corrosion resistant steel	Approval		Seismic-Approval	Drill hole diameter d_0 [mm]	Min. drill hole depth for through fixings h_2 [mm]	Anchor length l [mm]	Max. usable length hef,max./ hef,min. t_{fix} [mm]	Thread $\emptyset \times$ length [mm]	Width across nut \emptyset SW [mm]	Sales unit [pcs]
	Art.-No.	Art.-No.	Art.-No.	ETA	ICC								
	gvz	A4	C										
FAZ II 6/10	542621	542623	—	■	—	—	6	60	65	10/-	M 6 x 25	10	50
FAZ II 6/20	542622	542624	—	■	—	—	6	70	75	20/-	M 6 x 35	10	50
FAZ II 8/10	094871 1)	501396 1)	—	■	▲	C1	8	65	75	10/20	M 8 x 38	13	50
FAZ II 8/10	—	—	501428 1)	■	▲	C1	8	65	75	10/20	M 8 x 38	13	10
FAZ II 8/30	094877 1)	501399 1)	—	■	▲	C1	8	85	95	30/40	M 8 x 58	13	50
FAZ II 8/30	—	—	501429 1)	■	▲	C1	8	85	95	30/40	M 8 x 58	13	10
FAZ II 8/50	094878 1)	501401	—	■	▲	C1	8	105	115	50/60	M 8 x 78	13	50
FAZ II 8/100	094879 1)	—	—	■	▲	C1	8	155	165	100/110	M 8 x 128	13	25
FAZ II 8/160	503251 1)	—	—	■	▲	C1	8	215	225	160/170	M 8 x 100	13	20
FAZ II 10/10	094981	501403	—	■	▲	C1 / C2	10	85	95	10/30	M 10 x 53	17	50
FAZ II 10/10	—	—	501430	■	▲	C1	10	85	95	10/30	M 10 x 53	17	10
FAZ II 10/20	094982	—	—	■	▲	C1 / C2	10	95	105	20/40	M 10 x 63	17	25
FAZ II 10/20	—	501406	—	■	▲	C1 / C2	10	95	105	20/40	M 10 x 63	17	50
FAZ II 10/30	094983	—	—	■	▲	C1 / C2	10	105	115	30/50	M 10 x 73	17	25
FAZ II 10/30	—	501407	—	■	▲	C1 / C2	10	105	115	30/50	M 10 x 73	17	50
FAZ II 10/30	—	—	503185	■	▲	C1	10	105	115	30/50	M 10 x 73	17	10
FAZ II 10/50	094984	501409	—	■	▲	C1 / C2	10	125	135	50/70	M 10 x 93	17	20
FAZ II 10/70	—	501410	—	■	▲	C1 / C2	10	145	155	70/90	M 10 x 113	17	20
FAZ II 10/80	094985	—	—	■	▲	C1 / C2	10	155	165	80/100	M 10 x 123	17	20
FAZ II 10/100	—	501411	—	■	▲	C1 / C2	10	175	185	100/120	M 10 x 100	17	20
FAZ II 10/100	094986	—	—	■	▲	C1 / C2	10	175	185	100/120	M 10 x 143	17	20
FAZ II 10/160	—	501412	—	■	▲	—	10	235	245	160/180	M 10 x 100	17	20
FAZ II 10/160	503252	—	—	■	▲	—	10	235	245	160/180	M 10 x 193	17	20
FAZ II 12/10	095419	501413	—	■	▲	C1 / C2	12	100	110	10/30	M 12 x 61	19	20
FAZ II 12/10	—	—	503186	■	▲	C1	12	100	110	10/30	M 12 x 61	19	10
FAZ II 12/20	095420	501415	—	■	▲	C1 / C2	12	110	120	20/40	M 12 x 71	19	20
FAZ II 12/30	095421	501416	—	■	▲	C1 / C2	12	120	130	30/50	M 12 x 81	19	20
FAZ II 12/30	—	—	501431	■	▲	C1	12	120	130	30/50	M 12 x 81	19	10
FAZ II 12/50	095446	501419	—	■	▲	C1 / C2	12	140	150	50/70	M 12 x 101	19	20
FAZ II 12/60	—	501420	—	■	▲	C1 / C2	12	150	160	60/80	M 12 x 111	19	20
FAZ II 12/80	095454	—	—	■	▲	C1 / C2	12	170	180	80/100	M 12 x 131	19	20
FAZ II 12/100	095470	501421	—	■	▲	C1 / C2	12	190	200	100/120	M 12 x 151	19	20
FAZ II 12/160	503253	—	—	■	▲	—	12	250	260	160/180	M 12 x 186	19	10
FAZ II 12/160	—	503180	—	■	▲	—	12	250	260	160/180	M 12 x 100	19	20
FAZ II 12/200	095605	—	—	■	▲	—	12	290	300	200/220	M 12 x 186	19	10
FAZ II 16/5	522124	—	—	■	▲	C1 / C2	16	115	128	5/25	M 16 x 64	24	20
FAZ II 16/5	—	522125	—	■	▲	C1 / C2	16	115	128	5/25	M 16 x 64	24	10
FAZ II 16/25	—	501423	—	■	▲	C1 / C2	16	135	148	25/45	M 16 x 84	24	20
FAZ II 16/25	—	—	501432	■	▲	C1	16	135	148	25/45	M 16 x 84	24	10
FAZ II 16/25	095836	—	—	■	▲	C1 / C2	16	135	148	25/45	M 16 x 84	24	10
FAZ II 16/50	095864	—	—	■	▲	C1 / C2	16	160	173	50/70	M 16 x 109	24	10
FAZ II 16/50	—	—	503187	■	▲	C1	16	160	173	50/70	M 16 x 109	24	10
FAZ II 16/50	—	501424	—	■	▲	C1 / C2	16	160	173	50/70	M 16 x 109	24	20
FAZ II 16/100	095865	501425	—	■	▲	C1 / C2	16	210	223	100/120	M 16 x 159	24	10

FAZ II 16/160	503254	—	—	■	▲	C1 / C2	16	270	283	160/180	M 16 x 189	24	10
FAZ II 16/200	095967	—	—	■	▲	—	16	310	323	200/220	M 16 x 189	24	10
FAZ II 16/250	095968	—	—	■	▲	—	16	360	373	250/270	M 16 x 100	24	10
FAZ II 16/300	096188	—	—	■	▲	—	16	410	423	300/320	M 16 x 100	24	10
FAZ II 20/30	046632	—	—	■	▲	C1 / C2	20	155	172	30/-	M 20 x 54	30	5
FAZ II 20/30	—	501426	—	■	▲	C1 / C2	20	155	172	30/-	M 20 x 54	30	4
FAZ II 20/60	046633	—	—	■	▲	C1 / C2	20	185	202	60/-	M 20 x 84	30	5
FAZ II 20/60	—	503183	—	■	▲	C1 / C2	20	185	202	60/-	M 20 x 84	30	4
FAZ II 20/160	503255	—	—	■	▲	C1 / C2	20	285	302	160/-	M 20 x 100	30	5
FAZ II 24/30	046635	—	—	■	▲	C1	24	185	205	30/-	M 24 x 58	36	5
FAZ II 24/30	—	501427	—	■	▲	C1	24	185	205	30/-	M 24 x 58	36	4
FAZ II 24/60	046636	—	—	■	▲	C1	24	215	235	60/-	M 24 x 88	36	5
FAZ II 24/60	—	503184	—	■	▲	C1	24	215	235	60/-	M 24 x 88	36	4

1) With minimum embedment depth only for statically indeterminate systems
Approval Seismic C1/C2 only with maximum embedment depth

LOADS

Bolt anchor FAZ II, FAZ II K and FAZ II GS (HBS)

zinc plated steel / stainless steel / high corrosion resistant steel

Permissible loads of a single anchor in cracked normal concrete (concrete tension zone) of strength class C20/25 (~B25) ^{1) 2) 3) 9)}										Minimum spacings while reducing the load	
Type	Material fixing element	Min. member thickness	Effective anchorage depth	Installation torque	Permissible tensile load	Permissible shear load	Required edge distance (with one edge) for		Required spacing for	Min. spacing	Min. edge distance
							Max. tension load c	Max. shear load c			
		h _{min} [mm]	h _{ef} ⁴⁾ [mm]	T _{inst} [Nm]	N _{perm} ⁶⁾ [kN]	V _{perm} ⁶⁾ [kN]	[mm]	[mm]	[mm]	[mm]	[mm]
FAZ II 6	gvz	80	40	8	0,7	3,4	45	80	120	35	45
	A4										
	C										
FAZ II 8	gvz	80	35 ⁵⁾	20	2,6	7,8	40	200	105	35	40
		90	45		3,8		45	185	135		
	A4	80	35 ⁵⁾		2,6	8,9	40	235	105		
		90	45		3,8	9,6	45		135		
	C	80	35 ⁵⁾		2,6	8,9	40		105		
		90	45		3,8	9,6	45		135		
FAZ II 10	gvz	90	40	45	4,3	11,3	60	275	120	40	45
		110	60		6,2		12,2	65	255		
	A4	90	40		4,3	11,3	60	275	120		
		110	60		6,2	15,1	65	325	180		
	C	90	40		4,3	11,3	60	275	120		
		110	60		6,2	15,1	65	325	180		
FAZ II 12	gvz	100	50	60	6,1	17,5	75	400	150	50	55
		120	70		9,5		100	350	210		
	A4	100	50		6,1	18,8	75	435	150		
		120	70		9,5	21,9	100	450	210		
	C	100	50		6,1	18,8	75	435	150		
		120	70		9,5	21,9	100	450	210		
FAZ II 16	gvz	140	65	110	9,0	28,7	100	545	195	65	65
			85		13,4		31,4	130	585		
	A4		65		9,0	28,7	100	545	195		
			85		13,4	39,9	130	760	255		
	C		65		9,0	28,7	100	545	195		
			85		13,4	39,9	130	760	255		
FAZ II 20	gvz	170	100	200	17,1	44,6	150	745	300	95	85
	A4										
	C										
FAZ II 24	gvz	210	125	270	24,0	57,5	170	840	375	100	100
	A4										
	C										

For the design the complete assessment ETA-05/0069, issue date 03.07.2017 has to be considered.⁸⁾

¹⁾ The partial safety factors for material resistance as regulated in the ETA as well as a partial safety factor for load actions of $\gamma_L = 1,4$ are considered. As a single anchor under tension load and shear load without edge influence counts e.g. an anchor with a spacing $s \geq 3 \cdot h_{ef}$ and an edge distance $c \geq 1,5 \cdot h_{ef}$. Concerning shear loads under edge influence and accurate data see ETA.

²⁾ For higher concrete strength classes up to C50/60 higher permissible loads may be possible.

³⁾ Drill method hammer drilling, hollow drilling resp. Diamond drilling.

⁴⁾ Eff. anchorage depth: min. anchorage depth, max. anchorage depth.

⁵⁾ The anchorage depths smaller than 40 mm are only allowed for single anchors as part of a multiple fixing of non-structural systems.

⁶⁾ For combinations of tensile loads, shear loads, bending moments as well as reduced edge distances or spacings (anchor groups) see ETA.

⁷⁾ Minimum possible axial spacings resp. edge distance while reducing the permissible load.

⁸⁾ The given loads refer to the European Technical Assessment ETA-05/0069, issue date 03.07.2017. Design of the loads according TR055/ETAG 001, Annex C, Method A (for static resp. quasi-static loads).

⁹⁾ A reinforcement in the concrete to prevent splitting is required. The width of the cracks has to be limited under consideration of the splitting forces at $w_k \sim 0,3\text{mm}$.

The cost-efficient fixing for flexible use in non-cracked concrete



Column bases



Stormwater overflow tank manholes

VERSIONS

- zinc-plated steel
- stainless steel
- hot-dip galvanised steel

BUILDING MATERIALS

Approved for:

- Concrete C20/25 to C50/60, non-cracked

Also suitable for:

- Concrete C12/15
- Natural stone with dense structure

ASSESSMENT/APPROVAL



ADVANTAGES

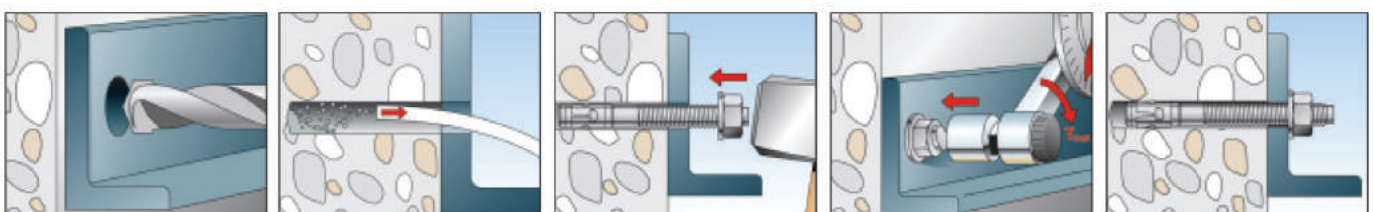
- The standard anchorage depth achieves the maximum load-bearing capacities. Thus fewer fixing points and smaller anchor plates are required.
- The reduced anchorage depth reduces the drill hole depth. This minimises the amount of time needed for installation whilst increasing flexibility.
- The long thread balances component tolerances and allows for stand-off installations, thus increasing flexibility.
- Few hammer blows and the minimal torque slippage allow for a noticeably simpler installation.
- The drive-in pin protects the thread from damage, and thus ensures a faster installation and dismantling of the attachment.

APPLICATIONS

- Steel constructions
- Guard rails
- Consoles
- Ladders
- Cable trays
- Machines
- Staircases
- Gates
- Façades / curtain wall

FUNCTIONING

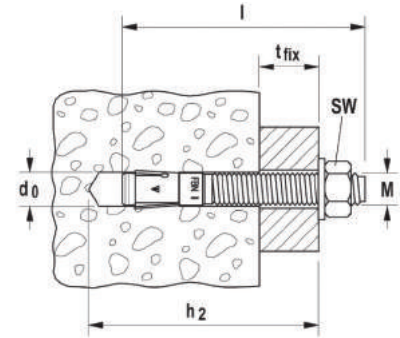
- The FBN II is suitable for pre-positioned and push-through installation; also suitable for stand-off installation under certain conditions.
- Prior to installation, place the hexagon nut in the optimal position (the drive-in pin projects by approx. 3 mm out of the hexagon nut).
- When applying the torque, the cone bolt is pulled into the expansion clip and expands it against the drill hole wall.
- The head embossing offers a simple control of the anchoring.
- In the case of series installation, we recommend using the FABS bolt anchor setting tool.



TECHNICAL DATA



Bolt anchor FBN II



	zinc-plated steel	stainless steel	hot-dip galva- nised steel	Approval	Drill hole diameter	Min. drill hole depth for through fixings	Anchor length	Max. usable length hef,max./ hef,min.	Thread	Width across nut	Sales unit
	Art.-No.	Art.-No.	Art.-No.	ETA	d ₀ [mm]	h ₂ [mm]	l [mm]	t _{fix} [mm]	Ø x length [mm]	○ SW [mm]	[pcs]
Item	gvz	A4	fvz								
FBN II 6/5	505526 ¹⁾²⁾	—	—	■	6	45	50	5/-	M 6 x 12	10	100
FBN II 6/10	505527 ¹⁾²⁾	505532 ¹⁾²⁾	—	■	6	50	55	10/-	M 6 x 17	10	100
FBN II 6/30	505528 ¹⁾²⁾	505535 ¹⁾²⁾	—	■	6	70	75	30/-	M 6 x 35	10	100
FBN II 8/5	040662	—	—	■	8	61	66	5/15	M 8 x 34	13	50
FBN II 8/10	040664	507555	507575	■	8	66	71	10/20	M 8 x 39	13	50
FBN II 8/20	040669	—	—	■	8	76	81	20/30	M 8 x 49	13	50
FBN II 8/30	040700	507556	507576	■	8	86	91	30/40	M 8 x 59	13	50
FBN II 8/50	040771	507557	507577	■	8	106	111	50/60	M 8 x 79	13	50
FBN II 8/70	040777	—	507578	■	8	126	131	70/80	M 8 x 99	13	20
FBN II 8/100	040783	—	—	■	8	156	161	100/110	M 8 x 129	13	20
FBN II 10/10	040827	507558	507579	■	10	78	86	10/20	M 10 x 46	17	50
FBN II 10/20	040851	507559	—	■	10	88	96	20/30	M 10 x 56	17	50
FBN II 10/30	040854	—	—	■	10	98	106	30/40	M 10 x 66	17	50
FBN II 10/30	—	507560	507580	■	10	98	106	30/40	M 10 x 66	17	50
FBN II 10/50	040855	507561	507582	■	10	118	126	50/60	M 10 x 86	17	20
FBN II 10/70	040931	—	—	■	10	138	146	70/80	M 10 x 106	17	20
FBN II 10/100	040943	507562	507583	■	10	168	176	100/110	M 10 x 136	17	20
FBN II 10/140	040944	—	—	■	10	208	216	140/150	M 10 x 176	17	20
FBN II 10/160	040945	—	—	■	10	228	236	160/170	M 10 x 196	17	20
FBN II 12/10	040950	507563	507589	■	12	95	106	10/25	M 12 x 59	19	20
FBN II 12/20	044558	507564	—	■	12	105	116	20/35	M 12 x 69	19	20
FBN II 12/30	045263	507565	507591	■	12	115	126	30/45	M 12 x 79	19	20
FBN II 12/50	045264	507566	507592	■	12	135	146	50/65	M 12 x 99	19	20
FBN II 12/80	045265	—	—	■	12	165	176	80/95	M 12 x 129	19	20
FBN II 12/100	045266	507567	507596	■	12	185	196	100/115	M 12 x 149	19	20
FBN II 12/120	045267	—	—	■	12	205	216	120/135	M 12 x 169	19	20
FBN II 12/140	045268	—	—	■	12	225	236	140/155	M 12 x 189	19	20
FBN II 12/160	045269	—	—	■	12	245	256	160/175	M 12 x 189	19	20
FBN II 16/10	—	507568	—	■	16	114	130	10/25	M 16 x 74	24	10
FBN II 16/25	045564	507569	507598	■	16	129	145	25/40	M 16 x 89	24	10
FBN II 16/50	045565	507570	507553	■	16	154	170	50/65	M 16 x 105	24	10
FBN II 16/80	045566	—	—	■	16	184	200	80/95	M 16 x 144	24	10
FBN II 16/100	045567	—	507554	■	16	204	220	100/115	M 16 x 164	24	10
FBN II 16/140	045568	—	—	■	16	244	260	140/155	M 16 x 184	24	10
FBN II 16/160	045569	—	—	■	16	264	280	160/175	M 16 x 184	24	10
FBN II 16/200	045570	—	—	■	16	304	320	200/215	M 16 x 184	24	10
FBN II 20/30	045573	507571	508015	■	20	165	187	30/55	M 20 x 90	30	10
FBN II 20/60	045574	507572	—	■	20	195	217	60/85	M 20 x 90	30	10
FBN II 20/80	045575	—	—	■	20	215	237	80/105	M 20 x 90	30	10
FBN II 20/120	045576	—	—	■	20	255	277	120/145	M 20 x 90	30	10

1) Use restricted to anchoring of structural components which are statically indeterminate.

2) Nut and washer not pre-assembled/supplied loose.

LOADS

Bolt anchor FBN II

zinc plated steel / stainless steel / hot dipped galvanised steel

Permissible loads of a single anchor in non-cracked normal concrete (concrete compression zone) of strength class C20/25 (~B25) ^{1) 2) 3)}											Minimum spacings while reducing the load	
Type	Material fixing element	Min. member thickness	Effective anchorage depth	Installation torque	Permissible tensile load	Permissible shear load	Required edge distance (with one edge) for		Required spacing for	Min. spacing	Min. edge distance	
							Max. tension load c	Max. shear load c				Max. Load s
		h _{min} [mm]	h _{ef} [mm]	T _{inst} [Nm]	N _{perm} ⁴⁾ [kN]	V _{perm} ⁴⁾ [kN]						
FBN II 6	gvz	100	30 ⁸⁾	4	2,9	3,4	100	60	90	40	40	
	A4			4	2,9	3,0		55				
FBN II 8	gvz	100	30 ⁸⁾	15	2,9	7,1	65	115	90	40	40	
	A4			10	2,9	7,1		115		50	45	
	gvz	100	40	15	6,1	7,6	95	120	120	40	40	
	A4			10		7,3		115			45	
	fvz			15		7,6		120			40	
FBN II 10	gvz	100	40	30	6,1	12,0	100	190	120	50	80	
	A4			20		11,6		185				
	gvz	100	50	30	8,5	12,0	100	185	150	50	50	
	A4			20		11,6		180		70	55	
	fvz			30		12,0		185		50	50	
FBN II 12	gvz	100	50	50	8,5	17,9	145	280	150	70	100	
	A4			35		15,7		245				
	gvz	120	65	50	12,6	17,9	145	245	195	70	70	
	A4			35		15,7		215				
	fvz			40		17,9		245				
FBN II 16	gvz	120	65	100	12,6	29,0	175	410	195	90	120	
	A4			80								
	gvz	160	80	100	17,2	31,5	175	375	240	90	90	
	A4			80		29,1		340		120	80	
	fvz			70		31,5		375		90	90	
FBN II 20	gvz	160	80	200	17,2	38,3	185	455	240	120	120	
	A4			150		39,6		470		140		
	gvz	200	105	200	25,9	38,3	185	385	315	120	120	
	A4			150		49,1		510				
	fvz			200		38,3		385				

For the design the complete assessment ETA-07/0211 has to be considered. ⁷⁾

¹⁾ The partial safety factors for material resistance as regulated in the ETA-07/0211 as well as a partial safety factor for load actions of $\gamma_L = 1.4$ are considered. As an single anchor counts e.g. an anchor with a spacing $s \geq 3 \cdot h_{ef}$ and an edge distance $c \geq 1.5 \cdot h_{ef}$. Accurate data see ETA-07/0211.

²⁾ For higher concrete strength classes up to C50/60 higher permissible loads may be possible.

³⁾ Drill method Hammer drilling resp. hollow drilling.

⁴⁾ For combinations of tensile loads, shear loads, bending moments as well as reduced edge distances or spacings (anchor groups) see ETA-07/0211.

⁵⁾ Minimum possible axial spacings resp. edge distance while reducing the permissible load.

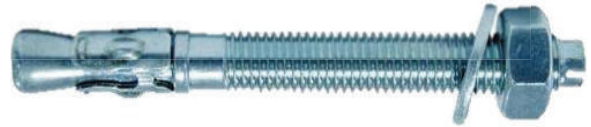
⁶⁾ Minimum possible spacing resp. edge distance while reducing the permissible load for the required minimum member thickness. The combination of minimum edge distance and minimum spacing is not possible. One of both values has to be increased acc. ETA-07/0211.

⁷⁾ The given loads refer to the European Technical Assessment ETA-07/0211, issue date 19/05/2016. Design of the loads according ETAG 001, Annex C, Method A (for static resp. quasi-static loads).

⁸⁾ Anchoring depth smaller than 40 mm are only approved for statically indeterminate systems.

Economic Wedge Anchor FWA

The flexible expansion bolt



Stairs, railings



Windows and façade



steel trusses and
consoles



Electric & sanitary
installation

Suitability:

For Fixing of:

Light Steel Construction, railings, consoles, ladders, cable trays, staircases, facades and curtain wall, window elements, wooden constructions.

Product descriptions:

An economical anchor bolt for push through installation

Advantages / Benefits

Long thread allows stand-off installations and variable usable lengths

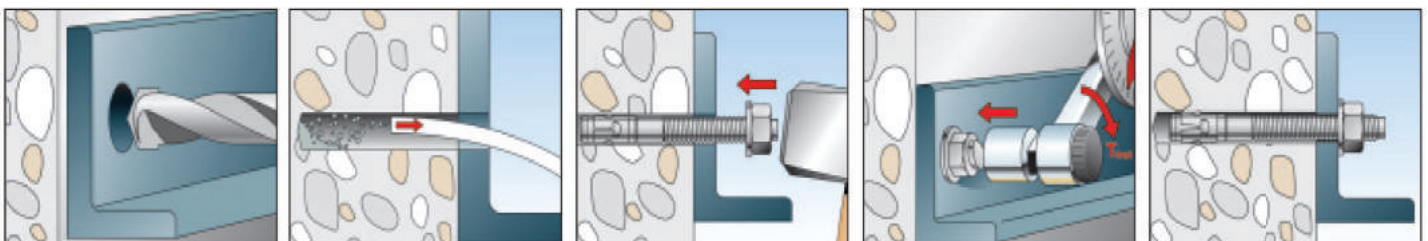
High loading capacity

Economical

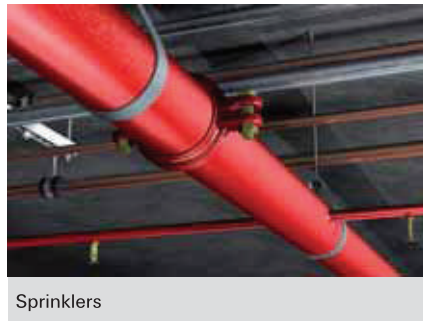
High quality steel

Product Data

Description	Zinc-plated Steel	Hot Dip Galv.	Anchor length	Hole dia (mm)	Min Embedment Depth (mm)
FWA 8x50	45644		50mm	8	40
FWA 8x65	45788		65mm	8	40
FWA 8x80	45789		80mm	8	40
FWA 10x65	45645		65mm	10	50
FWA 10x80	45792		80mm	10	50
FWA 10x95	45793		95mm	10	50
FWA 12x80	45647		80mm	12	60
FWA 12x100	45648		100mm	12	60
FWA 12x120	45795		120mm	12	60
FWA 12x150	45796		150mm	12	60
FWA 16x125	502921		125mm	16	80
FWA 16x140	45798		140mm	16	80
FWA 20x160	45800		160mm	20	100
FWA 20 x 200	503382		200mm	20	100
FWA 8 x 95 fvz		502924	95mm	8	40
FWA 10 x 95 fvz		502927	95mm	10	50
FWA 10 x 115 fvz		502928	115mm	10	50
FWA 12 x 100 fvz		502973	100mm	12	60
FWA 12 x 120 fvz		502974	120mm	12	60
FWA 16 x 140 fvz		502978	140mm	16	80



The internally threaded anchor with rim for simple hammerset installation



Sprinklers



Pipelines

VERSIONS

- zinc-plated steel
- stainless steel available upon request

FOR FIXING OF

- pipes and sprinkler systems
- steel constructions
- cable trays
- suspended ceiling

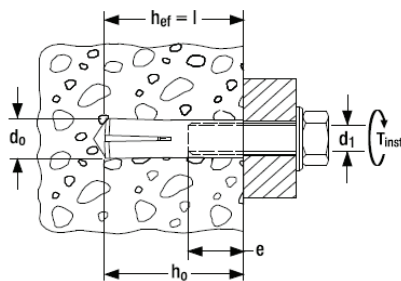
BUILDING MATERIALS

Approved for:

- Concrete C20/25 to C50/60, non-cracked

Also suitable for:

- Concrete C12/15
- Natural stone with dense structure

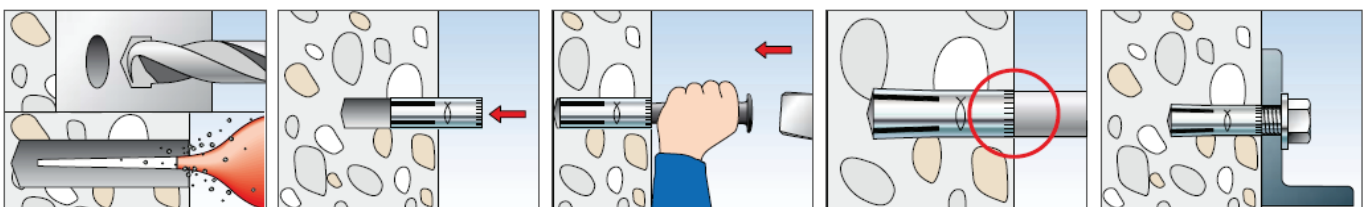


TECHNICAL DATA

Type	Art. No.	Thread	Nominal drill-Ø	Min. drill depth at prior insertion mode	Min. anchorage depth	Min. bolt penetration	Max. bolt penetration	Total length	Installation torque	Related setting tool	Qty. per box
		d ₁ M [mm]	d ₀ [mm]	h ₀ ≥ [mm]	h _{ef} ≥ [mm]	e ₂ ≥ [mm]	e ₁ ≤ [mm]	l [mm]	T _{inst} [Nm]		[pcs.]
Zinc-plated steel											
EA M6 N	90159	6	8	25	25	6	12	25	4	504573 EA-ST 6	100
EA M8 N	90160	8	10	30	30	8	13	30	8	504576 EA-ST 8	100
EA M10 N	90161	10	12	40	40	10	17	40	15	504584 EA-ST 10	50
EA M12 N	90162	12	15	50	50	12	22	50	35	504585 EA-ST 12	50
EA M12 N D	500872	12	16	50	50	12	22	50	35	504585 EA-ST 12	50
EA M16 N	90163	16	20	65	65	16	27	65	60	504586 EA-ST 16	25
EA M20 N	90164	20	25	80	80	20	34	80	120	504587 EA-ST 20	25

Type	Art. No.	Thread	Nominal drill-Ø	Min. drill depth at prior insertion mode	Min. anchorage depth	Total length	Installation torque	Qty. per box
		d ₁ UNC [inch]	d ₀ [inch]	h ₀ ≥ [inch]	h _{ef} ≥ [inch]	l [inch]	T _{inst} [Nm]	[pcs.]
EA IM-N								
EA IM 1/4 N	48103	1/4	8	25	25	25	4	100
EA IM 5/16 N	48104	5/16	10	30	30	30	8	100
EA IM 3/8 N	48105	3/8	12	40	40	40	15	50
EA IM 1/2 N	48106	1/2	16	50	50	50	35	50
EA IM 5/8 N	48107	5/8	20	65	65	65	60	25
EA IM 3/4 N	48108	3/4	25	80	80	80	120	25

INSTALLATION



The adaptable multi-substrate anchor



VERSIONS

- zinc-plated steel
- stainless steel

BUILDING MATERIALS

Approved for:

- Concrete C12/15
- Vertically perforated brick
- Perforated sand-lime brick
- Solid sand-lime brick
- Solid brick made from light-weight concrete
- Solid brick

Also suitable for:

- Natural stone with dense structure
- Solid panel made from gypsum
- Hollow blocks made from light-weight concrete
- Three-layer composite exterior wall panels
- Light-weight aggregate concrete

ASSESSMENT/APPROVAL



ADVANTAGES

- The universal operating principle with an anchorage depth of 70mm and unique asymmetrical teeth, makes it an assembly-friendly anchor even in an unknown base material. As such, the FUR is the right choice for projects with an unknown base material; ensuring a secure fixing at all times.
- The slim geometry guarantees a simple installation, even in cases involving thick wooden fixtures and narrow drill holes.
- Extensive range available with diameters of 8 and 10 mm as well as anchor lengths from 80 to 230 mm.

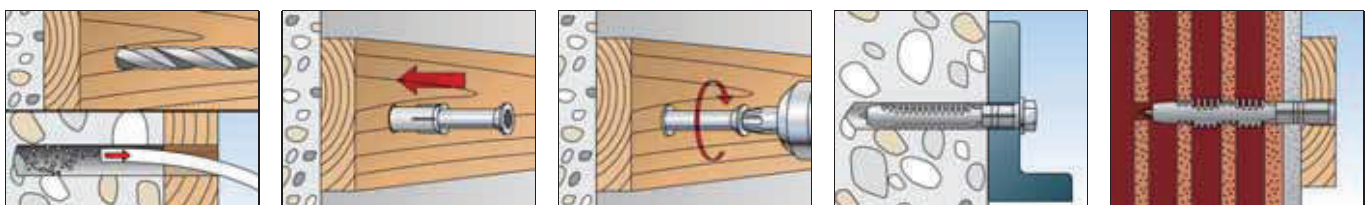
APPLICATIONS

- Façade and roof substructures made of wood and metal
- Windows
- Squared timbers
- Gates and doors
- Claddings
- Interior fittings

FUNCTIONING

- The FUR is suitable for push-through installation.
- Screwing in the screw causes the individual teeth to expand. In solid materials, the teeth create even expansion forces. In hollow materials, the teeth expand through the solid part of the block and form an undercut in the cavity.
- With vertically perforated bricks, only use rotary drilling (no impact drilling).
- Countersunk head screws are recommended for the installation of timber constructions; in the case of metal constructions, use anchors with hexagon head screws and moulded washers.

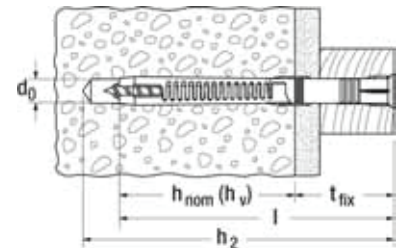
INSTALLATION



TECHNICAL DATA



FUR-T - with fischer countersunk head safety screw

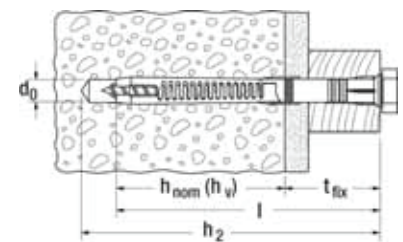


	zinc-plated steel	stainless steel	Approval	Drill hole diameter	Min. drill hole depth for through fixings	Min. anchorage depth	Anchor length	Max. fixture thickness	Drive	Sales unit
	Art.-No.	Art.-No.	ETA	d_0 [mm]	h_2 [mm]	$h_{nom}(h_v)$ [mm]	l [mm]	t_{fix} [mm]		[pcs]
Item	gvz	A4								
FUR 8 x 80 T	070110	070120	—	8	90	70	80	10	T30	50
FUR 8 x 100 T	070111	070121	—	8	110	70	100	30	T30	50
FUR 10 x 80 T	088756	088784	■	10	90	70	80	10	T40	50
FUR 10 x 100 T	088757	088785	■	10	110	70	100	30	T40	50

TECHNICAL DATA



FUR-SS - with fischer hexagon head safety screw



	zinc-plated steel	stainless steel	Approval	Drill hole diameter	Min. drill hole depth for through fixings	Min. anchorage depth	Anchor length	Max. fixture thickness	Drive	Sales unit
	Art.-No.	Art.-No.	ETA	d_0 [mm]	h_2 [mm]	$h_{nom}(h_v)$ [mm]	l [mm]	t_{fix} [mm]		[pcs]
Item	gvz	A4								
FUR 8 x 80 SS	070130	070140	—	8	90	70	80	10	SW 10	50
FUR 8 x 100 SS	070131	070141	—	8	110	70	100	30	SW 10	50
FUR 10 x 80 SS	088776	088792	■	10	90	70	80	10	SW 13	50
FUR 10 x 100 SS	088777	088793	■	10	110	70	100	30	SW 13	50

LOADS

Frame fixing FUR⁴⁾

Highest permissible loads^{1) 6)} for a single anchor for multiple fixings of non-structural applications in masonry.

For the design the complete approval ETA-13/0235 has to be considered.

Type	Compressive brick strength	Bulk density	Min. brick format	Min. anchorage depth ⁵⁾	Min. member thickness ⁵⁾	Solid brick masonry and perforated brick masonry		
						Permissible load	Min. spacing	Min. edge distance
	f_b [N/mm ²]	ρ [kg/dm ³]	(L x W x H) [mm]	h_{nom} [mm]	h_{min} [mm]	$F_{perm}^{3)}$ [kN]	$s_{min}^{2)}$ [mm]	$c_{min}^{2)}$ [mm]
Solid brick Mz acc. DIN 105-100 resp. DIN EN 771-1								
FUR 10	≅ 8	≅ 1,8	NF (240x113x71)	70	110 (113)	0,57	100	100
FUR 10	≅ 10					0,71	100	100
FUR 10	≅ 12					0,86	100	100
Calcium silicate solid brick KS acc. DIN V 106 resp. DIN EN 771-2								
FUR 10	≅ 8	≅ 1,8	NF (240x113x71)	70	110 (113)	0,43	100	100
FUR 10	≅ 10					0,57	100	100
FUR 10	≅ 20					0,71	100	100
FUR 10	≅ 8	≅ 1,8	500x175x235	70	110 (175)	0,71	100	100
FUR 10	≅ 10					0,86	100	100
FUR 10	≅ 12					1,00	100	100
Lightweight solid brick KLB V acc. DIN V 18152-100 resp. DIN EN 771-3								
FUR 10	≅ 6	≅ 1,6	250x240x245	70	110 (240)	0,57	100	100
FUR 10	≅ 8					0,86	100	100
Vertical perforated brick Hlz acc. DIN 105-100 resp. DIN EN 771-1								
FUR 10	≅ 10	≅ 1,4	Form B	70	110 (175)	0,29 ⁵⁾	100	100
FUR 10	≅ 12					0,37 ⁵⁾	100	100
FUR 10	≅ 16					0,49 ⁵⁾	100	100
FUR 10	≅ 20					0,57 ⁵⁾	100	100
Calcium silicate hollow brick KSL acc. DIN V 106 resp. DIN EN 771-2								
FUR 10	≅ 10	≅ 1,6	2 DF (240x115x113)	70	110 (115)	0,43	100	100
FUR 10	≅ 12					0,57	100	100
FUR 10	≅ 16					0,71	100	100

¹⁾ The required partial safety factors for material resistance as well as a partial safety factor for load actions $\gamma_c = 1,4$ are considered. As an single anchor counts e.g. an anchor with a minimum spacing s_{min} according table 10 of the approval.

²⁾ Minimum possible axial spacings (anchor group) while reducing the permissible load. The combination of the given min. spacing and min. edge distance is not possible. One of them has to be increased according approval.

³⁾ Valid for tensile load, shear load and oblique load under any angle. For combinations of tensile loads, shear loads and bending moments see approval. If the joints are not visible the permissible load has to be halved.

⁴⁾ Valid for zinc coated screws and for screws made of stainless steel. For exterior use of the zinc coated screws measures against incoming humidity according approval have to be taken.

⁵⁾ Erection of the drill hole by rotary drilling (without impact).

⁶⁾ Valid for temperatures in the substrate up to +50 °C (resp. short term up to 80 °C).

⁷⁾ If the embedment depth h_{nom} is higher than 70 mm (only for hollow and perforated masonry), job site tests have to be carried out acc. approval.

⁸⁾ Values in brackets derived from minimum brick format.

The hammer-in plug for a simple, fast and economical installation



Timber sub-structures



Cable ducts

VERSIONS

- zinc-plated steel
- stainless steel

BUILDING MATERIALS

- Concrete
- Solid sand-lime brick
- Building brick
- Natural stone
- Solid brick made from lightweight concrete
- Aerated concrete
- Solid panel made from gypsum
- Vertically perforated brick
- Perforated sand-lime brick
- Hollow blocks made from lightweight concrete

CHARACTERISTICS



ADVANTAGES

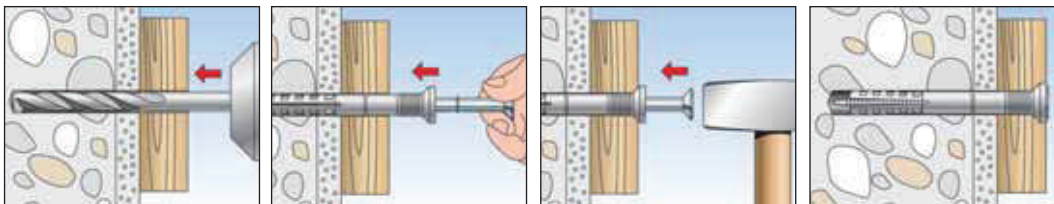
- The rapid hammerset installation reduces the amount of time required and allows for an economic series installation.
- The integrated hammer-in stop prevents the plug from expanding prematurely (jamming), thus enabling a problem-free installation.
- Together with the cross-slot recess, the thread of the nail screw allows the screw to be removed, thus allowing for subsequent dismantling.
- The wide range of diameters, usage lengths and head shapes provides the correct plug for every fixing.

APPLICATIONS

- Substructures made of wood and metal
- Wall connection or plaster profiles
- Slides
- Sheets
- Cable and pipe clips
- Punched tapes

FUNCTIONING

- The Hammerfix N is suitable for push-through installation.
- When hammered in, the nail screw causes the plug to expand in two directions, thus providing a secure anchoring in the building material.
- Countersunk head plugs are recommended for the installation of timber constructions; in the case of metal constructions, use flat-head plugs, and use pan-head plugs for long holes.



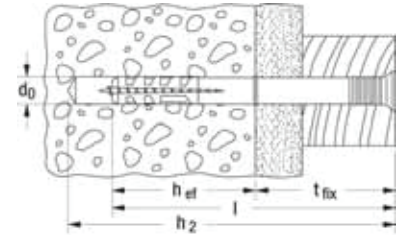
TECHNICAL DATA



Hammerfix **N-S** with nail, pre-assembled



Hammerfix **N-S A2** with stainless steel A2 nail, pre-assembled



	zinc-plated steel	stainless steel A2	Drill hole diameter	Effect. anchorage depth	Anchor length	Min. drill hole depth for through fixings	Max. fixture thickness	Sales unit
	Art.-No.	Art.-No.	d_0 [mm]	h_{ef} [mm]	l [mm]	h_2 [mm]	t_{fix} [mm]	[pcs]
Item	gvz	A2						
N 5 x 30/5 S (100)	050395 ²⁾	050370	5	25	30	45	5	100
N 5 x 30/5 S (200)	513732 ²⁾	—	5	25	30	45	5	200
N 5 x 40/15 S (100)	050351	—	5	25	40	55	15	100
N 5 x 40/15 S (200)	513733 ²⁾	—	5	25	40	55	15	200
N 5 x 50/25 S (100)	050352	—	5	25	50	65	25	100
N 5 x 50/25 S (200)	513734 ²⁾	—	5	25	50	65	25	200
N 6 x 40/10 S (50)	050354	050372	6	30	40	55	10	50
N 6 x 40/10 S (100)	048788	—	6	30	40	55	10	100
N 6 x 40/10 S (200)	513834 ²⁾	—	6	30	40	55	10	200
N 6 x 60/30 S (50)	050355	050373	6	30	60	75	30	50
N 6 x 60/30 S (100)	048789	—	6	30	60	75	30	100
N 6 x 60/30 S (200)	513835 ²⁾	—	6	30	60	75	30	200
N 6 x 80/50 S (50)	050353	—	6	30	80	95	50	50
N 6 x 80/50 S (100)	048790	—	6	30	80	95	50	100
N 6 x 80/50 S (200)	513836 ²⁾	—	6	30	80	95	50	200
N 8 x 60/20 S (50)	050356	050374	8	40	60	75	20	50
N 8 x 60/20 S (100)	048791	—	8	40	60	75	20	100
N 8 x 80/40 S (50)	050358	050375	8	40	80	95	40	50
N 8 x 80/40 S (100)	048792	—	8	40	80	95	40	100
N 8 x 100/60 S (50)	050357	050376	8	40	100	115	60	50
N 8 x 100/60 S (100)	048793	—	8	40	100	115	60	100
N 8 x 120/80 S (50)	050359	—	8	40	120	135	80	50
N 8 x 120/80 S (100)	048794	—	8	40	120	135	80	100
N 10 x 100/50 S (50)	050346 ¹⁾	—	10	50	100	115	50	50
N 10 x 135/85 S (50)	050347 ¹⁾	—	10	50	135	150	85	50
N 10 x 160/110 S (50)	050348 ¹⁾	—	10	50	160	175	110	50
N 10 x 230/180 S (50)	050335 ¹⁾	—	10	50	230	245	180	50

¹⁾ not pre-assembled

²⁾ also specially suitable for fischer Pipe clips FC, see chapter Electrical fixings.

LOADS

Hammerfix N

Highest recommended loads¹⁾ for a single anchor.

The given loads are valid for screw nails with the specified diameter.

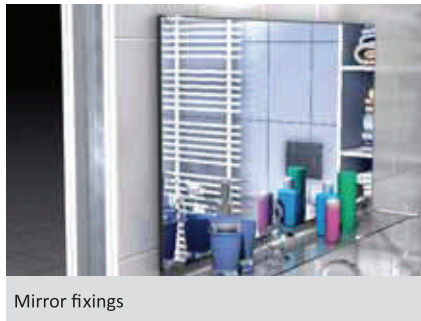
Type		N5	N6 ³⁾	N8	N10
Screw nail diameter	∅ [mm]	3,5	4	5	7
Recommended loads in the respective base material F_{rec} ²⁾					
Concrete	≥ C20/25 [kN]	0,20	0,25	0,27	0,33
Solid brick	≥ Mz12 [kN]	0,14	0,18	0,24	0,30
Solid sand-lime brick	≥ KS12 [kN]	0,18	0,22	0,24	0,33
Solid brick of lightweight aggregate concrete	≥ V4 [kN]	0,05	0,12	0,15	0,16
Aerated concrete	≥ PB2 [kN]	0,03	0,04	0,05	0,10
Aerated concrete	≥ PB4 [kN]	0,07	0,10	0,13	0,16

¹⁾ Includes the safety factor 4.

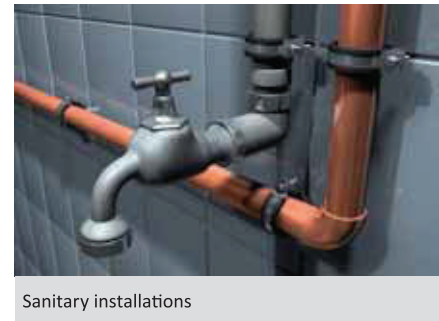
²⁾ Valid for tensile load, shear load and oblique load under any angle.

³⁾ The values have to be reduced by 50% for N 6 x 40/7 P K.

The nylon plug for all building materials



Mirror fixings



Sanitary installations

BUILDING MATERIALS

- Concrete
- Gypsum plasterboard and gypsum fibreboards
- Vertically perforated brick
- Hollow blocks made from light-weight concrete
- Cavity floor slabs made from bricks and concrete
- Perforated sand-lime brick
- Solid sand-lime brick
- Natural stone
- Aerated concrete
- Chipboard
- Solid panel made from gypsum
- Solid brick made from light-weight concrete
- Solid brick

CHARACTERISTICS



ADVANTAGES

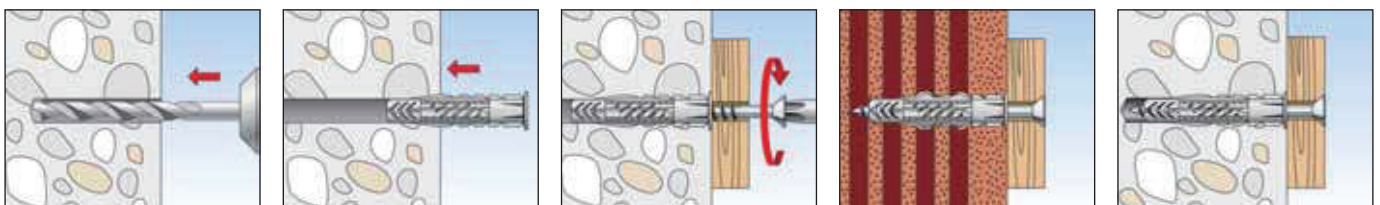
- The universal operating principle (knotting or expanding) allows for use in all solid, hollow and board building materials. Thus the UX is the correct choice for unknown base materials.
- The UX's angled connection ridges allow for optimum screw guidance. Serrated anti-rotation locks prevent rotation in the drill hole. This guarantees the greatest possible installation safety.
- Fixing sets with screws, eye screws and hooks provide the right solution for all applications.

APPLICATIONS

- Pictures
- Lighting
- Skirting
- Light cabinets
- Towel rails
- Mirror cabinets
- Curtain rails
- Wash basin fixings
- TV consoles
- Plumbing and heating fixings

FUNCTIONING

- The UX with rim is suitable for pre-positioned installation; the UX without rim is suitable for push-through installation.
- Turning in the screw causes the UX to expand in the solid building material and to knot within the cavity.
- The required screw length is given by the plug length + fixture thickness + 1 x screw diameter.
- Suitable for wood and chipboard screws, as well as stud screws.
- In the case of board building materials, the threadless part of the screw must not be longer than the fixture, and the UX with rim is to be used.
- The edge distance must be at least one plug length.



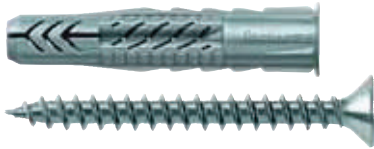
TECHNICAL DATA



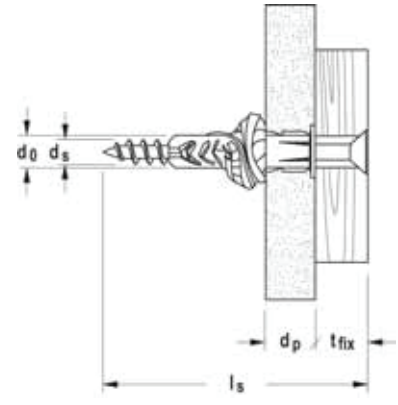
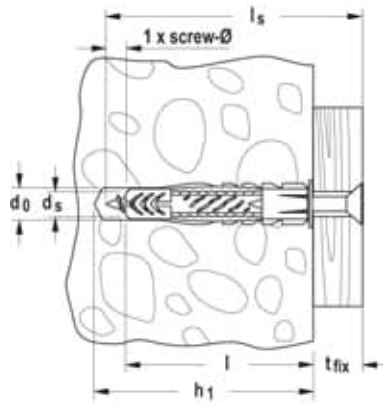
UX - without rim



UX R - with rim



UX R S - with rim and screw



	without rim	with rim	with rim and screw	Drill hole diameter d_0 [mm]	Min. drill hole depth h_1 [mm]	Min. panel thickness d_p [mm]	Anchor length l [mm]	Wood and chip-board screws $d_s / d_s \times l_s$ [mm]	Max. fixture thickness t_{fix} [mm]	Sales unit [pcs]
Item	UX	UX R	UX R S							
UX 5 x 30	094721	094722	—	5	40	9,5	30	3 - 4	—	100
UX 6 x 35	062754	062756	—	6	45	9,5	35	4 - 5	—	100
UX 6 x 35	—	—	094758	6	65	9,5	35	4,5 x 60	20	25
UX 6 x 50	072094	072095	—	6	60	9,5	50	4 - 5	—	100
UX 6 x 50	—	—	094759	6	80	9,5	50	4,5 x 75	20	25
UX 8 x 40	—	505483	—	8	50	9,5	40	4,5 - 6	—	100
UX 8 x 50	077869	077870	—	8	60	9,5	50	4,5 - 6	—	100
UX 8 x 50	—	—	094762	8	75	9,5	50	5 x 70	15	25
UX 8 x 50	—	—	094760	8	85	9,5	50	5 x 80	25	25
UX 10 x 60	077871	077872	—	10	75	12,5	60	6 - 8	—	50
UX 10 x 60	094761 ¹⁾	—	—	10	90	12,5	60	6 x 85	20	10
UX 12 x 70	062758	—	—	12	85	—	70	8 - 10	—	25
UX 14 x 75	062757	—	—	14	95	—	75	10 - 12	—	20

1) with screw

LOADS

Universal plug UX

Highest recommended loads¹⁾ for a single anchor.

The given loads are valid for wood screws with the specified diameter.

Type		UX5	UX6	UX6 x 50	UX8	UX10	UX12	UX14	
Screw diameter	\emptyset [mm]	4	5	5	6	8	10	12	
Recommended loads in the respective base material F_{rec}²⁾									
Concrete	\geq C20/25	[kN]	0,30	0,40	0,60	0,60	1,00	1,50	1,80
Solid brick	\geq Mz 12	[kN]	0,20	0,20	0,30	0,30	0,50	0,70	0,80
Hollow sand lime stone	\geq KSL 12	[kN]	0,30	0,40	0,40	0,50	0,60	0,80	0,80
Vertically perforated brick	\geq Hlz 12	[kN]	0,20	0,20	0,20	0,20	0,30	0,40	
Aerated concrete	\geq PB4, PP4 (G4)	[kN]	0,15	0,20	0,20	0,30	0,40	0,60	0,70
Gypsum plasterboard	12,5 mm	[kN]	0,10	0,10	0,10	0,10	-	-	
Gypsum plasterboard	25 mm	[kN]	0,10	0,15	0,15	0,15	-	-	
Gypsum fibreboard	(Fermacell)	[kN]	0,20	0,20	0,20	0,25	-	-	
Plaster wall	$\rho \geq 0,9$ kg/dm ³	[kN]	-	-	-	0,15	0,35	0,45	0,50

¹⁾ Includes the safety factor 7.

²⁾ Valid for tensile load, shear load and oblique load under any angle.

The powerful nylon plug with 4-way expansion



Wall consoles



Air conditioning units

BUILDING MATERIALS

- Concrete
- Vertically perforated brick
- Hollow blocks made from light-weight concrete
- Cavity floor slabs made from bricks and concrete
- Perforated sand-lime brick
- Solid sand-lime brick
- Natural stone with dense structure
- Aerated concrete
- Solid panel made from gypsum
- Solid brick made from light-weight concrete
- Solid brick

CHARACTERISTICS



ADVANTAGES

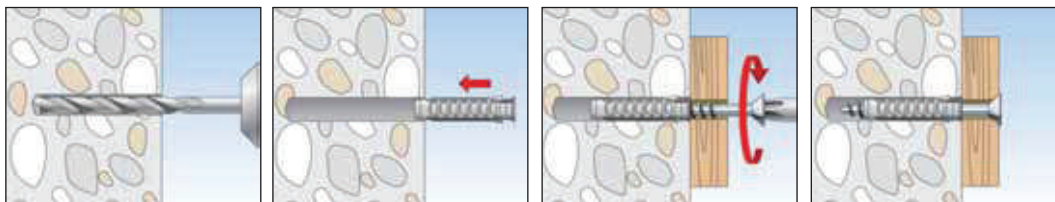
- The 4-way expansion provides the optimum force distribution in the material, and offers high load-bearing capacities in solid and hollow building materials.
- The expansion-free plug neck prevents the creation of expansion forces on the material surface whilst screwing in the screw. This helps to prevent damage to tiles and plaster.
- The pronounced rim prevents the plug from slipping into the drill hole, thus allowing for a simple installation.
- The greater anchorage depth of the SX 6x50, 8x65 and 10x80 means that the plug is especially suited to fixings in hollow building materials, aerated concrete and to bridge plaster.

APPLICATIONS

- Lighting
- Wardrobes
- Motion detectors
- Skirting
- Light shelves
- Mirror cabinets
- Letter boxes
- TV consoles
- Trellis
- Folding shutters
- Bath and toilet installations

FUNCTIONING

- The SX is suitable for pre-positioned and push-through installation.
- When turning in the screw, the SX expands in four directions, thus providing a secure anchoring in the building material.
- The required screw length is given by: Plug length + fixture thickness + 1 x screw diameter.
- Suitable for wood, chipboard and spacing screws (fischer ASL, see page).



TECHNICAL DATA



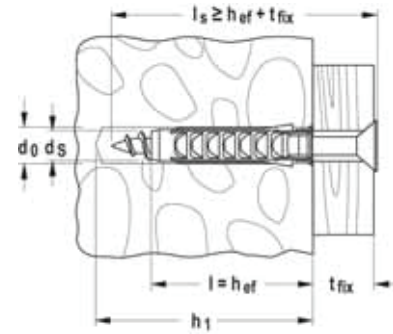
Plug SX with rim



Plug SX - with greater anchorage depth, without rim



Plug SX with rim and screw



	with rim	with greater anchorage depth, without rim	with rim and screw	Drill hole diameter d_0 [mm]	Min. drill hole depth h_1 [mm]	Anchor length l [mm]	Wood and chip-board screws $d_s / d_s \times l_s$ [mm]	Max. fixture thickness t_{fix} [mm]	Sales unit [pcs]
Item	Art.-No. SX	Art.-No. SX	Art.-No. SX-S						
SX 4 x 20	070004	—	—	4	25	20	2 - 3	—	200
SX 5 x 25	070005	—	—	5	35	25	3 - 4	—	100
SX 6 x 30	070006	—	—	6	40	30	4 - 5	—	100
SX 6 x 30	—	—	070021	6	45	30	4,5 x 40	5	50
SX 6 x 50	078185	024827	—	6	60	50	4 - 5	—	100
SX 8 x 40	070008	—	—	8	50	40	4,5 - 6	—	100
SX 8 x 40	—	—	070022	8	65	40	5 x 60	15	50
SX 8 x 65	—	024828	—	8	75	65	4,5 - 6	—	50
SX 10 x 50	070010	—	—	10	70	50	6 - 8	—	50
SX 10 x 80	—	024829	—	10	95	80	6 - 8	—	25
SX 12 x 60	070012	—	—	12	80	60	8 - 10	—	25
SX 14 x 70	070014	—	—	14	90	70	10 - 12	—	20
SX 16 x 80	070016	—	—	16	100	80	12 (1/2")	—	10

LOADS

Plug SX

Highest recommended loads¹⁾ for a single anchor.

The given loads are valid for wood screws with the specified diameter.

Type		SX 4 x 20	SX 5 x 25	SX 6 x 30 SX 6 x 50	SX 8 x 40 SX 8 x 65	SX 10 x 50	SX 10 x 80	SX 12 x 60	SX 14 x 70	SX 16 x 80
Screw diameter	\emptyset [mm]	3	4	5	6	8	8	10	12	12
Min. edge distance in concrete	c_{min} [mm]	20	25	35	40	50	50	65	100	120
Recommended loads in the respective base material F_{rec}²⁾										
Concrete	$\geq C20/25$ [kN]	0,16	0,30	0,65	0,70	1,20	1,20	1,70	2,00	2,60
Solid brick	$\geq Mz 12$ [kN]	0,11	0,25	0,30	0,45	0,65	1,20	0,70	0,80	0,90
Solid sand lime stone	$\geq KS 12$ [kN]	0,17	0,30	0,50	0,45	1,20	1,20	1,70	2,00	2,60
Aerated concrete	$\geq PB2, PP2 (G2)$ [kN]	0,03	0,03	0,03	0,04	0,09	0,20	0,14	0,30	0,40
Aerated concrete	$\geq PB4, PP4 (G4)$ [kN]	0,07	0,09	0,09	0,14	0,30	0,60	0,45	0,50	0,60
Vertically perforated bricks	$\geq Hlz 12 (\rho \geq 1.0 \text{ kg/dm}^3)$ [kN]	0,13	0,07	0,07	0,17	0,17	0,50	0,26	0,40	0,60
Perforated sand-lime brick	$\geq KSL 12$ [kN]	0,15	0,17	0,30	0,35	0,30	0,80	0,35	0,30	0,40
Plaster wall	[kN]	-	-	-	0,26	0,37	-	1,00	1,00	-

¹⁾ Includes the safety factor 7.

²⁾ Valid for tensile load, shear load and oblique load under any angle.

The 2-cutter for the fastest drilling progress



APPLICATIONS

To create approval-compliant drill

holes in:

- Concrete
- Masonry

Also suitable for:

- Natural stone

ADVANTAGES

- The distinctive chisel-shaped drill bit head ensures the fastest drilling progress.
- The large-volume flute quickly transports the drilling dust from the drill hole, thus reducing wear.
- The core-reinforced flute places more impact energy on the carbide cutting edge for the greatest stability and transfer of force.
- The distinctive centring tip allows for simple and high-precision drilling and thus offers increased installation safety.
- The PGM®-compliant cutting element guarantees perfect-fit drill holes and satisfies the highest safety requirements.

TECHNICAL DATA



Hammer drill bit SDS Plus II Pointer

Type	Art.-No.	Drill hole diameter d_0 [mm]	Total length l [mm]	Working length [mm]
SDS Plus II 5/100/160	531756	5	160	100
SDS Plus II 6/50/110	531765	6	110	50
SDS Plus II 6/100/160	531766	6	160	100
SDS Plus II 8/100/160	531780	8	160	100
SDS Plus II 8/150/210	531781	8	210	150
SDS Plus II 8/250/310	531783	8	310	250
SDS Plus II 10/50/110	531791	10	110	50
SDS Plus II 10/100/160	531792	10	160	100
SDS Plus II 10/150/210	531793	10	210	150
SDS Plus II 10/200/260	531794	10	260	200
SDS Plus II 10/250/310	531795	10	310	250
SDS Plus II 12/100/160	531803	12	160	100
SDS Plus II 12/150/210	531804	12	210	150
SDS Plus II 12/200/260	531805	12	260	200
SDS Plus II 12/250/310	531806	12	310	250
SDS Plus II 12/300/360	531807	12	360	300
SDS Plus II 13/100/160	531811	13	160	100
SDS Plus II 14/100/160	531815	14	160	100
SDS Plus II 14/150/210	531816	14	210	150
SDS Plus II 14/200/260	531817	14	260	200
SDS Plus II 14/250/310	531818	14	310	250
SDS Plus II 14/400/450	531819	14	450	400
SDS Plus II 15/150/210	531823	15	210	150
SDS Plus II 16/100/160	531826	16	160	100
SDS Plus II 16/150/210	531827	16	210	150
SDS Plus II 16/200/260	531828	16	260	200
SDS Plus II 16/250/310	531829	16	310	250
SDS Plus II 16/400/450	531830	16	450	400
SDS Plus II 18/150/200	531836	18	200	150
SDS Plus II 18/250/300	531837	18	300	250
SDS Plus II 18/400/450	531838	18	450	400
SDS Plus II 20/150/200	531843	20	200	150
SDS Plus II 20/250/300	531844	20	300	250
SDS Plus II 20/400/450	531845	20	450	400
SDS Plus II 20/550/600	531846	20	600	550
SDS Plus II 22/200/250	531849	22	250	200
SDS Plus II 22/400/450	531850	22	450	400
SDS Plus II 24/200/250	531853	24	250	200
SDS Plus II 24/400/450	531854	24	450	400
SDS Plus II 25/200/250	531855	25	250	200
SDS Plus II 25/400/450	531856	25	450	400
SDS Plus II 25/550/600	531857	25	600	550
SDS Plus II 26/400/450	531859	26	450	400

The hammer drill bits with SDS Max drill chuck



APPLICATIONS

To create approval-compliant drill holes in:

- Concrete
- Masonry

Also suitable for:

- Natural stone

ADVANTAGES

- The SDS Max drill chuck ensures optimum transfer of force and allows for rapid drilling progress for large volume drill holes.
- The drill bit head with four cutting edges prevents jamming in the concrete reinforcement.
- The quadruple flute reliably transports the drilling dust from the drill hole, thus reducing wear.
- The core-reinforced flute ensures maximum transfer of energy, and guarantees a low-vibration drilling.
- The PGM®-compliant cutting element guarantees perfect-fit drill holes to fulfil the highest safety requirements.

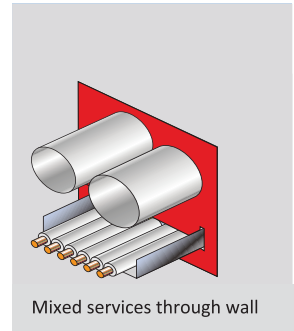
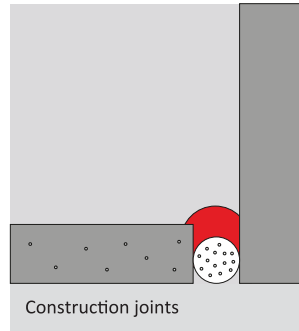
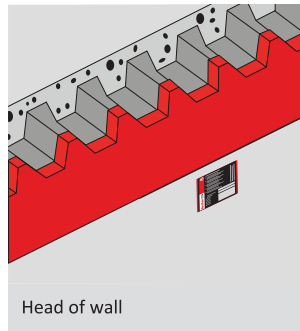
TECHNICAL DATA



Hammer drill bit SDS Max IV

Type	Art.-No.	Drill hole diameter d_0 [mm]	Total length l [mm]	Working length [mm]
SDS Max IV 16/200/340	504198	16	340	200
SDS Max IV 16/400/540	504199	16	540	400
SDS Max IV 16/800/920	504200	16	920	800
SDS Max IV 18/200/340	504207	18	340	200
SDS Max IV 18/400/540	504208	18	540	400
SDS Max IV 18/800/920	504209	18	920	800
SDS Max IV 20/200/320	504214	20	320	200
SDS Max IV 20/400/520	504217	20	520	400
SDS Max IV 20/800/920	504222	20	920	800
SDS Max IV 20/1200/1320	504223	20	1320	1200
SDS Max IV 22/200/320	504224	22	320	200
SDS Max IV 22/400/520	504225	22	520	400
SDS Max IV 22/800/920	504226	22	920	800
SDS Max IV 24/200/320	504228	24	320	200
SDS Max IV 24/400/520	504229	24	520	400
SDS Max IV 25/200/320	504235	25	320	200
SDS Max IV 25/400/520	504236	25	520	400
SDS Max IV 25/800/920	504237	25	920	800
SDS Max IV 25/1200/1320	504238	25	1320	1200
SDS Max IV 28/250/370	504240	28	370	250
SDS Max IV 28/450/570	504241	28	570	450
SDS Max IV 28/550/670	504242	28	670	550
SDS Max IV 30/250/370	504245	30	370	250
SDS Max IV 30/450/570	504246	30	570	450
SDS Max IV 30/800/920	057779	30	920	800
SDS Max IV 30/1230/1350	040187	30	1350	1210
SDS Max IV 32/450/570	504248	32	570	450
SDS Max IV 32/800/920	504249	32	920	800
SDS Max IV 35/250/370	504251	35	370	250
SDS Max IV 35/450/570	504256	35	570	450
SDS Max IV 35/550/670	504257	35	670	550
SDS Max IV 35/800/920	504258	35	920	800
SDS Max IV 35/1200/1320	504259	35	1320	1200
SDS Max IV 38/450/570	504268	38	570	450
SDS Max IV 40/250/370	504269	40	370	250
SDS Max IV 40/450/570	504270	40	570	450
SDS Max IV 40/800/920	504271	40	920	800

Elastomeric fire resistant sealant



APPLICATIONS

- Curtain wall/slab edge - 8" (200mm)
- Head of wall - 4" (100mm)
- General construction joints - 8" (200mm)
- Service penetrations -
- Cable tray - 24" x 4" (600mmx100mm)
- Steel pipes - 8" (200mm)

APPLICATIONS

Suitable for:

- Flexible wall construction
- Rigid Floor & Wall construction
- Flexible Wall
- Masonry
- Concrete
- Curtain wall perimeter joint

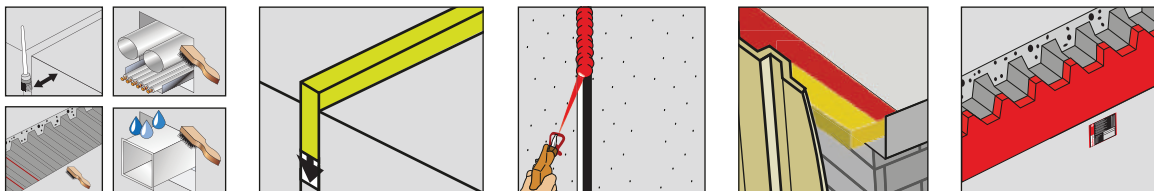
DESCRIPTION

- fischer fire rated construction joint sealant RFS 640 is a spray grade one part water based, fire rated sealant which has been design to provide smoke and fire protection on construction joints & service penetrations in both vertical and horizontal applications.
- Tested in accordance with ASTM E 814 (UL1479), ASTM E 1966 (UL 2079), ASTM E 2307, ASTM E 84 (UL723) the fischer RFS can provide up to 3 hours fire rating.
- Meeting the new requirements of ASTM E 1399, the fischer RFS has been cycled tested up to 500 times.
- fischer RFS 640 is Asbestos, Solvent and hazardous ingredients free, it exhibits excellent slump characteristics, is easy to apply and cures to a flexible elastomeric seal. It is suitable for internal applications and for conditions where dynamic movement may occur.
- RFS 640 has also been tested at positive pressure with a minimum 0.01in. (2.5 mPa) water i.a.w UL 2079 test standards.

INSTALLATION

Note: Firestop material must be installed in accordance with detailed instruction or the approved system:

- 1 Clean all contact surfaces so they are free from loose debris and contaminants
- 2 Install the required backing material as per the detailed instructions or approved system:-
Note: Backing material MUST be installed under compression - there should be no loose backing material, voids or gaps present
- 3 For best application results - fischer RFS 640 should be applied at room temperature
- 4 Apply fischer RFS 640 to the required parameters as per detailed instruction or approved system making sure that it is in contact with all surfaces to provide maximum adhesion - fischer RFS 640 can be installed by using recommended spray equipment or brush applied. Contact your local fischer representative for more details.
Note: Overspray a minimum of 12.5mm (or as recommended) beyond all surrounding surfaces
- 5 Tool sealant to a defect free finish using a wetted trowel or putty knife
- 6 Clean all equipment with water immediately after use
* Spray equipment should be clean in accordance to manufacturer's instructions.



ADVANTAGES

- Water based
- Flexible set
- Contains mould growth inhibitor
- Freeze - thaw capabilities
- Paintable
- Accelerated age & humidity tested
- Low VOC
- Spray or brush applied
- Excellent smoke seal
- Water resistant

APPROVALS

American Standard

ASTM E 814
(UL 1479)

American Standard

ASTM E 84
(UL 723)

American Standard

ASTM E 1966
(UL 2079)



SPECIFICATIONS

Description	Order No.	Size	Qty. Per Box	Suitable for use with
RFS 640	516539	19 lt	1	spray, paint, brush

TECHNICAL DATA

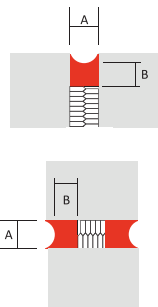
Chemical Base:	Water-Based
Density:	approx 1.25 g/cm ³
Application temperature:	+5°C to +40°C
Skin-forming time at 25°C:	approx 30-45 min*
Curing time at 25°C:	approx. 5-7days*
Storage temperature:	+2°C to +49°C
Movement capability:	up to 50%**
Water resistant:	yes***
Shelf-life:	36 months (under recommended conditions)
pH Value:	7 to 8
Sound transmission class: (dB) Tested in a UL 411 wall assembly to ASTM E90	50
Surface burning characteristics: ASTM E 84 UL 723 Tunnel Test	Flame spread - 5 Smoke index - 5
Colour	Red

* dependant on substrate, air humidity and weather conditions
 ** depending on UL listed system and configuration
 *** water resistant in accordance with UL 2079

APPLICATION DATA

The following dimensions must be observed when using fischer RFS 640

Consumption Guide



Joint Width [inch]	Joint Width [mm]	Ft/Gallon	Ft/Pail	LM/Gallon	LM/Pail
0.25	6	198	1325	89	404
0.50	13	164	1099	74	335
0.75	19	141	941	63	287
1.00	25	124	830	56	253
1.25	32	109	731	49	223
2.00	51	82	548	37	167
4.00	102	49	328	22	100
6.00	152	35	233	16	71
8.00	203	27	180	12	55

Above provides approx. yield for a coverage of 1/16" (1.5mm WFT) with a 1/2" (12.5mm) overlap



ADDITIONAL INFORMATION

Note: Please refer to MSDS for further information

Recommendations

- Can be used in conjunction with a suitable backing material as approved in detailed instruction or approved system
 - Non-flammable mineral wool (min. 60)kg/m³

Storage

- Storage temperatures between +2°C and +49°C
- Do not dilute or mix with any other chemical
- Store away from heat sources
- Keep container closed until use
- Monitor expiry date on pail

The gun foam with proven sound and thermal insulation as well as increased foam yield



BUILDING MATERIALS

Bonds to all standard building materials such as:

- Concrete
- Anodised layer
- Gypsum plasterboard
- Wood
- Sand-lime brick
- Plastics (not on PE, PP, Teflon, silicone)
- Masonry
- Metals
- Plaster

ADVANTAGES

- The thermal protection and proven reduction of air permeability fulfil the high standards for modern thermal protection.
- The proven 61dB sound insulation fulfils the standards of modern sound insulation and helps to reduce noise.
- The high yield of up to 55 l reduces the number of cans needed, thus ensuring maximum economic efficiency.
- The low level of foam expansion during the curing period avoids reworking, thus guaranteeing a simple and time-saving application.
- The solid valve prevents adhesion when being stored horizontally or during long interruptions of work, thus guaranteeing long-lasting functionality.

APPLICATIONS

- Insulating and filling window connection joints, around window sills and shutter boxes
- Insulating and filling in roofing work and dry construction
- Insulating and filling finished elements, wall connections, wall penetrations and cavities
- Insulating and filling pipe penetrations and ventilation ducts

FUNCTIONING

- 1-component PU foam
- Building material class B2
- Yellow in colour
- Foam yield of extruded foam 55 l
- Processing temperature +5°C to +35°C
- Non-tacky after approx. 25 minutes
- Can be cut after approx. 1 hour
- Cures within 5 to 8 hours
- Temperature resistant from -40°C to +90°C
- Layer thicknesses > 50 mm: foam in several layers and then dampen
- Fresh foam stains can be removed immediately with fischer PU cleaner.



One-component gun foam PUP B2



PU-cleaner

Article name	Art.-No.	Content per can [ml]	Max. foam yield (free foaming) [l]	Colour
PUP 750 B2 (DE)	053084	825	~ 55	yellow
PUR 150 (DE) Cleaner	053083	150	-	clear
PUR 500 (DE/EN) Cleaner	053085	500	-	clear

TECHNICAL DATA



Foam gun PUP K2

Article name	Art.-No.	Sales unit [pcs]
PUP K2	062400	1

LIGHT DUTY



SX 8

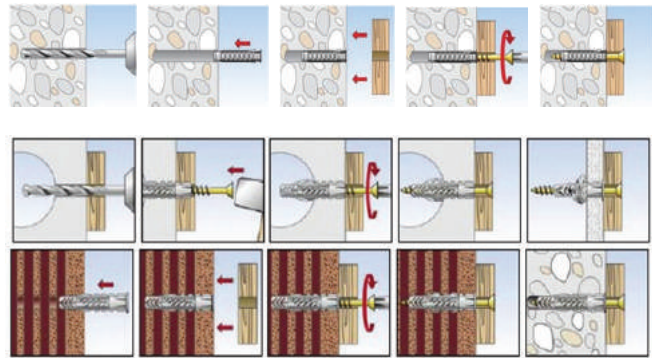


UX 8



RANGE OF APPROX WEIGHT : 5 - 25 kg

- a. Coat Hook
- b. Light Fitting
- c. Small Mirror
- d. Painting
- e. on/off Switch
- f. LCD/Plasma TV



DRILL HOLE DIAMETER / DEPTH (mm)	CHAC. LOAD PER FIXING (kg)	REC. LOAD PER FIXING (kg)	
		S 3	S 5
SX 8 x 40	84-126	16	22
UX 8 x 50	100-128	20	25

MEDIUM DUTY



UX 10



FUR 8,10

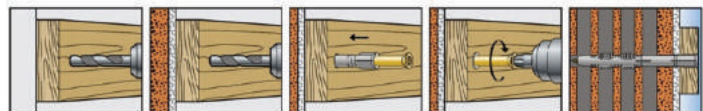


RANGE OF APPROX WEIGHT : 30 - 75 kg

- a. Shelf
- b. Satellite Disc
- c. Meter Box
- d. Towel Rail
- e. Curtain Rod/Rail
- f. Kitchen Cabinets
- g. Window Frame
- h. Air-Cond Compressor
- i. Door Frame
- j. Clothes Dryer
- k. Sink / Urinal / Basin
- l. Pipe Bracket



SX 10



DRILL HOLE DIAMETER / DEPTH (mm)	CHAC. LOAD PER FIXING (kg)	REC. LOAD PER FIXING (kg)	
		S 3	S 5
SX 10 x 50	154-275	31	55
UX 10 x 60	142-266	28	53
FUR 8 x 100	180-267	36	53
FUR 10 x 100	177-377	35	75

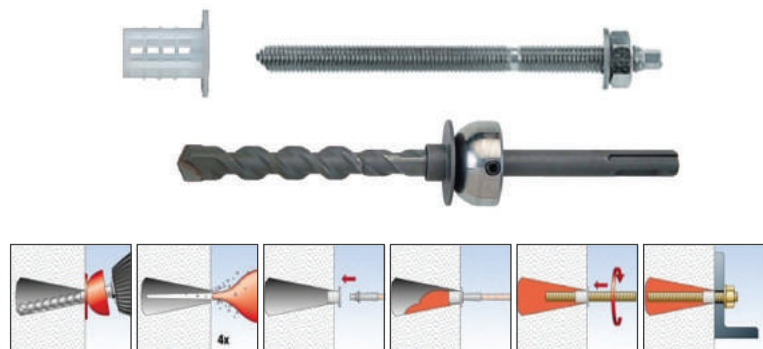
HEAVY DUTY



FIS VS360S M8, M10

RANGE OF APPROX WEIGHT : 167 - 306 kg

- a. Heavy DB
- b. Fire Hose Reel
- c. Signboard
- d. Sink / Urinal / Basin
- e. Cantilever Support
- f. Awing / Window Shade



DRILL HOLE DIAMETER / DEPTH (mm)	CHAC. LOAD PER FIXING (kg)	REC. LOAD PER FIXING (kg)	
		S 3	S 5
FIS VS360S M8	503-773	168	258
FIS VS360S M10	690-918	230	306

2018 / 2019

Fischer Catalogue

Contacts

fischerwerke GmbH & Co. KG
Klaus-Fischer-Straße 1
72176 Waldachtal
Germany
www.fischer.de

Your dealer:



www.defixcp.com.my

fischer  [®]
innovative solutions