

# Direct Fastening





## 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. This does not just mean innovative products, but also user-orientated support and a reliable service.

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.

## 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

The fischer product range is well-positioned in all sectors of fixing technology – Steel, Nylon and Chemical fixings.

2009 saw a complete range of wooden screws be made available on the market for the very first time.

## 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. We deal responsibly with energy resources and raw materials. 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).

## Our service to you

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

- global presence and active sales service in over 100 countries
- training sessions, some with accreditation, at your premises or in the fischer ACADEMY – our company's own training and customer service centre
- qualified, technical support and advice regarding economical fixing solutions, taking the latest building materials, standards and guidelines into account; we can even come to your building site if required
- convenient calculations with modern software



# Direct Fastening - fischer

## ■ PTB Approval Symbol



The fischer Power F35 Stud Driver is typeapproved and system-tested. The tool therefore bears the approval symbol of the PTB in square form with the approval number S 818. fischer thereby guarantees the conformity with the approved design.

Faults discovered during use must reported to the responsible head of the approvals authority (PTB) and to the office of the Permanent International Commission for Firearms Testing (C.I.P).

## ■ Material Suitability



**Fixing in concrete:**

fischer studs marked with this pictogram are suitable for applications in concrete, solid brick and solid lime-sand brick.

### Effective anchoring depth ( $h_{ef}$ )

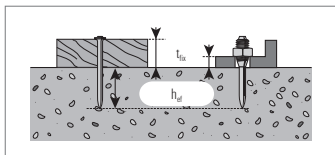
For fixtures in concrete, the effective anchoring depth ( $h_{ef}$ ) is the determining factor for the selection of the appropriate fastener element. The effective anchoring depth ( $h_{ef}$ ) is dependent on the compressive strength of the concrete.

Compressive strength of concrete	Effective anchoring depth ( $h_{ef}$ )
C16/20 (3.000 psi)	30 - 35 mm * - (1 3/16" - 1 6/16")*
C20/25 (3.500 psi)	25 - 30 mm * - (1" - 1 3/16")*
C30/37 (5.500psi)	20 - 25 mm * - (13/16" - 1")*

\* The values shown are indicative values. Several test fixings should be carried out in the base material to determine the exact values for the installation situation.

### Correct shaft length of the fastener element

The correct shaft length ( $L$ ) is determined by the thickness of the part to be fixed ( $t_{fix}$ ) and the effective anchoring depth ( $h_{ef}$ ) using the following formula:  $L = t_{fix} + h_{ef}$



For fixtures with stud bolts, the necessary shaft length corresponds to the effective anchoring depth ( $h_{ef}$ ), the thickness of the part to be fixed ( $t_{fix}$ ) does not have to be taken into consideration.



**Fixing in steel:**

fischer studs marked with this pictogram are suitable for applications in steel with a thickness  $\geq 4$  mm (0,157").

### Effective anchoring depth ( $h_{ef}$ )

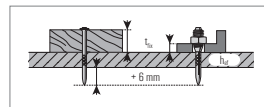
For fixtures in steel, the effective anchoring depth ( $h_{ef}$ ) is the determining factor for the selection of the appropriate fastener element. The effective anchoring depth ( $h_{ef}$ ) is dependent on the tensile strength of the steel.

Tensile strength of the steel ( $f_{tk}$ )	Effective anchoring depth ( $h_{ef}$ )
360 N/mm <sup>2</sup> (52.200 psi)	12 mm (1/2")
510 N/mm <sup>2</sup> (74.000 psi)	10 mm (3/8")

\* The values shown are indicative values. Several test fixings should be carried out in the base material to determine the exact values for the installation situation.

### Correct shaft length of the fastener element

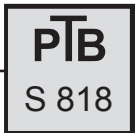
The correct shaft length ( $L$ ) is determined by the thickness of the part to be fixed ( $t_{fix}$ ) and the effective anchoring depth ( $h_{ef}$ ). If proper penetration of the base material is desired, an allowance of 6 mm (1/4") must be made (see following formulae).



Correct shaft length without penetration of the base material:  $L = t_{fix} + h_{ef}$   
 Correct shaft length with proper penetration of the base material:  $L = t_{fix} + h_{ef} + 6$  mm (1/4")

For fixtures with stud bolts, the necessary shaft length corresponds to the effective anchoring depth ( $h_{ef}$ ) plus 6 mm (1/4") allowance, the thickness of the part to be fixed ( $t_{fix}$ ) does not have to be taken into consideration.  
 $L = h_{ef} + 6$  mm (1/4").

# Power Drive F35 Stud Driver (8 mm tool - 5/16" tool)



## DESCRIPTION

The Power Drive F35 Stud Driver is a safe tool that can be employed for a wide range of applications by professional, certified users for driving elements of the fischer accessories product range developed specially for this field of application into concrete, steel, solid brick and solid lime-sand brick.

## YOUR BENEFITS AT A GLANCE

- Optimum adaptation
  - 3 cartridge strengths and 6-step power control
- Extremely flexible
  - Large selection of fastener elements for a wide range of fixing applications
- Short standstill times
  - Thanks to extremely simple care and maintenance
- High performance
  - up to 62 mm long fastener elements can be driven without predrilling



## POWER DRIVE F35 STUD DRIVER

Type	Art. No.	Weight		Tool length max.		Maximum length of the fastener elements - max.		Recommended maximum driving frequency [studs/h]	Power control
		[kg]	[lb]	[mm]	[in]	[mm]	[inch]		
F35	510000	2,35	5,18	340	13,4	62	2 7/16"	500	3 cartridge strengths and 6-step power control by means of regulation knob

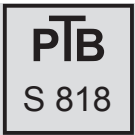
## SPARE PARTS / ACCESSORIES

Item	Art. No.	Description	Packaging [Qty.]
1	510003	Stabilizer	1
2	510005	Shear clip	5
3a-3e	510256	F35 cleaning kit: Brushes (4), Allen key (1)	1
4	510017	Steel ball	5
5	510258	Ear protector with strap	1
6	510259	Safety goggles, standard model	1
7	510001	F35 transport case	1
<sup>1)</sup>	510002	F35 operating manual, EN	1
<sup>1)</sup>	510250	F35 operating manual, DE	1
<sup>1)</sup>	510251	F35 operating manual, PT	1
<sup>1)</sup>	51052	F35 operating manual, ES	1

<sup>1)</sup> Não Ilustrado



# FSC safety cartridge strips for F35



## DESCRIPTION

- Cartridges with 3 different power classes are available for the fischer Power Drive F35 Stud Driver.
- The cartridges can be distinguished by their colour.
- The power class of the fischer safety cartridges is shown as a number (see table / power class) on each cartridge package.
- Fastener elements for Power Drive F35
- The higher the number, the higher the power class.
- The power class is also indicated by the colour of the package the label, a colour mark on the tip of each cartridge and the plastic strip.
- For users with colour blindness, a combination of numbers and colours is used on the package.



## FSC SAFETY CARTRIDGE STRIPS

Type	Art. No.	Test certificate number of the system approval	Size [mm]	Size [inch]	Colour of the cartridges	Power of the cartridges [DIN 7260]	Power class [DIN 7260 / ANSI A10.3:2006]	Packaging [Qty.]
FSC GR	510222	PTB SY 818 FW13	6,8/11	.27	Green	Low Load	3 / 3	100
FSC YE	510223	PTB SY 818 FW14	6,8/11	.27	Yellow	Medium Load	4 / 4	100
FSC RE	510225	PTB SY 818 FW16	6,8/11	.27	Red	High Load	6 / 5	100

# Fastener elements for Power Drive F35



## Stud FN



### Stud FN:

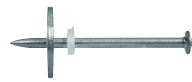
- Smooth shaft
- High-strength steel
- Ballistic tip
- Mechanically galvanised (minimum surface thickness 8 µm)

Type	Art. No.	Head diameter		Head thickness		Shaft diameter		Shaft type	Shaft length		Max. thickness of part to be fixed in concrete C16/20 - 3.000 psi		Maximum thickness of part to be fixed in concrete C20/25 - 3500 psi		Max. thickness of part to be fixed in concrete C30/37 - 5.500 psi		Max. thickness of part to be fixed in steel $f_{tk}$ 360-510 N/mm <sup>2</sup> $f_{tk}$ 52.200 - 74.000 psi		Packaging (Qty.)
		[mm]	[inch]	[mm]	[inch]	[mm]	[inch]		[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	
FN19	510155	8,15	0,321"	1,7	0,067"	3,7	0,146"	smooth	19	3/4"	-	-	-	-	-	-	7	1/4"	200
FN22	510156	8,15	0,321"	1,7	0,067"	3,7	0,146"	smooth	22	7/8"	-	-	-	-	2	1/16"	10	3/8"	200
FN27	510157	8,15	0,321"	1,7	0,067"	3,7	0,146"	smooth	27	1 1/16"	-	-	2	1/16"	7	1/4"	15	9/16"	200
FN32	510158	8,15	0,321"	1,7	0,067"	3,7	0,146"	smooth	32	1 1/4"	2	1/16"	7	1/4"	12	1/2"	20	13/16"	100
FN37	510159	8,15	0,321"	1,7	0,067"	3,7	0,146"	smooth	37	1 7/16"	7	1/4"	12	1/2"	17	11/16"	25	1"	100
FN42	510160	8,15	0,321"	1,7	0,067"	3,7	0,146"	smooth	42	1 10/16"	12	1/2"	17	11/16"	22	7/8"	30	1 3/16"	100
FN47	510161	8,15	0,321"	1,7	0,067"	3,7	0,146"	smooth	47	1 19/16"	17	11/16"	22	7/8"	27	1 1/16"	35	1 3/8"	100
FN52	510162	8,15	0,321"	1,7	0,067"	3,7	0,146"	smooth	52	2 1/52"	22	7/8"	27	1 1/16"	32	1 1/4"	40	1 9/16"	100
FN57	510163	8,15	0,321"	1,7	0,067"	3,7	0,146"	smooth	57	2 1/4"	27	1 1/16"	32	1 1/4"	37	1 7/16"	45	1 3/4"	100
FN62	510164	8,15	0,321"	1,7	0,067"	3,7	0,146"	smooth	62	2 7/16"	32	1 1/4"	37	1 7/16"	42	1 10/16"	50	1 15/16"	100
FN72	510165*	8,15	0,321"	1,7	0,067"	3,7	0,146"	smooth	72	2 7/16"	42	1 10/16"	47	1 14/16"	52	2 1/52"	60	2 3/8"	100
FN97	510166*	8,15	0,321"	1,7	0,067"	3,7	0,146"	smooth	97	3 13/16"	67	5/8"	72	1 13/16"	77	3 1/32"	85	3/18"	100

\* These fastener elements exceed the maximum useful length of the fastener guide and have to be preailed.



## Stud with washer FN-W25



### Stud with washer FN-W25:

- Smooth shaft
- High-strength steel
- Ballistic tip
- Mechanically galvanised (minimum surface thickness 8 µm)

Type	Art. No.	Head diameter		Head thickness		Shaft diameter		Shaft type	Shaft length		Max. thickness of part to be fixed in concrete C16/20 - 3.000 psi		Maximum thickness of part to be fixed in concrete C20/25 - 3500 psi		Max. thickness of part to be fixed in concrete C30/37 - 5.500 psi		Max. thickness of part to be fixed in steel $f_{tk}$ 360-510 N/mm <sup>2</sup> $f_{tk}$ 52.200 - 74.000 psi		Packaging (Qty.)
		[mm]	[inch]	[mm]	[inch]	[mm]	[inch]		[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	
FN 22 W25	510182	8,15	0,321"	1,7	0,067"	3,7	0,146"	smooth	22	7/8"	-	-	-	-	2	1/16"	10	3/8"	200
FN 27 W25	510183	8,15	0,321"	1,7	0,067"	3,7	0,146"	smooth	27	1 1/16"	-	-	2	1/16"	7	1/4"	15	9/16"	200
FN 32 W25	510184	8,15	0,321"	1,7	0,067"	3,7	0,146"	smooth	32	1 1/4"	2	1/16"	7	1/4"	12	1/2"	20	13/16"	200
FN 37 W25	510185	8,15	0,321"	1,7	0,067"	3,7	0,146"	smooth	37	1 7/16"	7	1/4"	12	1/2"	17	11/16"	25	1"	100
FN 42 W25	510186	8,15	0,321"	1,7	0,067"	3,7	0,146"	smooth	42	1 10/16"	12	1/2"	17	11/16"	22	7/8"	30	1 3/16"	100
FN 47 W25	510187	8,15	0,321"	1,7	0,067"	3,7	0,146"	smooth	47	1 19/16"	17	11/16"	22	7/8"	27	1 1/16"	35	1 3/8"	100
FN 52 W25	510188	8,15	0,321"	1,7	0,067"	3,7	0,146"	smooth	52	2 1/52"	22	7/8"	27	1 1/16"	32	1 1/4"	40	1 9/16"	100
FN 62 W25	510189	8,15	0,321"	1,7	0,067"	3,7	0,146"	smooth	62	2 7/16"	32	1 1/4"	37	1 7/16"	42	1 10/16"	50	1 15/16"	100
FN 72 W25	510190	8,15	0,321"	1,7	0,067"	3,7	0,146"	smooth	72	2 7/16"	42	1 10/16"	47	1 14/16"	52	2 7/16"	60	2 3/8"	100

# Fastener elements for Power Drive F35



## Stud FNS



### Stud FNS:

- Knurled shaft for maximum holding force in steel
- High-strength steel
- Ballistic tip
- Mechanically galvanised (minimum surface thickness 8 µm)

Type	Art. No.	Head diameter		Head thickness		Shaft diameter		Shaft type	Shaft length		Max. thickness of part to be fixed in concrete		Maximum thickness of part to be fixed in concrete		Max. thickness of part to be fixed in concrete		Max. thickness of part to be fixed in steel		Packaging [Qty.]		
		[mm]	[inch]	[mm]	[inch]	[mm]	[inch]		[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]		[mm]	[inch]
FNS 16	510167	8,15	0,321"	1,7	0,067"	3,7	0,146"	knurled	16	5/8"	-	-	-	-	-	-	-	-	4	5/32"	200
FNS 19	510168	8,15	0,321"	1,7	0,067"	3,7	0,146"	knurled	19	3/4"	-	-	-	-	-	-	-	-	7	1/4"	200



## Stud with standard ceiling bracket FNC



### Stud with standard ceiling bracket FNC:

- Smooth shaft
- High-strength steel
- Ballistic tip
- Mechanically galvanised (minimum surface thickness 8 µm)
- With integrated tophat
- High setting quality

Type	Art. No.	Head diameter		Head thickness		Shaft diameter		Shaft type	Shaft length		Max. thickness of part to be fixed in concrete		Maximum thickness of part to be fixed in concrete		Max. thickness of part to be fixed in concrete		Max. thickness of part to be fixed in steel		Packaging [Qty.]	
		[mm]	[inch]	[mm]	[inch]	[mm]	[inch]		[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]		[mm]
FNC 27	510191	8,15	0,321"	1,7	0,067"	3,7	0,146"	smooth	27	1 1/16"	-	-	-	-	-	-	-	-	-	200
FNC 32	510192	8,15	0,321"	1,7	0,067"	3,7	0,146"	smooth	32	1 1/4"	-	-	-	-	-	-	-	-	-	200





**fischer USA**  
Tel. 1-845-504-5098  
[www.fischerfixingusa.com](http://www.fischerfixingusa.com)