

# FAG

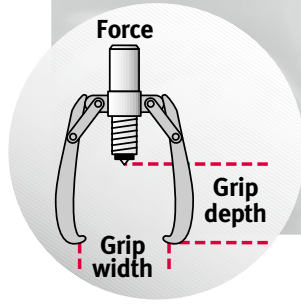


## **FAG PowerPull SPIDER TRISECTION PLATE**

**Hydraulic extraction pullers and puller plates  
for rolling bearings and other machine elements**

# FAG PowerPull SPIDER

## Strong, easy, quick



### User-friendly

- Quick, easy dismantling
- Integral hydraulic cylinder with hand pump
- Filled with high viscosity hydraulic oil R 68
- 2 and 3 arm pullers in a single device
- Low mass
- Pump handle can be turned through 360°
- Automatic centring on shaft by spring-loaded centring cone
- Can be used in any position

### Versatile

- For extraction of rolling bearings, gears, sleeves, washers and many other shrink fitted parts
- Large grip width due to optimised arrangement of puller arms
- Very large grip depth with extra long puller arms (accessories)
- Grip depth can be optimised by means of screw thread and piston rod extension or separate adapter

### Safe

- Safety grid (SPIDER 40...80) or transparent safety cover included in delivery
- Protection against overload by integral safety pressure control valve

### Longer stroke length – more efficient extraction work

The extension fitted to the piston rod (from SPIDER 250 upwards) or the adapter (SPIDER 40/60/80/100/120/200) increases the stroke length of the integral hydraulic cylinder to 250 mm. The shortened stroke travel speeds up the extraction process; it is not necessary to change to shorter puller arms.



### Operator protection

The safety cover

- captures any parts that fly off under extreme load,
- is made from extremely tough plastic and is transparent – you can see what is going on,
- can be easily fitted around any tool or workpiece,
- is easily fixed in place using velcro strips.

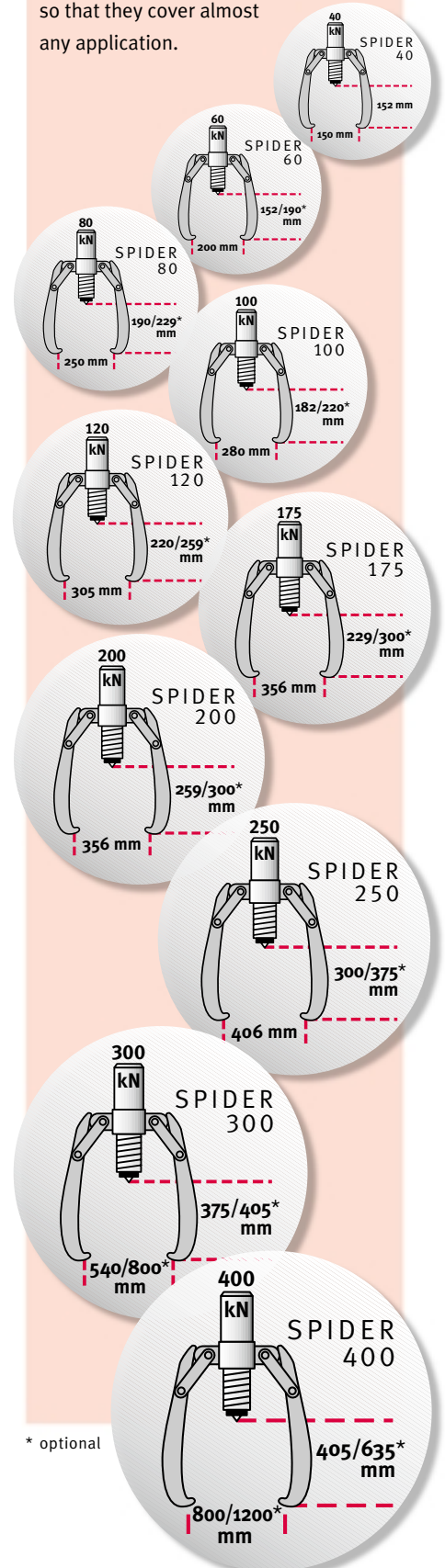
In the compact pullers SPIDER 40,60 and 80, a safety grid serves the same purpose.



### Selecting the right puller

Grip width → Grip depth → Force

The allocation of hydraulic forces is based on many years of experience. The designs and forces are calculated so that they cover almost any application.



\* optional

## SPIDER 40...80

### Standard version

Compact, user-friendly FAG pullers with integral hand pump for extraction forces up to 80 kN.

SPIDER 40 can be used up to a grip depth of 152 mm. SPIDER 60 and 80 are alternatively available with longer arms (for grip depths of 190 and 229 mm). The longer arms are available as accessories or replacement parts.

### Case

Easy transport – the compact SPIDER standard pullers are held, together with the safety grid, in a sturdy plastic case.



### FAG PowerPull SPIDER 40...80

#### Standard version

Puller	Extraction force		Grip width [mm]	Grip depth [mm]	Stroke [mm]	Mass [kg]
	[kN]	[t]				
<b>SPIDER 40</b>	40	4	150	152	55	4,5
<b>SPIDER 60</b>	60	6	200	152 (190*)	82	4,9
<b>SPIDER 80</b>	80	8	250	190 (229*)	82	6,6

\* With longer puller arms as an option



## SPIDER 100...300

### Extra strong with integral pump

With an extraction force up to 300 kN and a grip depth up to 405 mm, these pullers are a valuable aid in difficult dismantling work.

Thanks to the optimised design of the puller arms, they are clearly superior to conventional tools due to their higher extraction force and improved safety. Longer puller arms are available for all sizes in the SPIDER 100...300 range.

### Transport and storage

Neat and tidy, ready to hand – SPIDER 100...300 pullers are supplied, together with the safety cover and accessories, in a sturdy metal chest.



### FAG PowerPull SPIDER 100...300

#### Extra strong

Puller	Extraction force		Grip width [mm]	Grip depth [mm]	Stroke [mm]	Mass [kg]
	[kN]	[t]				
<b>SPIDER 100</b>	100	10	280	182 (220*)	82	5,6
<b>SPIDER 120</b>	120	12	305	220 (259*)	82	7,6
<b>SPIDER 200</b>	200	20	356	259 (300*)	82	10,0
<b>SPIDER 250</b>	250	25	406	300 (375*)	110	20,0
<b>SPIDER 300</b>	300	30	540 (800*)	375 (405*)	110	25,0

\* With longer puller arms as an option

## SPIDER 175 + 400

### Extra strong with separate pump

Restricted spaces and poorly accessible locations can impede or prevent rapid, secure dismantling.

SPIDER 175 and 400 are designed for this type of work. The pump, which is connected to the puller by a 1,5 m long hydraulic hose, is operated using a hand lever. Both pullers are available with appropriate arm lengths and grip depths.

The top model of the FAG PowerPull range, the SPIDER 400, is the ideal solution when high forces up to 400 kN are required for extraction of very large bearings and components.



### FAG PowerPull SPIDER 175 + 400

#### Extra strong

Puller	Extraction force		Grip width [mm]	Grip depth [mm]	Stroke [mm]	Mass [kg]
	[kN]	[t]				
<b>SPIDER 175</b>	175	17,5	356	229 (300*)	82	15,6
<b>SPIDER 400</b>	400	40	800 (1200*)	405 (635*)	250	49,0

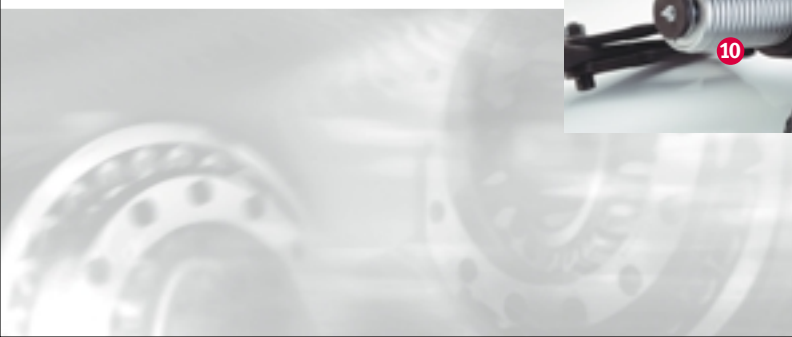
\* With longer puller arms as an option

# FAG PowerPull SPIDER

## Don't settle for anything less!



- 1 Safety grip allows easier pumping using industrial gloves
- 2 Optimum operating position due to 360° rotary coupling for pump hand lever (SPIDER 175+400 with separate pump)
- 3 Application or reduction in pressure by rotation of hand lever on cut-off valve
- 4 Pressure control valve gives protection against overload
- 5 Parts under mechanical load are made from high quality chromium/molybdenum steel
- 6 Maximum possible reduction in torsional and frictional forces by chromium plated piston made from quenched and tempered steel
- 7 Stroke travel can be changed by means of standard adapter
- 8 Single piece puller arm and grip hook for high load capacity
- 9 Simple centring by spring-loaded steel cone
- 10 "Quick" screw thread for setting of optimum grip depth
- 11 Not enough space for three puller arms? Simply change to two opposing arms!





# FAG PowerPull TRISECTION PLATE

## Bearings and machine parts stay in one piece!

**For hydraulic and mechanical pullers:  
the FAG PowerPull TRISECTION  
PLATE.**

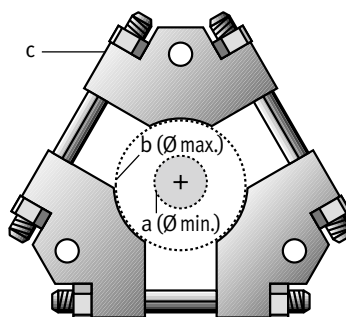
This allows the extraction of complete bearings, inner rings with a firm seating or other workpieces.

The load capacity and extraction force are precisely matched to each other and the unique design is patented.

The SPIDER puller hooks grip directly under the screw studs of the TRISECTION PLATE and give uniform force distribution. Even where parts are firmly seated, there is no tilting or bending.

The high extraction forces are concentrated, for example in a bearing, on the inner ring; in general, the bearing and shaft remain intact and can be used again. The optimised application of forces also reduces the work required for extraction.

The TRISECTION PLATE can be fitted under the bearing with only a small number of manual operations and is proven in practical use.



### FAG PowerPull TRISECTION PLATE

Puller plate	Dimensions [mm]			Mass [kg]	Recommended for	
	a	b	c		hydr. puller SPIDER	mech. puller
<b>TRISECTION PLATE 50</b>	12	50	113	0,5	–	53.130
<b>TRISECTION PLATE 100</b>	26	100	218	2,6	40/60/80/100	53.230
<b>TRISECTION PLATE 160</b>	50	160	322	5,8	80/100/20/175/200	53.295
<b>TRISECTION PLATE 260</b>	90	260	480	18,4	175/200/250/300	53.390
<b>TRISECTION PLATE 380</b>	140	380	656	50,3	250/300/400	53.640

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