

## CONSIDERATIONS:

Determine the type of puller or puller combination. Which puller type is best suited for gripping the part?

Is a combination of puller types required?

Determine the reach needed for your particular pulling problem. The puller you select must have a reach equal or greater than the corresponding sizes of the part to be pulled.

Determine the spread need. The spread is determined by the width of the part

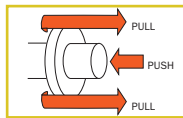
being pulled. The puller's spread should be greater than the width of the part to be pulled.

Estimate the force needed to solve your pulling problem. A puller with the proper reach and spread will usually have enough capacity to remove the corresponding part. When in doubt, always use a puller with a larger capacity than what may be needed. Rusty parts or parts with a large area of resistance may need more pulling force.

## Basics

### Puller selection

#### 3 Basic Puller Problems



# 1

### PULLING A GEAR, BEARING, WHEEL, PULLEY, ETC., FROM A SHAFT

In order to perform a proper pull, be certain that you firmly grip the gear, bearing, wheel, pulley, etc., and apply force to the shaft. Use a 3-jaw puller, instead of a 2-jaw, whenever possible for better gripping power and a more uniform displacement of pulling force.

### RECOMMENDED TOOLS:



#### Jaw-type pullers:

Either manual or hydraulic. For extra force and convenience, use a hydraulic puller. Both are available in 2 or 3 jaw configurations and are used to grip the outer circumference of a part or can be used with a pulling attachment, such as a bearing/pulley attachment. (Page 127, 134, 136-137, 146-147)



#### Push-Pullers

can thread directly into a threaded part for easy and secure removal. Push-Pullers can be used in conjunction with bearing/pulley attachments which grip the part from behind. A wide assortment of male and female threaded adapters are available as well as metric adapters. (Page 128, 138-139)



#### Bearing/pulley attachments

provide a "knife-like" edge to get behind parts for added versatility and secure removal of parts. Great for parts that don't offer adequate grip with jaw-type pullers. (Page 129)



#### Adapters

Whether you need an adapter compatible with any number of threaded hole sizes, protection of part to be pulled or for assisting the installation of a component; Power Team offers a variety of adapters to assist in the removal or installation of parts. (Page 131)

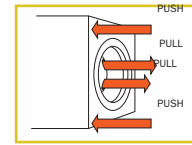
# Basics

## Puller selection

### 3 Basic Puller Problems

## PULLING INTERNAL BEARING RACES, RETAINER, SEALS, ETC.

2



By extending the narrow jaws of an internal pulling attachment through the center of the part to be pulled, a straight pull is insured, and damage to the housing is avoided. While parts within a "blind hole" in a housing do present a problem, Power Team has the internal pulling attachment or a combination of an internal pulling attachment and puller to handle the situation.

### RECOMMENDED TOOLS:



**Internal pulling attachments** have narrow jaws which extend through the center of the part to be pulled. They provide a straight pull and avoid damaging housings. Internal attachments feature adjustable jaws to fit various diameter parts. (Page 129)

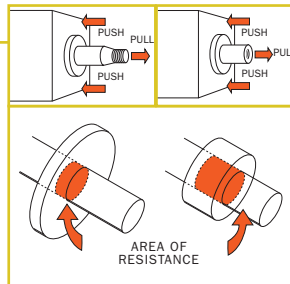


**Slide hammer with internal attachment** is ideal for removing parts from blind holes, especially where there is no housing to brace puller legs against. (Page 132-133)



**Push-puller with internal attachment.** Push-puller is available in both manual and hydraulic versions. (Page 128-129, 138-139)

3



## PULLING A PRESS-FITTED SHAFT FROM A HOUSING

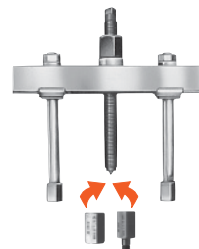
**Note:** Manual pullers require that the shaft being pulled is no more than twice the diameter of the puller's forcing screw. To determine the recommended tonnage for hydraulic pullers, multiply the diameter of the shaft to be pulled by ten. Example: For a 1" (25 mm) shaft, we recommend 10 tons of pulling force.

A shaft with a threaded end can be removed without damage by using one of our slide hammer, manual Push-puller or hydraulic Push-pullers, in conjunction with the proper threaded adapter. Removal is easy! If the shaft to be removed has external threads, simply choose one of our female threaded adapters of proper size/thread. If the shaft has internal threads, simply choose the correct size male threaded adapter.

### RECOMMENDED TOOLS:



**Slide hammer puller** matched with a set of threaded adapters is a perfect tool for light duty pulling needs. (Page 132-133)



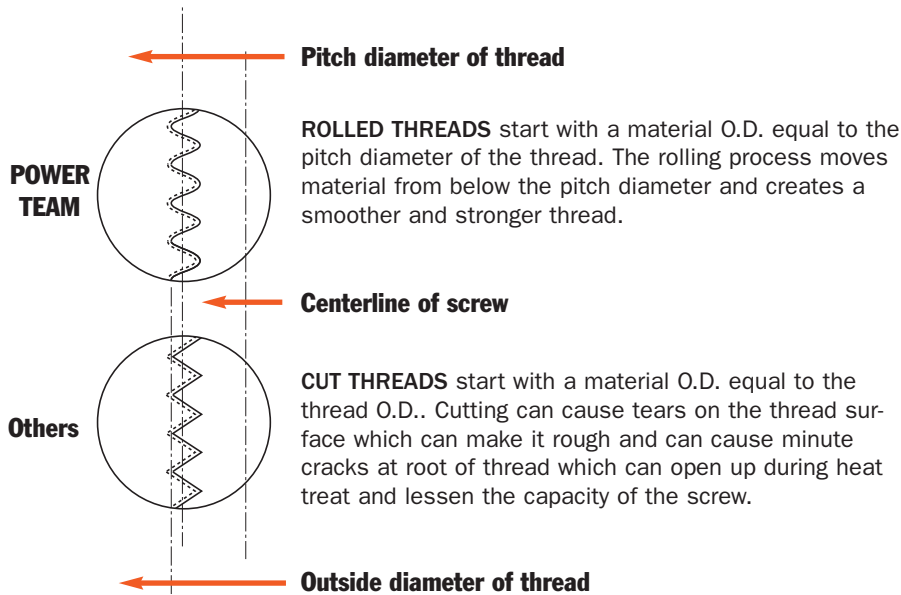
**Push-pullers** matched with a set of threaded adapters make for an extra versatile pulling tool. (Page 128, 131, 138-139)




# Basics

## Puller selection

Choosing the Right Puller

### WHY POWER TEAM ROLLED PULLER THREADS ARE SUPERIOR:



Features	Benefits
 <ul style="list-style-type: none"> <li>Grip-O-Matic® feature on jaw type pullers</li> <li>2-way, 3-way and 2/3-way combination pullers</li> <li>1 to 37 ton mechanical pullers</li> <li>5 to 50 ton hydraulic pullers</li> <li>2<sup>1</sup>/<sub>8</sub>" (54 mm) to 27<sup>5</sup>/<sub>8</sub>" (702 mm) reach</li> <li>3<sup>1</sup>/<sub>4</sub>" (83 mm) to 44" (1,118 mm) of spread</li> </ul>	<ul style="list-style-type: none"> <li>The harder the pulling force, the tighter the jaws grip</li> <li>A wide variety of pullers; select a specific puller for a specific application or select one or more pullers for general applications</li> <li>Strongest possible part; the grain of the material follows the contour of the part.</li> <li>Larger and stronger pulling toe than most competitors</li> <li>Heat treated and designed for maximum strength</li> <li>Stronger and smoother than cut threads</li> <li>Resists corrosion, traps lubrication better than black oxide</li> <li>Designed for max. shear strength</li> <li>Cylinder can be removed from puller and used in other hydraulic applications</li> </ul>
 <ul style="list-style-type: none"> <li>Forged alloy steel jaws</li> <li>Machined puller jaw toes</li> <li>Alloy steel heads (forged or flame cut)</li> <li>Rolled "V" threads</li> <li>Special coating on threads</li> <li>Heat treated alloy steel cross bolts</li> </ul>	
 <ul style="list-style-type: none"> <li>Standard hydraulic cylinders on Grip-O-Matic® series</li> </ul>	

**NOTE:** The puller application photos shown in this catalog are shown without protective blankets for clarity of photos. Power Team strongly recommends you always make your pull with a protective device in place. For protective blankets, refer page 145.

# Basics

## Puller selection

### 3 Basic Puller Problems

## SAFETY FIRST!

### Operator safety comes first!

Tons of force are being exerted with your Pulling System. You must respect this force, and observe safety precautions at all times

### CAUTION

It is impossible to predict the exact force required for every pulling job: setup requirements and the size, shape and condition of the parts being pulled vary a great deal. In addition, the Power Team Pulling System is so versatile, it is possible that components in a pulling setup may have different tonnage ratings.

The lowest “capacity” component, then, determines the capacity of the setup. For example: When an accessory with a 1 ton capacity is used with a 10 ton capacity puller, the setup can be used only at a force of one ton.

These tools should be used only by trained personnel familiar with them.

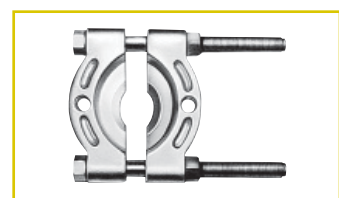
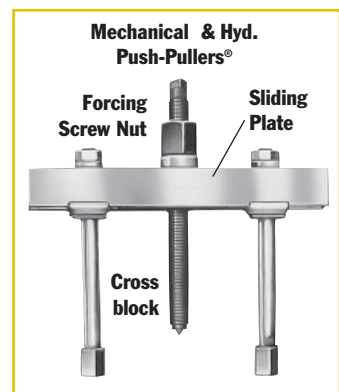
Always wear eye protection during a job since work parts, or the pulling tool itself, may break and parts may fly. It is recommended to cover the work with a Power Team Protective Blanket or use a shield while force is being applied. If you are at all unsure which tool or attachment to select, contact the Power Team factory.

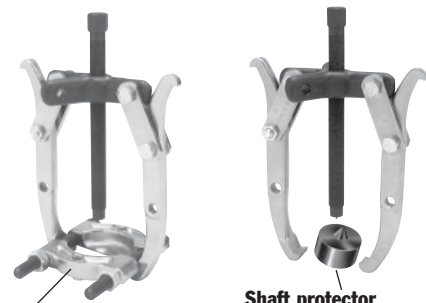
### A few easy tips to remember:

- 1. Wear safety glasses at all times!** You have only one pair of eyes, so protect them from possible flying parts.
- 2. Keep your pulling tools in shape!** Clean and lubricate the puller's forcing screw frequently, from threads to tip, to assure long service life and proper operation.
- 3. Cover work with a protective blanket!** With high forces being exerted on the part being pulled, breakage may sometimes result. By covering the work with a protective blanket, the mechanic reduces the danger of flying parts.
- 4. Apply force gradually!** The component should give a little at a time. Do not try speed removal by using an impact wrench on the puller screw.
- 5. Use the right size puller!** If you have applied maximum force and the part has not moved, go to a larger capacity puller. Resist sledging.
- 6. Align puller legs and jaws!** Be sure the setup is rigid and that the puller is square with the work.
- 7. Mount puller so grip is tight!** Tighten the adjusting strap-bolts when using a jaw type puller. Always use a 3-jaw puller whenever possible. A 3-jaw puller gives a more secure grip, more even pulling power. Apply force gradually.
  - Never use an extension on a wrench.
  - Never use an impact wrench.
  - Never strike the end of the forcing screw. Always cover work with a protective blanket.
- 8. Do not couple puller legs!** The tonnage capacity of a Push-Puller® is reduced when longer than standard legs are used, or when legs are in compression. The chance of breaking, bending or misaligning legs increases. Keep reach to a minimum. Use shortest legs possible to reach workpiece. Thread legs into work piece, pulling attachment or adapters evenly. Uneven legs will cause greater pull or push on one side, creating a bending action which could cause damage to work piece or cause a leg to break. The sliding plates must always be on the opposite side of the cross block from the forcing screw nut or hydraulic cylinder. Always cover work with a protective blanket.

### Bearing pulling attachments:

These attachments may not withstand the full tonnage of the pullers with which they are used. The shape and condition of the part being pulled affects the tonnage at which the puller blocks and/or studs may bend or break. Always select the largest attachment which will fit the part to be pulled.

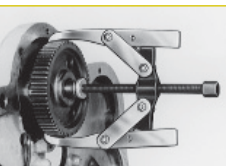
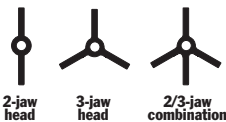




Pulling attachment

Shaft protector

Styles of puller cross heads



Step plate

Fed. Spec.: GGG-P-00781-D

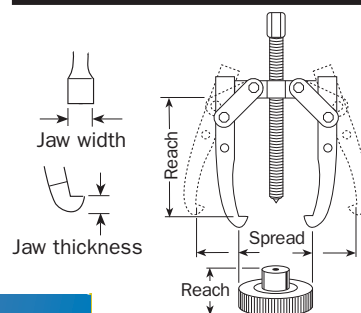
**Choosing the right size puller:** Compare the “reach” and “spread” of the pulling job with that of the pullers listed. The puller selected must have dimensions greater than those of the job.

- Grip-O-Matic® feature on all pullers. The harder the pull, the tighter the grip for removing gears, bearings and countless other press fitted parts.
- 2-way, 3-way and 2/3 way combination pullers make it easy to select a specific puller for a specific application.
- Forged from high quality steel, heat treated and subjected to rigorous tests which exceed rated puller capacity.
- Alloy steel heads are forged for maximum strength.
- Forcing screw threads are rolled, not cut. This process creates a smoother and stronger thread.
- Heat treated alloy steel cross bolts for maximum shear strength.
- Machined puller jaw toes produce larger and stronger pulling toes.

## Mechanical JAW PULLERS

### 1-25 Ton 2 & 2/3 Jaw Pullers

Pullers designed to pull gears, bearings and countless other press fitted parts.



BEARING MAINTENANCE

		Order No.	Max. Reach (mm)	Max. Spread (mm)	Screw Size (in.)	Jaw Thickness (mm)	Jaw Width (mm)	Capacity, Style and Weight
1020		1020	54	82,6	$\frac{5}{16}$ -24 x 98,4 mm	3,5	6,4	1-Ton, 2-Jaw; 0,14 kg
		1021	54	82,6	$\frac{5}{16}$ -24 x 98,4 mm	3,5	6,4	1-Ton, 3-Jaw; 0,23 kg
1022		1022	85,7	101,6	$\frac{3}{8}$ -24 x 124 mm	Upper 4,8 Lower 3,2	Upper 6,4 Lower 12,7	2-ton, 2-Jaw; 0,4 kg (Reversible Jaws)
		1023	85,7	121	$\frac{3}{8}$ -24 x 124 mm	Upper 4,8 Lower 3,2	Upper 6,4 Lower 12,7	2-ton, 2/3-Jaw; 0,6 kg (Reversible Jaws)
1024		1024	83	152	$\frac{9}{16}$ -20 x 176 mm	Upper 7,9 Lower 6,4	Upper 9,5 Lower 19,1	5-Ton, 2-Jaw; 0,8 kg (Reversible Jaws)
		1026	83	178	$\frac{9}{16}$ -20 x 176 mm	Upper 7,9 Lower 6,4	Upper 9,5 Lower 19,1	5-Ton, 2/3-Jaw; 1,3 kg (Reversible Jaws)
1025		1025	140	152	$\frac{9}{16}$ -20 x 176 mm	Upper 7,9 Lower 6,4	Upper 9,5 Lower 19,1	5-Ton, Long 2-Jaw; (Reversible Jaws) 0,9 kg
		1027	140	178	$\frac{9}{16}$ -20 x 178 mm	Upper 7,9 Lower 6,4	Upper 9,5 Lower 19,1	5-Ton, Long 2/3-Jaw; (Rev. Jaws) 1,5 kg
1035		1035	127	229	$\frac{11}{16}$ -18 x 229 mm	Upper 7,9 Lower 8,7	Upper 25,4 Lower 25,4	7-Ton, 2-Jaw; (Reversible Jaws) 2 kg
		1037	127	267	$\frac{11}{16}$ -18 x 229 mm	Upper 7,9 Lower 8,7	Upper 25,4 Lower 25,4	7-Ton, 2/3-Jaw; (Rev. Jaws) 2,8 kg
1036		1036	222	241	$\frac{11}{16}$ -18 x 229 mm	8,7	25,4	7-Ton, Long 2-Jaw; 2,3 kg
		1038	222	279	$\frac{11}{16}$ -18 x 229 mm	8,7	25,4	7-Ton, Long 2/3-Jaw; 3,3 kg
1039/1040		1039	279	318	$\frac{13}{16}$ -16 x 305 mm	14,3	25,4	13-Ton, 2-Jaw; 4,8 kg
		1040	387	279	$\frac{13}{16}$ -16 x 305 mm	14,3	25,4	13-Ton, Long 2-Jaw; 5,9 kg
		1041	279	356	$\frac{13}{16}$ -16 x 305 mm	14,3	25,4	13-Ton, 2/3-Jaw; 6,7 kg
		1042	387	432	$\frac{13}{16}$ -16 x 305 mm	14,3	25,4	13-Ton, Long 2/3-Jaw; 8,3 kg

• For puller piece part identification, consult factory.

• Available standard 17.5 ton & 25 ton mechanical jaw pullers, consult factory.

# Mechanical PUSH PULLERS

10, 17 $\frac{1}{2}$ , &  
30 Ton Cap.

For removing and installing  
gears, bearings, pulleys and  
other press-fitted parts.

**No. 927 – 10-Ton Capacity** can be used with No. 1123 bearing pulling attachment or No. 679 pulley pulling attachment. May also be used with Nos. 1150, 1151, 1152, or 1153 internal pulling attachments.

**No. 938 – 17 $\frac{1}{2}$ -Ton Capacity** can be used with Nos. 1124 and 1130 bearing pulling attachment or Nos. 679 and 680 pulley pulling attachment. May also be used with Nos. 1150, 1151, 1153, or 1166 internal pulling attachments.

**No. 939 – 30-Ton Capacity** can be used with Nos. 1126 and 1127 bearing pulling attachment or No. 680 pulley pulling attachment (two 8012 adapters are required to connect 680 to puller). Can be used with No. 1165 internal pulling attachments.



Bearing Pulling  
Attachment



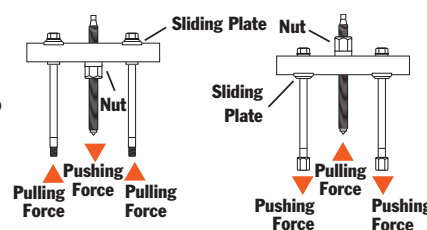
Internal Pulling  
Attachment

## ASSEMBLING THE TOOL TO APPLY PUSHING OR PULLING FORCE:

1. Determine if you want the tool's forcing screw to push or pull.
2. To exert pushing force, the forcing nut is installed beneath the cross block, as shown on left.
3. To cause the forcing screw to pull, the forcing nut is placed on top of the cross block.
4. The sliding plates must always be placed on the opposite side of the cross block from the forcing nut.

## Selection and capacity rating –

Each Push-Puller's specified tonnage "capacity" is determined using its standard legs in tension. Using longer legs, or a setup in which the legs are in compression, will reduce the "capacity". Always select the largest "capacity" puller and the shortest legs that will fit the job.



**927**

Max.



Reach	Spread	Screw	Size	Notes / Weight
210 mm	54 - 184 mm	$\frac{3}{4}$ "-16 x 305 mm	$\frac{1}{2}$ "	of forcing screw tip end is threaded $\frac{5}{8}$ "-18. No. 1100 legs and No. 24827 leg ends included. Wt., 3,2 kg.

### Order No. Leg Length & Wt.

<b>1103</b>	121 mm, 0,45 kg	
<b>1100*</b>	171 mm, 0,7 kg	

### Order No. Leg Length & Wt.

<b>1102</b>	298 mm, 1 kg	
<b>1101</b>	400 mm, 1,5 kg	

Extra Legs (pair) for No. 927 Push-Puller (Reach equals leg length plus 50,8 mm with leg end caps.)

**938**

Max.



Reach	Spread	Screw	Size	Notes / Weight
282 mm	79-298 mm	1"-14 x 336 mm	$\frac{1}{2}$ "	Leg ends threaded $\frac{5}{8}$ "-18. No. 1106 legs and No. 24827 leg ends included. Wt., 9,4 kg

### Order No. Leg Length & Wt.

<b>1107</b>	114 mm, 1,1 kg	
<b>1106*</b>	241 mm, 2 kg	
<b>1104</b>	419 mm, 3kg	

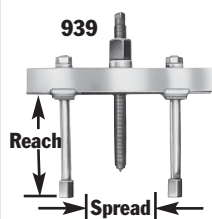
### Order No. Leg Length & Wt.

<b>1105</b>	572 mm, 4,1 kg	
<b>1108</b>	762 mm, 5,2 kg	

Extra Legs (pair) for No. 938 Push-Puller (Reach equals leg length plus 50,8 mm with leg end caps.)

**939**

Max.



Reach	Spread	Screw	Size	Notes / Weight
267 mm	178-413 mm	1 $\frac{1}{2}$ "-12 x 438 mm	$\frac{1}{2}$ "	Leg ends threaded 1"-14. No. 1109 legs and No. 28390 leg ends included. Wt., 20 kg

### Order No. Leg Length & Wt.

<b>1109*</b>	203 mm, 3,6 kg	
<b>1110</b>	457 mm, 6,8 kg	

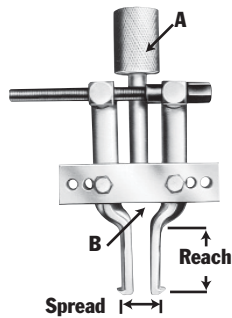
### Order No. Leg Length & Wt.

<b>1111</b>	711 mm, 10 kg	
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Extra Legs (pair) for No. 939 Push-Puller (Reach equals leg length plus 66,7 mm with leg end caps.)

\* Standard legs (pair) with pullers.

**CAUTION** – These attachments may not withstand the full tonnage of the pullers they are used with. The shape and condition of the part being pulled affects the tonnage at which the jaws may slip off. Always select the largest attachment which will fit behind the part being pulled (See page 126).



- Handles internal pulling jobs, such as, bearing /bearing cup removal, bushing removal, oil seals, etc.
- Remove hard to get at parts easily and without damage!
- Use with corresponding Power Team Slide Hammer or Push-Puller.®
- Adjustable jaws fit various diameters

**Fed. Spec.: GGG-P-00781-D**

## Pulling ATTACHMENTS

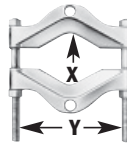
### Jaw Spreads Bearing & Pulley

Order No.	Jaw Spread (mm)	Reach (mm)	A (in. – thd.)	B (in. – thd.)	Wt. (kg)	Application
<b>1153</b>	38,1–127	54	1–14	$\frac{5}{8}$ –18	1,9	Use with Nos. 927 and 938 Push-Pullers,
<b>1150</b>	38,1–152	102	1–14	$\frac{5}{8}$ –18	2	
<b>1151</b>	38,1–178	133	1–14	$\frac{5}{8}$ –18	2	
<b>1152</b>	38,1–152	102	–	$\frac{5}{8}$ –18	1,6	Use with Nos. 927 and 938 Push-Pullers, 1155 and 1156 slide hammer pullers, or 24832 and 24833 puller screw.
<b>1154</b>	38,1–152	102	1–8	$\frac{5}{8}$ –18	2	Use with No. PPH17.
<b>1165</b>	76,7–229	149	$1\frac{1}{2}$ –12	1–14	6,1	Use with No. 939 Push-Puller.
<b>1166</b>	76,2–229	149	$1\frac{1}{4}$ –7	1–14	6,1	Use with No. PPH30.
<b>Puller Screws</b>						
<b>24832</b>	349 mm long	$\frac{5}{8}$ –18	0,5			Use with Nos. 1150, 1151, 1152, and 1153.
<b>24833</b>	140 mm long	$\frac{5}{8}$ –18	0,2			Use with Nos. 1150, 1152, and 1153.

- 24832 & 24833 acts as a regular forcing screw when threaded directly into block of pulling attachment.



- “Knife-like” edges fit behind bearings and other hard-to-grip parts for easy removal, even where clearance is limited.
- Usable with both Grip-O-Matic® jaw type pullers and Push-Pullers®.
- All puller blocks are made from forged alloy steel.

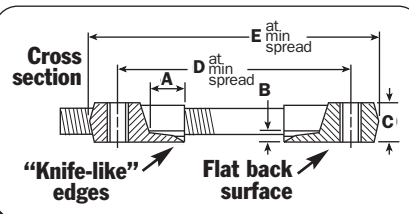


Attachment clamps down into V-groove to distribute load. Use with Grip-O-Matic® pullers or Push-Pullers.

**X** = Thread of tapped hole in adapter.  
**Y** = Distance between adjusting screws.

**Fed. Spec.: GGG-P-00781-D**

Order No.	Max. Spread (mm)	X (in.)	Y (mm)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Wt. (kg)	Application - (Use with Puller Nos.)
<b>1121</b>	6,4-22,2	$\frac{5}{16}$ –18	43	11,1	3,2	12,7	34,9	50,8	0,3	1020, 1022, and 1023.
<b>1122</b>	3,2-51	$\frac{3}{8}$ –16	62	11,1	4,0	15,9	50,8	69,9	0,6	1024, 1025, 1026, 1027, 7392 and 7393.
<b>1123</b>	9,5-117	$\frac{5}{8}$ –18	111	22,2	9,5	25,4	88,9	114,3	2,3	1035, 1036, 1037, 1038, and 927.
<b>1124</b>	12,7-133	$\frac{5}{8}$ –18	152	34,9	11,1	31,8	127	158,8	5,4	1039, 1040, 1041, 1042, PH172, PPH17, and 938.
<b>1126</b>	16-203	1–14	181	34,9	17,5	34,9	146,1	190,5	9	1047, 1043, and 939.
<b>1127</b>	19-340	1–14	260	44,5	17,5	44,5	158,8	215,9	18,8	1047, 1073, and 939.
<b>1128</b>	127-327	$1\frac{3}{4}$ –12	330	44,5	19,1	57,2	327	406	45,4	PH553C, and PPH50. (When using 1128 with PPH50, two 8024 adapters are required to connect PPH50 to the puller tees.)
<b>1130</b>	12,7-219	$\frac{5}{8}$ –18	152	34,9	11,1	31,8	127	158,8	5,4	1039, 1040, 1041, 1042, PH172, PPH17, and 938.
<b>V-belt pulley pulling attachments</b>										
<b>679</b>	45-149	$\frac{5}{8}$ –18	152						2	1035, 1036, 1037, 1038, and 927.
<b>680</b>	42,3-254	$\frac{5}{8}$ –18	257						10,1	1039, 1040, 1041, 1042, 1047, PH172, PPH30* and 938. (When using 680 with PPH30, two 8012 adapters are required.)



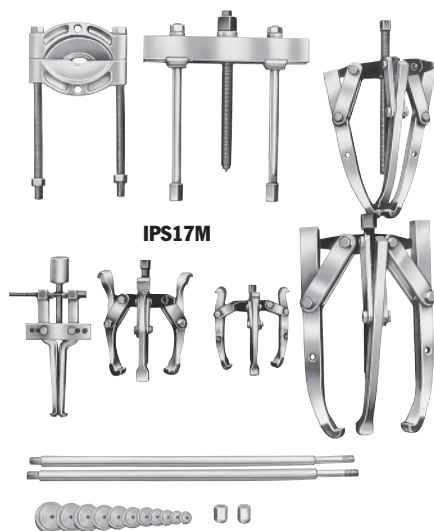
# Puller Sets

## MANUAL

10 & 17½ Ton

BEARING MAINTENANCE

**10 ton manual puller set** – This puller set is just what you need for removing gears, bearings, etc. Includes pullers, attachments, and many accessories.



**17½ ton manual puller set** – The pullers and accessories in this set can be used for hundreds of applications including quick and easy maintenance involving removal and replacement of press-fit parts.

Manual Puller Set No. Order No.	Set Contents	Pullers	Set Contents	Accessories
<b>IPS10M</b> 10 ton capacity Wt., 24 kg.	<b>927</b>	10 ton capacity Push-Puller® with 171 mm legs	<b>8075</b>	Step plate adapter set
	<b>1023</b>	2 ton combination 2/3-jaw puller	<b>8044</b>	Female threaded adapter set
	<b>1026</b>	5 ton combination 2/3-jaw puller	<b>8035</b>	Female threaded adapter: ½"–20 x ⅝"–18
	<b>1027</b>	5 ton combination 2/3-jaw puller	<b>1151</b>	Bearing cup pulling attachment
	<b>1037</b>	7 ton combination 2/3-jaw puller	<b>1121</b>	Bearing pulling attachment
	<b>1178</b>	Slide hammer set	<b>1122</b>	Bearing pulling attachment
<b>IPS17M</b> 17½ ton capacity Wt., 52,7 kg.	<b>938</b>	17½ ton capacity Push-Puller® with 241 mm legs	<b>1123</b>	Bearing pulling attachment
	<b>1027</b>	5 ton combo 2/3-jaw puller, with long jaws	<b>1101</b>	400 mm long puller legs for 927 (pr.)
	<b>1037</b>	7 ton combination 2/3-jaw puller	<b>8075</b>	Step plate adapter set
	<b>1041</b>	13 ton combination 2/3 jaw puller	<b>1105</b>	572 mm legs for 938
	<b>1045</b>	17½ ton 3-jaw puller	<b>1130</b>	Bearing pulling attachment
			<b>1151</b>	Bearing cup pulling attachment
			<b>8038</b>	Female adapter: ⅝"–18 F. x ¾"–16 F. (2)

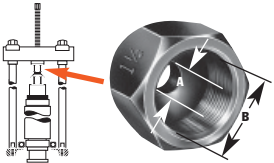
**Note:** Storing boards must be ordered separately.

**No. DB10M** – Board for storing IPS10M set. Size 9,5 x 900 x 1200 mm high. Wt., 10,9 kg.

**No. DB17M** – Board for storing IPS17M set. Size 9,5 x 900 x 1200 mm high. Wt., 11,4 kg.

- **Female threaded adapters** - Use these adapters on the ends of Push-Puller® forcing screws, legs, or slide hammers in the removal and installation of shafts, axles, and housings.

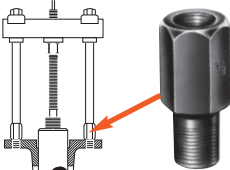
**Set No. 8044** – consists of a set of 6 adapters (Nos. 8037-8042)

	Order No.	Female End "A"	Female End "B"	Order No.	Female End "A"	Female End "B"
	8035*	1/2"-20	5/8"-18	8040	5/8"-18	1"-14
	8036*	1"-14	1"-14	8041	5/8"-18	1 1/8"-12
	8037	5/8"-18	5/8"-18	8042	5/8"-18	1 1/4"-12
	8038	5/8"-18	3/4"-16	8043*	5/8"-18	1 1/2"-12
	8039	5/8"-18	7/8"-14			

**Note:** All adapters available separately.

\*Not included in set No. 8044. Order separately.

- **Male-female threaded adapters** – These adapters are used on ends of Push-Puller® legs, with forcing screws or slide hammers to assist in pulling shafts, bearing caps, pinions, and many other parts.

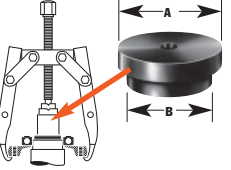
	Order No.	Female End	Male End	Length (mm)	Order No.	Female End	Male End	Length (mm)
	8000	5/8"-18	1/4"-20	57,2	8015	5/8"-18	3/4"-10	57,2
	8001	5/8"-18	5/16"-18	57,2	8016	1"-14	3/4"-10	63,5
	8002	5/8"-18	7/16"-14	57,2	8017	5/8"-18	7/8"-14	57,2
	8003	5/8"-18	7/16"-20	57,2	8018	5/8"-18	7/8"-9	57,2
	8004	5/8"-18	3/8"-24	57,2	8019	5/8"-18	1"-14	57,2
	8005	5/8"-18	3/8"-16	57,2	8020	1"-8	5/8"-18	76,2
	8006	5/8"-18	1/2"-20	57,2	8021	1"-8	1"-14	76,2
	8007	5/8"-18	1/2"-13	57,2	8022	5/8"-18	1/8" pipe	57,2
	8008	5/8"-18	9/16"-18	57,2	8023	1 1/4"-12	1"-14	114,3
	8009	5/8"-18	9/16"-12	57,2	8024	1 1/4"-12	1 3/4"-12	114,3
	8010	5/8"-18	5/8"-11	57,2	8025	1 1/4"-7	5/8"-18	101,6
	8011	1"-14	5/16"-11	63,5	8027	1 1/4"-7	1"-14	101,6
	8012	1"-14	5/8"-18	81	8028	1 5/8"-5 1/2	1"-8	101,6
	8013	5/8"-18	3/4"-16	57,2	8029	1 5/8"-5 1/2	1"-14	101,6
8014	1"-14	3/4"-16	63,5	Note: Nos. 8000-8029 – each sold individually.				

Fed. Spec.:  
GGG-P-00781-D

- **Step plate adapter sets** – Power Team step plate adapters are necessary for pulling and installing bearings, gears, or other parts on hollow shafts or housings. Puller screw forces against step plate adapter, as shown at right. May be used with Power Team jaw-type pullers, Push-Pullers® and shop presses.

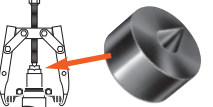
**Set No. 8075** – set of 11 adapters (Nos. 8057-8067).

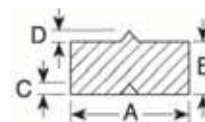
**Set No. 8076** – set of 6 adapters (Nos. 8068-8073).

	Set No. 8075			Set No. 8075			Set No. 8076		
	Order No.	Dia. "A" (mm)	Dia. "B" (mm)	Order No.	Dia. "A" (mm)	Dia. "B" (mm)	Order No.	Dia. "A" (mm)	Dia. "B" (mm)
	8057	25,4	19,1	8063	47,5	38,1	8068	66,5	53,8
	8058	28,4	22,1	8064	50,8	41,1	8069	69,9	57,2
	8059	31,8	25,4	8065	53,8	44,5	8070	72,9	60,3
	8060	34,8	28,4	8066	60,2	47,5	8071	76,2	63,5
	8061	41,1	31,8	8067	63,5	50,8	8072	82,6	69,9
	8062	44,5	34,8				8073	88,9	76,2

- **Shaft protector set** -- Power Team shaft protectors are designed to protect shaft centers from distortion when extreme pressures are applied with jaw-type pullers or Push-Pullers®. Shaft protectors are inserted between the end of the puller screw and the shaft.

**Set No. 8056** – Set of 6 shaft protectors (Nos. 8050 thru 8055).

	Order No.	"A" (mm)	"B" (mm)	"C" (60°) (mm)	"D" (60°) (mm)	Order No.	"A" (mm)	"B" (mm)	"C" (60°) (mm)	"D" (60°) (mm)
	8050	38,1	19,1	9,4	11,1	8053	19,1	19,1	6,4	6,4
	8051	31,8	19,1	9,4	9,4	8054	15,7	15,7	6,4	6,4
	8052	25,4	19,1	9,4	7,9	8055	15,7	15,7	4,8	4,8



**CAUTION:** All the items shown may not withstand the full tonnage of the pullers they may be used with (Refer page 126).

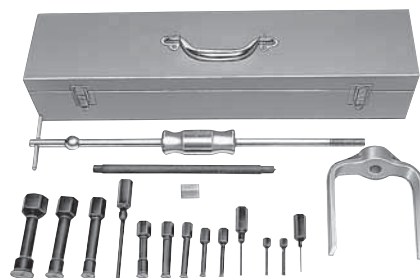
## Adapters

### Specialty Pullers & Metric

# Pullers

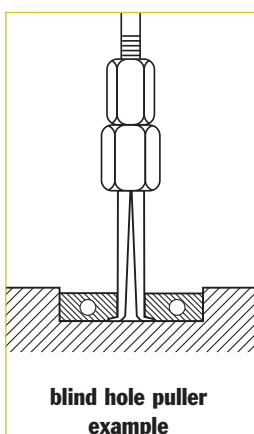
## SLIDE HAMMER

**Blind hole puller set** – Removal of bearings, bushings, sleeves and other friction-fitted parts from blind holes can now be accomplished with ease. Set provides selection of expanding collets 8 to 44,5 mm I.D. Collet is placed through bore of part to be removed, then expanded with actuator pin so that lips of collet secure a positive grip for pulling. Pulling force is exerted by means of a forcing screw and bridge assembly or with a slide hammer.



**Set No. 981**

**No. 981** – Blind-hole puller set with slide hammer, forcing screw, bridge, actuator pins, collets, and storage box. Wt., 9,5 kg.



Order No.	Description	Order No.	Description
24835	Forcing Screw	28253	Actuator Pin (5 mm dia.)
24836	Forcing Screw Nut	28256	Actuator Pin (12,7 mm dia.)
22185	Hammer 1,1 kg.	41331	Bridge
208627	Shank & Tee Bar Assembly	28323GY8	Metal Box
28250	Actuator Pin (3,2 mm dia.)	10419	Metal Box

Order No.	Inch Range	MM Range	Order No.	Inc Range	MM Range
33856*	5/16" to 3/8"	8 to 9.5	33861**	3/4" to 7/8"	19.1 to 22.2
33857*	3/8" to 7/16"	9.5 to 11.1	33862**	7/8" to 1"	22.2 to 25.4
33858**	7/16" to 1/2"	11.1 to 12.7	33863***	1" to 1 1/4"	25.4 to 31.7
33859**	1/2" to 5/8"	12.7 to 15.9	33864**	1 1/4" to 1 1/2"	31.7 to 38.1
33860**	5/8" to 3/4"	15.9 to 19.1	33865***	1 1/2" to 1 3/4"	38.1 to 44.4

\*Use with 3 mm actuator pin. \*\*Use with 4,8 mm actuator pin. \*\*\*Use with 12,7 mm actuator pin

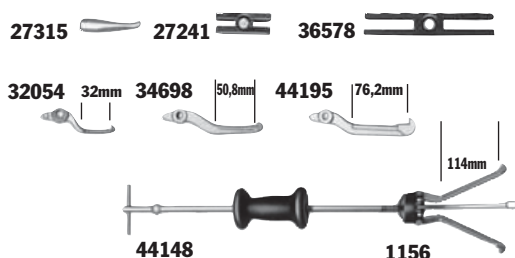
**Slide hammer puller set** – This very handy set is ideal for those close-quarter, inside pulling jobs. Very practical for pulling motor, generator, and magneto bearings. Also good for removing small-bore bushings, bearings, and oil seals.

**No. SS2** – Slide hammer puller set. Wt., 2,6 kg.

Jaw Set		Inside Spread	
		Min. (mm)	Max. (mm)
1172		12,7	50,8
1174		12,7	34,9

**Slide hammer puller set** – This useful set contains a reversible-jaw slide hammer puller with a 1,1 kg sliding hammer plus an assortment of special jaws (3 of each size) and adapters. In this set, you get all the versatility you demand of a slide hammer puller.

**No. 1178** – Slide hammer puller set with 1,1 kg. sliding hammer. Wt., 6,3 kg.



**Sliding hammers only -**

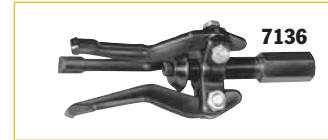
**No. 22185** – 1,1 kg sliding hammer.

**No. 34331** – 2,3 kg sliding hammer.



Jaw	2-Jaw Spread				3-Jaw Spread			
	Min. (mm)	Max. (mm)	Min. (mm)	Max. (mm)	Min. (mm)	Max. (mm)	Min. (mm)	Max. (mm)
44195	38,1	114,3	19,1	127	38,1	120,7	25,4	114
32054	19,1	60,3	—	—	25,4	69,9	—	—
44148	69,9	139,7	19,1	191	82,6	158,8	25,4	159
34698	31,8	88,9	25,4	114	38,1	108	38,1	114

**Bearing cup remover** – The 7136 is perfect for pulling internal bearing cups, seals, bushings, etc. Jaw spread – 23,8 to 82,6 mm, reach to 88,9 mm. Use with any slide hammer having  $\frac{5}{8}$ "-18 thread (Power Team 1155, 1156 or 927 Push-Puller®).



**No. 7136** – Universal bearing cup remover. Wt., 0,7 kg.

**Pilot bearing pullers** -These very versatile pullers are built especially for inside pulling jobs, and particularly for removing flywheel pilot bearings on machines and construction vehicles. Also very practical for pulling motor, generator and magneto bearings.

**Special slide hammer puller** – Ideal for pulling jobs in very close quarters, as in

removal of small-bore bushings, bearings, oil seals, etc. Internal pulling attachment has jaw spread of 12,7 to 35 mm. Handle end has a  $\frac{1}{2}$ "– 20 thread.

**No. 1173** – Slide hammer puller. Wt., 1,6 kg.

**No. 1174** – Puller head, less slide hammer.

**Basic slide hammer units** – Compatible with internal pulling attachment (see page 198). Compatible with threaded adapters (see page 204-205). 610 mm length,  $\frac{5}{8}$ "–18 threaded end.

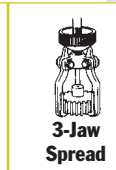
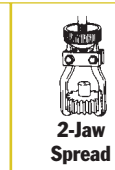
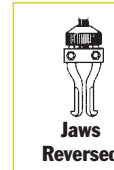
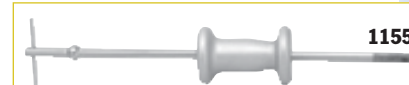
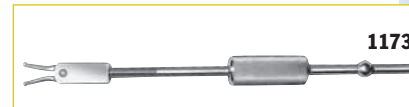
**No. 1155** – Basic slide hammer unit with 2,3 kg hammer. Wt., 3,3 kg.



**No. 1156** – Basic slide hammer unit with 1,1 kg hammer. Wt., 2,2 kg.

**Reversible-jaw slide hammer pullers** – Ideal for pulling gears, bearings, outer races, grease retainers, oil seals, etc. Two or three jaws may be used and positioned for "inside" or "outside" pulling jobs. Both have  $\frac{5}{8}$ "– 18 threaded end so attachments and adapters may be used.

**No. 1176** – Slide hammer puller with 1,1 kg hammer, 27241 two-way head and 34698 jaws. Wt., 3,3 kg

**No. 1177** – Same as 1176 but with 2,2 kg hammer. Wt., 4,8 kg



Order No.	2 Jaw Spread				3 Jaw Spread				Prod. Wt. (kg)	Overall Length (mm)	
	Inside Min. (mm)	Inside Max. (mm)	Outside Min. (mm)	Outside Max. (mm)	Inside Min. (mm)	Inside Max. (mm)	Outside Min. (mm)	Outside Max. (mm)			
1176	31,8	88,9	25,4	114	38,1	108	38,1	114	3,6	686	
1177	31,8	88,9	25,4	114	38,1	108	38,1	114	4,8	686	

**Slide hammer pullers with cup pulling attachments** – These combine a basic slide hammer with No. 1152 internal pulling attachment for removing oil seals, outer races, and bearing cups from blind holes.

**No. 1157** – Slide hammer puller consisting of 1156 slide hammer and 1152 internal pulling attachment.

**No. 1158** – Same as 1157 but with 1155 slide hammer.

Order No.	Reach Max. (mm)	Spread Min. (mm)	Spread Max. (mm)	Prod. Wt. (kg)	Overall Length (mm)	
1157	102	38,1	152	4,5	711	
1158	102	38,1	152	5,6	711	

# Hydra Grip-O-Matic®

USE WITH 2/3 JAW PULLERS

6 - 30 Ton

A self contained pulling system in a compact package

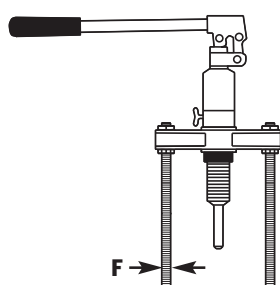
BEARING MAINTENANCE



- You get the world's most copied puller design; the harder the pulling force, the tighter the jaws grip for secure holding force.
- Power Team pullers are tested for top performance and reliability at maximum capacity and jaw spread.
- Removing a wide variety of gears, bearings, bushings, pulleys and other press-fitted parts becomes a routine task.
- Easily metered release valve control knob.
- Spring loaded live centering cone.
- Bladder type oil reservoir.
- Rapid adjustment.
- Use with 2 or 3 jaws.
- Supplied with a sturdy storage/ carrying case.
- Features Power Team's exclusive Marathon Limited Lifetime Warranty.

## Hydra Grip-O-Matic® pulling system -

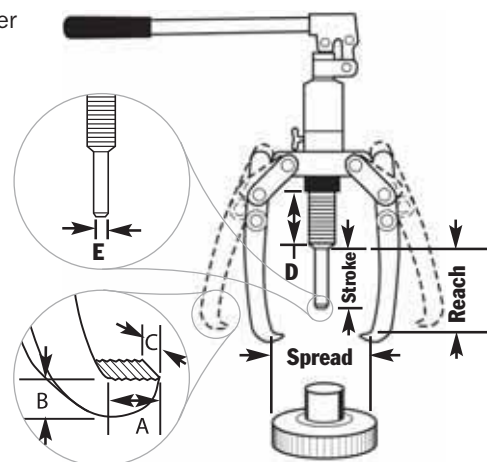
These pullers are ideal for pulling a wide variety of press-fitted parts including bushings, bearings, wheels, gears and pulleys. Applications can be found in a wide variety of industries as well. Grip-O-Matic® pullers have been rigorously tested for top performance and reliability. PH82K is a complete pulling system which includes a hydraulic power module, 2-way puller head, jaws, legs and bearing splitter attachment; all contained in a convenient carrying case.



PH63C



PH303C



Cyl. Cap. (tons)	Order No.	Reach		Min. Reach (mm)	Max. Studs (mm)	Spread Jaws (mm)	Stroke (mm)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (in.)	Wt. (kg)
		Studs (mm)	Jaws (mm)											
6	PH63C	—	152	—	—	200	80	11	6,4	22	83	22	—	4,9
8	PH83C	—	190	—	—	249	80	11	9,5	25,4	83	22	—	6,6
11	PH113C	—	229	—	—	280	80	14,3	9,5	29	83	29	—	8,0
30	*PH303C	—	375	—	—	540	110	27	36.5	38	170	54	—	32.3
8	PH82K	266,7	207	125	300	245	80	52	25,4	16	83	22	5/8-18 UNF	9,5
11	HST11S	—	150	—	—	102-410	80	—	—	—	65	29	—	14,5

\* PH303C include protective blanket & storage case

# Puller

## Accessories

**Hydra Grip-O-Matic® puller accessory kits – K82** accessory kit for the Hydra-Grip-O-Matic® puller No. PH83C. Includes 2-way puller head, 2 jaws, 2 threaded legs and sturdy carrying/storage case.

**No. K82** – Accessory kit for PH83C Grip-O-Matic® hydraulic puller. K83 2/3 way head accessories kit for a Hydra Grip-O-Matic® puller No. PH83C. Includes 2/3 way puller head, 3 jaws, 3 threaded legs and sturdy carrying/storage case.

**No. K83** – Accessory kit for PH83C Grip-O-Matic® hydraulic puller.



K82



K83

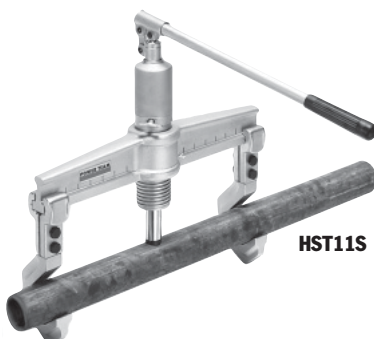


**Puller Accessory converts PH113C into a Hydraulic Straightening Tool** – Portable...Good for straightening mechanical shafts, round bars, etc. Simply remove pump and cylinder from puller head and insert them into the straightening tool accessory. This product is widely used in steel mills, wire roll companies, wire extruding companies, textile industry, and any straightening situation where portability and power are required. Contoured heat-treated shaft adapter included.

**No. HST11** – Spread: 89 to 410 mm, Reach: 150 mm. Wt., 9,5 kg.

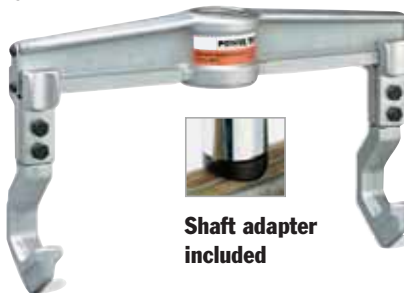
**Long jaw set for PH83C and PH113C Grip-O-Matic® pullers** – This long jaw set is the perfect addition to the PH83C or PH113C Grip-O-Matic® hydraulic pullers. The extra long jaws give you the added capability of pulling a wider variety of parts. Jaw capacity is 8 tons when used with the PH83C puller; 11 tons when used with the PH113C puller.

**No. 1188** – Spread: 280 to 317 mm, Reach: 317mm.



HST11S

HST11



Shaft adapter included



1188

# Pullers HYDRAULIC

5, 10, 17½, 30 & 50 Ton



- Remove gears, bearings, and other press-fitted parts with speed and ease.
- Broad capacity range of 5, 10, 17½, 30 and 50 tons.
- 5 and 10 ton sets include: single-acting, spring return hydraulic cylinder with hose, coupler and dust cap; single-speed hydraulic hand pump; puller.
- 17½, 30 and 50 tons sets include: Power-Twin® single acting, spring return hydraulic cylinder with hose, coupler and dust cap; single-speed hydraulic hand pump; puller, adjusting screw and crank.
- Hydraulic cylinder of all models is readily removable from puller for use with pump in other hydraulic applications. You get maximum maintenance versatility for your investment.

## 5 ton capacity, 2/3 jaw puller -

**No. PH53C** - Combination 2-jaw/3-jaw puller set. Includes 1057 5 ton puller, RPS55 hydraulic set (C55C cylinder, P12 700 bar hand pump, fittings, coupler, and 1,8 m hose), and 309874 pushing adapter. Wt., 9,1 kg.

**No. PH53CR** - Combination 2-jaw/3-jaw puller set. Includes 1057 5 ton puller, C55C cylinder, and 309874 pushing adapter. Wt., 5,5 kg

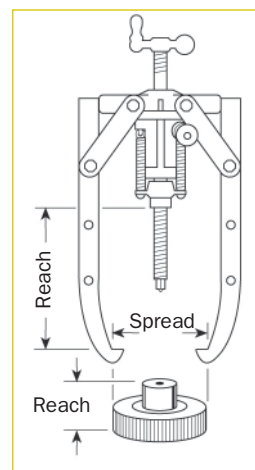
**No. 1057** - 5 ton cap. 2-jaw/3-jaw puller only. Wt., 3,5 kg.

### Available components -

**No. 309874** - 15,9 mm diameter pushing adapter. (Included with PH53C and PH53CR hydraulic puller sets.) Wt., 0,3 kg.

**No. 309875** - 22,2 mm diameter pushing adapter. Wt., 0,3 kg.

**No. 47997** - 2-way/3-way puller head. (Can be used to convert No. 1038 7 ton manual puller into a 5 ton hydraulic puller.) Wt., 1,1 kg.



Fed. Spec.: GGG-P-00781-D

## 10 ton capacity, 2/3 jaw puller -

**No. PH103C** - Combination 2-jaw/3-jaw puller; 10 ton capacity. Set includes 1060 10 ton puller, RPS1010 cylinder and pump set, 202179 threaded adapter, and 34602 pushing adapter. Wt., 23,6 kg.

**No. PH103CR** - Combination 2-jaw/3-jaw puller, 10 ton capacity. Set includes 1060 10 ton puller, 202179 threaded adapter, 34602 pushing adapter, and C1010C cylinder only. (Pump and hose not included.) Wt., 14,5 kg.

**No. 1060** - Combination 2-jaw/3-jaw puller only; 10 ton capacity. (Cylinder and pump set, hose, coupler, and adapter No. 202179 not included.) Wt., 7,7 kg.

**NOTE:** This puller may be used with any 10 ton single-acting cylinder having a 2¼"-14 straight collar thread.



PH172



PH173

### 17½ ton capacity, 2-jaw puller –

**No. PH172** – 2-jaw puller with RT172 center-hole Power-Twin® cylinder, cylinder half coupler, P55 pump, 1,8 m hose, hose half coupler, 1"– 8 x 508 mm long adjusting screw, and adjusting crank. Wt., 27,7 kg.

**No. 1064** – Puller only. (Cylinder, pump, hose, coupler, screw, and crank not included). Wt., 10 kg.

### 17½ ton capacity, 3-jaw puller –

**No. PH173** – 3-jaw puller with RT172 center-hole Power-Twin® cylinder, cylinder half coupler, P55 pump, 1,8 m hose, hose half coupler, 1"– 8 x 508 mm long adjusting screw, and adjusting crank. Wt., 34 kg.

**No. PH173R** – 3-jaw puller with screw and crank, and RT172 center-hole twin cylinder. Wt., 25,4 kg.

**No. 1066** – Puller only. (Cylinder, pump, hose, coupler, screw, and crank not included). Wt., 16,3 kg.

### 30 ton capacity, 3-jaw puller –

**No. PH303** – 3-jaw puller with RT302 center-hole Power-Twin® cylinder, cylinder half coupler, P55 pump, 1,8 m hose, hose half coupler, 1¼"– 7 x 610 mm lg. adjusting screw, and adjusting crank. Wt., 67,7 kg.

**No. PH303R** – 3-jaw puller with screw and crank, and RT302 center-hole twin cylinder. Wt., 59 kg.

**No. 1074** – Puller only. (Cylinder, pump, hose, coupler, screw, and crank not included). Wt., 40,9 kg.

### 50 ton capacity, 3-jaw puller –

**No. PH503** – 3-jaw puller with RT503 center-hole Power-Twin® cylinder, cylinder half coupler, P55 pump, 1,8 m hose, hose half coupler, 1⅝"– 51/2 x 772 mm long adjusting screw, and adjusting crank. Wt., 130 kg.

**No. 1080** – 3-jaw puller only. (Cylinder, pump, hose, coupler, screw, and crank not included). Wt., 86,7 kg.

### PULLER ONLY

Order No.	Cap. (Tons)	Jaws	Jaw Reach (mm)	Jaw Spread (mm)	Jaw Thickness (mm)	Jaw Width (mm)	Wt. (kg)
1057	5	2/3	222	292	8,7	25	3,5
1060	10	2/3	381	432	14,3	25	7,7
1064	17½	2	292	406	20,6	32,5	10
1066	17½	3	292	508	20,6	32,5	16,3
1074	30	3	494	864	28,6	41,3	40,9
1080	50	3	702	1.118	35,7	47,6	86,7

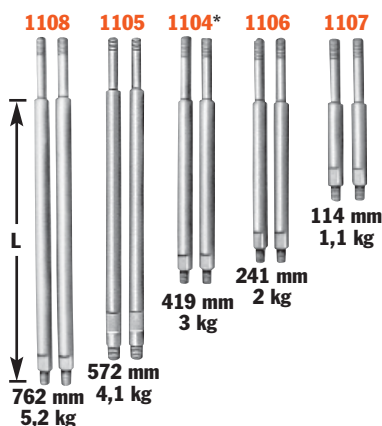
**CAUTION:** Always use a 3-jaw puller where clearance permits in order to provide a more stable setup and a more even pulling force.

# Push-Pullers® HYDRAULIC

17½, 30-50 Ton

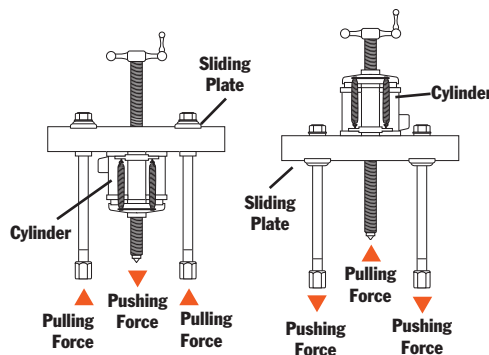
The power to make impossible jobs become routine.

- Can apply a hydraulic pushing or pulling force, depending on how the puller is set up.
- Each unit includes perfectly matched hydraulic components that can be detached from the Push-Puller® for other tasks requiring dependable Power Team power; assuring maximum return on your investment.
- Optional leg kits adapt your Push-Puller® to extra long or extra short reach.
- A wide variety of threaded adapters, bearing pulling attachments and internal pulling attachments can be used in combination with our Push-Pullers®.



## ASSEMBLING THE TOOL TO APPLY PUSHING OR PULLING FORCE:

1. Determine if you want the tool's forcing screw to push or pull.
2. To exert pushing force, the forcing nut is installed beneath the cross block, as shown on left.
3. To cause the forcing screw to pull, the forcing nut is placed on top of the cross block.
4. The sliding plates must always be placed on the opposite side of the cross block from the forcing nut.



**NOTE:** L = leg length: 114; 241; 419; 572 and 762 mm subtract 124 mm from leg length to determine reach when using leg end caps.

**Selection and capacity rating** – Each Push-Puller's specified tonnage "capacity" is determined using its standard legs in tension. Using longer legs, or a setup in which the legs are in compression, will reduce the "capacity". Always select the largest "capacity" puller and the shortest legs that will fit the job.

**Power Twin® cylinder** – This unique center-hole cylinder powers each Push-Puller®. Puller screw runs right between the twin spring cylinder. A basic head allows you to change from a tapped hole to a plain hole by merely changing the head insert.

### 17½ ton capacity Push-Puller® –

**No. PPH17** – Push-Puller® with RT172 center-hole Power Twin® cylinder, cylinder half coupler, P55 pump, 9767 1,8 m. hose, 9798 hose half coupler, 419\* mm legs, 24827 leg ends, 1"-8 x 508 mm lg. adjusting screw and adjusting crank. Wt., 26,8 kg.

**No. PPH17R** – Same as above, but without P55 pump, 9767 1,8 m. hose and 9798 hose half coupler. Wt., 18,2 kg.

**No. 1062** – Puller only. (Cylinder, pump, hose, coupler, screw and crank not included.) Wt., 9,1 kg.

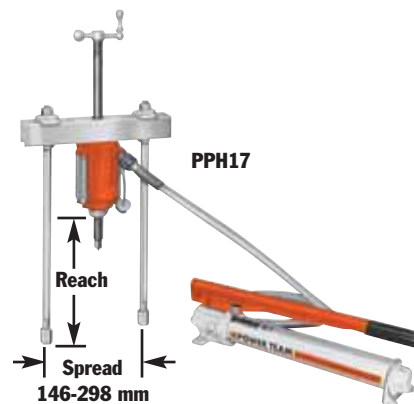
### USE WITH:

Bearing pulling attachments: **Nos. 1124 and 1130.**

Pulley pulling attachment: **No. 679.**

Internal pulling attachment: **No. 1154.**

Legs: **Nos. 1104, 1105, 1106, 1107 and 1108** - Pair of legs for 17½-ton "capacity" Push-Puller®.



**Leg Ends** – Upper leg ends are threaded ¾"-16. Lower leg ends are threaded 5/8"-18 x 25 mm lg.

\* No. 1104 included in PPH17, PPH17R & 1062.

### 30 ton capacity Push-Puller® -

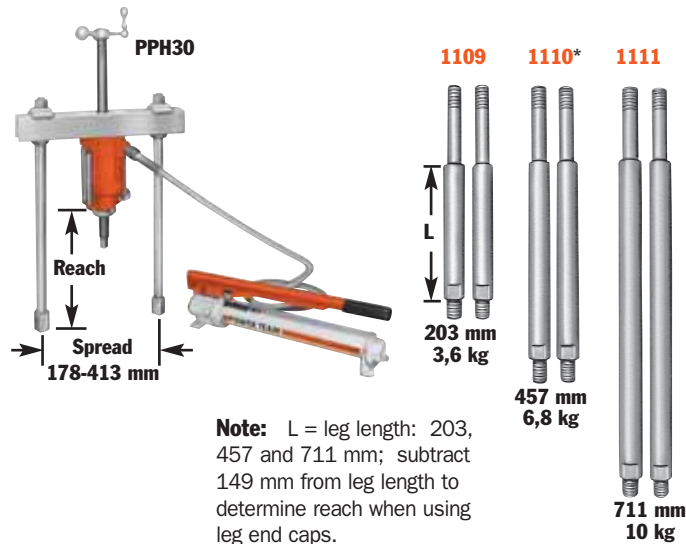
**No. PPH30** – Push-Puller® with RT302 center-hole Power Twin® cylinder, cylinder half coupler, P55 pump, 9767 1,8 m. hose, 9798 hose half coupler, 457\* mm legs, 28390 leg ends, 1<sup>1</sup>/<sub>4</sub>"-7 x 610 mm lg. adjusting screw and adjusting crank.  
Wt., 46,3 kg.

**No. PPH30R** – Same as above, but without P55 pump, 9767 1,8 m hose and 9798 hose half coupler. Wt., 37,2 kg.

**No. 1070** – Puller only. (Cylinder, pump, hose, coupler, screw and crank not included.)  
Wt., 19,1 kg.

#### USE WITH:

Bearing pulling attachments. **No. 680** (Use two 8012 adapters to connect to puller.)  
Pulley pulling attachment: **No. 679**.  
Internal pulling attachment: **No. 1166**.  
Legs: **Nos. 1109, 1110 and 1111** - Pair of legs for 30 ton "capacity" Push-Puller®.



**Leg ends** are threaded 1"-14 x 32 mm lg.

\* No. 1110 included in PPH30, PPH30R & 1070.

### 50 ton capacity Push-Puller® -

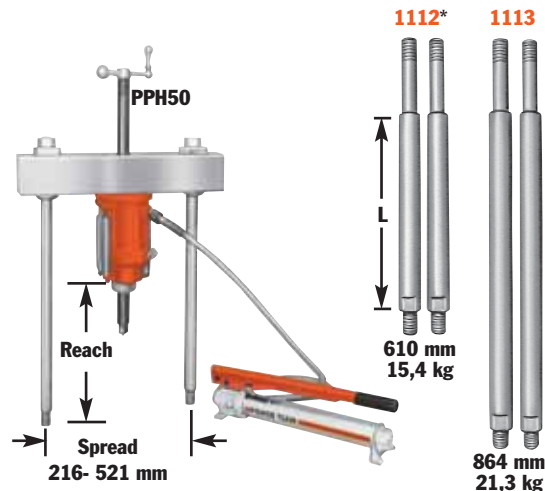
**No. PPH50** – Push-Puller® with RT503 center-hole Power Twin® cylinder, cylinder half coupler, P55 pump, 9767 1,8 m hose, 9798 hose half coupler, 610\* mm legs, 1<sup>5</sup>/<sub>8</sub>"-5<sup>1</sup>/<sub>2</sub> x 722 mm lg. adjusting screw and adjusting crank.  
Wt., 91,3 kg.

**No. PPH50R** – Same as above, but without P55 pump, 9767 1,8 m hose and 9798 hose half coupler. Wt., 82,2 kg.

**No. 1076** – Puller only. (Cylinder, pump, hose, coupler, screw and crank not included.)  
Wt., 48,1 kg.

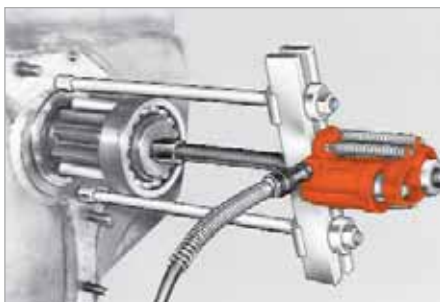
#### USE WITH:

Bearing pulling attachments: **Nos. 1128 and 1129**.  
Legs: **Nos. 1112 and 1113** - Pair of legs for 50 ton "capacity" Push-Puller®.



**Leg ends** are threaded 1<sup>1</sup>/<sub>4</sub>"-12 x 44,5 mm lg.

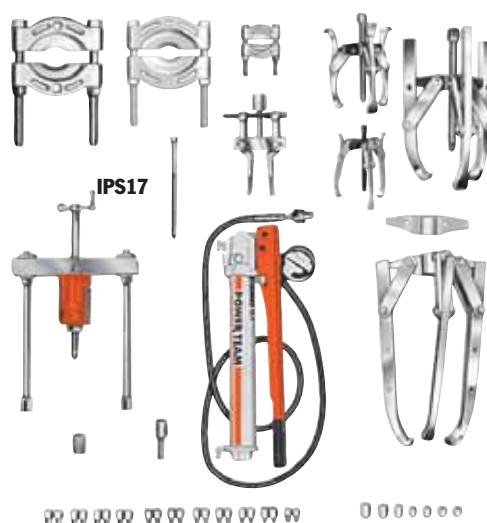
\* No. 1112 included in PPH50, PPH50R & 1076.



# Puller Sets

## HYDRAULIC

17½, 30 & 50 Ton



Wooden storage box No. **3084350R9** is included with the sets listed on this page. 1.016L x 406 W x 406 mmD Metal storage boxes also available (See page 145).

**17½ ton hydraulic master puller sets** – Having this Power Team puller set at your fingertips will not only reduce your downtime, but also increase your profits.

**No. IPS17** – 17½ ton capacity puller set. Includes hydraulics, pullers, wooden storage box and accessories listed below. Wt., 86,7 kg.

**No. IPS17B** – Puller set with MB5 metal box. Wt., 96,7 kg.

**No. DB17** – Board for storing IPS17 set. Must be ordered separately. Size: 15,9 x 1.200 x 1.800 mm long. Wt., 30,9 kg.



**17½ ton hydraulic puller set** - This set includes a 3-jaw puller and a Push-Puller®. Ideal for heavy duty applications; put this set to work wherever large gears, bearings, wheels, pulleys, etc. are found.

**No. IPS17H** – 17½ ton capacity hydraulic puller set. Includes hydraulics, pullers, wooden storage box and accessories listed below. Wt., 62,2 kg.

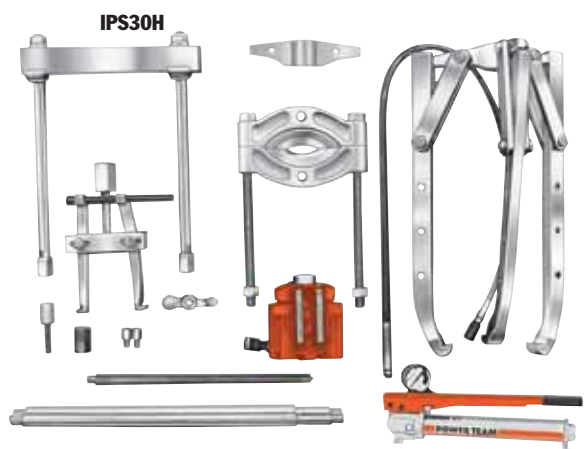
**No. DB17H** – Board for storing IPS17H set. Must be ordered separately. Size 15,9 x 1.200 x 1.200 mm Wt., 13,6 kg.

### CONTENTS OF SET NO. IPS17

Contents	Hydraulics	Contents	Accessories
<b>P55</b>	Single-stage hyd. hand Pump assembly	<b>1154</b>	Bearing cup pulling attach
<b>RT172</b>	17½ ton cylinder with threaded insert	<b>1122</b>	Bearing pulling attachment
<b>9798</b>	Hose half coupler	<b>1123</b>	Bearing pulling attachment
<b>9767</b>	Hydraulic hose – 1,8 m	<b>1130</b>	Bearing pulling attachment
<b>9670</b>	Tee adapter	<b>Threaded Adapters</b>	
<b>9059</b>	Pressure gauge	<b>8005</b>	5/8" – 18 F. x 3/8" – 16 M. (2)
<b>Pullers</b>		<b>8006</b>	5/8" – 18 F. x 1/2" – 20 M. (2)
<b>1062</b>	17½ ton cap. Push-Puller® with 419 mm legs	<b>8007</b>	5/8" – 18 F. x 1/2" – 13 M. (2)
<b>24814</b>	Speed crank	<b>8010</b>	5/8" – 18 F. x 5/8" – 11 M. (2)
<b>32118</b>	Adjusting screw	<b>8013</b>	5/8" – 18 F. x 3/4" – 16 M. (2)
<b>201923</b>	Pushing adapter	<b>8015</b>	5/8" – 18 F. x 3/4" – 10 M. (2)
<b>1105</b>	572 mm legs (pr)	<b>8017</b>	5/8" – 18 F. x 7/8" – 14 M. (2)
<b>1066</b>	17½ ton 3-jaw hyd. puller	<b>8018</b>	5/8" – 18 F. x 7/8" – 9 M. (2)
<b>1027</b>	Combination 2/3-jaw puller	<b>8019</b>	5/8" – 18 F. x 1" – 14 M. (2)
<b>41224</b>	17½ ton 2-jaw puller head	<b>8020</b>	1" – 8 F. x 5/8" – 18 M. (1)
<b>24832</b>	Puller screw	<b>8021</b>	1" – 8 F. x 1" – 14 M. (1)
<b>1037</b>	Combination 2/3-jaw puller	<b>8044</b>	Female threaded adapter set
<b>1041</b>	Combination 2/3-jaw puller	<b>8038</b>	5/8" – 18 F. x 3/4" – 16 F. (2)
<b>28228</b>	Cylinder cap	<b>679</b>	V-belt pulley pulling attachment
		<b>8056</b>	Set of 6 shaft protectors (8050-8055)
		<b>8075</b>	Set of 11 adaptors (8057-8067)

### CONTENTS OF SET NO. IPS17H

Contents	Hydraulics	Contents	Accessories
<b>P55</b>	Single-stage hydraulic hand pump assembly	<b>1154</b>	Bearing cup pulling attach.
<b>RT172</b>	17½ ton cylinder with threaded insert	<b>1130</b>	Bearing pulling attachment
<b>9798</b>	Hose half coupler	<b>1105</b>	572 mm legs (pr)
<b>9767</b>	Hydraulic hose – 1,8 m	<b>24814</b>	Speed crank
<b>9670</b>	Tee adapter	<b>28228</b>	Screw cap
<b>9059</b>	Pressure gauge	<b>32118</b>	Adjusting screw
<b>Pullers</b>		<b>201454</b>	Pushing adapter
<b>1062</b>	17½ ton cap. Push-Puller with 419 mm legs	<b>41224</b>	2-jaw head for 1066
<b>1066</b>	17½ ton 3-jaw hyd. puller	<b>Threaded Adapters</b>	
		<b>8020</b>	1" – 8 F. x 5/8" – 18 M. (1)
		<b>8038</b>	5/8" – 8 F. x 3/4" – 16 F. (1)



**30 ton capacity puller set** – Just what you need for those big jobs. Not only do you get a 30 ton hydraulic Push-Puller®, you also get a 2-jaw and 3-jaw hydraulic puller. Plus, many popular accessories and the hardware to tackle the big jobs right away.

**No. IPS30H** – 30 ton capacity hydraulic maintenance puller set. Includes hydraulics, pullers, wooden storage box and accessories listed below. Wt., 150 kg.

**No. DB30H** – Board for storing IPS30H set. Must be ordered separately. Size 15,9 x 1.200 x 1.800 mm Wt., 35,4 kg.

CONTENTS OF SET NO. IPS30H			
Contents	Hydraulics	Contents	Pullers
<b>P55</b>	Single-stage hydraulic hand pump assembly	<b>1074</b>	30 ton, 3-jaw hyd. puller
<b>RT302</b>	30 ton cylinder with threaded insert	<b>41226</b>	2-way head for 1074
<b>9798</b>	Hose half coupler	<b>1070</b>	30 ton cap. hydraulic Push-Puller® with 457 mm legs
<b>9767</b>	Hydraulic hose – 1,8 m	<b>1111</b>	711 mm legs for 1070
<b>9670</b>	Tee adapter	<b>27198</b>	Speed crank
<b>9059</b>	Pressure gauge	<b>28229</b>	Screw cap
<b>Accessories</b>		<b>34510</b>	Pushing adapter
<b>8036</b>	Female threaded adapters 1" – 14F. x 1" – 14F. (2)	<b>34758</b>	Adjusting screw
<b>1166</b>	Bearing cup pulling attach.		
<b>1127</b>	Bearing pulling attachment		

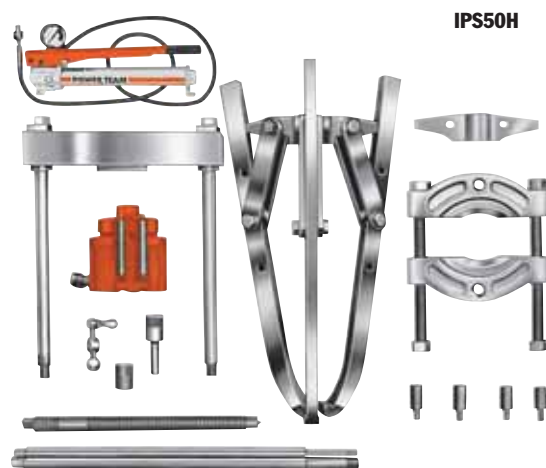


**Note:** Wooden storage box No. **3084380R9** is provided with the sets listed on this page. 1180L x 615H x 579D  
Metal storage boxes also available (See page 145).

**50 ton capacity puller set** - For those really big jobs, this 50 ton puller set is what you need. Just think of the jobs you can do with a 50 ton hydraulic Push-Puller®, a 2-jaw and a 3-jaw puller, both with a 50 ton capacity. Of course, you also get many versatile accessories and attachments.

**No. IPS50H** – 50 ton capacity hydraulic maintenance puller set. Includes hydraulics, pullers, wooden storage box and accessories listed below. Wt., 261 kg.

CONTENTS OF SET NO. IPS50H			
No.	Hydraulics	No.	Pullers
<b>P55</b>	Single-stage hydraulic hand pump assembly	<b>1080</b>	50 ton, 3-jaw hyd. puller
<b>RT503</b>	50 ton cylinder with threaded insert	<b>50449</b>	2-way head for 1080
<b>9798</b>	Hose half coupler	<b>1076</b>	50 ton cap. hydraulic Push-Puller® with 610 mm legs
<b>9767</b>	Hydraulic hose – 1,8 m	<b>1113</b>	864 mm legs for 1076
<b>9670</b>	Tee adapter	<b>29595</b>	Speed crank
<b>9059</b>	Pressure gauge	<b>28230</b>	Screw cap
<b>Threaded Adapters</b>		<b>34755</b>	Pushing adapter
<b>8024</b>	1 1/4" – 12F. x 1 3/4" – 12M. (2)	<b>32698</b>	Adjusting screw
<b>8028</b>	1 5/8" – 5 1/2 F. x 1" – 8M.	<b>Accessories</b>	
<b>8029</b>	1 5/8" – 5 1/2 F. x 1" – 14M.	<b>1128</b>	Bearing pulling attachment



**CAUTION:** All the items shown may not withstand the full tonnage specified. Example: When an accessory with a 1 ton capacity is used with a 7 ton puller, the setup can be used only at a force of 1 ton.

# Puller Sets

## HYDRAULIC

17½ & 30 Ton  
17½ & 50 Ton

**17½ and 30 ton capacity puller sets** – These heavy-duty maintenance sets will more than pay for themselves, especially in saving you costly damage to parts. This set lets you tackle hundreds of applications where pushing and pulling are required.

**No. IPS3017** – 17½ and 30 ton capacity manual and hydraulic puller set. Includes hydraulics, pullers, and accessories listed below. Wt., 244 kg.

**No. IPS3017B** – Puller set with MB8 metal box. Wt., 256 kg.



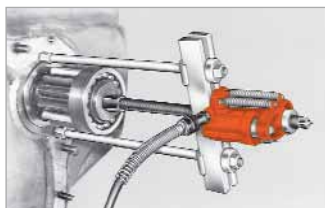
**Note:** Wooden storage box No. **3084360R9** is provided with this set. 1.016 L x 432 H x 610 mm D Metal storage boxes also available (See page 145).



2-jaw puller reaches through spokes of gear to grip hub. Hand pump supplies hydraulic power.



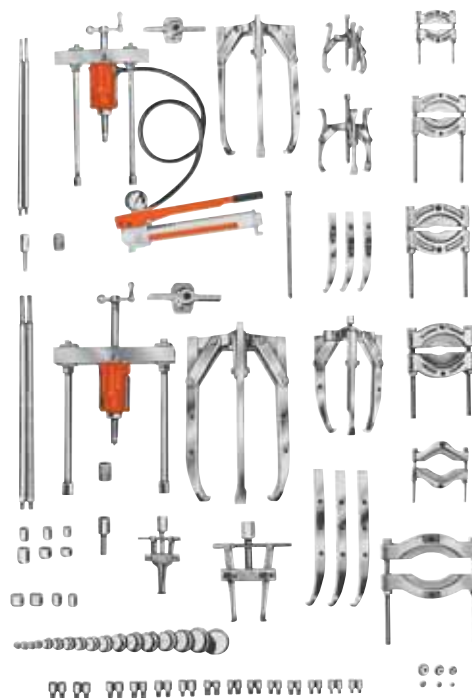
Flexible coupler is removed from electric motor shaft with 2-jaw puller.



Typical setup for removing sprocket drive pinion shaft. Puller screw is attached to shaft by threaded adapter. Shaft is now ready to be pulled out hydraulically.

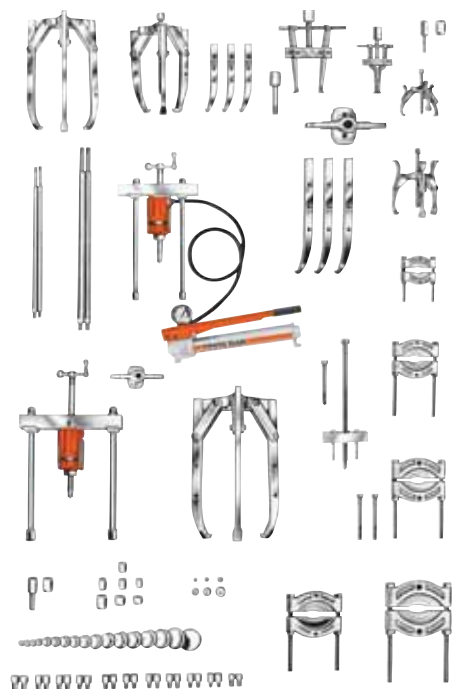
**CAUTION:** All the items shown may not withstand the full tonnage specified. Example: When an accessory with a 1 ton capacity is used with a 7 ton puller, the setup can be used only at a force of 1 ton.

IPS3017



### CONTENTS OF SET NO. IPS3017

No.	Hydraulics	No.	Accessories
<b>P55</b>	Single-stage hyd. hand pump assembly	<b>24832</b>	Special puller forcing screw
<b>RT172</b>	17½ ton center-hole twin cylinder w/ threaded insert	<b>8075</b>	Step plate adapter set
<b>RT302</b>	30 ton center-hole twin cylinder w/ threaded insert	<b>8076</b>	Step plate adapter set
<b>9798</b>	Hose half coupler	<b>8056</b>	Shaft protector set
<b>9767</b>	Hydraulic hose – 1,8 m	<b>679</b>	Pulley pulling attachment
<b>9670</b>	Tee adapter	<b>680</b>	Pulley pulling attachment
<b>9059</b>	Pressure gauge	<b>1154</b>	Bearing cup pulling attach.
<b>Pullers</b>		<b>1166</b>	Bearing cup pulling attach.
<b>1062</b>	17½ ton cap. hydraulic Push-Puller® w/419 mm legs	<b>1122</b>	Bearing pulling attachment
<b>1070</b>	30 ton cap. hydraulic Push-Puller® w/457 mm legs	<b>1123</b>	Bearing pulling attachment
<b>1066</b>	17½ ton 3-jaw hyd. puller	<b>1126</b>	Bearing pulling attachment
<b>1074</b>	30 ton 3-jaw hyd. puller	<b>1130</b>	Bearing pulling attachment
<b>41224</b>	17½ ton 2-jaw puller head	<b>Threaded Adapters</b>	
<b>41226</b>	30 ton 2-jaw puller head	<b>8005</b>	5/8" – 18 F. x 3/8" – 16 M. (2)
<b>1027</b>	Combination 2/3-jaw puller	<b>8006</b>	5/8" – 18 F. x 1/2" – 20 M. (2)
<b>1037</b>	Combination 2/3-jaw puller	<b>8007</b>	5/8" – 18 F. x 1 1/2" – 13 M. (2)
<b>1041</b>	Combination 2/3-jaw puller	<b>8010</b>	5/8" – 18 F. x 5/8" – 11 M. (2)
<b>43892</b>	Long jaws (3) for 1037	<b>8012</b>	1" – 14 F. x 5/8" – 18 M. (2)
<b>30902</b>	Long jaws (3) for 1041	<b>8013</b>	5/8" – 18 F. x 3/4" – 16 M. (2)
<b>1105</b>	572 mm legs for 1062	<b>8015</b>	5/8" – 18 F. x 3/4" – 10 M. (2)
<b>1111</b>	711 mm legs for 1070	<b>8017</b>	5/8" – 18 F. x 7/8" – 14 M. (2)
<b>24814</b>	Speed crank	<b>8018</b>	5/8" – 18 F. x 7/8" – 9 M. (2)
<b>27198</b>	Speed crank	<b>8019</b>	5/8" – 18 F. x 1" – 14 M. (2)
<b>28229</b>	Screw cap	<b>8020</b>	1" – 8 F. x 5/8" – 18 M. (1)
<b>28228</b>	Cylinder cap	<b>8021</b>	1" – 8 F. x 1" – 14 M. (1)
<b>32118</b>	Adjusting screw	<b>8025</b>	1 1/4" – 7 F. x 5/8" – 18 M. (2)
<b>34758</b>	Adjusting screw	<b>8027</b>	1 1/4" – 7 F. x 1" – 14 M. (2)
<b>34510</b>	Pushing adapter	<b>8036</b>	1" – 14 F. x 1" – 14 F. (2)
<b>201923</b>	Pushing adapter	<b>8038</b>	5/8" – 18 F. x 3/4" – 16 F. (2)
		<b>8044</b>	Female threaded adapter set



IPS5017

**17½ and 50 ton capacity puller sets** – If your looking for a maintenance puller set that will handle a wide variety of applications, this is the one for you. The mechanical and hydraulic pullers and attachments are designed to handle most removing and installing jobs with a minimal amount of effort.

**No. IPS5017** – 17½ and 50 ton capacity manual and hydraulic puller set. Includes hydraulics, pullers, wooden storage box and accessories listed below. Wt., 405 kg.

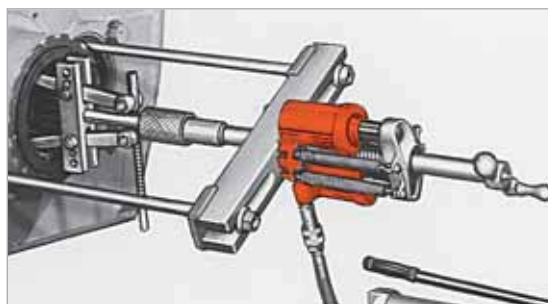
**No. IPS5017B** – Puller set with MB16 metal box. Wt., 415 kg.

CONTENTS OF SET NO. IPS5017

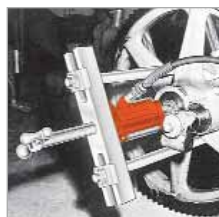
No.	Hydraulics	No.	Accessories
<b>P55</b>	Single-stage hyd. hand pump assembly	<b>8075</b>	Step plate adapter set
<b>RT172</b>	17½ ton center-hole twin cylinder w/ threaded insert	<b>8076</b>	Step plate adapter set
<b>RT503</b>	50 ton center-hole twin cylinder w/ threaded insert	<b>8056</b>	Shaft protector set
<b>9798</b>	Hose half coupler	<b>1154</b>	Bearing cup pulling attach.
<b>9767</b>	Hydraulic hose – 1,8 m	<b>1166</b>	Bearing cup pulling attach.
<b>9670</b>	Tee adapter	<b>1122</b>	Bearing pulling attachment
<b>9059</b>	Pressure gauge	<b>1123</b>	Bearing pulling attachment
<b>Pullers</b>		<b>1126</b>	Bearing pulling attachment
<b>1062</b>	17½ ton cap. hydraulic Push-Puller® w/419 mm legs	<b>1127</b>	Bearing pulling attachment
<b>1076</b>	50 ton cap. hydraulic Push-Puller® w/610 mm legs	<b>1130</b>	Bearing pulling attachment
<b>1066</b>	17½ ton 3-jaw hyd. puller	<b>34479</b>	Reducing adapter for 1166
<b>1080</b>	50 ton 3-jaw hyd. puller	<b>10215</b>	Hex nut; ¾" – 16 (2)
<b>41224</b>	17½ ton 2-jaw puller head	<b>24829</b>	Short bolt
<b>50449</b>	50 ton 2-jaw puller head	<b>Threaded Adapters</b>	
<b>1027</b>	Combination 2/3-jaw puller	<b>8005</b>	⅝" – 18 F. x ⅜" – 16 M. (2)
<b>1037</b>	Combination 2/3-jaw puller	<b>8006</b>	⅝" – 18 F. x ½" – 20 M. (2)
<b>1041</b>	Combination 2/3-jaw puller	<b>8007</b>	⅝" – 18 F. x ½" – 13 M. (2)
<b>43892</b>	Long jaws (3) for 1037	<b>8010</b>	⅝" – 18 F. x ⅝" – 11 M. (2)
<b>30902</b>	Long jaws (3) for 1041	<b>8013</b>	⅝" – 18 F. x ¾" – 16 M. (2)
<b>1105</b>	572 mm legs for 1062	<b>8015</b>	⅝" – 18 F. x ¾" – 10 M. (2)
<b>1113</b>	864 mm legs for 1076	<b>8019</b>	⅝" – 18 F. x 1" – 14 M. (2)
<b>24814</b>	Speed crank	<b>8020</b>	1" – 8 F. x ⅝" – 18 M. (1)
<b>29595</b>	Speed crank	<b>8021</b>	1" – 8 F. x 1" – 14 M. (1)
<b>28228</b>	Screw cap	<b>8023</b>	1¼" – 12 F. x 1" – 14 M. (2)
<b>28230</b>	Cylinder cap	<b>8028</b>	1⅝" – 5½ F. x 1" – 8 M. (1)
<b>32118</b>	Adjusting screw	<b>8029</b>	1⅝" – 5½ F. x 1" – 14 M. (1)
<b>32698</b>	Adjusting screw	<b>8038</b>	⅝" – 18 F. x ¾" – 16 F. (1)
<b>34755</b>	Pushing adapter	<b>8044</b>	Female threaded adapter set
<b>201923</b>	Pushing adapter		
<b>7392</b>	Gear and pulley puller		
<b>24833</b>	Forcing screw for 7392		



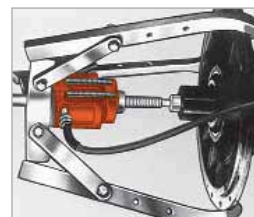
**Note:** Wooden storage box No. **3084360R9** is provided with this set. 1143 L x 572 H x 762 mm D Metal storage boxes also available (See page 145).



Combination of 50 ton capacity Push-Puller and cup pulling attachment simplifies the removal of a final drive axle seal.



Hydraulically powered Push-Puller removes drive wheel. Pulling attachment is used to provide gripping surface.



3-jaw puller provides grip while hydraulic hand pump provides power to push shaft from housing. Shaft protector is used on end of puller screw.

**CAUTION:** All the items shown may not withstand the full tonnage specified. Example: When an accessory with a 1 ton capacity is used with a 7 ton puller, the setup can be used only at a force of 1 ton.

# Puller Sets

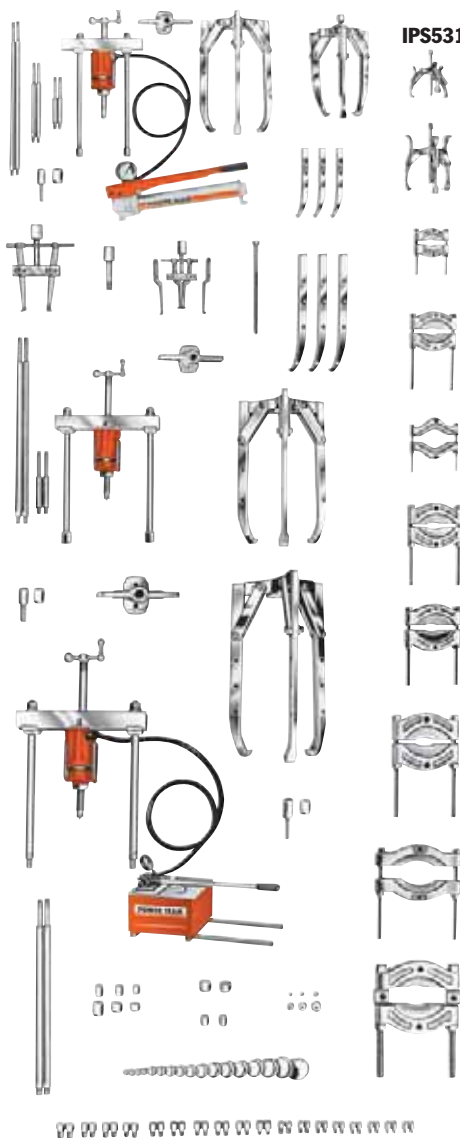
## HYDRAULIC

17½, 30 & 50 Ton

**17½, 30 & 50 ton capacity puller set** – Here's the ultimate in industrial puller sets! You'll find a puller for just about every job. Included in this "master set" are 17½, 30 and 50 ton hydraulics, along with an extensive assortment of pullers, attachments and adapters.

**No. IPS5317** – 17½, 30 and 50 ton capacity manual and hydraulic puller set. Includes hydraulics, pullers, wooden storage box and accessories listed below. Wt., 572 kg.

IPS5317



**Note:** Wooden storage box No. **3084400R9** is provided with this set. 1168 L x 571H x 571 mm D Metal storage boxes also available (See page 145).

**CAUTION:** All the items shown may not withstand the full tonnage specified. Example: When an accessory with a 1 ton capacity is used with a 7 ton puller, the setup can be used only at a force of 1 ton.

### CONTENTS OF SET NO. IPS5317

Contents	Hydraulics	Contents	Accessories
<b>P55</b>	Single-stage hyd. hand pump assembly	<b>28230</b>	Screw cap
<b>P460</b>	Two-stage hyd. hand pump w/ 3-way control valve	<b>32118</b>	Adjusting screw
<b>RT172</b>	17½ ton center-hole twin cylinder w/ threaded insert	<b>32698</b>	Adjusting screw
<b>RT302</b>	30 ton center-hole twin cylinder w/ threaded insert	<b>34758</b>	Adjusting screw
<b>RT503</b>	50 ton center-hole twin cylinder w/ threaded insert	<b>34510</b>	Pushing adapter
<b>9798</b>	Hose half coupler (2)	<b>34755</b>	Pushing adapter
<b>9767</b>	Hydraulic hose – 1,8 m (2)	<b>201923</b>	Pushing adapter
<b>9670</b>	Tee adapter	<b>8075</b>	Step plate adapter set
<b>9059</b>	Pressure gauge	<b>8076</b>	Step plate adapter set
<b>Pullers</b>		<b>8056</b>	Shaft protector set
<b>1062</b>	17½ ton cap. hydraulic Push-Puller® w/419 mm legs	<b>679</b>	Pulley pulling attachment
<b>1070</b>	30 ton cap. hydraulic Push-Puller® w/457 mm legs	<b>680</b>	Pulley pulling attachment
<b>1076</b>	50 ton cap. hydraulic Push-Puller® w/610 mm legs	<b>1154</b>	Bearing cup pulling attach.
<b>1066</b>	17½ ton 3-jaw hyd. puller	<b>1166</b>	Bearing cup pulling attach.
<b>1074</b>	30 ton 3-jaw hyd. puller	<b>1122</b>	Bearing pulling attachment
<b>1080</b>	50 ton 3-jaw hyd. puller	<b>1123</b>	Bearing pulling attachment
<b>41224</b>	17½ ton 2-jaw puller head	<b>1126</b>	Bearing pulling attachment
<b>41226</b>	30 ton 2-jaw puller head	<b>1127</b>	Bearing pulling attachment
<b>50449</b>	50 ton 2-jaw puller head	<b>1128</b>	Bearing pulling attachment
<b>1027</b>	Combination 2/3-jaw puller	<b>1130</b>	Bearing pulling attachment
<b>1037</b>	Combination 2/3-jaw puller	<b>34479</b>	Reducing adapter
<b>1041</b>	Combination 2/3-jaw puller	<b>Threaded Adapters</b>	
<b>43892</b>	Long jaws (3) for 1037	<b>8005</b>	5/8" – 18 F. x 3/8" – 16 M. (2)
<b>30902</b>	Long jaws (3) for 1041	<b>8006</b>	5/8" – 18 F. x 1/2" – 20 M. (2)
<b>32136</b>	Long jaws (3) for 1154	<b>8007</b>	5/8" – 18 F. x 1/2" – 13 M. (2)
<b>1105</b>	572 mm legs for 1062	<b>8010</b>	5/8" – 18 F. x 5/8" – 11 M. (2)
<b>1106</b>	241 mm legs for 1062	<b>8012</b>	1" – 14 F. x 5/8" – 18 M. (2)
<b>1107</b>	114 mm legs for 1062	<b>8013</b>	5/8" – 18 F. x 3/4" – 16 M. (2)
<b>1109</b>	203 mm legs for 1070	<b>8015</b>	5/8" – 18 F. x 3/4" – 10 M. (2)
<b>1111</b>	711 mm legs for 1070	<b>8017</b>	5/8" – 18 F. x 7/8" – 14 M. (2)
<b>1113</b>	864 mm legs for 1070	<b>8018</b>	5/8" – 18 F. x 7/8" – 9 M. (2)
<b>Accessories</b>		<b>8019</b>	5/8" – 18 F. x 1" – 14 M. (2)
<b>24832</b>	Special puller forcing screw	<b>8020</b>	1" – 8 F. x 5/8" – 18 M. (1)
<b>24814</b>	Speed crank	<b>8021</b>	1" – 8 F. x 1" – 14 M. (1)
<b>27198</b>	Speed crank	<b>8023</b>	1¼" – 12 F. x 1" – 14 M. (2)
<b>29595</b>	Speed crank	<b>8024</b>	1¼" – 12 F. x 1¼" – 12 M. (2)
<b>28228</b>	Screw cap	<b>8025</b>	1¼" – 7 F. x 5/8" – 18 M. (2)
<b>28229</b>	Screw cap	<b>8027</b>	1¼" – 7 F. x 1" – 14 M. (2)
		<b>8028</b>	1½" – 5½ F. x 1" – 8 M. (1)
		<b>8029</b>	1½" – 5½ F. x 1" – 14 M. (1)
		<b>8036</b>	1" – 14 F. x 1" – 14 F. (2)
		<b>8038</b>	5/8" – 18 F. x 3/4" – 16 F. (2)
		<b>8044</b>	Female threaded adapter set