

# TIMKEN

Where You Turn



Maintenance Tools

## SAFETY



**WARNING** *Failure to observe the following warnings could create a risk of serious injury.*

Never spin a bearing with compressed air. The rollers may be forcefully expelled.

Proper maintenance and handling procedures are critical. Always follow installation instructions and maintain proper lubrication.

Tensile stresses can be very high in tightly fitted bearing components. Attempting to remove such components by cutting the cone (inner race) may result in a sudden shattering of the component causing fragments of metal to be forcefully expelled. Always use properly guarded presses or bearing pullers to remove bearings from shafts, and always use suitable personal protective equipment, including safety glasses.

## DISCLAIMER

*Every reasonable effort has been made to ensure the accuracy of the information contained in this writing, but no liability is accepted for errors, omissions or for any other reason.*



# Less Friction. More Solutions.

With more than 100 years of experience in bearing technology, Timken understands the importance of proper maintenance procedures in maximizing product and equipment life. High-quality Timken maintenance products help to decrease downtime and operating costs.

Our line of maintenance tools are an example of how we extend beyond bearings with friction management solutions to keep your business running smoothly. These value-added products are grounded in our knowledge of motion, lubrication, friction and metallurgy. They are designed to help you extend bearing life in your applications through proper installation, removal and service.

For more than 100 years, Timken has provided quality products to the industrial marketplace. Our maintenance tools are made to the same standards you've come to expect from Timken® bearings. Our field support team is available to help you use these tools appropriately, as well as identify other Timken solutions that may boost your productivity and save you money.

Through our products, programs and services, we're providing less friction and more solutions to help you achieve greater success.

For more information, contact your local Timken distributor or sales representative.





## BEARING INSTALLATION TOOLS

# Induction Heaters

Timken offers a large assortment of high-quality induction heaters designed for demanding industrial applications. They can heat and radially expand a wide variety of gears, rings, couplings, bearings and other components.

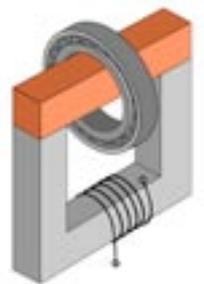
All heaters are produced in accordance with International (IEC) and European (CE) health and safety requirements. They feature a microprocessor-controlled power supply, automated time and temperature control and automatic demagnetization.

### Why choose an induction heater?

- Induction heating is a superior, fast and controlled heating method. It is a safe and environmentally friendly alternative for traditional heating methods such as ovens, oil baths or blow torches. These methods cause smoke, fumes or oil waste and are hazardous for personal health and safety.
- Timken induction heaters use the principle of induction, similar to a transformer. The heater and yokes remain cool; only the work piece is heated. During the induction heating cycle, a certain degree of magnetism occurs.
- All Timken heaters demagnetize automatically after each heating cycle.

### Versatility, safety and quality

- Timken induction heaters can be used for heating gear wheels, bushings, couplings and other components. Proper mounting lengthens the life span of your equipment, and controlled induction heating helps prevent unnecessary damage.
- Digital electronics provide optimal control during the heating process and automatically select the most efficient power supply to ensure balanced and fast heating.
- Timken induction heaters are dependable.
- The robust and easy-to-use designs offer you reliable heaters that are suitable for continuous operation in industrial environments.



## NEW HEATER MODELS - TURBO DESIGN

- Powerful turbo design for demanding industrial applications
- Maximum capacity for both work piece sizes and heating capability
- Plug & Heat design models are delivered with a molded plug\* (available for 120V and 230V models only)
- Safe: all Timken heaters automatically select the most effective power setting to ensure optimal and balanced heating

### ■ VHIN 33 Model

Plug & Heat Turbo Model



Min. Bore	Max. O.D.	Max. Width	Max. Weight
10 mm (0.4")	350 mm (13.8")	135 mm (5.3")	40 kg (88.2 lb)

<b>VHIN 331</b>	230V - °C, Yokes 10, 14, 40
<b>VHIN 331GB</b>	230V - °C, Yokes 10, 14, 40
<b>VHIN 331EN</b>	230V - °C, Yokes 10, 14, 40
<b>VHIN 332GB</b>	120V - °C, Yokes 10, 14, 40
<b>VHIN 332US</b>	120V - °F, Yokes 10, 14, 40



### ■ VHIS 75 Model

Plug & Heat Turbo Swing Arm Model



Min. Bore	Max. O.D.	Max. Width	Max. Weight
15 mm (0.6")	750 mm (29.5")	230 mm (9.1")	95 kg (209.4 lb)

<b>VHIS 751</b>	230V - °C, Yokes 14, 30, 60
<b>VHIS 751GB</b>	230V - °C, Yokes 14, 30, 60
<b>VHIS 751EN</b>	230V - °C, Yokes 14, 30, 60
<b>VHIS 752GB</b>	120V - °C, Yokes 14, 30, 60
<b>VHIS 754US</b>	120V - °F, Yokes 14, 30, 60



#### HEATING EXAMPLES: 20-110°C (68-230°F)

Voltage	Work Piece	Weight		O.D.		Bore		Heating Time
		kg	lbs.	mm	inch	mm	inch	
110V	6314	2.6	5.7	150	5.9"	70	2.8"	1.5 min.
110V	23148	63.0	138.9	400	15.7"	240	9.4"	53.0 min.
230V	23148	63.0	138.9	400	15.7"	240	9.4"	53.0 min.
230V	23156	95.0	209.4	460	18.1"	280	11.0"	45.0 min.

### ■ VHIS 400 Model Turbo Design

Mobile extra-powerful heater with unique swing arm

Min. Bore	Max. O.D.	Max. Width	Max. Weight
60 mm (2.4")	920 mm (36.2")	350 mm (13.8")	550 kg (1,212 lbs.)

<b>VHIS 4001</b>	400V - °C, Yoke 80
<b>VHIS 4002</b>	450V - °C, Yoke 80
<b>VHIS 4003US</b>	500V - °F, Yoke 80

#### HEATING EXAMPLES: 20-110°C (68-230°F)

Work Piece	Weight	Weight		O.D.		Bore		Heating Time
		kg	lbs.	mm	inch	mm	inch	
Bearing 23156	95.8	211	460	18.1	11.0	280	8.3	4 min.
Gear wheel	300	661	600	23.6	210	8.3	3 min.	



# BEARING INSTALLATION TOOLS • INDUCTION HEATERS

## MODELS



### ■ VHIN 10 Model

Portable design, easy to use, ideal for on-site jobs.

Min. Bore	Max. O.D.	Max. Width	Max. Weight
15 mm (0.6")	210 mm (8.3")	120 mm (4.8")	15 kg (33 lbs.)

<b>VHIN 10</b>	230V - °C, Yokes 10, 14, 40
<b>VHIN 10GB</b>	230V - °C, Yokes 10, 14, 40
<b>VHIN 10US</b>	120V - °F, Yokes 10, 14, 40
<b>VHIN 10EN</b>	230V - °C, Yokes 10, 14, 40
<b>VHIN 101GB</b>	120V - °C, Yokes 10, 14, 40



### ■ VHIS 35 Model

This bench-top model is the most popular among customers and features a unique swing arm for ergonomic working.

Min. Bore	Max. O.D.	Max. Width	Max. Weight
15 mm (0.6")	480 mm (18.9")	150 mm (5.9")	35 kg (77 lbs.)

<b>VHIS 35</b>	230V - °C, Yokes 14, 30, 60
<b>VHIS 35GB</b>	230V - °C, Yokes 14, 30, 60
<b>VHIS 35EN</b>	230V - °C, Yokes 14, 30, 60
<b>VHIS 351GB</b>	120V - °C, Yokes 14, 30, 60
<b>VHIS 351US</b>	120V - °F, Yokes 14, 30, 60



### ■ VHIS 100 Model

Large capacity bench-top model with swing arm.

Min. Bore	Max. O.D.	Max. Width	Max. Weight
30 mm (1.2")	720 mm (28.3")	200 mm (7.9")	125 kg (275 lbs.)

<b>VHIS 1003</b>	450V - °C, Yokes 20, 70
<b>VHIS 1005</b>	400V - °C, Yokes 20, 70
<b>VHIS 1011US</b>	500V - °F, Yokes 20, 70



### ■ VHIS 200 Model

Mobile heavy-duty heater with unique swing arm

Min. Bore	Max. O.D.	Max. Width	Max. Weight
30 mm (1.2")	1020 mm (40.2")	265 mm (10.4")	250 kg (551 lbs.)

<b>VHIS 2002</b>	400V - °C, Yoke 80
<b>VHIS 2003</b>	450V - °C, Yoke 80
<b>VHIS 2007US</b>	500V - °F, Yoke 80



please add the following suffix to the appropriate part number to identify your plug:

Suffix	Plug type	
-	European plug 230V	⊙
GB	UK 2-pin plug for 120V UK-3 pin plug for 230V	⊞
US	US 2-flat pin plug 120 V	⊠
EN	3-round pin plug 230 V	⊞

# MODELS

## ■ VHIN 550 Model

Powerful heater for exceptionally heavy components up to 600 kg (1,322 lbs.). Popular in workshops within steel mills, paper mills and gear box manufacturing. Heats parts in horizontal and vertical positions.

Min. Bore	Max. O.D.	Max. Width	Max. Weight
85 mm (3.4")	900 mm (35.4")	400 mm (15.8")	600 kg (1,322 lbs.)

<b>VHIN 5502</b>	400V - °C, Yoke 100
<b>VHIN 5503</b>	450V - °C, Yoke 100
<b>VHIN 5504US</b>	500V - °F, Yoke 100



## ■ VHIN 800 Model

Powerful heater for exceptionally heavy components up to 1,250 kg (2,756 lbs.). Popular in workshops within steel, rail, wind, paper and gear box operations. Heats parts in horizontal and vertical positions.

Min. Bore	Max. O.D.	Max. Width	Max. Weight
85 mm (3.4")	1400 mm (55.1")	420 mm (16.5")	1250 kg (2,756 lbs.)

<b>VHIN 8002</b>	400V - °C, Yoke 150
<b>VHIN 8003</b>	450V - °C, Yoke 150
<b>VHIN 8004US</b>	500V - °F, Yoke 150



## ■ VHIN 850 Model

The biggest standard size and capacity design.

Powerful heater for exceptionally heavy components up to 1,500 kg (3,300 lbs.).

Min. Bore	Max. O.D.	Max. Width	Max. Weight
145 mm (5.7")	1760mm (69,29")	700 mm (27.6")	1500 kg (3,300 lbs.)

<b>VHIN 8501</b>	400V - °C, Yoke 150
<b>VHIN 8502</b>	450V - °C, Yoke 150
<b>VHIN 8503US</b>	500V - °F, Yoke 150



Contact your local Timken representative for assistance in building a custom solution for extremely large heaters.



**DIGITAL CONTROLS:**  
All digital controls operate by time or temperature in °C or °F



**TEMPERATURE PROBE:**  
Each Timken Induction Heater model is supplied with a magnetic temperature probe. A clamp is also available for nonferrous components. Replacement probes are also available for purchase.  
Part number: VHIA 100001



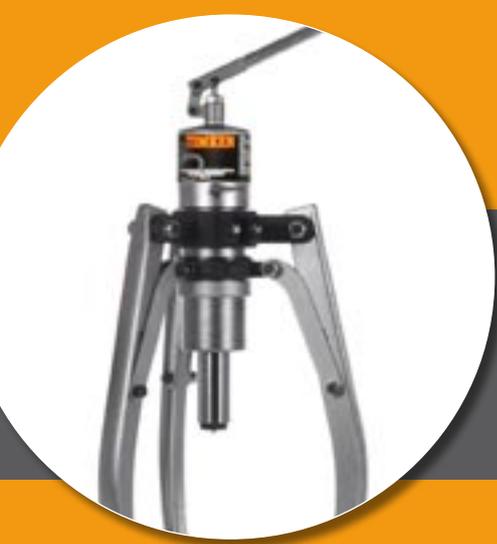
**HORIZONTAL SUPPORT:**  
Support for heating in horizontal position.

# BEARING INSTALLATION TOOLS • INDUCTION HEATERS

## MODELS

Type	VHIN 10	VHIN 33	VHIS 35	VHIS 75	VHIS 100
<b>ELECTRICITY</b>					
Power Rating	3.6 k VA	3.6 k VA	3.6 kVA	3.6 kVA	8 kVA
Voltage/Current	120V/20A 230V/16A	120V/15A 230V/16A	120/20A 230V/16A	120V/15A 230V/16A	400/450/500V 20A
Different Voltage Option	—	—	—	—	230V
Frequency	50/60 Hz	50/60 Hz	50/60Hz	50/60Hz	50/60Hz
Swing Arm	No	No	Yes	Yes	Yes
Plug	Yes	Yes	Yes	Yes	—
<b>WORK PIECE</b>					
Max. Weight					
- Bearings	15 kg (33.1 lbs.)	40 kg (88.2 lbs.)	35 kg (77.2 lbs.)	95 kg (209.4 lbs.)	125 kg (275.6 lbs.)
- Other Parts	10 kg (22.1 lbs.)	25 kg (55.1 lbs.)	20 kg (44.1 lbs.)	50 kg (110.2 lbs.)	75 kg (165.4 lbs.)
Min. Bore Diameter	15 mm (0.6")	10 mm (0.4")	15 mm (0.6")	15 mm (0.6")	30 mm (1.2")
Max O.D.	210 mm (8.3")	350 mm (13.8")	340/480 mm (13.4"/18.9")	520/750 mm (20.5"/29.5")	480/720 mm (18.9"/28.4")
Vertical/Horizontal					
Max. Work Piece Width	120 mm (4.7")	135 mm (5.3")	150 mm (5.9")	230 mm (9.1")	200 mm (7.9")
<b>POLE DIMENSIONS</b>					
Operating area	120 x 130 mm (4.7" x 5.1")	135 x 135 mm (5.3" x 5.3")	150 x 140 mm (5.9" x 5.5")	200 x 230 mm (7.9" x 9.1")	200 x 180 mm (7.9" x 7.1")
Width x Height					
Pole Section	40 mm (1.6")	95/40 mm (3.7"/1.6")	60 mm (2.4")	120/60 mm (2.4"/4.7")	70 mm (2.8")
Pole Height	130 mm (5.1")	135 mm (5.3")	140 mm (5.5")	230 mm (9.1")	210 mm (8.3")
<b>CONTROLS</b>					
Temperature Control					
Max. Temp	150° C (302° F)	240° C (464° F)	240° C (464° F)	240° C (464° F)	240° C (464° F)
Time Control					
Max. Time	0 – 30 Min.	0 – 45 Min.	0 – 45 Min.	0 – 45 Min.	0 – 60 Min.
Auto Power Reduction	—	Automatically	—	Automatically	Automatically
<b>OPTIONS</b>					
Standard / Optional Yokes	<b>10,14, 20, 40</b> mm (0.4", 0.6", 0.8", 1.6")	<b>7, 10, 14, 20, 40</b> mm (0.3", 0.4", 0.6", 0.8", 1.6")	<b>10, 14, 20, 30, 40, 50,</b> <b>60</b> mm (0.4", 0.6", 0.8", 1.2", 1.6", 2.0", 2.4")	<b>10, 14, 20, 30, 40, 50,</b> <b>60</b> mm (0.4", 0.6", 0.8", 1.2", 1.6", 2.0", 2.4")	<b>20, 30, 40, 50, 70</b> mm (0.8", 1.2", 1.6", 2.0", 2.8")
Support for Horizontal Heating	(in case)	Yes	(in carry box)	(in carrier)	Yes
Mobile	—	—	—	—	—
Temperature Control	—	—	—	—	—
<b>DIMENSIONS</b>					
Dimensions	435 x 225 x 275 mm (17.1" x 8.9" x 10.8")	600 x 220 x 275 mm (23.6" x 8.7" x 10.8")	340 x 290 x 380 mm (13.4" x 11.4" x 15.0")	440 x 370 x 360 mm (17.3" x 14.6" x 14.2")	630 x 365 x 470 mm (24.8" x 14.4" x 18.5")
Package Size	500 x 250 x 350 mm (19.7" x 9.8" x 13.8")	650 x 290 x 350 mm (25.6" x 11.4" x 13.8")	600 x 450 x 600 mm (23.6" x 17.7" x 23.6")	700 x 500 x 700 mm (27.6" x 19.7" x 27.6")	700 x 500 x 700 mm (27.6" x 19.7" x 27.6")
Mass Heater Body (excludes yokes) (includes yokes)	21 kg (46.3 lbs.)	23 kg (50.7 lbs.)	31 kg (68.3 lbs.)	38 kg (83.8 lbs.)	53 kg (116.8 lbs.)
<b>MISCELLANEOUS</b>					
Sound Signal	yes	yes	yes	yes	yes
Temperature Hold	yes	yes	yes	yes	yes
Demagnetizing <2 A/cm	yes	yes	yes	yes	yes
Thermal Safety Guard	yes	yes	yes	yes	yes
Magnetic Temperature Probe	yes	yes	yes	yes	yes
<b>DIGITAL DISPLAY</b>					
Temperature	yes	yes	yes	yes	yes
Time	yes	yes	yes	yes	yes
Error Report	yes	yes	yes	yes	yes

VHIS 200	VHIS 400	VHIN 550	VHIN 800	VHIN 850
12 kVA	12 kVA	24 kVA	40 kVA	40 kVA
400/450/500V	400/450/500V	400/450/500V	400/450/500V	400/450/500V
32A	32A	63A	100A	100A
—	—	—	-	-
50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Yes	Yes	No	No	No
—	—	—	-	-
250 kg (551.2 lbs.)	550 kg (1,212.5 lbs.)	600 kg (1,322.8 lbs.)	1250 kg (2,755.8 lbs.)	1500 kg (3,300 lbs.)
150 kg (330.7 lbs.)	450 kg (992.1 lbs.)	350 kg (771.6 lbs.)	750 kg (1,653.5 lbs.)	800 kg (1,764 lbs.)
30 mm (1.2")	60 mm (2.4")	85 mm (3.4")	85 mm (3.4")	145 mm (5.7")
700/1020 mm (27.6"/40.2")	920 mm (36.2")	900 mm (35.4")	1400 mm (55.1")	1760 mm (69,29")
265 mm (10.4")	350 mm (13.8")	400 mm (15.8")	420 mm (16.5")	700 mm (27.6")
265 x 310 mm (10.4" x 12.2")	350 x 305 mm (13.8" x 12.0")	390 x 400 mm (15.4" x 15.8")	660 x 420 mm ( 26.0" x 16.5")	750x700 mm (29,52"x27,56")
80 mm (3.2")	170/110 x 80 mm (6.7"/4.3" x 3.2")	100 mm (3.9")	150 mm (5.9")	240 mm (9.5")
310 mm (12.2")	305 mm (12.0")	390 mm (15.4")	660 mm (26.0")	750 mm (29.5")
240° C (464° F)	240° C (464° F)	240° C (464° F)	240° C (464° F)	240° C (464° F)
0 – 99 Min.	0 – 99 Min.	0 – 99 Min.	0 – 99 Min.	0 – 99 Min.
Automatically	Automatically	Automatically	Automatically	Automatically
20, 30, 40, 60, <b>80</b> mm (0.8", 1.2", 1.6", 2.4", 3.2")	40, 60, <b>80</b> mm (1.6", 2.4", 3.2")	60, 80, <b>100</b> mm (2.4", 3.2", 4.0")	60, 80, 100, <b>150</b> mm (2.4", 3.2", 4.0", 5.9")	60, 80, 100, <b>150</b> mm (2.4", 3.2", 4.0", 5.9")
Yes	Yes	Yes	Yes	Yes
Yes	Yes	—	—	—
—	—	On request up to 480°C ( 896°F)	On request up to 480°C (896°F)	On request up to 480°C (896°F)
950 x 640 x 1000 mm (37.4" x 25.2" x 39.4")	1200 x 640 x 1000 mm (47.2" x 25.2" x 39.4")	1000 x 500 x 1350 mm (39.4" x 19.7" x 53.2")	1500 x 600 x 1470 mm (59.1" x 23.6" x 57.9")	2300 x 1000 x 1000 mm (90.6" x 39.4" x 39.4")
1140 x 750 x 1000 mm (44.9" x 29.5" x 39.4")	1250 x 750 x 1000 mm (49.2" x 29.5" x 39.4")	1400 x 700 x 1600 mm (55.1" x 27.6" x 63.0")	1920 x 950 x 1720 mm (75.6" x 37.4" x 67.7")	2750 x 1350 x 1350 mm (108" x 53" x 53")3000 kg
120 kg (264.6 lbs.)	205 kg (452.0 lbs.)	200 kg (440.9 lbs.)	660 kg (1,455.1 lbs.)	(6614,0 lbs.)
yes	yes	yes	yes	yes
yes	yes	yes	yes	yes
yes	yes	yes	yes	yes
yes	yes	yes	yes	yes
yes	yes	yes	yes	yes
yes	yes	yes	yes	yes
yes	yes	yes	yes	yes
yes	yes	yes	yes	yes
yes	yes	yes	yes	yes



## BEARING REMOVAL TOOLS

# Self-centering Hydraulic Pullers with Integrated Pump and Cylinder

The new Timken Self-centering Hydraulic Pullers are practical and convert easily to either a 2- or 3-arm puller. The arms slide inwards or outwards simultaneously.

### Features:

- Integrated pump, cylinder, hose and puller with safety-release valve.
- Compact design: The self-contained hydraulic pump and puller saves space.
- Sets are supplied in handy carrying case.
- Multi-purpose: Ideal for pulling a wide variety of press-fit parts including bearings, wheels, bushings, gears and pulleys.
- The pump handle is able to rotate 360-degrees providing flexibility to use the puller in the most convenient position.
- Pullers can be used with two or three legs.
- Available with accessories.

### Benefits

#### Practical:

- **Ergonomic design** - easy to handle
- **Flexible** - use in any position with a pump handle that rotates 360 degrees
- **Protective** - prevents damage to shafts and objects being pulled
- **Efficient** - saves time
- **Accessories** - available for models from 4 to 12 tons

#### Safe:

The safety-release valve prevents overloading and ensures that you never exceed maximum force.

#### Easy-to-use:

The VHPS20 and VHPS30 ton models are equipped with an innovative 2-stage pump for easier and safer pumping.

#### Rugged:

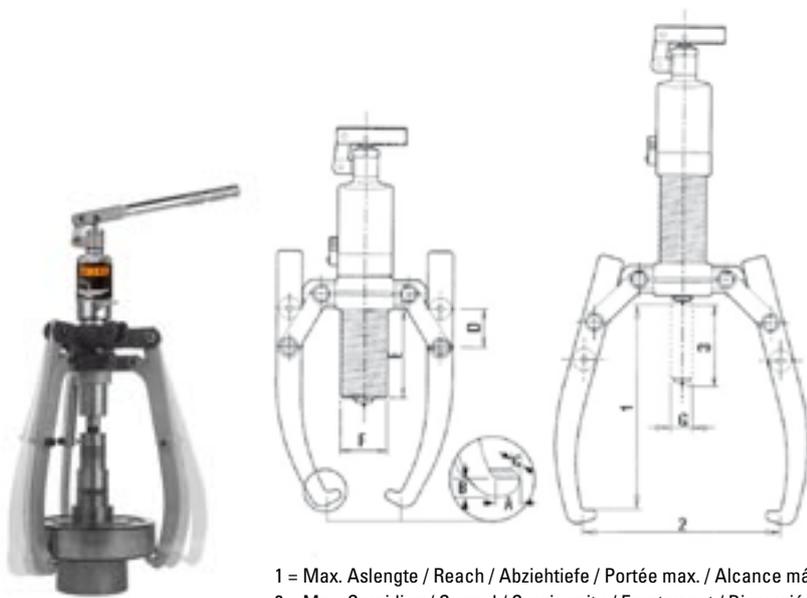
The greater the pulling force, the tighter the jaws grip the object concerned. The arms cannot be bent or deflected.

#### Economical:

The combination 2- or 3- arm puller gives you 2 pullers for the price of one.



MODEL	Max. Withdrawal Force	Arm length	Width of Grip	STROKE	A	B	C	D	E	F	G	MASS
VHPS4	4 t	190 mm (7,48")	325 mm (12,8")	60 mm (2,4")	13 mm (0,5")	10 mm (0,4")	22 mm (0,9")	-	40 mm (1,6")	42 mm (1,7")	22 mm (0,9")	8 kg (18lbs.)
VHPS6A	6 t	230 mm (9,1")	380 mm (15")	70 mm (3,4")	13 mm (0,5")	10 mm (0,4")	22 mm (0,9")	-	50 mm (2")	45 mm (1,8")	23 mm (0,9")	10 kg (22lbs.)
VHPS8	8 t	280 mm (11")	450 mm (17,7")	85 mm (3,4")	13 mm (0,5")	13 mm (0,5")	27,5 mm (1,1")	-	70 mm (2,7")	50 mm (2")	25 mm (1")	12 kg (26lbs.)
VHPS12	12 t	305 mm (12")	485 mm (19,1")	85 mm (3,4")	15 mm (0,6")	17 mm (0,7")	29 mm (1,1")	-	70 mm (2,7")	60 mm (2,4")	28 mm (1,1")	15 kg (33lbs.)
VHPS20	20 t	365 mm (14,4")	570 mm (22,4")	111 mm (4,4")	20 mm (0,8")	27 mm (1,1")	33 mm (1,3")	-	62 mm (2,4")	80 mm (3,2")	40 mm (1,6")	25 kg (55lbs.)
VHPS30	30 t	465 mm (18,3")	680 mm (26,8")	111 mm (4,4")	20 mm (0,8")	27 mm (1,1")	38 mm (1,5")	-	85 mm (3,3")	98 mm (3,9")	50 mm (2")	36 kg (80lbs.)



1 = Max. Aslengte / Reach / Abziehtiefe / Portée max. / Alcance máx.  
 2 = Max. Spreiding / Spread / Spreizweite / Ecartement / Dispersión  
 3 = Slag / Stroke / Hub / Course vérin / Carrera

### PULLER HANDLING TIPS

- Check condition of puller before use.
- If there are indications of wear and tear such as ground-down, overloaded or worn-out parts, exchange them with new parts.
- Do not use a hammer when operating spindle.
- If any indications of overload, stiff working, etc., can be observed during pulling, please stop the procedure at once. Try to use a larger or different type of puller if necessary.
- For proper puller engagement, the jaws/legs should be centered.
- When pulling, make sure puller and pulled part are kept covered by the safety blanket provided.
- When operating the puller please wear protective clothing, including safety shoes, protective glasses, gloves and helmet.
- Spindle and puller body should always be kept clean.
- Make sure you avoid puller overload, as it can result in breakage of the puller's arms and/or beam. This breakage can cause damage to the puller, shaft and bearing as well as personal injury.

### ACCESSORIES SET

#### MODELS:

VHPT490, VHPT690A,  
 VHPT890, VHPT1290

Puller shown  
 with accessories.  
 (set supplied  
 without pump)

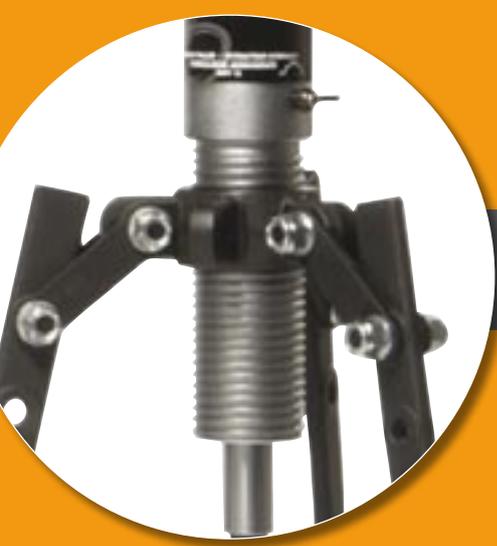
For puller  
 VHPS6A  
 please use  
 VHPT690A  
 accessory set only



Technical specifications for the accessory sets can be found on page 13

## BEARING REMOVAL TOOLS

# Hydraulic Pullers



Timken has a wide range of self-contained portable hydraulic pulling systems that have capacities from four to 30 tons. They are excellent for the removal of all kinds of shaft-fitted parts.

### Advantages:

- Integrated pump, cylinder, hose and puller with safety-release valve.
- Compact design: The self-contained hydraulic pump and puller saves space.
- Sets are supplied in handy carrying case.
- Multi-purpose: Ideal for pulling a wide variety of press-fit parts including bearings, wheels, bushings, gears and pulleys.
- The pump handle is able to rotate 360-degrees providing flexibility to use the puller in the most convenient position.
- Pullers can be used with two or three legs.
- Available with accessories.

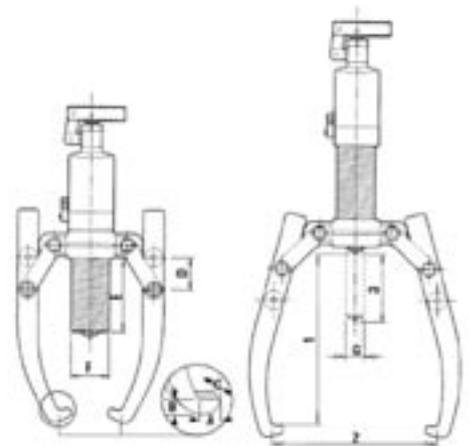
### HYDRAULIC PULLERS HANDLING TIPS

- **Check condition of puller before use.**
- **If there are indications of wear and tear such as ground-down, overloaded or worn-out parts, exchange them with new parts.**
- **Do not use a hammer when operating spindle.**
- **If any indications of overload, stiff working, etc., can be observed during pulling, please stop the procedure at once. Try to use a larger or different type of puller if necessary.**
- **For proper puller engagement, the jaws/legs should be centered.**
- **When pulling, make sure puller and pulled part are kept covered by the safety blanket provided.**
- **When operating the puller please wear protective clothing, including safety shoes, protective glasses, gloves and helmet.**
- **Spindle and puller body should always be kept clean.**

MODEL	Max. Withdrawal Force	Arm length	Width of Grip	STROKE	A	B	C	D	E	F	G	MASS
VHPT4	4 t	185 mm (7.3")	275 mm (10.8")	60 mm (2,4")	11 mm (0.4")	6 mm (0.2")	22 mm (0,9")	32 mm (1.3")	84 mm (3.3")	42 mm (1,7")	22 mm (0,9")	4.5 kg (9.9 lbs.)
VHPT6A	6 t	230 mm (9,1")	300 mm (11.8")	85 mm (3,4")	11 mm (0.4")	10 mm (0,4")	25 mm (1.0")	51 mm (2.0")	122 mm (4.8")	50 mm (2.0")	25 mm (1.0")	6.5 kg (14.3 lbs.)
VHPT8	8 t	230 mm (9,1")	350 mm (13.8")	85 mm (3,4")	11 mm (0.4")	10 mm (0,4")	25 mm (1.0")	51 mm (2.0")	122 mm (4.8")	50 mm (2.0")	25 mm (1.0")	6.5 kg (14.3 lbs.)
VHPT12	12 t	270 mm (10.6")	375 mm (14.8")	85 mm (3,4")	14 mm (0.6")	10 mm (0,4")	29 mm (1,1")	51 mm (2.0")	118 mm (4.6")	60 mm (2,4")	28 mm (1,1")	8 kg (17.6 lbs.)
VHPT20	20 t	360 mm (14.2")	520 mm (20.5")	111 mm (4,4")	20 mm (0,8")	27 mm (1,1")	33 mm (1,3")	60 mm (2.4")	161 mm (6.3")	80 mm (3,2")	40 mm (1,6")	22 kg (48.5 lbs.)
VHPT30	30 t	360 mm (14.2")	550 mm (21.7")	111 mm (4,4")	20 mm (0,8")	27 mm (1,1")	38 mm (1,5")	60 mm (2.4")	155 mm (6.1")	98 mm (3,9")	50 mm (2")	32 kg (70.6 lbs.)

### ACCESSORY SETS (HYDRAULIC PUMP NOT INCLUDED)

MODEL	Puller	Arm length	Width of Grip	Min. OD	Max. OD	MASS
VHPT490	VHPT4	250 mm (9.8")	110 mm (4.3")	25 mm (1.0")	110 mm (4.3")	8.5 kg (18.7 lbs.)
VHPT690A	VHPT6A	280 mm (11.0")	220 mm (8.7")	50 mm (2.0")	150 mm (5.9")	12.5 kg (21.6 lbs.)
VHPT890	VHPT8	280 mm (11.0")	210 mm (8.3")	50 mm (2.0")	150 mm (5.9")	12.5 kg (21.6 lbs.)
VHPT1290	VHPT12	325 mm (12.8")	290 mm (11.4")	80 mm (3.2")	225 mm (8.9")	18 kg (39.7 lbs.)



- 1- Arm Length
- 2- Width of Grip
- 3- Stroke

### SPLITTER ACCESSORY SET MODELS:

VHPT490, VHPT690A, VHPT890, VHPT1290



Puller shown with splitter accessory. (set supplied without pump)





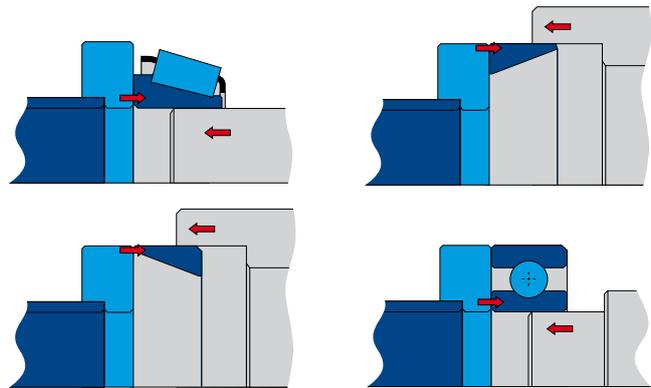
## BEARING INSTALLATION TOOLS

# Impact Fitting Tool

This Metric mounting set consists of:

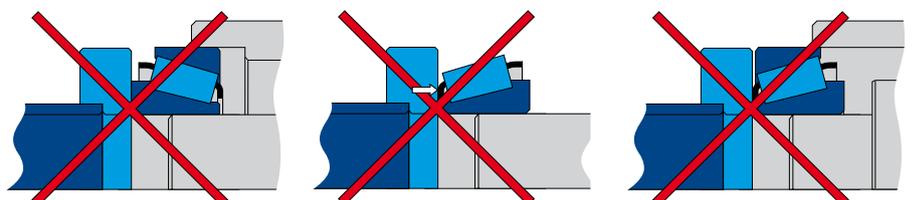
- 33 Collets
- 3 Sleeves
- 1 Impact hammer weight : 0.7 kg (1.5 lbs.) absorbs shock and vibration
- Case dimensions: 430 x 320 x 100 mm (16.9" x 12.6" x 4.0")

Proper mounting allows the load to be transmitted to the ring experiencing the interference fit. This way, mounting forces are not transmitted via the rolling elements, avoiding damage to the raceways.



### IMPACT FITTING TOOL HANDLING TIPS

- When operating the impact fitting tool, please wear protective clothing, including safety shoes, protective glasses, gloves and helmet.
- Do not use the collets to mount components that have a temperature greater than 80° C (176° F).
- Never mount the cup and cone of a tapered bearing together or mount a cone from the front face.
- Proper mounting is essential to ensure long bearing life. Designed to permit the safe, precise and quick mounting of bearings, bushings, sealing rings, cam wheels and pulleys, the Timken Impact Fitting Tool Set features impact-resistant plastic collets, which help to avoid metal-to-metal contact and the resulting shaft damage.
- During the mounting of bearings, such as ball and spherical roller bearings, where the faces lie in the same plane, the collets enable the load to be transmitted to the ring experiencing the interference fit. In this way, mounting forces are not transmitted via the rolling elements and hence damage to the raceways is avoided.



Part Number: VIFT 3300

Sleeve	Ring	All ISO bearings codes ending with:	60,62, 63,64	12,22, 13,23	70, 72B, 73B	32, 33	222,213,223	NU,NJ,N 2 3 4	302, 322, 303, 330	320, 313, 323, 332	
A1	10-26	000	6000	129	7000						
	10-30	200	6200	1200		3200					
				2200							
	10-35	300	6300	1300	7300						
	12-28	001	6001								
	12-32	201	6201	1201		3201					
					2201						
	12-37	301	6301	1301	7301						
					2301						
	15-32	002	6002								
	15-35	202	6202	1202	7202B	3202					
					2202						
	15-42	302	6302	1302		3302			30302		
					2302						
	17-35	003	6003								
				16003							
	17-40	203	6203	1203	7203B	3203			30203		
				2203							
17-47	303	6303	1303	7303B	3303			30303	32303		
				2303							
B2	20-42	004	6004		7004					32004	
	20-47	204	6204	1204	7204B	3204		204	30204		
					2204						
	20-52	304	6304	1304	7304B	3304	21304	304	30304	32304	
			403	6403	2304						
	25-47	005	6005		7005					32005	
	25-52	205	6205	1205	7205B	3205	22205	205	30205	33205	
					2205				32205		
	25-62	305	6305	1305	7305B	3305	21305	305	30305	31305	
			404	6404	2305					32305	
	30-55	006	6006							32006	
	30-62	206	6206	1206	7206B	3206	22206	206	30206	33206	
				2206				32206			
30-72	306	6306	1306	7306B	3306	21306	306	30306	31306		
		405	6405	2206			405		32306		
C3	35-62	007	6007		7007					32007	
	35-72	207	6207	1207	7207B	3207	22207	207	30207	33207	
					2207				32207		
	35-80	307	6307	1307	7307B	3307	21307	307	30307	31307	
			406	6406	2307			406		32307	
	40-68	008	6006							32008	
	40-80	208	6208	1208	7208B	3208	22208	208	30208	33208	
									32208		
	40-90	308	6308	1308	7308B	3308	21308	308	30308	31308	
			407	6407	2308		22308	407		32308	
	45-75	009	6009							32009	
	45-85	209	6209	1209	7209B	3209	22209	209	30209	33209	
					2209				32209		
	45-100	309	6309	1309	7309B	3309	21309	309	30309	31309	
			408	6408	2309		22309	408		32309	
	50-80	010	6010							33010	32010
	50-90	210	6210	1210	7210B	3210	22210	210	30210	33210	
				2210				32210			
50-110	310	6310	1310	7310B	3310	21310	310	JM205149/JM205110	31310		
		409	6409	2310		22310	409		32310		

Impact rings 50-90, 45-100, 50-110 also fit the following bearing where only the outer ring is to be fitted (e.g. shaft is not installed)

C3	50-90		6011							
			6012							
	45-100		6013	1211	7211B	3211	22211	211		
				6211	2211	7212B				
	50-110		6014	1212	7213B	3212	22212	212		
			6015	1213		3213	22213	213		
			6212	2213		3211	21311	311		
			6213	2213			22311	410		
			6311	1311						
			6410	2311						

For tapered bearings, impact rings fit outer ring and also inner ring if driving is from larger diameter side.

The numbers on each impact ring (e.g. 25-62) are clearly marked on the ring. The first figure refers to shaft diameter, the second to bearing outer diameter

**WARNING:**

Proper maintenance and handling practices are critical. Failure to follow user manual instructions can result in equipment failure, creating a risk of serious bodily harm.

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