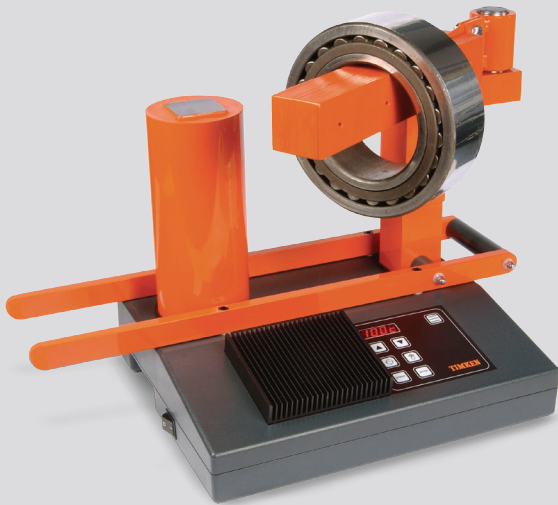


TIMKEN



TIMKEN[®] MAINTENANCE TOOLS SOLUTIONS

ENSURING PERFORMANCE THROUGH PROPER
INSTALLATION AND REMOVAL OF BEARINGS

INDUCTION HEATERS



INSTALLATION TOOLS

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.

INSTALLATION TOOLS

- Induction Heaters 3
- Accessories 9
- Impact Fitting Tools 11

REMOVAL TOOLS

- Hydraulic and Self-Centering Hydraulic Pullers 13
- Mechanical Pullers 15

Why Choose an Induction Heater?

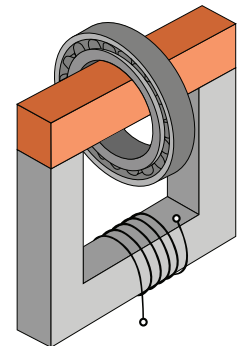
Induction heating is a superior, fast and controlled heating method. It is a safer and more environmentally friendly alternative to traditional heating methods such as ovens, oil baths or blow torches. These methods cause fumes or oil waste and are not recommended for personal health and safety.

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.

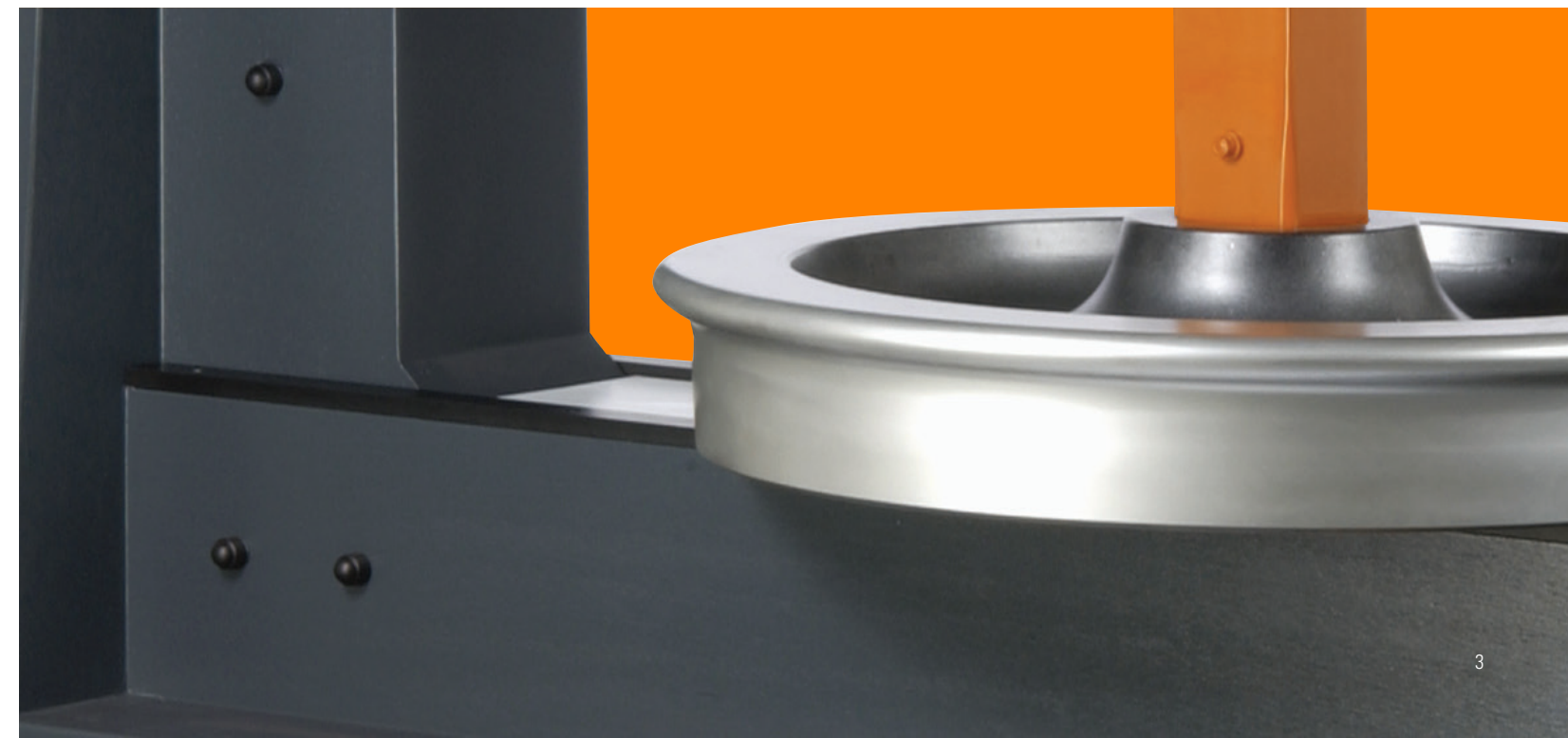
Versatility, Safety and Quality

Timken induction heaters can be used for heating gear wheels, bushings, couplings and other components. Proper mounting may lengthen the life span of your equipment, and controlled induction heating helps to prevent unnecessary damage.

Digital electronics provide optimum control during the heating process and automatically select the most efficient power supply to help ensure balanced and fast heating.



High-quality induction heaters designed for demanding industrial applications.



⚠ WARNING

Failure to observe the following warnings could create a risk of death or serious injury.

Proper maintenance and handling practices are critical.

Failure to follow user manual can result in equipment failure, creating a risk of serious bodily harm.



DO NOT WEAR METAL OBJECTS OR WATCHES.



PROHIBITED FOR PEOPLE WITH A PACEMAKER AND/OR HEARING AID.



READ THE INSTRUCTIONS.



USE HEAT PROTECTIVE GLOVES.

⚠ CAUTION

Failure to observe the following cautions could create a risk of injury.

Do not operate an induction heater in areas where there is a risk of an explosion.

See inside text for additional warnings.

VHIN 10



Portable design, easy to use and ideal for site jobs.

Heating capacity, 15 kg (33.1 lbs.)
(Max. Bearing Weight)
Voltages available:
120V and 230V

Min. Bore: 10 mm (0.4 in.)
Max. O.D.: 210 mm (8.3 in.)
Max. Width: 120 mm (4.8 in.)
Max. Weight: 15 kg (33.1 lbs.)

VHIN 33



Bench-top TURBO model

Heating Capacity, 40 kg (88.2 lbs.)
(Max. Bearing Weight)
Voltages available:
120V and 230V

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

VHIS 35



Bench-top model with swing arm

Heating Capacity, 35 kg (77.2 lbs.)
(Max. Bearing Weight)
Voltages available:
120V and 230V

Min. Bore: 15 mm (0.6 in.)
Max. O.D.: 340 mm (13.4 in.)
Max. Width: 150 mm (5.9 in.)
Max. Weight: 35 kg (77.2 lbs.)

VHIS 200



Mobile, medium capacity with swing arm

Heating Capacity, 250 kg (551.2 lbs.)
(Max. Bearing Weight)
Voltages available:
400V and 500V

Min. Bore: 30 mm (1.2 in.)
Max. O.D.: 720 mm (28.3 in.)
Max. Width: 340 mm (13.4 in.)
Max. Weight: 250 kg (551.2 lbs.)

VHIS 400



Powerful, TURBO model, mobile with swing arm

Heating Capacity, 550 kg (1212.5 lbs.)
(Max. Bearing Weight)
Voltages available:
400V, 450V, 500V

Min. Bore: 60 mm (2.4 in.)
Max. O.D.: 920 mm (36.2 in.)
Max. Width: 350 mm (13.8 in.)
Max. Weight: 550 kg (1212.5 lbs.)

VHIN 550



Powerful heater for heavy bearings

Heating Capacity, 600 kg (1322.6 lbs.)
(Max. Bearing Weight)
Voltages available:
400V and 500V

Min. Bore: 60 mm (2.6 in.)
Max. O.D.: 900 mm (35.4 in.)
Max. Width: 400 mm (15.8 in.)
Max. Weight: 600 kg (1322.6 lbs.)

VHIS 75



TURBO model with swing arm

Heating Capacity, 95 kg (209.4 lbs.)
(Max. Bearing Weight)
Voltages available:
120V and 230V

Min. Bore: 15 mm (0.6 in.)
Max. O.D.: 480 mm (18.9 in.)
Max. Width: 200 mm (7.9 in.)
Max. Weight: 95 kg (209.4 lbs.)

VHIS 100



Bench-top model with swing arm

Heating Capacity, 125 kg (275.6 lbs.)
(Max. Bearing Weight)
Voltages available:
230V, 400V, 500V

Min. Bore: 30 mm (1.2 in.)
Max. O.D.: 520 mm (20.9 in.)
Max. Width: 200 mm (7.9 in.)
Max. Weight: 125 kg (275.6 lbs.)

VHIS 150

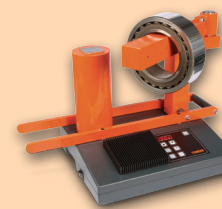


Bench top, medium capacity, TURBO model with swing arm

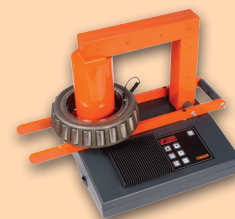
Heating Capacity, 350 kg (771.6 lbs.)
(Max. Bearing Weight)
Voltages available:
400V and 500V

Min. Bore: 30 mm (1.2 in.)
Max. O.D.: 790 mm (31.1 in.)
Max. Width: 315 mm (12.4 in.)
Max. Weight: 350 kg (771.6 lbs.)

TURBO models are designed for high-output, energy-efficient performance. Turbo performance works in horizontal heating position.



1. Horizontal position based on bore axis orientation of work piece and smallest yoke available for model.



2. Vertical position based on bore axis orientation of work piece.

VHIN 600



Heavy-duty TURBO model for heavy bearings

Heating Capacity, 1200 kg (2645.5 lbs.)
(Max. Bearing Weight)
Voltages available:
400V and 500V

Min. Bore: 175 mm (6.9 in.)
Max. O.D.: 1700 mm (66.9 in.)
Max. Width: 750 mm (29.5 in.)
Max. Weight: 1200 kg (2645.6 lbs.)

VHIN 800



Powerful heater for heavy bearings

Heating Capacity, 1250 kg (2750 lbs.)
(Max. Bearing Weight)
Voltages available:
400V and 500V

Min. Bore: 85 mm (3.4 in.)
Max. O.D.: 1400 mm (55.1 in.)
Max. Width: 420 mm (16.5 in.)
Max. Weight: 1250 kg (2645 lbs.)

TECHNICAL DATA	VHIN10	VHIN33 TURBO	VHIS35	VHIS 75 TURBO	VHIS100	VHIS150 TURBO	VHIS200	VHIS400 TURBO	VHIN550	VHIN600 TURBO	VHIN800
ELECTRICITY											
Power rating	3.6 kVA	3.6 kVA	3.6 kVA	3,6 kVA	8 kVA	8 kVA	12kVA	12 kVA	24 kVA	24 kVA	40 kVA
Available voltages	230V/16A	230V/16A	230V/16A	230V/16A	400V/20A	400V/20A	400V/30A	400V/30A	400V/60A	400V/60A	400V/100A
	120V/15A	120V/15A	120V/15A	120V/15A	500V/16A, 230V/20A	500V/20A	500V/30A	500V/24A	500V/60A	500V/60A	500V/80A
Frequency Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Yokes, standard, mm	10,14,40	10,14,40	14,30,60	14,30,60	20,70	80	80	80	100	standard sliding yoke	150
Yokes, optional mm	7,20	7,20	10,20,40,50	10,20	30,40,50	20,30,40,60	20,30,40,60	40,60	40,50,60,80		60,80,100
Swivel arm	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
Plug	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
WORK PIECE											
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.)	350 kg (771.6 lbs.)	250 kg (551.2 lbs.)	550 kg (1212.5 lbs.)	600 kg (1322.6 lbs.)	1200 kg (2645.5 lbs.)	1250 kg (2750 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.)	250 kg (551.1 lbs.)	150 kg (330.7 lbs.)	450 kg (992.1 lbs.)	350 kg (771.6 lbs.)	900 kg (1984.2 lbs.)	750 kg (1653.5 lbs.)
Min. bore diameter, horizontal 1	10 mm (0.4 in.)	10 mm (0.4 in.)	15 mm (0.6 in.)	15 mm (0.6 in.)	30 mm (1.2 in.)	30 mm (1.2 in.)	30 mm (1.2 in.)	60 mm (2.4 in.)		175 mm (6.9 in.)	
Min. bore diameter, vertical 2		100 mm (4 in.)	100 mm (4 in.)	120 mm (4.8 in.)	110 mm (4.4 in.)	160 mm (6.3 in.)	130 mm (5.2 in.)	175 mm (6.9 in.)	60 mm (2.4 in.)	200 mm (7.9 in.)	85 mm (3.4 in.)
Max. O.D. bearing	240 mm (9.5 in.)	380 mm (15.0 in.)	380 mm (15.0 in.)	520 mm (20.5 in.)	500 mm (19.7 in.)	790 mm (31.1 in.)	720 mm (28.3 in.)	920 mm (36.2 in.)	900 mm (35.4 in.)	1700 mm (66.9 in.)	1400 mm (55.1 in.)
Max. work piece width	120 mm (4.8 in.)	135 mm (5.3 in.)	150 mm (5.9 in.)	200 mm (7.9 in.)	200 mm (7.9 in.)	315 mm (12.4 in.)	340 mm (13.4 in.)	350 mm (13.8 in.)	400 mm (15.8 in.)	750 mm (29.5 in.)	420 mm (16.5 in.)
POLE DIMENSIONS											
Cross section poles	40 mm (1.6 in.)	95 mm (3.7 in.)	60 mm (2.4 in.)	120 mm (4.7 in.)	70 mm (2.8 in.)	160mm (6.3 in.)	80 mm (3.2 in.)	175 mm (6.9 in.)	100 mm (3.9 in.)	200 mm (7.9 in.)	150 mm (5.9 in.)
Pole height	130 mm (5.1 in.)	165 mm (6.5 in.)	140 mm (5.5 in.)	230 mm (9.1 in.)	210 mm (8.3 in.)	320 (12.6 in.)	340 mm (13.4 in.)	305 mm (12 in.)	390 mm (15.4 in.)	595 mm (23.4 in.)	660 mm (26.0 in.)
CONTROLS											
Temperature control											
- Max. reach	150° C (302° F)	240° C (464° F)	240° C (464° F)	240° C (464° F)	240° C (464° F)	240° C (464° F)	240° C (464° F)	240° C (464° F)	350° C (662° F)	240° C (464° F)	240° C (464° F)
- Magnetic probe	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
- Digital display	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time control											
- Max. reach	0-30 min.	0-45 min.	0-45 min.	0-45 min.	0-60 min.	0-60 min.	0-99 min.	0-99 min.	0-99 min.	0-99 min.	0-99 min.
- Digital display	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sound signal	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Error report	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Temperature hold	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Automatic power reduction		Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Aut. demagnetising, <2A/cm	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Thermal safety guard electronics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
UNIT DIMENSIONS											
Dimensions (lxbxh)	460x240x280 mm (18.1x9.45x11.02 in.)	600x220x275 mm (23.6x8.7x10.8 in.)	340x290x380 mm (13.4in.x11.4in.x12.2 in.)	440x370x420 mm (17.3x14.6x14.2 in.)	630x365x470 mm (22.8x14.7,18.5 in.)	1200x640x1000 mm (47.2x25.2x39.4 in.)	1200x640x1000 mm (47.2x25.2x39.4 in.)	1200x640x1000 mm (47.2x25.2x39.4 in.)	1000x500x1350 mm (39.4x19.7x53.2 in.)	1600x700x1300 mm (63.0x27.6x51.2 in.)	1750x600x1470 mm (68.9X23.62X57.48 in.)
Weight heater	21 kg (46.3 lbs.) (incl. yokes)	23 kg (50.7 lbs.) (incl. yokes)	31 kg (68.3 lbs.)	37 kg (81.6 lbs.)	53 kg (116.9 lbs.)	105 kg (116.8 lbs.)	125 kg (275.6 lbs.)	185 kg (410.1 lbs.)	220 kg (485.0 lbs.)	450 kg (992.1 lbs.) (incl. yoke)	660 kg (1455.1 lbs.)
Mobile	No	No	No	No	No	Yes (w/opt. trolley)	Yes	Yes	No	No	No

COMPARISON HEATING TIMES BETWEEN STANDARD AND TURBO HEATERS 120/480VOLT

UP TO 110° C (230° F) IN MINUTES

BEARING NO.		22322	22326	22332	23148	22348	23168	GEAR WHEEL
WEIGHT (kg)	12 kg	18 kg	30 kg	50 kg	65,5 kg	147 kg	210 kg	300 kg
I.D./O.D. (mm)		110/240	130/280	160/340	240/400	220/500	350/580	210/600
VHIN 10... 120V	30:00	51:00						
VHIN 33... 120V		13:30	42:45					
VHIS 35... 120V		30:00	48:15					
VHIS 75... 120V		34:54		18:12	1:09			
VHIS 100... 480V				7:45	12:10	28:00		
VHIS 150... 480V				2:45	5:10	9:00	21:30	23:45
VHIS 200... 480V				5:25	8:15	17:00	32:55	47:20
VHIS 400... 480V					3:50	4:40	10:20	10:05
VHIS 550... 480V								
VHIS 600... 480V					1:30	1:55	3:50	3:20
VHIS 800... 480V								
VHIS 850... 480V								

COMPARISON HEATING TIMES BETWEEN STANDARD AND TURBO HEATERS 230/400VOLT

UP TO 110° C (230° F) IN MINUTES

BEARING NO.		22322	22326	22332	23148	22348	23168	GEAR WHEEL
WEIGHT (kg)	12 kg	18 kg	30 kg	50 kg	65,5 kg	147 kg	210 kg	300 kg
I.D./O.D. (mm)		110/240	130/280	160/340	240/400	220/500	350/580	210/600
VHIN 10... 230V		30:00						
VHIN 33... 230V		3:47		23:00				
VHIS 35... 230V		7:45		27:20				
VHIS 75... 230V		9:30		6:03				
VHIS 100... 230V		7:15		12:45	23:45	59:00		
VHIS 100... 400V		2:58		7:10	11:50	31:20		
VHIS 150... 400V				2:25	4:10	7:20	25:30	16:00
VHIS 200... 400V				6:30	10:05	22:45	45:10	61:00
VHIS 400... 400V					1:45	2:35	8:40	6:35
VHIS 550... 400V							3:50	
VHIS 600... 400V								
VHIS 800... 400V								
VHIS 850... 400V								

SELECTION GUIDE USING WEIGHT AND O.D.

VHIN10	VHIS100	VHIN550
VHIN33	VHIS150	VHIN600
VHIS35	VHIS200	VHIN800
VHIS75	VHIS400	

MAXIMUM WEIGHT	MAXIMUM O.D. SIZE										
	210 mm 8.3 in.	340 mm 13.8 in.	350 mm 13.9 in.	480 mm 18.9 in.	520 mm 20.5 in.	720 mm 28.3 in.	750 mm 31.1 in.	900 mm 35.4 in.	900 mm 35.4 in.	1400 mm 66.9 in.	1400 mm 66.9 in.
1250 kg (2750 lbs.)											VHIS800
1200 kg (2645 lbs.)										VHIS600	
600 kg (1322 lbs.)								VHIS550			
550 kg (1212 lbs.)								VHIS400			
350 kg (771 lbs.)								VHIS150			
250 kg (551 lbs.)						VHIS200					
125 kg (275 lbs.)					VHIS100						
95 kg (209 lbs.)				VHIS75							
40 kg (88 lbs.)											
35 kg (77 lbs.)		VHIS33	VHIS35								
15 kg (33 lbs.)	VHIS10										

The size and weight of your product are two of the many factors that determine which heater is right for your equipment. This chart is offered as a general guide only.

INDUCTION HEATERS

ACCESSORIES

GLOVES



Heat resistant to 150° C (302° F).

YOKE SET



Available for various models.

TEMPERATURE PROBE



Each Timken induction heater model is supplied with a magnetic temperature probe. A clamp also is available for nonferrous components.



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TIMKEN

The Timken team applies their know-how to improve the reliability and performance of machinery in diverse markets worldwide. The company designs, makes and markets high-performance mechanical components, including bearings, gears, belts, chain and related mechanical power transmission products and services.

Stronger. Commitment. Stronger. Value. Stronger. Worldwide. Stronger. Together. | Stronger. By Design.

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