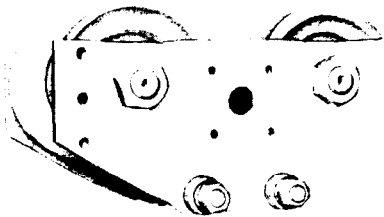


# PARTS, OPERATION AND MAINTENANCE MANUAL

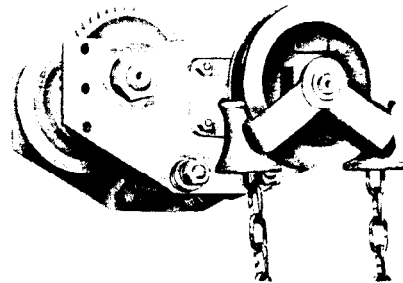
## RIGID MOUNT PUSH AND HAND GEARED TROLLEYS

FOR  
1/2 THROUGH 5 METRIC TON SERIES E1 AND E2 WIRE  
ROPE HOISTS



1 TON RATED LOAD PUSH TYPE TROLLEY

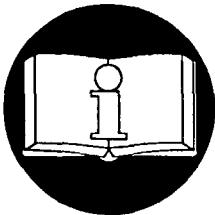
12688



1 TON RATED LOAD HAND GEARED TROLLEY

12689

Tons in this manual are metric tons (2,200 lbs.)



**READ THIS MANUAL BEFORE USING THESE TROLLEYS.** This manual contains important safety, installation, operation and maintenance information. Make this manual available to all persons responsible for the operation, installation and maintenance of these products.

### **⚠ WARNING**

**Do not use this trolley for lifting, supporting, or transporting people or lifting or supporting loads over people.**

**Always operate, inspect and maintain this trolley in accordance with any federal, state or local regulations and any other applicable safety codes.**

**Refer all communications to the nearest Ingersoll-Rand Material Handling Products Office or Distributor.**

Form MHD56068

Edition 1

February 1993

71121008

© 1993 Ingersoll-Rand Company

**INGERSOLL-RAND®**  
**MATERIAL HANDLING**

## GENERAL

INGERSOLL-RAND Rigid Mount I-Beam Trolleys are designed especially for use on Series E1 and E2 INGERSOLL-RAND Electric Hoists. They attach directly to suspension brackets of lug mounted hoists.

Trolleys are shipped partially disassembled to make it unnecessary to take them apart before mounting on hoist. This also makes it easier to properly adjust the trolleys to fit the particular beams on which they are to operate. Correctly fitted trolleys travel easier and last longer.

Your new INGERSOLL-RAND Rigid Mount Trolley can be assembled to your hoist and the complete unit then installed on its runway beam with a minimum of effort by following the directions given here.

**THE INFORMATION CONTAINED IN THIS MANUAL IS FOR INFORMATIONAL PURPOSES ONLY AND INGERSOLL-RAND DOES NOT WARRANT OR OTHERWISE GUARANTEE (IMPLIEDLY OR EXPRESSLY) ANYTHING OTHER THAN THE COMPONENTS THAT INGERSOLL-RAND SUPPLIES AND ASSUMES NO LEGAL RESPONSIBILITY (INCLUDING, BUT NOT LIMITED TO CONSEQUENTIAL DAMAGES) FOR INFORMATION CONTAINED IN THIS MANUAL.**

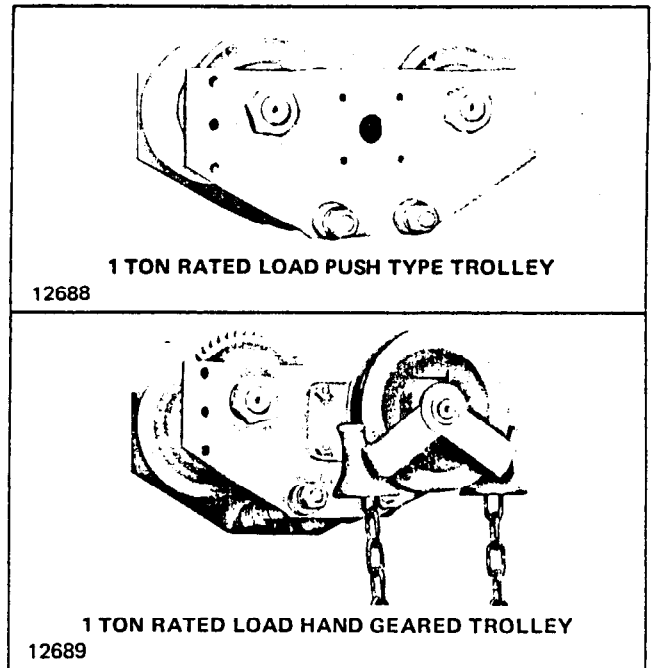


Figure 1.

## ASSEMBLY OF TROLLEY TO HOIST

Place hoist on workbench, suspension lug facing up, and proceed as follows:

1. If trolley is a hand geared type rated 2 tons or less, make certain that proper size anti-tilt roller is installed on inside of one side plate before assembling trolley to hoist. Two rollers are provided with each hand geared trolley to accommodate full range of beam sizes that trolley is designed for. A small roller, suitable for I-beam sizes of 10" up to largest specified for trolley has been pre-installed by the factory. If trolley is to operate on an I-beam smaller than 10", substitute the larger roller, which is shipped loose, by removing the outer "C" ring and replacing the smaller roller. For other than standard I-beams, measure beam flange thickness and allow not less than 1/16" clearance between roller and bottom of beam flange.

2. Before attaching trolley to hoist, first determine proper spacing of trolley side plates to provide adequate wheel clearance (approximately 1/8") on both sides of I-beam, between inside faces of wheel flanges and edges of bottom beam flange. Proper spacing is obtained by varying number of spacer washers, (furnished with trolley) which are installed on suspension cross pins, between suspension lug and trolley side plates.

3. Due to manufacturing tolerances, I-beams having the same size designation may vary in the width of their flanges. This makes it impossible to prescribe the specific

number of spacer washers required between trolley side plates and lug for any particular beam size. As a result the following procedure should be followed:

4. Measure exact width of bottom beam flange and add 1/4" to this dimension. This is the required distance between inside faces of wheel flanges to obtain proper operating clearance, as indicated in Figure 2.

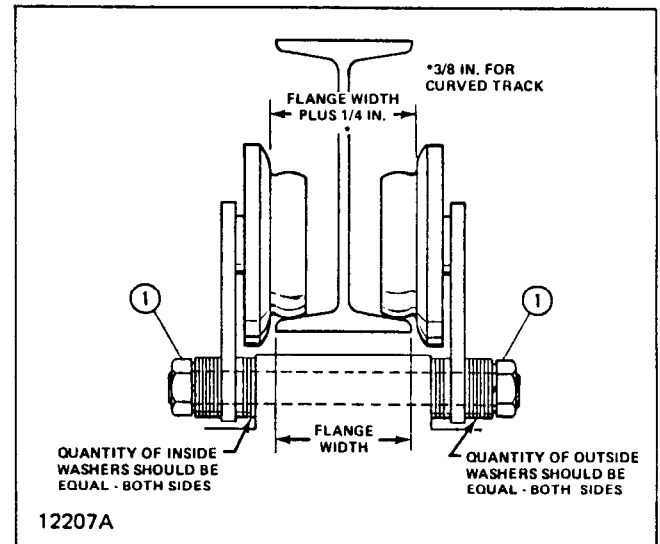
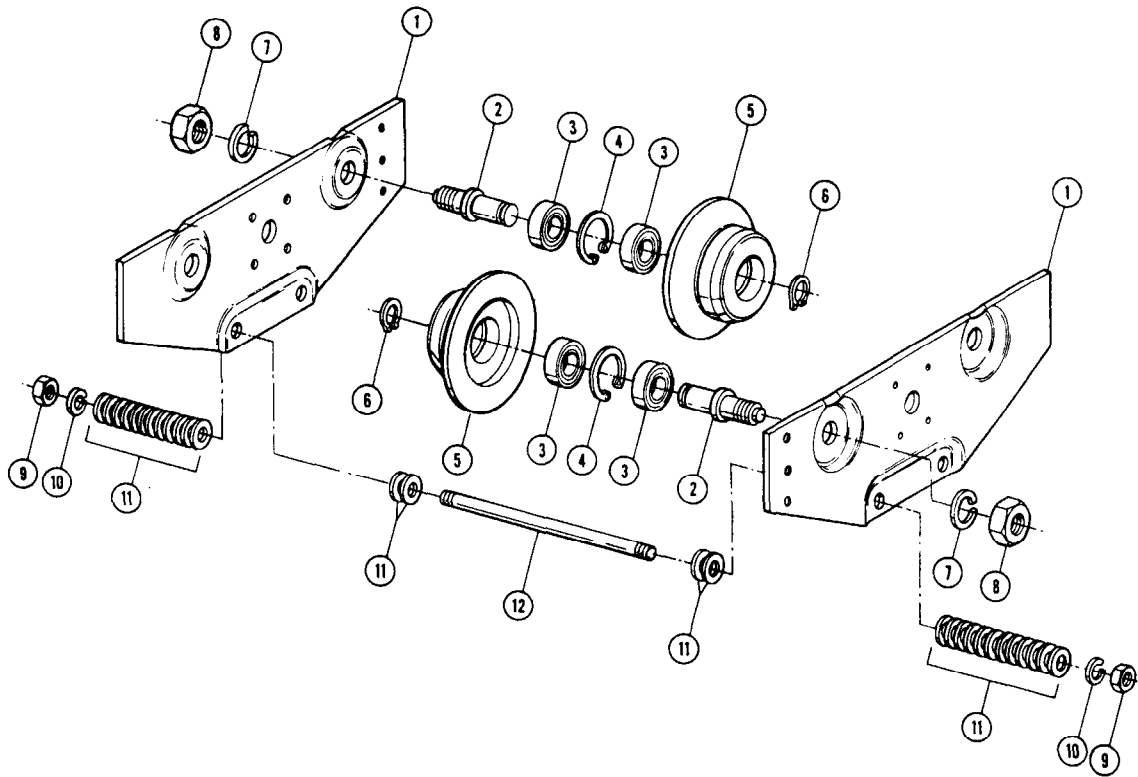


Figure 2. Sectional View of Trolley Showing Proper Wheel and Washer Spacing.





12682

Figure 3. Push Type Rigid Mount Trolley Assembly.  
(4"  $\phi$  Wheels - 3-1/8" and 5" c/c Pins.)

Ref. No.	Description	3-1/8" c/c Pins		5" c/c Pins	
		Part Number	Qty. Req'd.	Part Number	Qty. Req'd.
1	Plate Assembly – Side				
	For 3" to 5" Flange Widths and Patented Track	700T-1300	2	--	--
	For 5-1/8" to 7-1/4" Flange Widths	700T-1301	2	--	--
	For 7-1/2" to 9-1/8" Flange Widths	700T-1302	2	--	--
	For 3-5/8" to 6" Flange Widths and Patented Track	--	--	700T-1303	2
	For 6-1/4" to 8-5/8" Flange Widths	--	--	700T-1304	2
5	For 8-7/8" to 11-1/4" Flange Widths	--	--	700T-1305	2
	Wheel – Plain				
	Standard	700T-1309	4	700T-1309	4
	Patented Track	700T-1310	4	700T-1310	4
	Spark Resistant	700T-1311	4	700T-1311	4
6	Ring – Retaining	700T-1312	4	700T-1312	4
7	Lockwasher	700T-1313	4	700T-1313	4
8	Nut – Hex Jam	700T-1314	4	700T-1314	4



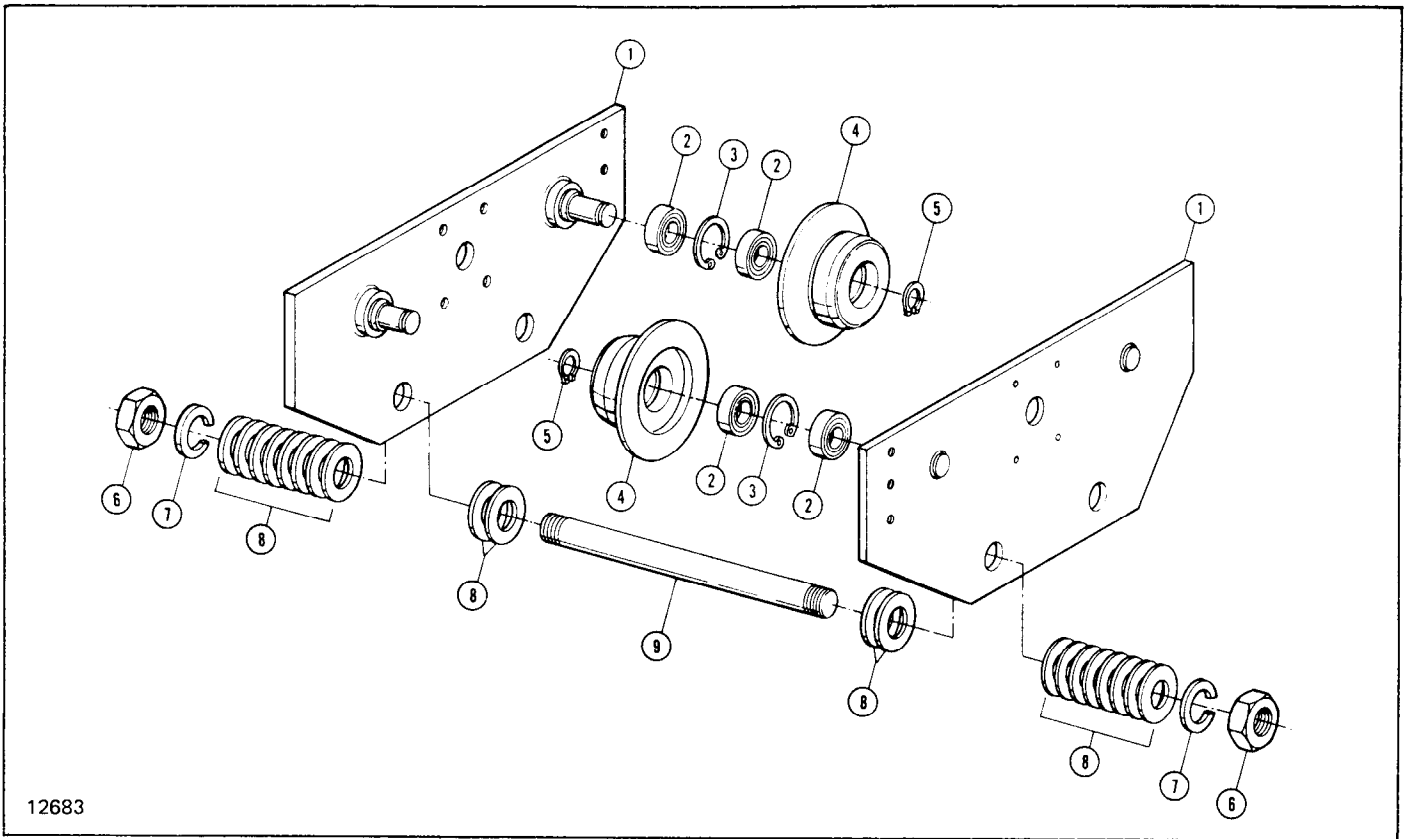


Figure 4. Push Type Rigid Mount Trolley Assembly – (4"  $\phi$  Wheels - 6" c/c Pins) and Trailer Trolley\* – (2 - 4"  $\phi$  Wheels).

Ref. No.	Description	6" c/c Pins		2 Wheel Trolley	
		Part Number	Qty. Req'd.	Part Number	Qty. Req'd.
1	Plate Assembly – Side				
	For 4" to 6" Flange Widths and Patented Track	700T-1400	2	700T-1401	2
	For 6-3/8" to 8-5/8" Flange Widths	700T-1402	2	700T-1403	2
	For 8-3/4" to 11" Flange Widths	700T-1404	2	700T-1405	2
2	Bearing – Ball	700T-1406	8	700T-1406	4
3	Ring – Retaining	700T-1407	4	700T-1407	2
4	Wheel – Plain				
	Standard	700T-1408	4	700T-1408	2
	Patented Track	700T-1409	4	---	---
	Spark Resistant	700T-1410	4	---	---
5	Ring – Retaining	700T-1411	4	700T-1411	2
6	Nut – Hex Jam	700T-1412	4	700T-1413	4
7	Lockwasher	700T-1414	4	700T-1415	4
8	Washer – Spacer	700T-1416	40	700T-1417	40
9	Pin – Suspension				
	For 4" to 6" Flange Widths and Patented Track	700T-1418	2	700T-1419	2
	For 6-3/8" to 8-5/8" Flange Widths	700T-1420	2	700T-1421	2
	For 8-3/4" to 11" Flange Widths	700T-1422	2	700T-1423	2

\*Used on low headroom hoists only.

NOTES

---



---



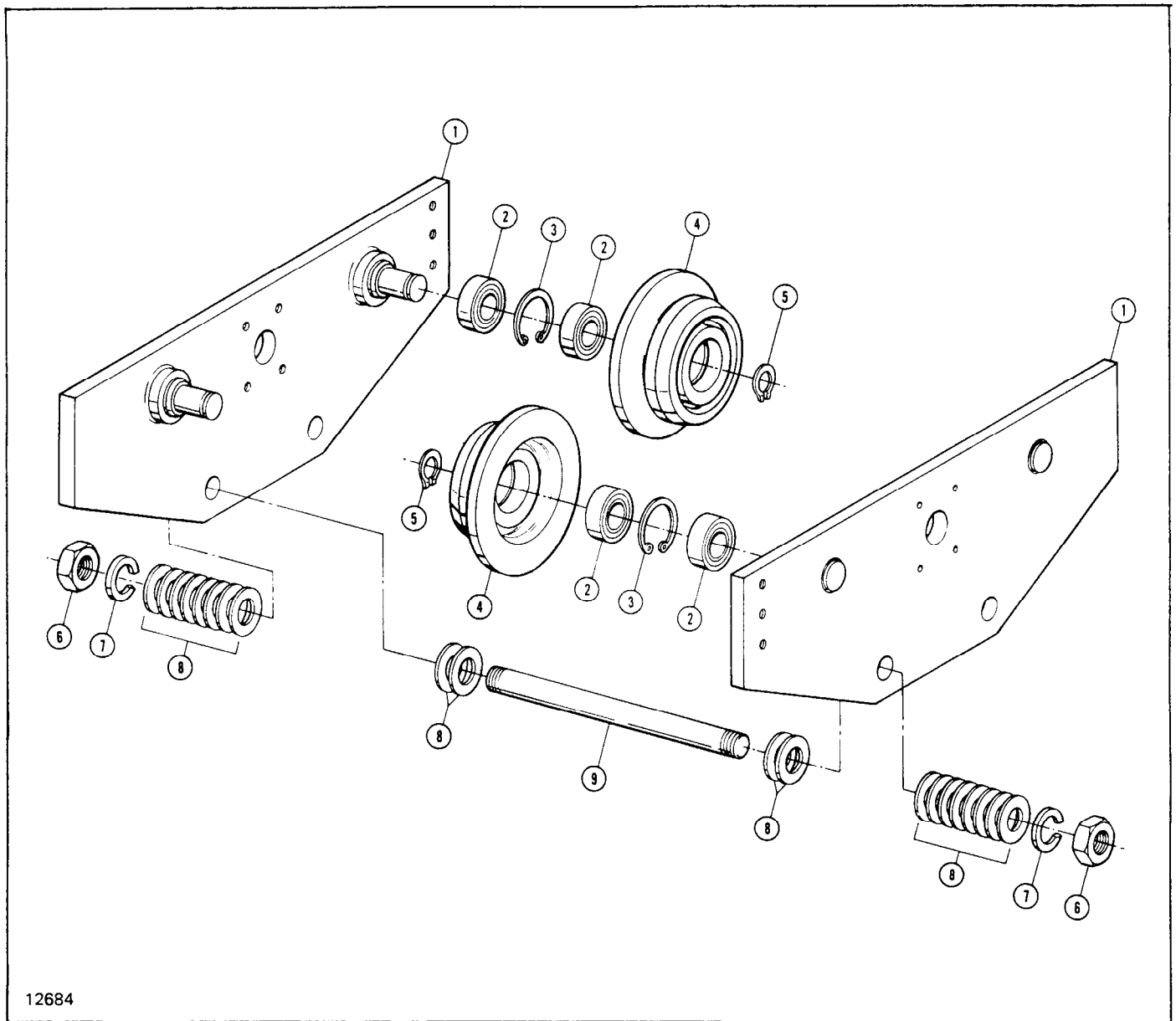
---



---



---



12684

Figure 5. Push Type Rigid Mount Trolley Assembly – (6-1/2" & 8"  $\phi$  Wheels) and Trailer Trolley\* – (6-1/2"  $\phi$  Wheels).

Ref. No.	Description	6-1/2" $\phi$ Wheels				8" $\phi$ Wheels		
		1-1/4" $\phi$ Pins	1-1/2" $\phi$ Pins	Trailer Trolley	Qty. Req'd.	9" c/c Pins	16" c/c Pins	Qty. Req'd.
		Part Number	Part Number	Part Number		Part Number	Part Number	
1	Plate Assembly – Side For 4" to 6-1/4" Flange Widths and Patented Track	700T-1500	700T-1501	700T-1502	2	---	---	---
	For 6-3/8" to 8-5/8" Flange Widths	700T-1503	700T-1504	700T-1505	2	---	---	---
	For 8-3/4" to 11" Flange Widths	700T-1506	700T-1507	700T-1508	2	---	---	---
	For 6" to 8-1/2" Flange Widths	---	---	---	---	700T-1509	700T-1509	2
	For 8-5/8" to 11-1/8" Flange Widths	---	---	---	---	700T-1510	700T-1511	2
	For 11-1/4" to 13-3/4" Flange Widths	---	---	---	---	700T-1512	700T-1513	2
2	Bearing – Ball	700T-1514	700T-1514	700T-1514	8	700T-1515	700T-1515	8
3	Ring – Retaining	700T-1516	700T-1516	700T-1516	4	700T-1517	700T-1517	4



Figure 5. Push Type Rigid Mount Trolley Assembly—(6-1/2" & 8"  $\phi$  Wheels) and Trailer Trolley\*—(6-1/2"  $\phi$  Wheels) (Continued).

Ref. No.	Description	6-1/2" $\phi$ Wheels				8" $\phi$ Wheels		
		1-1/4" $\phi$ Pins	1-1/2" $\phi$ Pins	Trailer Trolley	Qty. Req'd.	9" c/c Pins	16" c/c Pins	Qty. Req'd.
		Part Number	Part Number	Part Number		Part Number	Part Number	
4	Wheel – Plain							
	Standard	700T-1518	700T-1518	700T-1518	4	700T-1519	700T-1519	4
	Patented Track	700T-1520	700T-1520	---	4	---	---	---
	Spark Resistant	700T-1521	700T-1521	---	4	700T-1522	700T-1522	4
5	Ring – Retaining	700T-1523	700T-1523	700T-1523	4	700T-1524	700T-1524	4
6	Nut – Hex Jam	700T-1525	700T-1526	700T-1525	4	700T-1527	700T-1527	4
7	Lockwasher	700T-1528	700T-1529	700T-1528	4	700T-1530	700T-1530	4
8	Washer – Spacer	700T-1531	700T-1532	700T-1531	40	700T-1533	700T-1533	44
9	Pin – Suspension							
	For 4" to 6-1/4" Flange Widths and Patented Track	700T-1534	700T-1535	700T-1534	2	---	---	---
	For 6-3/8" to 8-5/8" Flange Widths	700T-1536	700T-1537	700T-1536	2	---	---	---
	For 8-3/4" to 11" Flange Widths	700T-1538	700T-1539	700T-1538	2	---	---	---
	For 6" to 8-1/2" Flange Widths	---	---	---	---	700T-1540	700T-1540	2
	For 8-5/8" to 11-1/8" Flange Widths	---	---	---	---	700T-1541	700T-1541	2
	For 11-1/4" to 13-3/4" Flange Widths	---	---	---	---	700T-1542	700T-1542	2

\*Used on low headroom hoists only.

NOTES

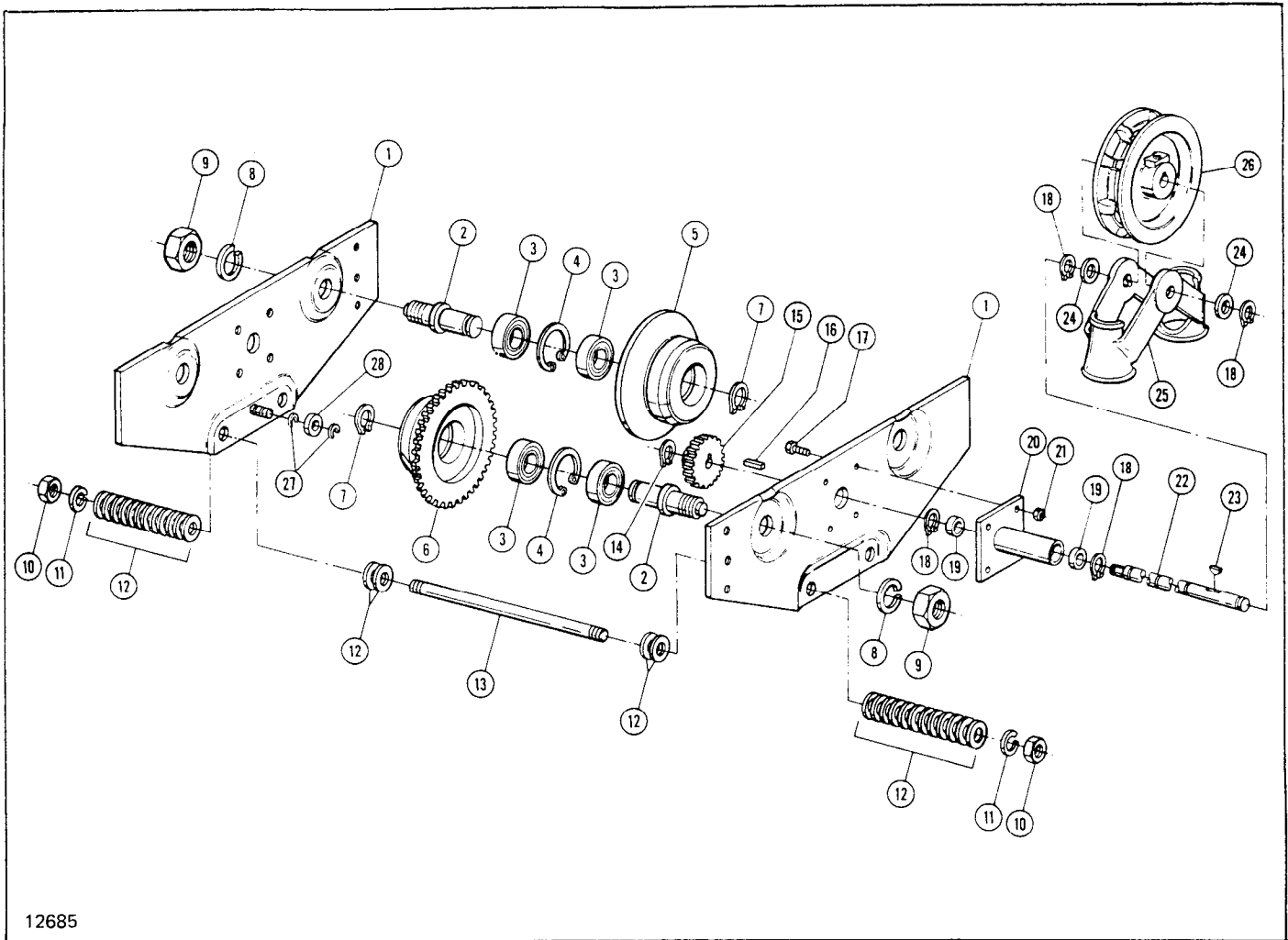
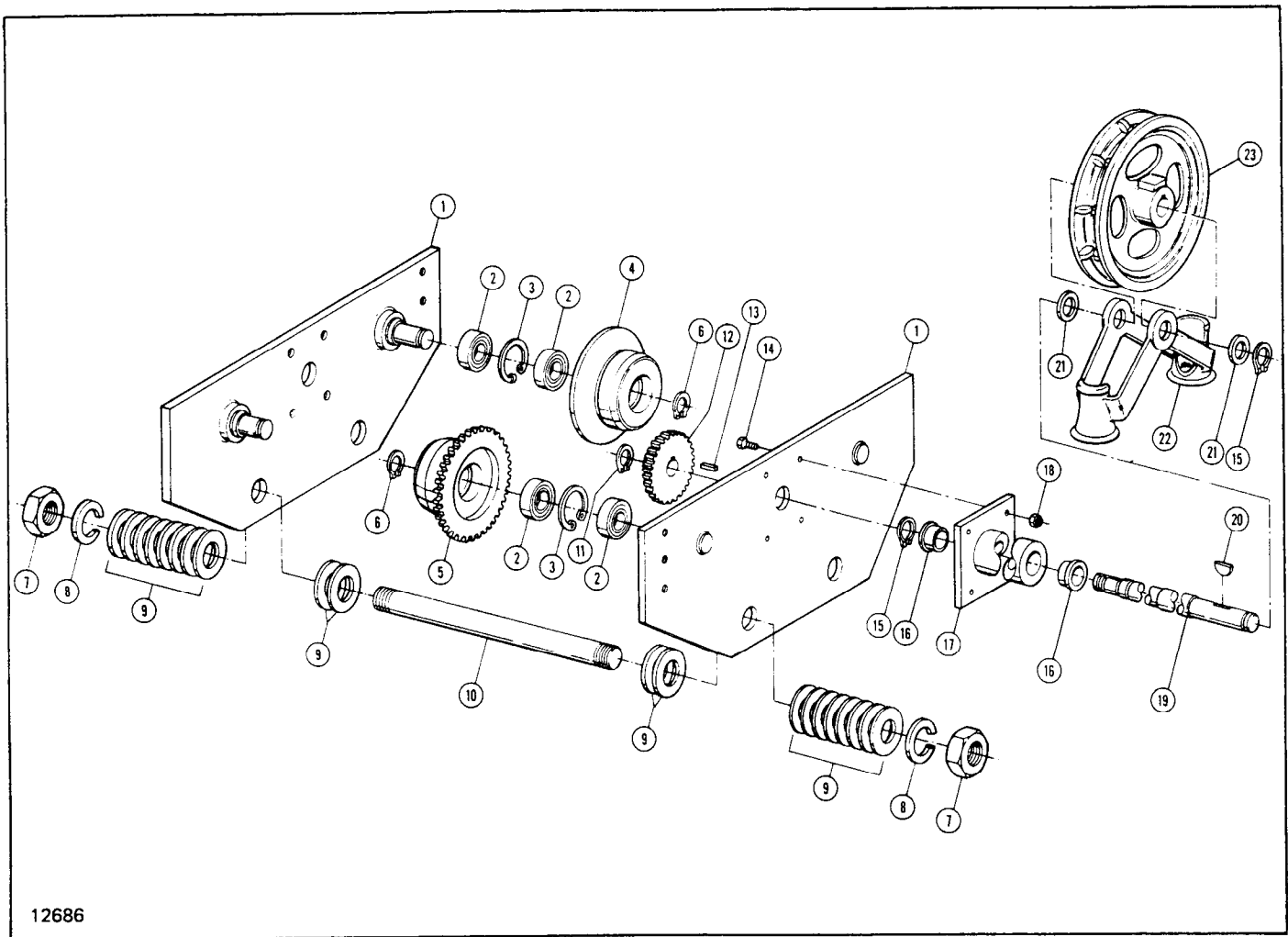


Figure 6. Hand Geared Rigid Mount Trolley Assembly.  
(4"  $\phi$  Wheels - 3-1/8" & 5" c/c Pins.)

Ref. No.	Description	3-1/8" c/c Pins		5" c/c Pins	
		Part Number	Qty. Req'd.	Part Number	Qty. Req'd.
1	Plate Assembly – Side				
	For 3" to 5" Flange Widths and Patented Track	700T-1600	2	---	---
	For 5-1/8" to 7-1/4" Flange Widths	700T-1601	2	---	---
	For 7-1/2" to 9-1/8" Flange Widths	700T-1602	2	---	---
	For 3-5/8" to 6" Flange Widths and Patented Track	---	---	700T-1603	2
6	For 6-1/4" to 8-5/8" Flange Widths	---	---	700T-1604	2
	For 8-7/8" to 11-1/4" Flange Widths	---	---	700T-1605	2
	Wheel – Plain				
2	Standard	700T-1606	2	700T-1606	4
	Patented Track	700T-1606	4	700T-1606	4
	Spark Resistant	700T-1606	4	700T-1606	4
3	Bearing – Ball	700T-1607	8	700T-1607	8
	Ring – Retaining	700T-1608	4	700T-1608	4
	Wheel – Geared				
6	Standard	700T-1612	2	700T-1612	2
	Patented Track	700T-1613	2	700T-1613	2
	Spark Resistant	700T-1614	2	700T-1614	2
7	Ring – Retaining	700T-1615	4	700T-1615	4
	Lockwasher	700T-1616	4	700T-1616	4
9	Nut – Hex Jam	700T-1617	4	700T-1617	4
	Nut – Hex Jam	700T-1618	4	700T-1617	4
11	Lockwasher	700T-1619	4	700T-1616	4
	Washer – Spacer	700T-1620	56	700T-1621	36



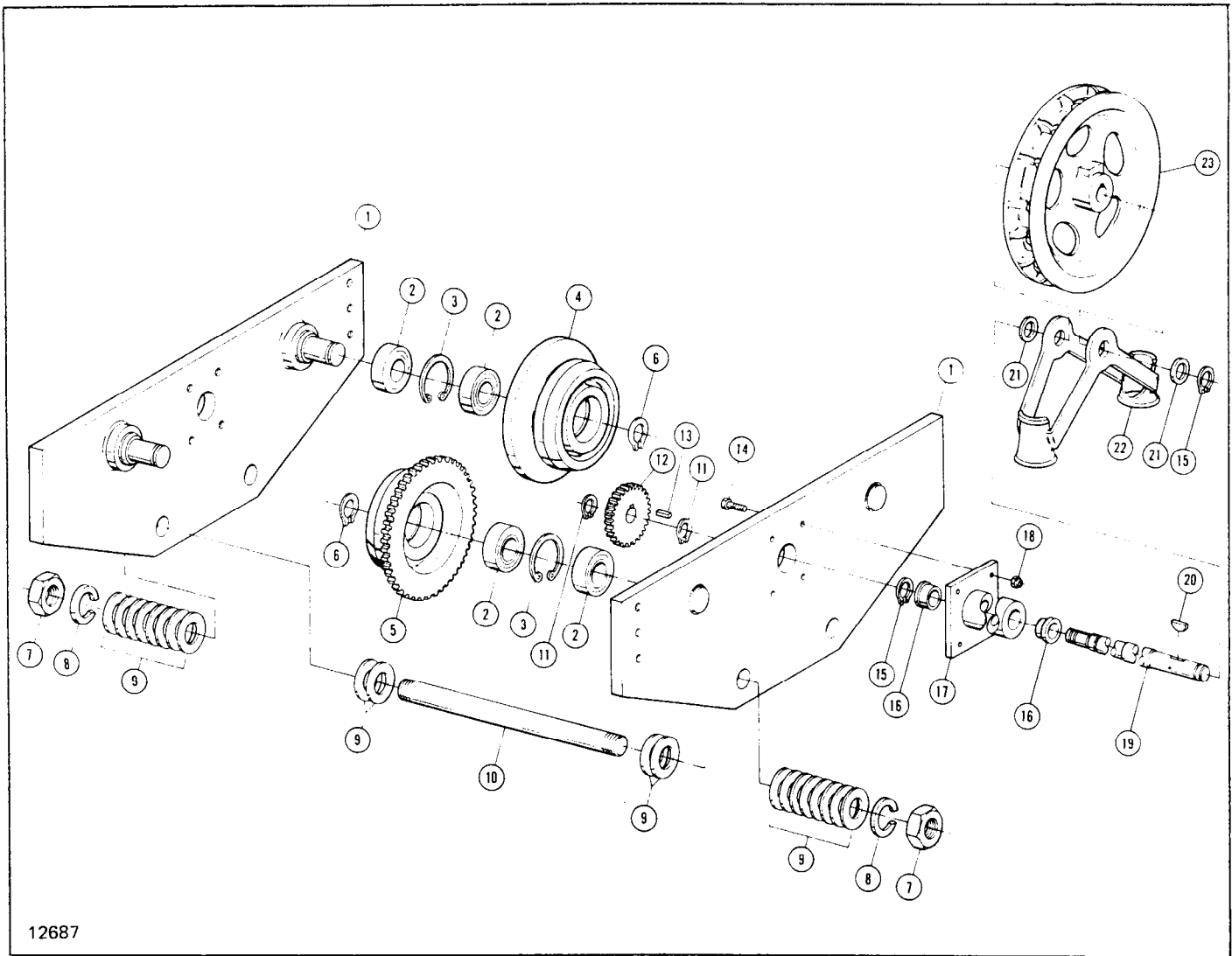


12686

Figure 7. Hand Geared Rigid Mount Trolley Assembly.  
(4"  $\phi$  Wheels - 6" c/c Pins.)

Ref. No.	Part Number	Description	Qty. Req'd.
1	700T-1700	Plate Assembly – Side For 4" to 6-1/4" Flange Widths and Patented Track	2
	700T-1701	For 6-3/8" to 8-5/8" Flange Widths	2
	700T-1702	For 8-3/4" to 11" Flange Widths	2
2	700T-1703	Bearing – Ball	8
3	700T-1704	Ring – Retaining	4
4	700T-1705	Wheel – Plain Standard	2
	700T-1706	Patented Track	2
	700T-1707	Spark Resistant	2
	700T-1708	Wheel – Geared Standard	2
5	700T-1709	Patented Track	2
	700T-1710	Spark Resistant	2
	700T-1711	Ring – Retaining	4
6	700T-1712	Nut – Hex Jam	4
7	700T-1713	Lockwasher	4
8	700T-1714	Washer – Spacer	40
10	700T-1715	Pin – Suspension For 4" to 6-1/4" Flange Widths and Patented Track	2
	700T-1716	For 6-3/8" to 8-5/8" Flange Widths	2
	700T-1717	For 8-3/4" to 11" Flange Widths	2
	700T-1718	Ring – Retaining	1
11	700T-1719	Pinion	1
12	700T-1720	Key – Pinion	1
13	700T-1721	Screw – Hex Cap	4
14	700T-1721	Screw – Hex Cap	4





12687

Figure 8. Hand Geared Rigid Mount Trolley Assembly.  
(6-1/2" & 8"  $\phi$  Wheels.)

Ref. No.	Description	6-1/2" $\phi$ Wheels			8" $\phi$ Wheels			
		1-1/4" $\phi$ Pins	1-1/2" $\phi$ Pins	Qty. Req'd.	9" c/c Pins	16" c/c Pins	Qty. Req'd.	
		Part Number	Part Number		Part Number	Part Number		
1	Plate Assembly – Side							
	For 4" to 6-1/4" Flange Widths and Patented Track	700T-1800	700T-1801	2	---	---	---	
	For 6-3/8" to 8-5/8" Flange Widths	700T-1802	700T-1803	2	---	---	---	
	For 8-3/4" to 11" Flange Widths	700T-1804	700T-1805	2	---	---	---	
	For 6" to 8-1/2" Flange Widths	---	---	---	700T-1806	700T-1806	2	
	For 8-5/8" to 11-1/8" Flange Widths	---	---	---	700T-1807	700T-1808	2	
2	Bearing – Ball	700T-1811	700T-1811	8	700T-1812	700T-1812	8	
	3	Ring – Retaining	700T-1813	700T-1813	4	700T-1814	700T-1814	4
		4	Wheel – Plain					
4	Standard	700T-1815	700T-1815	2	700T-1816	700T-1816	2	
	Patented Track	700T-1817	---	2	---	---	---	
	Spark Resistant	700T-1818	700T-1818	2	700T-1819	700T-1819	2	
	5	Wheel – Geared						
5	Standard	700T-1820	700T-1820	2	700T-1821	700T-1821	2	
	Patented Track	700T-1822	---	2	---	---	---	
	Spark Resistant	700T-1823	700T-1823	2	700T-1824	700T-1824	2	
6	Ring – Retaining	700T-1825	700T-1825	4	700T-1826	700T-1826	4	
	7	Nut – Hex Jam	700T-1827	700T-1828	4	700T-1829	700T-1829	4









# PARTS ORDERING INFORMATION

The use of replacement parts other than INGERSOLL-RAND Material Handling will invalidate the Company's warranty. For prompt service and genuine INGERSOLL-RAND Material Handling parts, provide your nearest Distributor with the following:

1. Complete trolley model number and serial number of trolley on which the parts are to be used.
2. Part number and part description as shown in this manual.
3. Quantity required.

For your convenience and future reference it is recommended that the following information be recorded.

Trolley Model Number.....

Trolley Serial Number.....

Date Purchased.....

## Return Goods Policy

Ingersoll-Rand will not accept any returned goods for warranty or service work unless prior arrangements have been made and written authorization has been provided from the location where the goods were purchased.

## NOTICE

- Continuing improvement and advancement of design may cause changes to this trolley which are not included in this manual. Manuals are periodically revised to incorporate changes. Always check the manual edition number on the front cover for the latest issue.

When the life of the trolley has expired, it is recommended that the trolley be disassembled, degreased and parts separated as to materials so that they may be recycled.

For additional information contact:

### Ingersoll-Rand Material Handling

2724 Sixth Avenue South  
Seattle, Wa 98124 USA  
Phone: (206) 624-0466  
Fax: (206) 624-6265

or

### Ingersoll-Rand Material Handling

#### Samila, Douai Operations

111, avenue Roger Salengro  
59450 Sin Le Noble, France  
Phone: (33) 27-93-08-08  
Fax: (33) 27-93-08-00

## Recommended Spare Parts for your Ingersoll-Rand Trolley

Certain parts of your trolley will, in time, require replacement under normal wear conditions. It is suggested that the following parts be purchased for your trolley as spares for future use.

- One set of wheel bearings
- One set of wheels

When ordering parts always furnish complete trolley model number, serial number and capacity of trolley on which the parts are to be used.

## HOIST AND WINCH LIMITED WARRANTY

Ingersoll-Rand Company (I-R) warrants to the original user its Hoists and Winches (Products) to be free of defects in material and workmanship for a period of one year from the date of purchase.

I-R will repair, without cost, any Product found to be defective, including parts and labor charges, or at its option, will replace such Products or refund the purchase price less a reasonable allowance for depreciation, in exchange for the Product. Repairs or replacements are warranted for the remainder of the original warranty period.

If any Product proves defective within its original one year warranty period, it should be returned to any Authorized Hoist and Winch Service Distributor, transportation prepaid with proof of purchase or warranty card.

This warranty does not apply to Products which I-R has determined to have been misused or abused, improperly maintained by the user, or where the malfunction or defect can be attributed to the use of non-genuine I-R parts.

**I-R makes no other warranty, and all implied warranties including any warranty of merchantability or fitness for a particular purpose are limited to the duration of the expressed warranty period as set forth above.**

**I-R's maximum liability is limited to the purchase price of the Product and in no event shall I-R be liable for any consequential, indirect, incidental, or special damages of any nature rising from the sale or use of the Product, whether based on contract, tort, or otherwise.**

**Note:** Some states do not allow limitations on incidental or consequential damages or how long an implied warranty lasts so that the above limitations may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which may vary from state to state.

## IMPORTANT NOTICE

It is our policy to promote safe delivery of all orders. This shipment has been thoroughly checked, packed and inspected before leaving our plant and receipt for it in good condition has been received from the carrier. Any loss or damage which occurs to this shipment while enroute is not due to any action or conduct of the manufacturer.

### VISIBLE LOSS OR DAMAGE

If any of the goods called for on the bill of lading or express receipt are damaged or the quantity is short, do not accept them until the freight or express agent makes an appropriate notation on your freight bill or express receipt.

### CONCEALED LOSS OR DAMAGE

When a shipment has been delivered to you in apparent good condition, but upon opening the crate or container,

loss or damage has taken place while in transit, notify the carrier's agent immediately.

### DAMAGE CLAIMS

You must file claims for damage with the carrier. It is the transportation company's responsibility to reimburse you for repair or replacement of goods damaged in shipment. Claims for loss or damage in shipment must not be deducted from the Ingersoll-Rand invoice, nor should payment of Ingersoll-Rand invoice be withheld awaiting adjustment of such claims as the carrier guarantees safe delivery.

You may return products damaged in shipment to us for repair, which services will be for your account and form your basis for claim against the carrier.

## United States Office Locations

### For Order Entry and Order Status:

**Ingersoll-Rand  
Distribution Center**  
510 Hester Drive  
P.O. Box 618  
White House, TN 37188  
Phone: (615) 672-0321  
Telex: 786573  
Fax: (615) 672-0801

### For Technical Support:

**Ingersoll-Rand  
Material Handling**  
2724 Sixth Avenue South  
P.O. Box 24046  
Seattle, WA  
98124-0046  
Phone: (206) 624-0466  
Telex: 328795  
Fax: (206) 624-6265

### Regional Sales Offices

**Atlanta, GA**  
111 Ingersoll-Rand Drive  
Chamblee, GA 30341  
Phone: (404) 936-6230

**Detroit, MI**  
23192 Commerce Drive  
Farmington Hills, MI 48335  
Phone: (313) 476-6677  
Fax: (313) 476-6670

**Houston, TX**  
2500 East T.C. Jester  
Suite 150  
Houston, TX 77008  
Phone: (713) 864-3700

**Los Angeles, CA**  
5533 East Olympic Blvd.  
Los Angeles, CA 90022  
Phone: (213) 725-2826

**Milwaukee, WI**  
12311 W. Silver Spring Dr.  
Milwaukee, WI 53225  
Phone: (414) 461-0973

**Philadelphia, PA**  
900 E. 8th Ave., Suite 103  
P.O. Box 425  
King of Prussia, PA 19406  
Phone: (215) 337-5930

## International

Offices and distributors in principal cities throughout the world. Contact the nearest Ingersoll-Rand office for the name and address of the distributor in your country or write/fax to:  
**Ingersoll-Rand  
Material Handling**  
P.O. Box 24046 Seattle,  
WA 98124-0046 USA  
Phone: (206) 624-0466  
Telex: 328795  
Fax: (206) 624-6265

**Canada  
National Sales Office  
Regional Warehouse  
Toronto, Ontario**  
51 Worcester Road  
Rexdale, Ontario  
M9W 4K2  
Phone: (416) 675-5611  
Fax: (416) 675-6920

### Regional Sales Offices

**Calgary, Alberta**  
333 11th Avenue S.W.  
Calgary, Alberta  
T2R 0C7  
Phone: (403) 261-8652

**Montreal, Quebec**  
3501 St. Charles Blvd.  
Kirkland, Quebec  
H9H 4S3  
Phone: (514) 695-9040

**British Columbia**  
201-6351 Westminster Hwy  
Richmond, B.C.  
V7C 5C7  
Phone: (604) 278-0459

**British Columbia  
Regional Warehouse  
Technical Support**  
123 Bowser Avenue  
North Vancouver, British  
Columbia V7P 3H1  
Phone: (604) 985-4470  
Fax: (604) 985-0160

**Latin America Operations  
Ingersoll-Rand  
Production Equipment  
Group**  
730 N.W. 107 Avenue  
Suite 300, Miami, FL  
33172-3107  
Phone: (305) 559-0500  
Telex: 441617TTL5 UI  
Fax: (305) 559-7505

### Europe, Middle East and Africa

**Ingersoll-Rand  
Material Handling  
Samlia, Douai Operations**  
111, avenue Roger Salengro  
59450 Sin Le Noble, France  
Phone: (33) 27-93-08-08  
Fax: (33) 27-93-08-00

**Asia - Pacific  
Ingersoll-Rand (Japan) Ltd.**  
Kowa Bldg. No. 17  
2-7 Nishi-Azabu 1-chome  
Minato-ku, Tokyo 106, Japan  
Phone: (03) 3403-0641/7  
Fax: 81 3 3401-2049