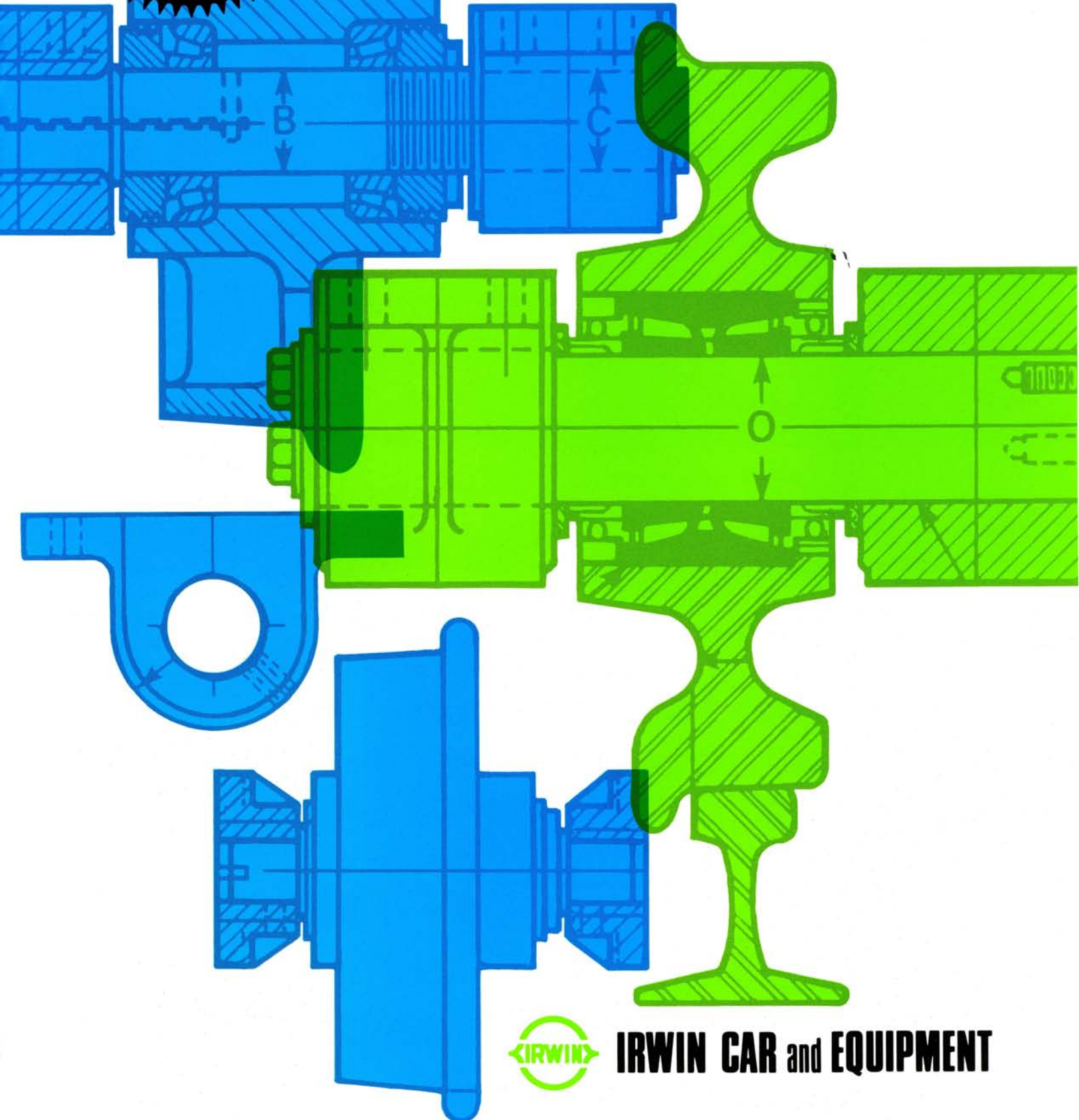


Capacities  
to 75 tons  
...

Operating  
Temperatures  
to 1200° F

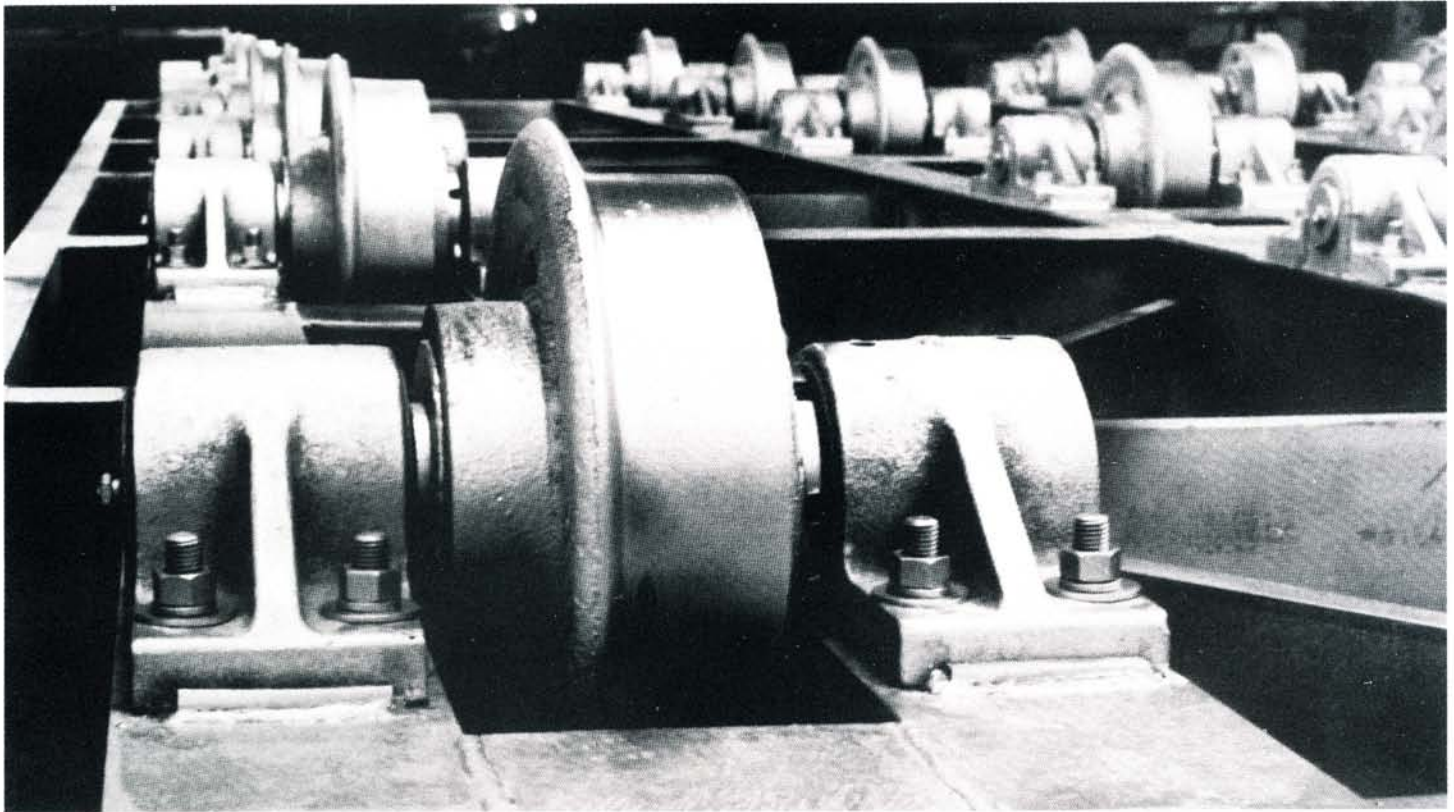
# INDUSTRIAL CARS PACKAGED WHEEL ASSEMBLIES STEEL WHEELS



**IRWIN CAR and EQUIPMENT**



# IRWIN DOES THE ENGINEERING



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**Engineering.** IRWIN has over 35 years of engineering knowledge in designing wheel assemblies for our own transfer cars, industrial cars, furnace cars, kiln cars, mine cars, walking beam furnaces and other types of material handling systems. Standard assemblies are capable of carrying loads up to 75 tons per wheel and turn on roller bearings at temperatures up to 1200° F.

**Manufacturing.** IRWIN's wheel assemblies provide top dependability and safety. Precision craftsmanship, testing and inspection are all part of our manufacturing process.

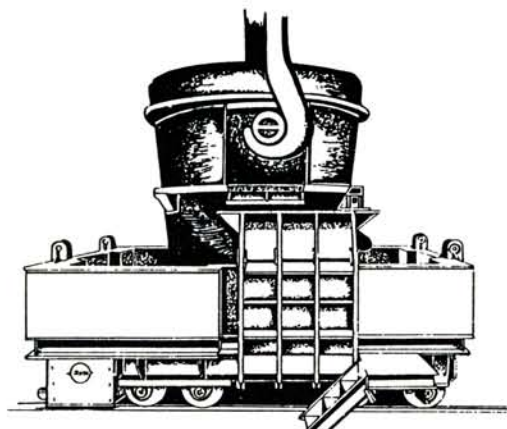
**Service.** IRWIN is interested in your productivity. Our cars' wheel assemblies and steel wheels are available in all sizes ready to roll. And our sales engineers are always at your service, ready to analyze your problems and make specific recommendations.



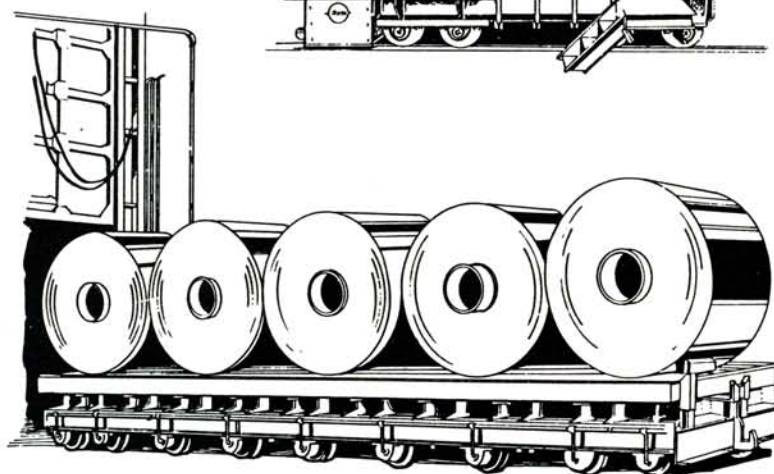


# INDUSTRIAL CARS

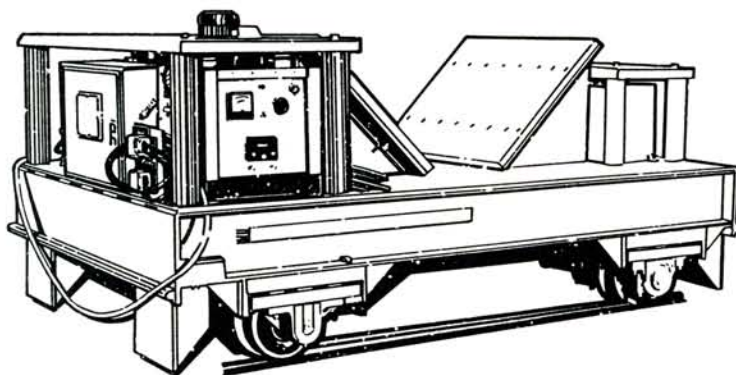
We custom-build a wide variety of industrial cars for mine, mill, foundry, quarry and other applications.



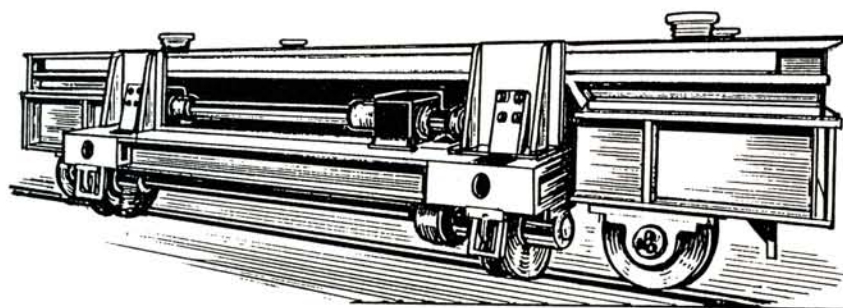
**Heavy Duty Transfer Cars**



**Furnace Cars**



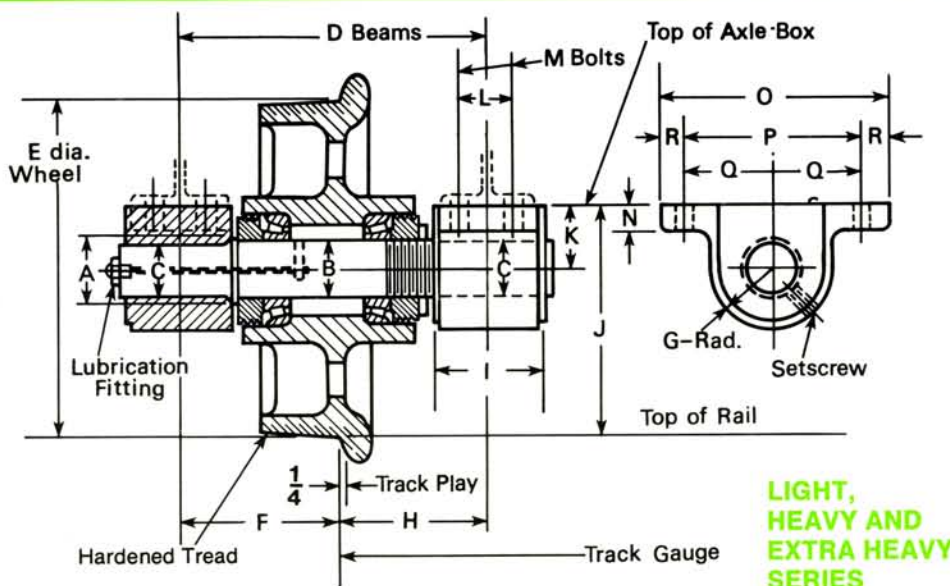
**Battery-Powered Cars**



**Four-Directional Bay Transfer Cars**



# STUB AXLE WHEEL ASSEMBLY



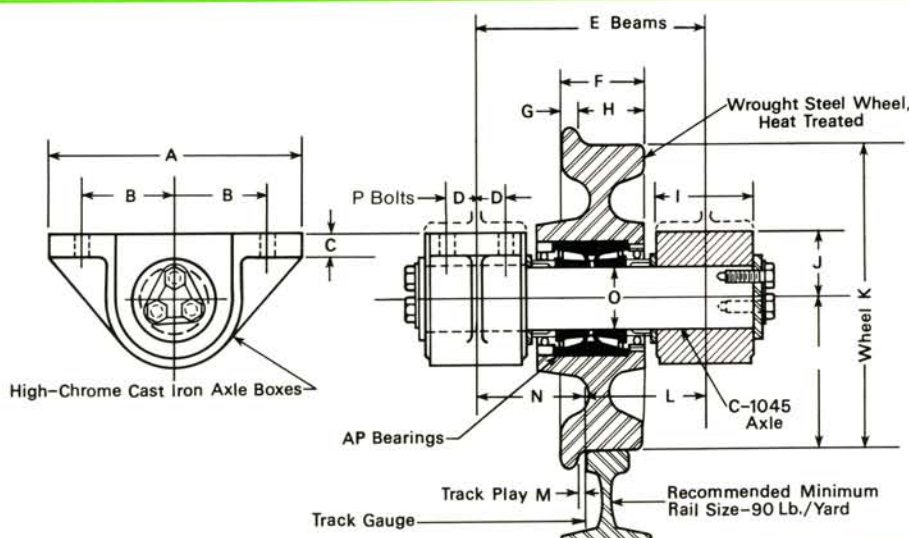
The 1 through 15 ton Stub Axle Wheel Assembly includes the following:

- 1—Wheel
- 2—Axle boxes—high-grade cast iron
- 1—Wheel set of tapered roller bearings including dust collars
- 1—Axle C1045 hot rolled steel with lube fitting

Wheel diameters 10" thru 20" are available

Model No. SA-101

| CAPACITY | SHAFT DIA. A | SHAFT DIA. B | SHAFT DIA. C | D       | E   | F      | G      | H      | I      | J      | K      | L      | M    | N      | O      | P      | Q      | R      | APPROX. WT. |
|----------|--------------|--------------|--------------|---------|-----|--------|--------|--------|--------|--------|--------|--------|------|--------|--------|--------|--------|--------|-------------|
| 1 ton    | 1 5/8"       | 1 3/8"       | 1 1/8"       | 8 3/4"  | 10" | 5 1/8" | 1 3/4" | 3 5/8" | 3"     | 7"     | 2"     | 1 3/4" | 1/2" | 3/4"   | 8"     | 6"     | 3"     | 1"     | 190 lbs.    |
| 3 ton    | 2 1/4"       | 2"           | 1 3/4"       | 13"     | 14" | 6 3/4" | 2 1/2" | 6 1/4" | 4 1/4" | 9 5/8" | 2 5/8" | 2 1/4" | 3/4" | 1 1/8" | 9 3/4" | 7 1/2" | 3 3/4" | 1 1/8" | 210 lbs.    |
| 5 ton    | 2 3/4"       | 2 1/2"       | 2 1/4"       | 13"     | 14" | 6 3/4" | 2 1/2" | 6 1/4" | 4 1/4" | 9 5/8" | 2 5/8" | 2 1/4" | 3/4" | 1 1/8" | 9 3/4" | 7 1/2" | 3 3/4" | 1 1/8" | 225 lbs.    |
| 8 ton    | 3"           | 2 3/4"       | 2 1/2"       | 13"     | 14" | 6 3/4" | 2 1/2" | 6 1/4" | 4 1/4" | 9 5/8" | 2 5/8" | 2 1/4" | 3/4" | 1 1/8" | 9 3/4" | 7 1/2" | 3 3/4" | 1 1/8" | 235 lbs.    |
| 10 ton   | 3 1/4"       | 3"           | 2 3/4"       | 14 3/4" | 14" | 7 5/8" | 3"     | 7 1/8" | 5 7/8" | 10"    | 3"     | 3 1/2" | 3/4" | 1 3/8" | 15"    | 11"    | 5 1/2" | 2"     | 350 lbs.    |
| 12 ton   | 3 1/4"       | 3"           | 2 3/4"       | 14 3/4" | 14" | 7 5/8" | 3"     | 7 1/8" | 5 7/8" | 10"    | 3"     | 3 1/2" | 3/4" | 1 3/8" | 15"    | 11"    | 5 1/2" | 2"     | 360 lbs.    |
| 15 ton   | 3 3/4"       | 3 1/2"       | 3 1/4"       | 14 3/4" | 14" | 7 5/8" | 3"     | 7 1/8" | 5 7/8" | 10"    | 3"     | 3 1/2" | 3/4" | 1 3/8" | 15"    | 11"    | 5 1/2" | 2"     | 390 lbs.    |



The 25 and 40 ton Stub Axle Wheel Assembly includes the following:

- 1—18" or 22" diameter wrought steel wheel—heat treated
- 2—Axle boxes—high-grade cast iron on the 25 ton and cast steel on the 40 ton
- 1—"AP" tapered roller bearing
- 1—Axle C1045 cold rolled steel
- 2—End caps with hardware
- Load ratings are based on 15 RPM. RPM's greater than 15 are available.
- Operating temperature 300° F. maximum.
- Units are completely assembled, painted, permanently lubricated and ready for installation.

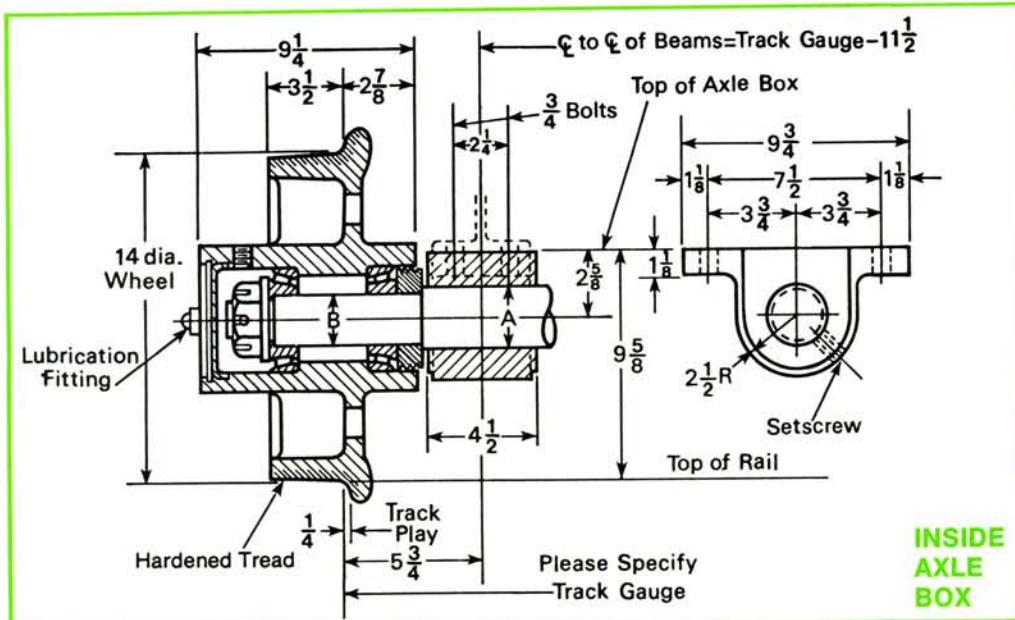
Model No. SA-102

| CAPACITY | A  | B      | C      | D      | E       | F  | G       | H        | I  | J  | K        | L      | M       | N      | O       | P    | WT. |
|----------|----|--------|--------|--------|---------|----|---------|----------|----|----|----------|--------|---------|--------|---------|------|-----|
| 25 ton   | 15 | 5 1/2" | 1 3/8" | 1 3/4" | 13 3/4" | 5" | 1 5/32" | 3 27/32" | 6" | 4" | 18 OR 22 | 7 1/8" | 1 3/32" | 6 5/8" | 4"      | 3/4" | 670 |
| 40 ton   | 17 | 6 1/2" | 2"     | 2"     | 16 1/2" | 5" | 1 5/32" | 3 27/32" | 7" | 5" | 22       | 8 1/4" | 1 3/32" | 8 1/4" | 5 3/16" | 1"   | 800 |





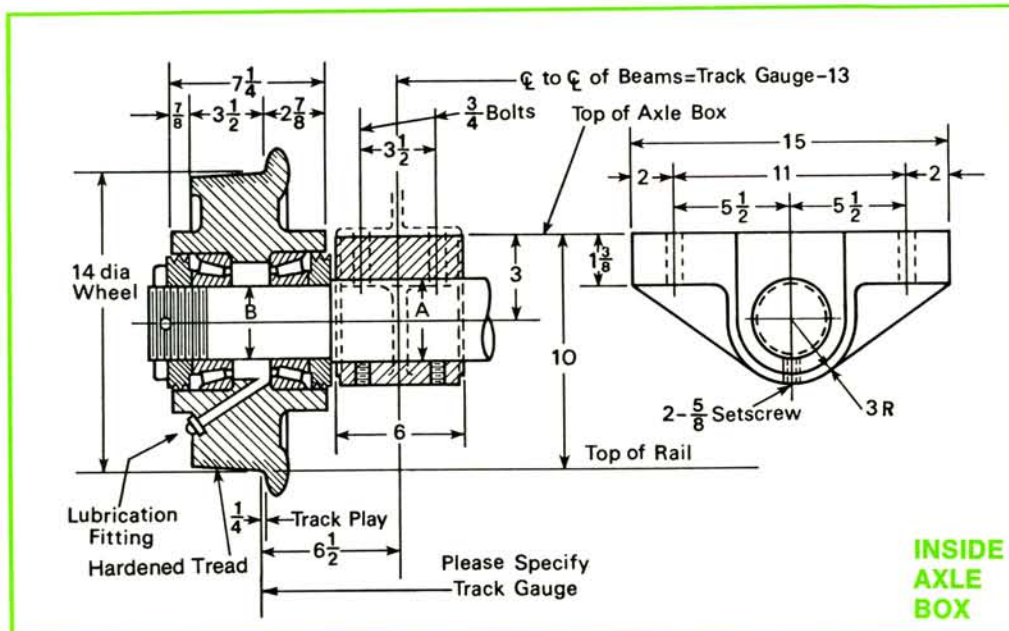
# THRU AXLE WHEEL ASSEMBLY



Model No. TA-101

Ratings shown are for 56 1/2" track gauge or less.

| CAPACITY   | SHAFT DIA. A | SHAFT DIA. B | WT.      |
|------------|--------------|--------------|----------|
| 1 ton/axle | 1 5/8"       | 1 3/8"       | 335 lbs. |
| 3 ton/axle | 2 1/4"       | 2"           | 365 lbs. |
| 6 ton/axle | 2 3/4"       | 2 1/2"       | 400 lbs. |
| 8 ton/axle | 3"           | 2 3/4"       | 425 lbs. |



Model No. TA-102

Ratings shown are for 56 1/2" track gauge or less.

| CAPACITY | SHAFT DIA. A | SHAFT DIA. B | WT.      |
|----------|--------------|--------------|----------|
| 10 ton   | 3 1/4"       | 3"           | 575 lbs. |
| 15 ton   | 3 3/4"       | 3 1/2"       | 660 lbs. |

The 1 through 8 ton Inside Axle Box Thru Axle Wheel Assembly includes the following:

- 2—Wheels with lube fittings
  - 2—Axle boxes—high-grade cast iron
  - 2—Wheel sets of tapered roller bearings, including nuts and dust collars
  - 1—Axle C1045 hot rolled steel. Models are available with steel wheels ranging from 10" through 24" diameters
- Please Specify Track Gauge

The 10 and 15 ton Inside Axle Box Thru Axle Wheel Assembly includes the following:

- 2—Wheels with lube fittings 10" thru 24" diameter are available
- 2—Axle boxes—high-grade cast iron
- 2—Wheel sets of tapered roller bearings including dust collars
- 1—Axle C1045 hot rolled steel
- Load ratings are based on 50 RPM. RPM's greater than 50 are available.
- Operating temperature 300°F. maximum.
- Units are completely assembled, painted, lubricated and ready for installation.

Please Specify Track Gauge







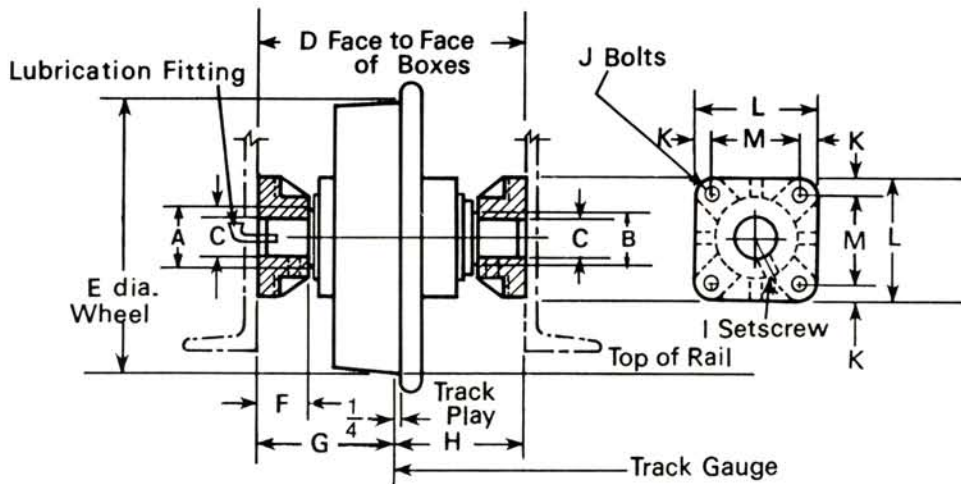
# FLANGE MOUNTING

Flange Mounting Box FM-1 is available for use on the 1 through 8 ton wheel assemblies using tapered roller bearings.

Flange Mounting Box FM-2 is available for use on the 10 through 15 ton wheel assemblies using tapered roller bearings and the 700°-1200°F. Extra High Temperature Assembly.

- Flange mounted units also available.

NOTE: For high temperature assemblies, contact IRWIN for "D" dimension.



| TYPE                | A    | B | C | D   | E  | F  | G  | H  | I   | J   | K   | L  | M  |
|---------------------|------|---|---|-----|----|----|----|----|-----|-----|-----|----|----|
| Heavy Duty FM-1     | SEE  |   |   | 13½ | 14 | 2½ | 7  | 6½ | 5/8 | 5/8 | 7/8 | 6¾ | 4½ |
| Ex. Heavy Duty FM-2 | NOTE |   |   | 15¾ | 14 | 3½ | 8½ | 7½ | ¾   | ¾   | 1½  | 7¾ | 5½ |

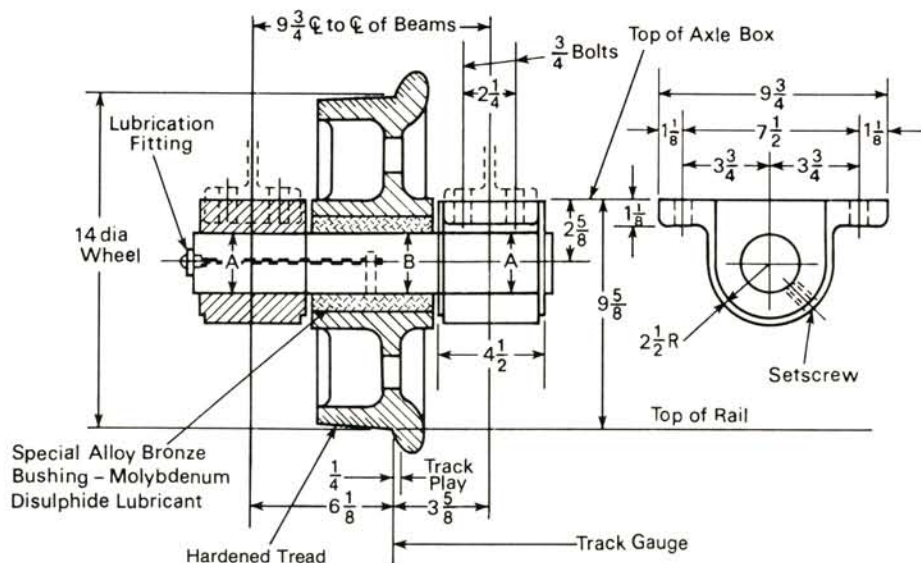
NOTE: For Dimensions A, B, and C see stub axle wheel assembly at the capacity required.



# HI TEMP. WHEEL ASSEMBLY

The Irwin 3 through 7½ ton Stub Axle 550°F. Wheel Assembly includes:

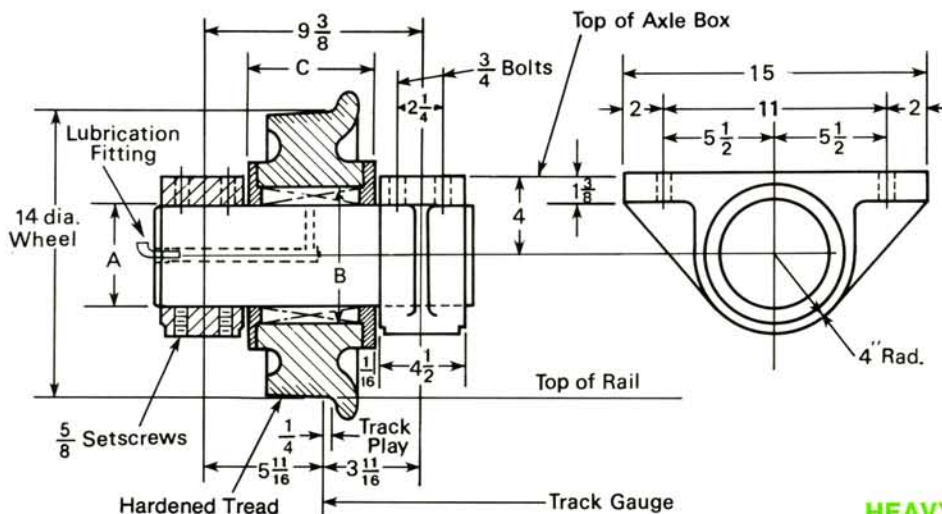
- 1—Wheel, 10" - 24" diameter steel
  - 2—Axle boxes, high-grade cast iron
  - 1—Special alloy bronze, high-temperature bushing
  - 1—Axle C1045 hot rolled steel with lube fitting
- Load ratings are based on 50 RPM. RPM's greater than 50 are available.
  - Operating temperature 550°F. maximum.
  - Units are completely assembled, painted, lubricated and ready for installation.



HI-TEMP 550° F. SERIES Model No. HT-101

| CAPACITY | SHAFT DIA. A | SHAFT DIA. B | APP. ASSEM. WEIGHT |
|----------|--------------|--------------|--------------------|
| 3 ton    | 2½"          | 2½"          | 210 lbs.           |
| 5 ton    | 3"           | 3"           | 225 lbs.           |
| 7½ ton   | 3"           | 3½"          | 235 lbs.           |

## EXTRA HI-TEMP WHEEL ASSEMBLY



**HEAVY  
DUTY**

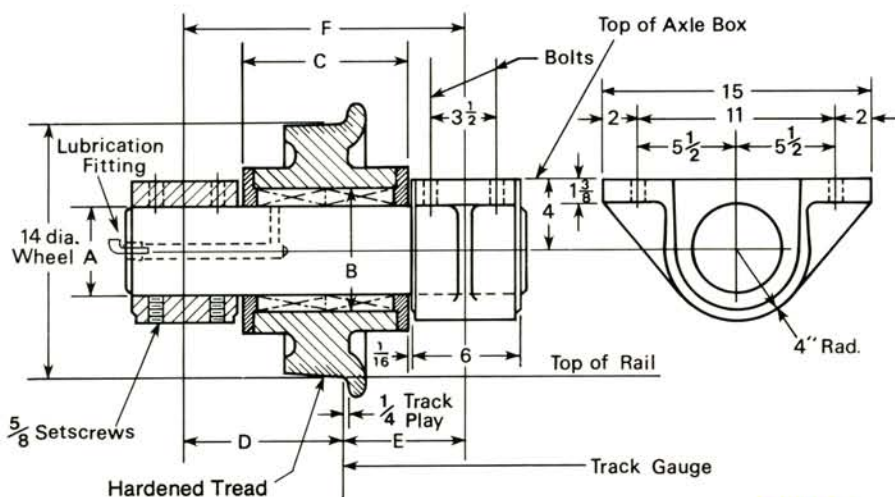
**The 3 and 5 ton Extra High-Temperature Wheel Assembly includes:**

- 1—Wheel
- 2—Axle boxes, high-grade cast iron
- 1—Die steel caged roller bearing
- 1—Axle with lube fitting—C1045 cold rolled steel for 700°F. operation and stainless steel for 1000°F. and 1200°F. operation

Wheel diameters 10" thru 20"  
are available

700° F.-1200° F. SERIES Model No. ET-101

| CAPACITY | AXLE DIA. A       | WHEEL BORE B      | DISTANCE THRU WHEEL C | APP. ASSEM. WEIGHT |
|----------|-------------------|-------------------|-----------------------|--------------------|
| 3 ton    | 3 $\frac{3}{8}$ " | 4 $\frac{7}{8}$ " | 4 $\frac{3}{4}$ "     | 240 lbs.           |
| 5 ton    | 4"                | 5 $\frac{1}{2}$ " | 4 $\frac{3}{4}$ "     | 255 lbs.           |



**EXTRA  
HEAVY-DUTY**

**The 10-15 ton Extra High-Temperature Wheel Assembly includes:**

- 1—Wheel
  - 2—Axle boxes, high-grade cast iron
  - 2—Die steel caged roller bearings
  - 1—Axle with lube fittings—C1045 cold rolled steel for 700°F. operation and stainless steel for 1000°F. and 1200°F. operation
- Load ratings are based on 50 RPM. RPM's greater than 50 are available.
  - Operating temperature 700°F.-1000°F.-1200°F.
  - Wheel diameter 10" - 20".
  - Units are completely assembled, painted, lubricated and ready for installation.

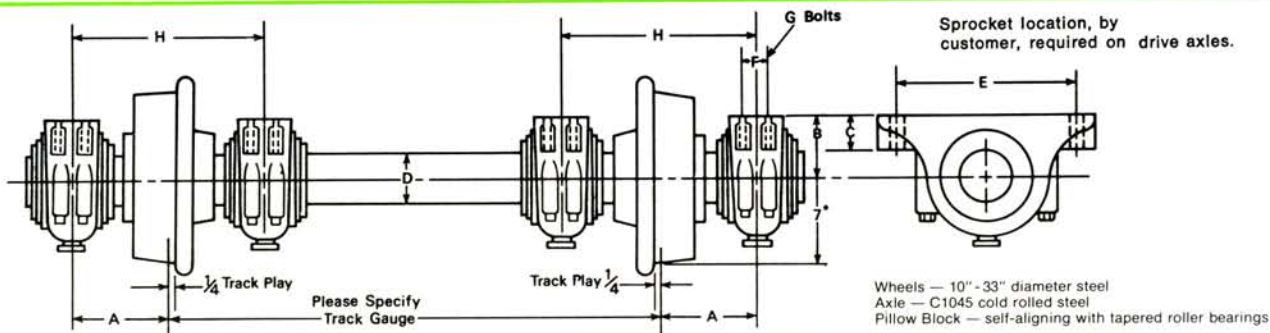
**700° F.-1200° F. SERIES    Model No. ET-102**

| CAPACITY | AXLE DIA. A | WHEEL BORE B | DISTANCE THRU WHEEL C | D                                 | E                                 | F    | APP. ASSEM. WEIGHT |
|----------|-------------|--------------|-----------------------|-----------------------------------|-----------------------------------|------|--------------------|
| 10 ton   | 3¾"         | 4⅞"          | 8¼"                   | 7 <sup>11</sup> / <sub>16</sub> " | 6 <sup>11</sup> / <sub>16</sub> " | 14¾" | 360 lbs.           |
| 12 ton   | 4"          | 5½"          | 8¼"                   | 7 <sup>11</sup> / <sub>16</sub> " | 6 <sup>11</sup> / <sub>16</sub> " | 14¾" | 370 lbs.           |
| 15 ton   | 5"          | 6⅞"          | 9¼"                   | 8 <sup>3</sup> / <sub>16</sub> "  | 7 <sup>3</sup> / <sub>16</sub> "  | 15¾" | 380 lbs.           |





# DRIVE THRU AXLE

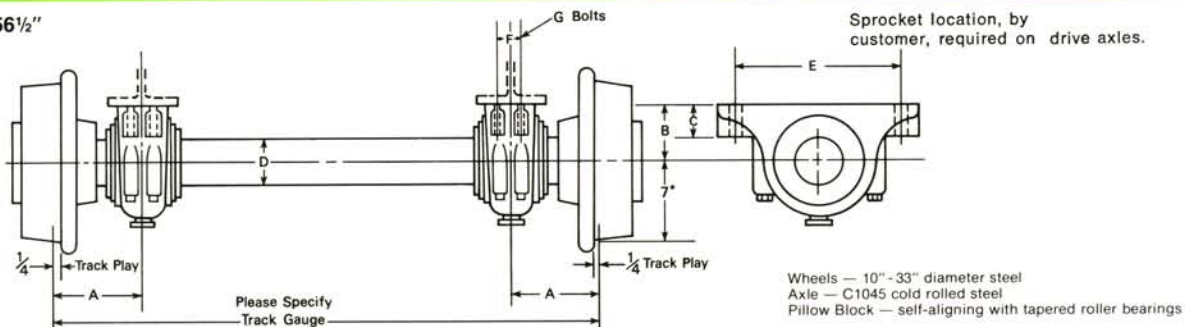


**Model No. DA-101 DOUBLE BOX ASSEMBLY**

| CAPACITY | A     | B   | C   | D       | E    | F     | G    | H    | WT. |
|----------|-------|-----|-----|---------|------|-------|------|------|-----|
| 10 ton   | 6¾"   | 3¼" | 1¾" | 27/16"  | 10"  | 1¾"   | ½"   | 13"  | 410 |
| 15 ton   | 6¾"   | 3¾" | 2"  | 215/16" | 11¼" | 17/8" | 5/8" | 13"  | 565 |
| 24 ton   | 75/8" | 4½" | 2¼" | 37/16"  | 13½" | 2"    | ¾"   | 14¾" | 790 |

| CAPACITY | A     | B   | C   | D       | E    | F   | G    | H    | WT.  |
|----------|-------|-----|-----|---------|------|-----|------|------|------|
| 30 ton   | 75/8" | 5"  | 2¾" | 315/16" | 14½" | 2"  | ¾"   | 14¾" | 1045 |
| 40 ton   | 75/8" | 5¾" | 3"  | 47/16"  | 16"  | 2¼" | ¾"   | 14¾" | 1390 |
| 50 ton   | 85/8" | 6¼" | 3¼" | 415/16" | 17¾" | 2½" | 7/8" | 16½" | 1800 |

Ratings shown are for 56½" track gauge or less.

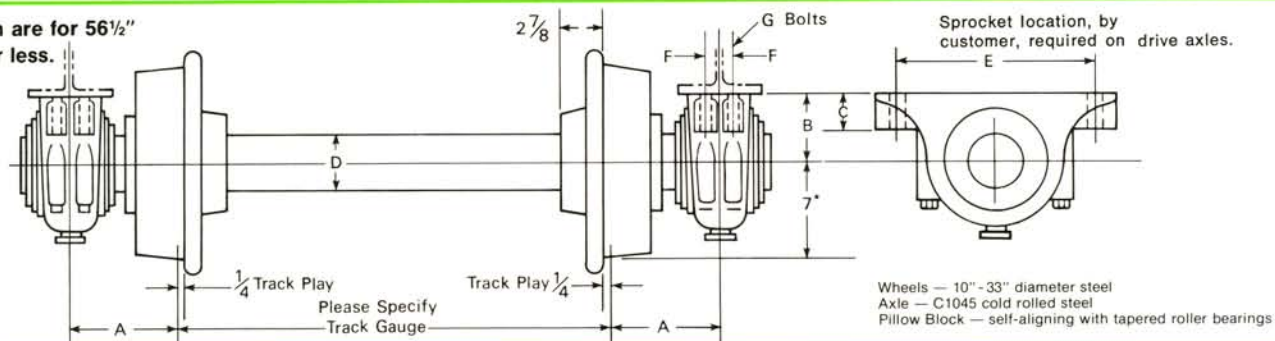


**Model No. DA-102 INSIDE BOX ASSEMBLY**

| CAPACITY | A     | B   | C   | D       | E    | F     | G    | WT. |
|----------|-------|-----|-----|---------|------|-------|------|-----|
| 4 ton    | 5¾"   | 3¼" | 1¾" | 27/16"  | 10"  | 1¾"   | ½"   | 340 |
| 6 ton    | 5¾"   | 3¾" | 2"  | 215/16" | 11¼" | 17/8" | 5/8" | 465 |
| 10 ton   | 6½"   | 4½" | 2¼" | 37/16"  | 13½" | 2"    | ¾"   | 630 |
| 15 ton   | 6½"   | 5"  | 2¾" | 315/16" | 14½" | 2"    | ¾"   | 785 |
| 20 ton   | 67/8" | 5¾" | 3"  | 47/16"  | 16"  | 2¼"   | ¾"   | 880 |

| CAPACITY | A     | B       | C     | D       | E    | F     | G    | WT.  |
|----------|-------|---------|-------|---------|------|-------|------|------|
| 25 ton   | 77/8" | 6¼"     | 3¼"   | 415/16" | 17¾" | 2½"   | 7/8" | 1050 |
| 30 ton   | 77/8" | 611/16" | 2¾"   | 5½"     | 18¼" | 3¾"   | 1"   | 1150 |
| 35 ton   | 8¼"   | 71/16"  | 27/8" | 6"      | 20½" | 4¼"   | 1"   | 1250 |
| 42 ton   | 8½"   | 7½"     | 3"    | 6½"     | 22¼" | 45/8" | 1"   | 1350 |
| 50 ton   | 8¾"   | 77/8"   | 3½"   | 7"      | 23"  | 4½"   | 1¼"  | 1450 |

Ratings shown are for 56½" track gauge or less.

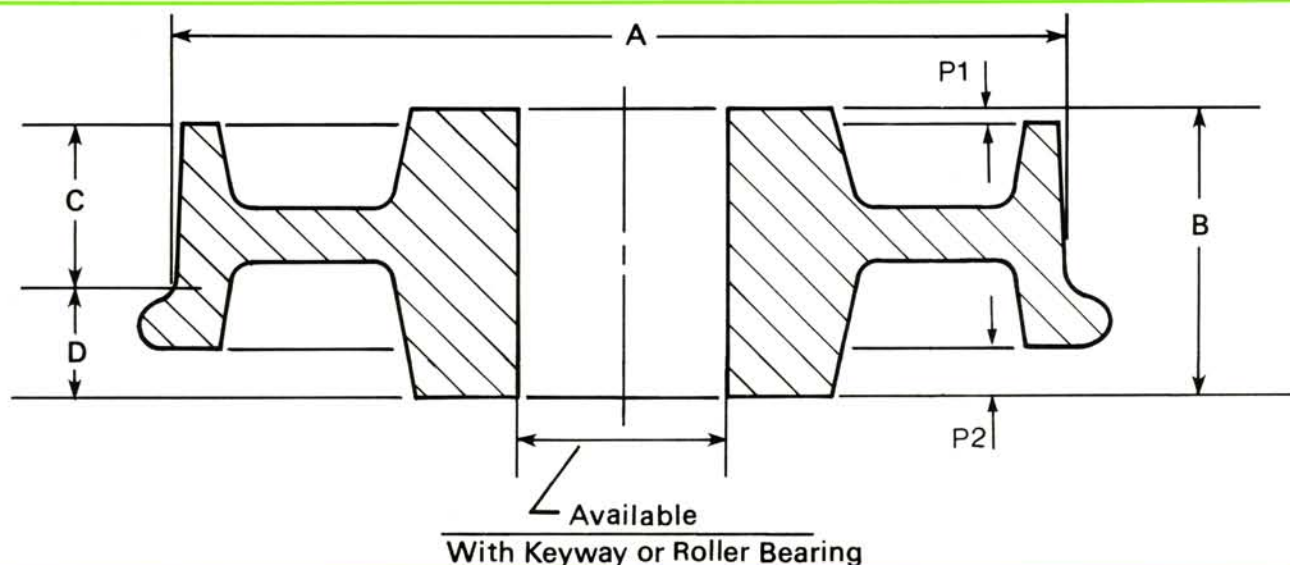


**Model No. DA-103 OUTSIDE BOX ASSEMBLY**

| CAPACITY | A     | B   | C   | D       | E    | F     | G    | WT. |
|----------|-------|-----|-----|---------|------|-------|------|-----|
| 4 ton    | 7¼"   | 3¼" | 1¾" | 27/16"  | 10"  | 1¾"   | ½"   | 355 |
| 6 ton    | 7¼"   | 3¾" | 2"  | 215/16" | 11¼" | 17/8" | 5/8" | 490 |
| 10 ton   | 81/8" | 4½" | 2¼" | 37/16"  | 13½" | 2"    | ¾"   | 660 |
| 15 ton   | 81/8" | 5"  | 2¾" | 315/16" | 14½" | 2"    | ¾"   | 830 |
| 20 ton   | 81/8" | 5¾" | 3"  | 47/16"  | 16"  | 2¼"   | ¾"   | 940 |

| CAPACITY | A     | B       | C     | D       | E    | F     | G    | WT.  |
|----------|-------|---------|-------|---------|------|-------|------|------|
| 25 ton   | 81/8" | 6¼"     | 3¼"   | 415/16" | 17¾" | 2½"   | 7/8" | 1130 |
| 30 ton   | 85/8" | 611/16" | 2¾"   | 5½"     | 18¼" | 3¾"   | 1"   | 1230 |
| 35 ton   | 9¼"   | 71/16"  | 27/8" | 6"      | 20½" | 4¼"   | 1"   | 1330 |
| 42 ton   | 9½"   | 7½"     | 3"    | 6½"     | 22¼" | 45/8" | 1"   | 1430 |
| 50 ton   | 9¾"   | 77/8"   | 3½"   | 7"      | 23"  | 4½"   | 1¼"  | 1530 |

# STEEL WHEELS



- Dimensions P1 and P2 can be made to specs.
- Finished, ready-to-roll sizes from 6" to 33" tread diameter or custom made to your specs.
- Hardened tread.
- Brinell up to 500 available.
- Available with plain bore and keyway or roller bearings.
- For new industrial and mine cars or as replacements.
- Other sizes available.

| PART NO. | TREAD DIAMETER | DISTANCE THROUGH HUB | TREAD WIDTH        | FLANGE AND PROJECTION |
|----------|----------------|----------------------|--------------------|-----------------------|
|          | A              | B                    | C                  | D                     |
| 160      | 6"             | 3 $\frac{3}{8}$ "    | 2 $\frac{7}{16}$ " | $\frac{3}{4}$ "       |
| 201      | 6"             | 9 $\frac{1}{4}$ "    | 6 $\frac{3}{8}$ "  | 2 $\frac{7}{8}$ "     |
| 116      | 8"             | 9 $\frac{1}{4}$ "    | 5"                 | 2 $\frac{7}{8}$ "     |
| V 95A    | 8"             | 3 $\frac{9}{16}$ "   | 2 $\frac{3}{8}$ "  | 1 $\frac{1}{16}$ "    |
| V 160    | 8"             | 7 $\frac{1}{4}$ "    | 4 $\frac{3}{8}$ "  | 2 $\frac{7}{8}$ "     |
| 149B     | 10"            | 7 $\frac{15}{16}$ "  | 3 $\frac{3}{4}$ "  | 2 $\frac{7}{8}$ "     |
| 249      | 10"            | 6"                   | 3 $\frac{3}{8}$ "  | 2 $\frac{5}{16}$ "    |
| 113      | 12"            | 4"                   | 3 $\frac{1}{8}$ "  | $\frac{7}{8}$ "       |
| C 132    | 12"            | 6"                   | 3 $\frac{1}{2}$ "  | 2 $\frac{1}{4}$ "     |
| 156AA    | 12"            | 9 $\frac{1}{4}$ "    | 3 $\frac{1}{2}$ "  | 2 $\frac{7}{8}$ "     |
| V 200    | 14"            | 9"                   | 3 $\frac{1}{2}$ "  | 2 $\frac{7}{8}$ "     |
| 234      | 14"            | 7 $\frac{1}{4}$ "    | 3 $\frac{1}{2}$ "  | 2 $\frac{7}{8}$ "     |
| 544B     | 14"            | 4 $\frac{5}{16}$ "   | 3 $\frac{1}{8}$ "  | 1"                    |
| V222     | 18"            | 9 $\frac{1}{4}$ "    | 3 $\frac{1}{2}$ "  | 2 $\frac{7}{8}$ "     |
| 177B     | 20"            | 6 $\frac{1}{16}$ "   | 3 $\frac{1}{4}$ "  | 2 $\frac{7}{16}$ "    |
| V 144    | 20"            | 4 $\frac{7}{8}$ "    | 3 $\frac{7}{8}$ "  | 2 $\frac{1}{8}$ "     |



## IRWIN CAR AND EQUIPMENT

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[WWW.IRWINCAR.COM](http://WWW.IRWINCAR.COM)

### Industrial Sales Application Worksheet Transfer Cars, Furnace Cars & Industrial Wheel Assemblies

|           |       |        |       |
|-----------|-------|--------|-------|
| Customer  | _____ | Phone  | _____ |
| Contact   | _____ | Fax    | _____ |
| Payload   | _____ | E-mail | _____ |
| Reference | _____ | Date   | _____ |

#### Application Notes / Questions

Type of Car: \_\_\_\_\_

Quantity Required: \_\_\_\_\_

Capacity (Gross): \_\_\_\_\_

Est. # of Wheels: \_\_\_\_\_

Length x Width: \_\_\_\_\_

Deck Height / Overall Height: \_\_\_\_\_

Self-Propelled (Y or N): \_\_\_\_\_

If Yes, specify  
type of drive: \_\_\_\_\_

Travel Distance: \_\_\_\_\_

Travel Speed: \_\_\_\_\_

Track Gauge: \_\_\_\_\_

Negotiate Curves in Tracks (Y/N): \_\_\_\_\_

If Yes, what radius?: \_\_\_\_\_

Environment: \_\_\_\_\_

Ambient Temp: \_\_\_\_\_

Special Controls: \_\_\_\_\_

Power Source (AC, Battery, Diesel, Propane, Air, etc): \_\_\_\_\_

Frequency of Operation: \_\_\_\_\_

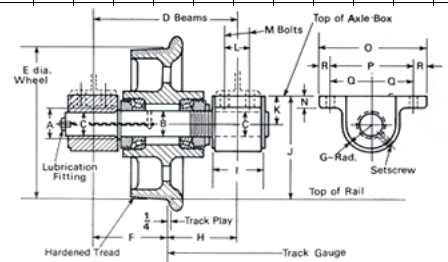
Safety Features Required: \_\_\_\_\_

Special Features or Options: \_\_\_\_\_

Target Delivery: \_\_\_\_\_



#### **CHANCES ARE WE HAVE ALREADY**



#### **SOLVED YOUR PROBLEM!**



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