



# Jacks

## Product Guide



# Air Motor Jacks

Duff-Norton air motor jacks are offered in seven models from 20 ton to 100 ton. These precision built, sturdy, dependable machines employ the time-tested basic screw principle with fool-proof, built-in rotary air motor. Can be synchronized for simultaneous operation of two jacks through use of a "Y" connection. Used for raising and lowering freight cars, diesel locomotives and truck trailers.

## Features

- Manufactured in compliance with ASME B30.1
- Easy to move and spot with long transport handle and collapsible spotting handles
- Up or down hand throttle control well guarded. Position of lever clearly indicates direction up or down
- Sturdy shell with large diameter base for stability under top-heavy loads
- 10" diameter, 2 1/2" face solid rubber-tire roller bearing wheels assure easy portability
- Transport handle folds down and out of the way when jack is in use
- Automatic shut off stops the motor when the lifting standard reaches the safe limit of its raised or lowered position
- Screen in air hose connection easily removed for cleaning
- Easy to lubricate through two convenient plugs in jack and one in air motor
- Built in muffler
- Ball bearing thrust and radial mountings throughout for easy action and long life

## Safety Features

- A brake is provided on 50 and 100 ton jacks to prevent accidental lowering
- The load is lowered entirely, as well as raised, by air motor so that the lowering speed is always under constant control, preventing slipping or sudden dropping of the load
- The design of the jack prevents lowering or creeping under load in case of air failure due to disconnection or injury to the hose
- Jacks are internally keyed to prevent standard from turning
- Broad, sturdy base for stability
- Serrated forged steel top



Capacity (tons)	Model Number	Product Code	Height (inches)	Raise (in.)	Base Dia. (in.)	Head Dia. (inches)	Type of Motor	Weight (lbs)
20	228R	00105	28	18	12	4	Rotary	240
35	326R	00106	26	14 3/8	14	4	Rotary	275
50	528CMJ	00141C	28	17	14	5	Rotary	394
50	536CMJ	00142C	36	25	15	5	Rotary	425
75 lifting, 100 sustaining	126CMJ	00143C	26	13 3/4	13	6 1/8	Rotary	448
75 lifting, 100 sustaining	132CMJ	00144	32	18	13	6 1/8	Rotary	480
75 lifting, 100 sustaining	144CMJ	00145	44	30	18	6 1/8	Rotary	530

## 50 Ton Capacity Bossman Jacks

A Bossman jack for the railroad industry! Same sturdy construction as the 100 and 150 ton jacks in a compact two-wheel design.

### Features

- Patented locking mechanism: spring-activated locking shoes engage while lifting and lock into place every 3/8" to eliminate the need for blocking. When lowering, air pressure allows the locking shoes to disengage until the operator releases the lowering button.
- Remote operation capability allows the operator to use the jack from a distance
- Air/hydraulic pump operates with 50 CFM at 90 PSI air pressure to lift full load
- Overall length is 26.5" – large base provides stability under load
- Extensions available for increasing closed height as follows: 6" extension model BJ50-70; 9" extension model BJ50-71; 12" extension model BJ50-72; set of all three extensions model BJ50-6912. Special extensions available - consult Duff-Norton.



Capacity (tons)	Model Number	Product Code	Closed Height (in.)	Raise (in.)	Extended Height (in.)	Lifting Speed Full Load	Lifting Speed No Load	Weight (lbs)
50	BJ5026	5026C	26	13	39	2 1/2"/min	29"/min	400

## 100 and 150 Ton Capacity Bossman Jacks

Duff-Norton's 100 and 150 ton capacity Bossman jacks are designed for jacking mining and construction equipment for maintenance. Sturdy steel frame. Three large pneumatic tires and swiveling handle for easy maneuverability. Pneumatic tires flatten under load to allow base to contact floor.

### Features

- Patented locking mechanism: spring-activated locking shoes engage while lifting and lock into place every 1/2" to eliminate the need for blocking. When lowering, air pressure allows the locking shoes to disengage until the operator releases the lowering button.
- Remote operation capability allows the operator to use the jack from a distance
- Air/hydraulic pump operates with 50 CFM at 90 PSI air pressure to lift full load
- Overall length is 52" – large base provides stability under load
- Extensions available for increasing closed height of 100-ton models as follows: 6" extension model BJ100-70; 9" extension model BJ100-71; 12" extension model BJ100-72; set of all three extensions model BJ100-6912. Special extensions available - consult Duff-Norton.
- Extensions available for increasing closed height of 150-ton models as follows: 6" extension model BJ150-70; 9" extension model BJ150-71; 12" extension model BJ150-72; set of all three extensions model BJ150-6912. Special extensions available - consult Duff-Norton.



Capacity (tons)	Model Number	Product Code	Closed Height (in.)	Raise (in.)	Extended Height (in.)	Lifting Speed Full Load	Lifting Speed No Load	Weight (lbs)
100	BJ10026	10026C	26	11.5	37.5	2 1/2"/min	20"/min	930
100	BJ10036	10036	36	14.5	50.5	2 1/2"/min	20"/min	1100
150	BJ15026	15026A	26	11.5	37.5	1 3/4"/min	14"/min	1000
150	BJ15036	15036A	36	14.5	50.5	1 3/4"/min	14"/min	1200
150	BJ15044	15044	44	30	74.0	1 3/4"/min	14"/min	1550

### Little Devils Hydraulic Toe Jacks

Little Devils hydraulic toe jacks are offered in 2 ton, 5 ton and 10 ton capacities. This line of hydraulic toe jacks is designed for lifting heavy machinery and cargo in plant maintenance, shipbuilding, mining and railroad applications. Same capacity rating for top or toe lifting. Operating levers included.

#### Features

- Lever socket swivels 180° for operation in any direction
- Height of toe allows easier access to low height applications
- Internal springs allow for self-retraction of jack under no load (5 and 10 ton models only)
- Ergonomic lifting handle design allows for ease of transport
- Safety relief valve prevents jacking of overloads
- Heavy duty, welded steel construction
- Lever bar included
- Manufactured in compliance with ASME B30.1
- May be used vertically, inclined or horizontally. When used horizontally, stroke is decreased to 70%



Model	Capacity US tons	Minimum Toe Height		Hydraulic Travel		Maximum Toe Height		Toe Length x Width	
		mm	in	mm	in	mm	in	mm	in
HTJ0209	2	16	0.63	113	4.4	129	5.1	50 x 50	2.0 x 2.0
HTJ512	5	25	0.98	120	4.7	145	5.7	57 x 75	2.2 x 3.0
HTJ1013	10	28	1.10	145	5.7	173	6.8	60 x 85	2.4 x 3.3

Model	Min. Head Height		Max. Head Height		Head Length x Width		Base Size Width x Length		Lever Diam x Length		Oil Volume		Weight	
	mm	in	mm	in	mm	in	mm	in	mm	in	cu cm	cu in	kg	lbs
HTJ0209	235	9.3	348	13.7	85 x 50	3.3 x 2.0	125 x 178	4.9 x 7.0	ø19 x 380	ø.75 x 15.0	110	17	8.1	18
HTJ512	293	11.5	413	16.3	117 x 75	4.6 x 3.0	182 x 270	7.2 x 10.6	ø22 x 415	ø.85 x 16.3	337	21	23.5	2
HTJ1013	325	12.8	470	18.5	145 x 85	5.7 x 3.3	225 x 286	8.9 x 11.3	ø28 x 548	ø1.07 x 21.6	500	31	33.4	3

### Little Devils Mini Jacks

Little Devils mini jacks are offered in three capacities: 10 ton, 20 ton and 50 ton. These compact, powerful jacks are designed to be used in low-height applications. Lever bar is pumped side to side rather than up and down. Positive stops prevent over extension of the lifting ram.

#### Features



- Durable steel ram is treated to prevent corrosion and rust
- Operating lever is pumped side to side to accommodate low height applications
- Housing cylinder and base are welded for greater strength and sealing
- Lever bar included
- Manufactured in compliance with ASME B30.1
- May be used vertically, inclined or horizontally. When used horizontally, stroke is decreased to 70%

Model	Cap. US tons	Closed Height		Hydraulic Travel		Maximum Height		Head Diameter		Base Diameter		Lever Diam x Length		Oil Volume		Weight	
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	cu cm	cu in	kg	lbs
HJ1005	10	120	4.72	30	1.2	150	5.9	42	1.65	110	4.3	ø18 x 440	ø.71 x 17.3	77	4.7	5.5	12
HJ2005	20	130	5.12	30	1.2	160	6.3	53	2.09	120	4.7	ø22 x 548	ø.85 x 21.6	110	6.7	8.7	19
HJ5006	50	140	5.51	30	1.2	170	6.7	80	3.15	178	7	ø27 x 1000	ø.85 x 39.4	370	23	19	42

## Little Devils Bottle Jacks

Little Devils bottle jacks are offered in capacities from 2 tons to 100 tons. The wide range of available closed heights makes them suitable for use in a broad range of industrial applications.

### Features

- Standard height and low height models
- Can be used both indoors and outdoors
- Lightweight and durable
- Unique base forging method increases resistance to high pressure and offers a high degree of durability
- Heavy duty, welded steel construction
- Lever bar included
- Manufactured in compliance with ASME B30.1
- May be used vertically, inclined or horizontally. When used horizontally, stroke is decreased to 70%



Model	Ca. US tons	Closed Height		Hydraulic Travel		Extension Screw Adjustment		Maximum Height		Head Size		
		mm	in	mm	in	mm	in	mm	in	mm	in	
Standard Type	HJ0206	2	150	5.9	85	3.3	50	2.0	285	11.2	ø25	ø.98
	HJ0207	2	180	7.1	115	4.5	50	2.0	345	13.6	ø25	ø.98
	HJ0508	5	200	7.9	120	4.7	70	2.8	390	15.4	35X36.5	1.38X1.44
	HJ1009	10	240	9.5	150	5.9	80	3.1	470	18.5	45X47	1.77X1.85
	HJ1510	15	265	10.4	165	6.5	80	3.1	510	20.1	51X53	2.00X2.09
	HJ2011	20	270	10.6	160	6.3	—	—	430	16.9	ø52	ø2.05
	HJ5012	50	305	12.0	170	6.7	—	—	475	18.7	ø80	ø3.15
	HJ10012	100	305	12.0	145	5.7	—	—	450	17.7	ø125	ø4.92
Short Type	HJ1007	10	170	6.7	95	3.7	75	3.0	340	13.4	45X47	1.77X1.85
	HJ1507	15	170	6.7	90	3.5	70	2.8	330	13.0	51X53	2.00X2.09
	HJ2007	20	180	7.1	85	3.3	40	1.6	305	12.0	56.5X58	2.22X2.28
	HJ3007	30	180	7.1	80	3.1	—	—	260	10.2	ø61	ø2.40
	HJ3011	30	280	11.0	160	6.3	—	—	440	17.3	ø61	ø2.40

Model	Base Size		Lever Length		Oil Volume		Weight		
	mm	in	mm	in	mm	in	k	lbs	
Standard Type	HJ0206	110 x 65	4.3 x 2.6	ø19 x 380	ø.75 x 15.0	40	2.4	2.4	6
	HJ0207	110 x 65	4.3 x 2.6	ø19 x 380	ø.75 x 15.0	50	3.1	2.4	6
	HJ0508	142 x 82	5.6 x 3.2	ø19 x 380	ø.75 x 15.0	150	9.1	4.6	10
	HJ1009	166 x 106	6.5 x 4.2	ø22 x 415	ø.85 x 16.3	337	21	7.9	18
	HJ1510	180 x 118	7.1 x 4.6	ø22 x 415	ø.85 x 16.3	540	33	10.4	23
	HJ2011	182 x 128	7.2 x 5.0	ø28 x 548	ø1.07 x 21.6	490	30	12.1	27
	HJ5012	237 x 188	9.3 x 7.4	ø28 x 1000	ø1.07 x 39.4	1340	82	37.1	82
	HJ10012	318 x 265	12.5 x 10.4	ø28 x 1000	ø1.07 x 39.4	2940	179	90.7	200
Short Type	HJ1007	166 x 106	6.5 x 4.2	ø22 x 415	ø.85 x 16.3	226	14	6.4	14
	HJ1507	180 x 118	7.1 x 4.6	ø22 x 415	ø.85 x 16.3	320	20	8.0	18
	HJ2007	182 x 128	7.2 x 5.0	ø28 x 548	ø1.07 x 21.6	250	15	10.1	22
	HJ3007	192 x 142	7.6 x 5.6	ø28 x 548	ø1.07 x 21.6	380	23	14.0	31
	HJ3011	200 x 142	7.9 x 5.6	ø28 x 548	ø1.07 x 21.6	670	41	18.9	42

# Terms of Sale

*Supersedes all previously published terms*

All sales by Seller are made pursuant to the following terms. No other or additional terms or conditions are or will be accepted.

## **ACCEPTANCE OF ORDERS -**

All orders, whether placed directly or through an agent, and all subsequent amendments thereto, are subject to a final approval and acceptance by Seller's main office.

## **LIMITATION OF WARRANTIES, REMEDIES AND DAMAGES -**

THE WARRANTY STATED BELOW IS GIVEN IN PLACE OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE. NO PROMISE OR AFFIRMATION OF FACT MADE BY ANY AGENT OR REPRESENTATIVE OF SELLER SHALL CONSTITUTE A WARRANTY BY SELLER OR GIVE RISE TO ANY LIABILITY OR OBLIGATION.

Seller warrants that on the date of its delivery to carrier the goods are free from defects in workmanship and materials.

SELLER'S SOLE OBLIGATION IN THE EVENT OF BREACH OF WARRANTY OR CONTRACT OR FOR NEGLIGENCE OR OTHERWISE WITH RESPECT TO GOODS SOLD SHALL BE EXCLUSIVELY LIMITED TO REPAIR OR REPLACEMENT, F.O.B. SELLER'S POINT OF SHIPMENT, OF ANY PARTS WHICH SELLER DETERMINES TO HAVE BEEN DEFECTIVE or if Seller determines that such repair or replacement is not feasible, to a refund of the purchase price upon return of the goods to Seller.

Any action against Seller for breach of warranty, negligence or otherwise must be commenced within one year after such cause of action accrues.

NO CLAIM AGAINST SELLER FOR ANY DEFECT IN THE GOODS SHALL BE VALID OR ENFORCEABLE UNLESS BUYER'S WRITTEN NOTICE THEREOF IS RECEIVED BY SELLER WITHIN ONE YEAR FROM THE DATE OF SHIPMENT.

Seller shall not be liable for any damage, injury or loss arising out of the use of the goods if, prior to such damage, injury or loss, such goods are (1) damaged or misused following Seller's delivery to carrier; (2) not maintained, inspected, or used in compliance with applicable law and Seller's written instructions and recommendations; or (3) installed, repaired, altered or modified without compliance with such law, instructions or recommendations.

UNDER NO CIRCUMSTANCES SHALL SELLER BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES AS THOSE TERMS ARE DEFINED IN SECTION 2-715 OF THE UNIFORM COMMERCIAL CODE.

## **TERMS OF PAYMENT -**

Unless otherwise stated herein, payment of each invoice is required within thirty (30) days after date of shipment. Any balance unpaid after the required payment date shall be subject to a service charge of 1% per month from such date.

## **PRICE ADJUSTMENTS -**

Amendments made by the Buyer to orders already placed shall, without formal notice to the Buyer, be subject to extra charges. If the estimated shipping date for the goods is more than sixty (60) days after date of order, the price of the goods are subject to increase by Seller.

## **TAXES -**

Any sales, use, excise, and other taxes applicable to this transaction and the goods and/or services furnished by Seller are not included in the price and shall be paid by Buyer when due. If Seller pays any such taxes, Buyer shall reimburse Seller upon demand.

## **INDEMNIFICATION AND SAFE OPERATION -**

Buyer shall comply with and require its employees to comply with directions set forth in instructions and manuals furnished by Seller and shall use and require its employees to follow such instructions and manuals and to use reasonable care in the use and maintenance of the goods. Buyer shall not remove or permit anyone to remove any warning or instruction signs on the goods. In the event of personal injury or damage to property or business arising from the use of the goods, Buyer shall, within forty-eight (48) hours thereafter, give Seller written notice of such injury or damage. Buyer shall cooperate with Seller in investigating any such injury or damage and in the defense of any claims arising therefrom.

If Buyer fails to comply with this section or if any injury or damage is caused, in whole or in part, by Buyer's failure to comply with applicable federal or state safety requirements, Buyer shall indemnify and hold Seller harmless against any claims, loss or expense for injury or damage arising from the use of the goods.

## **GOVERNING LAW -**

This agreement shall be governed by and construed under the laws of the State of New York.

## **DELIVERY AND DELAYS -**

Unless otherwise specified herein, deliveries shall be F.O.B. Seller's point of shipment and risk of loss shall pass to Buyer upon Seller's delivery to carrier. All shipping dates are approximate and Seller shall not be liable for loss or damage because of delays occasioned by labor disputes, damage to facilities, or failure of suppliers or subcontractors to meet scheduled deliveries or any other cause beyond Seller's reasonable control or making its performance commercially impracticable.

Notwithstanding other provisions hereof, if shipment is delayed at Buyer's request, the goods shall be deemed to be stored at Buyer's risk and expense and Seller may thereupon bill Buyer for the full price and storage costs. Buyer shall pay such bill within 30 days after mailing thereof.

## **BUYER'S INSPECTION UPON RECEIPT OF SHIPMENT -**

Buyer shall inspect the goods as soon as received. If any loss or damage is discovered, Buyer must notify both the carrier and Seller at once. Seller will cooperate with Buyer in filing claims with the carrier.

## **CHANGES AND CANCELLATION -**

Seller reserves the right to change or cancel any order whenever circumstances require allocation of production or delivery or Seller deems change or cancellation to be necessary to comply with applicable laws, ordinances, regulations, directives or administrative actions. Seller reserves the right to make changes in materials or design which it determines appropriate for the goods.

## **SECURITY INTEREST AND REPOSSESSION -**

Until full payment has been made therefor, Seller shall have a security interest in goods shipped to Buyer and the goods shall remain personal property. Upon request Buyer shall execute and deliver to Seller security agreements and financing statements further evidencing Seller's security interest. Buyer authorizes Seller to file a financing statement or statements relating to the goods, without Buyer's signature thereon, as Seller may deem appropriate and appoints Seller as Buyer's attorney-in-fact for the limited purpose of executing (without requiring Seller to do so) financing statements in Buyer's name and performing other acts which Seller deems appropriate to perfect and continue its security interest and to protect and preserve the goods.

In the event Buyer defaults in making any payment due Seller, Seller in addition to any other rights or remedies provided by law, shall have the right, with or without legal process, to enter the place where said goods are located and to repossess the goods in accordance with the Uniform Commercial Code.

## **ASSURANCES -**

Shipment by Seller shall at all times be subject to the prior approval of its credit personnel and Seller may, at any time, decline to make shipment except upon receipt of prior payment or upon other terms and conditions or security satisfactory to such personnel.

## **PATENTS -**

Except as to goods manufactured according to design supplied by Buyer, Seller will defend and hold Buyer free and harmless in a suit or proceeding brought against Buyer insofar as it is based on a claim that use of the goods by Buyer constitutes an infringement of any existing U.S. Patents, provided, however, that Buyer gives Seller prompt written notice of such suit or proceeding; permits Seller, through its counsel, to defend and/or settle the same; and gives Seller all necessary information, assistance and authority to enable Seller to do so. If Buyer's use of the goods is held to constitute infringement and further use is enjoined, Seller shall, at its option, either (i) procure for Buyer the right to continue using the goods; or (ii) replace the goods with non-infringing goods; or (iii) modify the goods to non-infringing goods. The foregoing states Seller's entire liability for patent infringement and shall not be construed to render Seller liable for damages based on product output.

## **MISCELLANEOUS -**

This instrument constitutes the entire agreement between Seller and Buyer, superseding all previous understandings and writings regarding this transaction. Any amendment or modification of this Agreement shall be void unless in writing and signed by Seller.

No delay or omission by Seller in exercising any right or remedy hereunder shall be a waiver thereof or of any other right or remedy, and no single or partial exercise thereof shall preclude any other or further exercise thereof or the exercise of any other right or remedy. All rights and remedies of Seller are cumulative.

Sales made pursuant to this Agreement shall be governed by the Uniform Commercial Code as the same may from time to time be construed and in effect in the state wherein Seller has its main office.

## **ARBITRATION -**

All disputes that may arise between the parties regarding the interpretation of the contract and the legal effect of the contract shall, to the exclusion of any court of law, be arbitrated and determined in accordance with the latest Commercial Arbitration Rules of the American Arbitration Association. The arbitration proceeding shall be held in the city in that state where the principal office of the Seller is located. The parties recognize and consent to the above mentioned arbitration association's jurisdiction over each and every one of them.

## Other Duff-Norton Products

Since 1883, Duff-Norton has manufactured quality industrial lifting, positioning and material handling equipment. Today, Duff-Norton continues this tradition through its dedication to the ISO 9001 standard of excellence.



*Electromechanical Actuators*



*Rotary Unions®*



*Mechanical Actuators*



*SuperCylinders*

### NOTE

Duff-Norton has made every effort to ensure that the information contained in this publication is accurate and reliable. Determining the suitability of our products for specific applications is the user's responsibility.

### ⚠ WARNING

The equipment shown in this catalog is intended for industrial use only and should not be used to lift, support, or otherwise transport people unless you have a written statement from Duff-Norton, which authorizes the specific product used in your applications as suitable for moving people.



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