DOWNS CRANE & HOIST CO., INC.

MECHANICAL ENGINEERS

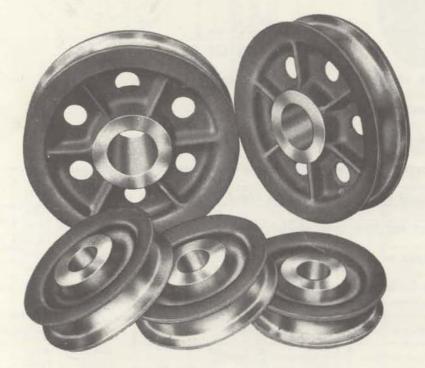
8827 S. JUNIPER STREET . LOS ANGELES, CALIFORNIA, U.S.A. 90002

PHONE: (323) 589-6061

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ELECTRIC CRANES - HAND CRANES - JIB CRANES - PORTABLE CRANES - SHEAVES - SHEAVE BLOCKS - PLATE GRIPS - PLATE HOOKS CRANE TROLLEY HOISTS - CRANE WHEELS - CRANE END TRUCK UNITS - JIB CRANE FITTINGS - AUTOMATIC MECHANICAL LOAD BRAKE UNITS - CURRENT COLLECTORS - CRANE HOOK BLOCKS - DERRICK FALL BLOCKS

CRANE WHEELS AND WHEEL ASSEMBLIES



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The wheel capacities given in the tables on the following pages are the maximum permissible loads when used on cranes for medium service, intermittent duty, and traveling speeds up to 200 feet per minute. For heavy duty and high speeds, these capacities should be reduced somewhat, in order to get a satisfactory service life from the wheel. The required capacity reduction is governed by a number of operating conditions, and there is no simple rule applicable to all cases. Downs Crane and Hoist Company will be pleased to make a recommendation upon receipt of all the pertinent facts applying to any specific case.

CRANES. Downs Crane & Hoist Company will furnish all types of Cranes, both for electric and hand operation, finished complete and ready for work.

CRANE UNIT PARTS. Where the purchaser has facilities for fabrication, and wishes to construct his own Crane, Downs Crane & Hoist Company will furnish any or all of the unit parts required.

CRANE UNIT PARTS AND DRAWINGS. Engineering, design and detailed shop drawings for any type of Crane may be purchased complete. These drawings, with the purchased parts, will enable any well equipped shop to fabricate their own Crane.

TERMS OF SALE

Unless otherwise noted, all quotations are f.o.b. Los Angeles, California.

Full shipping instructions should accompany order.

Terms of payment are 1% 10 days, or net 30 days from date of shipment.

Unless known to us, satisfactory credit references or arrangements must acompany order.

All Federal, State or local taxes, if any, must be added to the quoted prices.

Weights given are net and have been carefully estimated, but are not guaranteed.

Written quotations expire as noted on face thereof.

Verbal quotations are for immediate acceptance.



UNMOUNTED STEEL WHEELS

These double flanged cast steel crane wheels are suitable for all types of power driven cranes. They are designed with treads and flanges of the proper contour to operate on the runway rails with a minimum of friction and wear. The treads may be finished straight, tapered, or crowned. Flanges are heavy and may be finished for lighter rails than the maximum sizes listed. Wheels may be adapted to any style of mounting and fitted with any type of bearing.

Wheels will be furnished either "Rough Cast" or "Finished", as ordered.

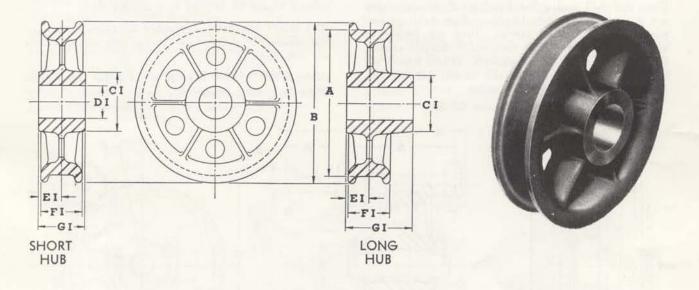
When specified "Rough Cast," they will be supplied

with sufficient excess material to finish to the dimensions listed.

"Finished" wheels will be machined to the purchasers' specifications. Rail size should be specified, otherwise wheels will be finished with straight treads for the maximum size of rail, as listed.

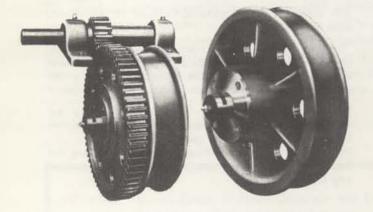
NOTE: The cored hole diameter "DI" may be varied to suit and either the core diameter or finished bore dimension must be specified. We have a number of wheel patterns, which are not

We have a number of wheel patterns, which are not listed, and solicit your inquiries for crane wheels of any style or size.



ITEM	TREAD	HUB	CAPACITY	FOR MAX.	WEIGHT			DIMENS	IONS IN	INCHES		
NO.	DIA.	TYPE	PER WHEEL (LBS.)	A.S.C.E. RAIL	(LBS.)	Α	в	CI	DI	EI	FI	GI
3543	7-1/2"	SHORT	8,000	30#	36	7-1/2	8-3/4	4-1/4		1-13/16	3-1/8	3-5/8
3549	9	SHORT	10,000	35	47	9	10-1/2	4-3/4		1-13/16	3-1/8	3-5/8
3555	10-1/2	SHORT	12,000	40	63	10-1/2	11-3/4	5-1/4		1-15/16	3-3/8	3-7/8
3561	12	SHORT	12,500	40	73	12	13-1/4	5-1/2		1-15/16	3-3/8	3-7/8
3562	12	LONG	12,500	40	81	12	13-1/4	5-1/2	SEE	1-15/16	3-3/8	5-5/8
3563	12	SHORT	15,000	60	97	12	13-1/2	5-1/2	NOTE	2-5/16	4-1/8	4-5/1
3564	12	LONG	15,000	60	106	12	13-1/2	5-1/2		2-5/16	4-1/8	6-3/1
3569	15	SHORT	17,500	50	115	15	16-1/2	5-3/8		2-3/16	3-7/8	4-3/8
3570	15	LONG	17,500	50	125	15	16-1/2	5-3/8		2-3/16	3-7/8	6-3/
3573	15	SHORT	20,000	70	150	15	16-1/2	6		2-3/8	4-1/4	4-3/4
3574	15	LONG	20,000	70	160	15	16-1/2	6		2-3/8	4-1/4	6-3/4
3577	18	SHORT	30,000	70	185	18	19-1/2	7		2-3/8	4-1/4	4-3/
3578	18	LONG	30,000	70	206	18	19-1/2	7		2-3/8	4-1/4	7
3585	21	SHORT	50,000	80	321	21	22-3/4	9-1/4		2-13/16	5	5-5/1
3586	21	LONG	50,000	80	363	21	22-3/4	9-1/4		2-13/16	5	8-1/1
3593	24	SHORT	70,000	100	442	24	25-3/4	9-1/2		2-15/16	5-1/4	5-7/8
3594	24	LONG	70,000	100	464	24	25-3/4	9-1/2		2-15/:5	5-1/4	8-5/

STEEL WHEEL ASSEMBLIES—PIN & KEEPER TYPE



These full ball and roller bearing wheel assemblies are a very popular style for all medium duty, general purpose power driven cranes. They are simple to install and may be quickly removed if, for any reason, inspection or servicing is required. Wheel treads will be finished for the maximum size runway rail as listed, unless specified otherwise on order. WHEELS — Cast steel, double flanged, with treads finished for the runway rail specified.

WHEEL BEARINGS — Standard quill roller bearings of large capacity. They are carefully fitted in the finished bore of the wheels, and operate directly on the hardened axle which serves as an inner race.

AXLES — Hardened and precision ground to the bearing manufacturers' standard dimensions. Hollow bored for grease. Milled cross slots to receive keeper plates.

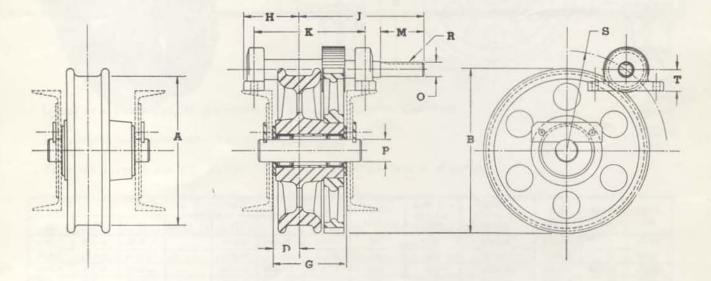
WHEEL GEAR — Cast steel, standard pitch cut teeth, pressed and keyed on finished wheel hub.

PINION GEAR - Steel, standard pitch cut teeth.

STUB SHAFT — Finished all over. Extended end has a standard keyway for coupling to a squaring shaft.

STUB SHAFT BEARINGS — Standard self-aligning ball bearings mounted in journal type housings with sealing washers and snap rings.

LUBRICATION — All bearings are provided with grease fittings for pressure lubrication.



ITEM	TREAD	TYPE	CAPACITY	FOR MAX.	GEAR	WGT.			DIMENS	IONS IN	INCHES	APPLY	ING TO	BOTH P	LAIN B	GEARE	TYPE	5	
NO.	DIA.	TIPE	PER WHEEL (LBS.)	A.S.C.E. RAIL	RATIO	(LBS.)	A	0	D	G	н	J	к	м	0	р	R	s	т
3621	12"	NON-GEARED	12,500	40#		103	12	13-1/4	2-3/16	6-1/8		1 2		-		2-1/4	10000		
3622	12	GEARED	12,500	40	4.12 -1	176	12	13-1/4	2-3/16	6-1/8	4-5/8	11-3/16	9	4-1/4	1-7/16	2-1/4	3/8	8.20	2-1/8
3623	12	NON-GEARED	15,000	60		129	12	13-1/2	2-9/16	6-7/8						2-1/4			
3624	12	GEARED	15,000	6.0	4.12 -1	203	12	13-1/2	2-9/16	6-7/8	5	11-5/8	9-3/4	4-1/4	1-7/16	2-1/4	3/8	8.20	2-1/8
3629	15	NON-GEARED	17,500	50	-	155	15	16-1/2	2-7/16	6-7/8						2-1/4		-	
3630	15	GEARED	17,500	50	4.00-1	261	15	16-1/2	2-7/16	6-7/8	5-1/4	12	10-1/2	4-1/4	1-7/16	2-1/4	3/8	10.00	2-1/8
3633	15	NON-GEARED	20,000	70		177	15	16-1/2	2-5/8	7-1/4			10			2-1/4			
3634	15	GEARED	20,000	70	4.00-1	283	15	16-1/2	2-5/8	7-1/4	5-7/16	12-1/8	10-7/8	4-1/4	1-7/16	2-1/4	3/8	10.00	2-1/8
3637	18	NON-GEARED	30,000	70		251	18	19-1/2	2-5/8	7-1/2	-					3-1/4			
3638	18	GEARED	30,000	70	4.11-1	475	18	19-1/2	2-5/8	7-1/2	5-7/16	14-1/4	11-1/8	6	1-15/16	3-1/4	1/2	11.50	3-1/H
3645	21	NON-GEARED	50,000	80		450	21	22-3/4	4-3/16	9-7/8						4			
3646	21	GEARED	50,000	80	4.32 -1	754	21	22-3/4	4-3/16	9-7/8	7-1/2	15-9/16	14	6	2-7/16	4	5/8	14.1.6	3-3/
3653	24	NON-GEARED	70,000	100		552	24	25-3/4	4-5/16	10-3/8						4-1/2			
3654	24	GEARED	70,000	100	4.11-1	958	24	25-3/4	4-5/16	10-3/8	7-5/8	16	14-1/2	6	2-7/16	4-1/2	5/8	15.33	3-3/4

BULLETIN No. 3540

STEEL WHEEL ASSEMBLIES-M.C.B. TYPE

These M.C.B. type assemblies are the finest heavy duty wheels made. They are equipped throughout with standard self-aligning bearings, which take all thrusi, as well as radial loads. The wide bearing spacing, made possible by the outboard style of mounting, is a decided advantage in properly distributing the combined thrust and radial loads encountered in crane operation. The outer race of one bearing on each shaft has a small amount of float to provide for expansion of the shaft. Bearings may be inspected by removing the cover plates.

WHEELS — Cast steel, double flanged, with treads finished for the runway rails specified.

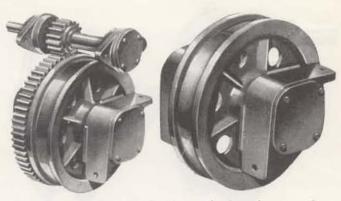
WHEEL BEARINGS — Standard heavy duty, selfaligning, spherical roller bearings.

WHEEL BEARING HOUSINGS — Cast steel with finished mounting faces and removable cover plates.

AXLES - Finished all over, pressed in wheel.

WHEEL GEAR — Steel with standard pitch cut teeth, pressed and keyed on finished wheel hub.

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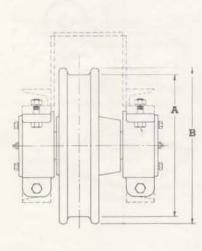
PINION GEAR - Steel with standard pitch cut teeth.

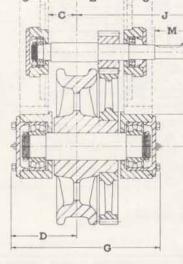
STUB SHAFT — Finished all over, extended end has a standard keyway for coupling to a squaring shaft.

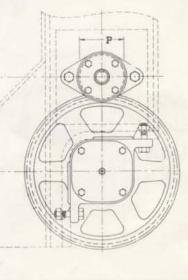
STUB SHAFT BEARINGS — Standard self-aligning ball bearings mounted in flange type housings with removable cover plates.

LUBRICATION — All bearings are provided with grease fittings for pressure lubrication.

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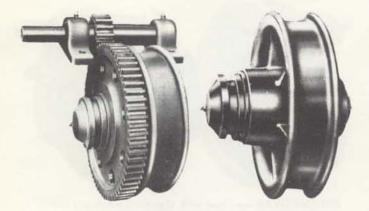






ITEM	TREAD	TYPE	CAPACITY	FOR MAX	GEAR	WGT.			DIME	SIONS	IN IN	CHES A	PPLYING	TO BO	TH PLAN	N B GI	EARED	TYPES		
NO.	AIG	TYPE	PER WHEEL (LBS.)	A.S.G.E. RAIL	RATIO	(LBS)	A	8	c	D	ε	G	3	м	0	P	8	5	T	U.
3893	15	NON-GEARED	20,000	70	1	267	15	16-1/2	3	6-7/8	8	15-3/4	1.000							_
3894	15	GEARED	20,000	70	4.00-1	377	15	16-1/2	3	6-7/8	8	15-3/4	12-1/2	4-1/4	1-7/16	4-3/4	3/8	10.00	6.63	7/8
3895	18	NON-GEARED	30,000	70		355	18	19-1/2	3	7	8-1/4	16-1/4								
3896	18	GEARED	30,000	70	4.11-1	518	18	19-1/2	3	7	8-1/4	16-1/4	(5	6	1-15/16	6	1/2	11.50	763	1
3897	21	NON-GEARED	50,000	80		578	21	22-3/4	3-1/2	8	9-1/2	18-1/2				1				
3898	21	GEARED	50,000	80	4.32-1	845	21	22-3/4	3-1/2	8	9-1/2	18-1/2	16	6	2-7/16	7	5/8	14.17	9.67	1-1/8
3899	24	NON-GEARED	70,000	100		825	24	25-3/4	3-5/8	8-7/8	10	20-1/2		1.2.1						
3900	24	GEARED	70,000	100	4.11-1	1197	24	25-3/4	3-5/8	8-7/8	10	20-1/2	16-7/8	6	2-7/16	7-1/2	5/8	15.33	9.83	1-1/4

STEEL WHEEL ASSEMBLIES—CARTRIDGE BEARING TYPE



These full ball and roller bearing wheel assemblies are suitable for medium to heavy service. The cartridge type bearing housings are designed to be mounted in the truck members with a small amount of side clearance, and held in place with a keeper plate. This slight looseness will allow the bearings to align themselves for proper distribution of the load. WHEELS — Cast steel, double flanged, with treads finished for the runway rail specified.

WHEEL BEARINGS — Standard heavy duty quill roller bearings with inner races and a large overload capacity.

WHEEL BEARING HOUSINGS — Outboard cartridge type with a flat surface for a keeper plate to bear against, and a machined mounting groove.

AXLES — Finished all over, pressed in finished wheel bore.

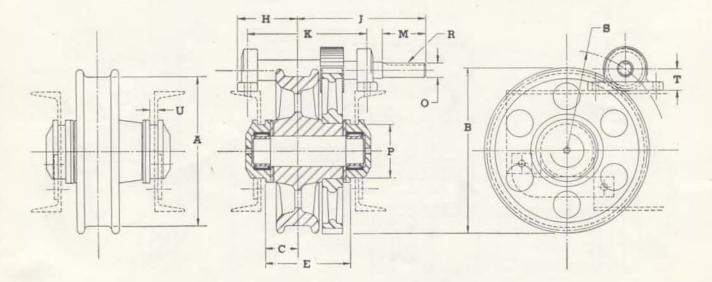
WHEEL GEAR — Steel with standard pitch cut teeth, pressed and keyed on finished wheel hub.

PINION GEAR — Steel with standard pitch cut teeth.

STUB SHAFT — Finished all over, extended end has a standard keyway for coupling to a squaring shaft.

STUB SHAFT BEARINGS — Standard self-aligning ball bearings mounted in journal type housings with sealing washers and snap rings.

LUBRICATION — All bearings are provided with grease fittings for pressure lubrication.



ITEM	TREAD	TYPE	CAPACITY PER WHEEL	FOR MAX. A.S.C.E.	GEAR	WGT.			DIMENSI	ONS IN	INCHES	APPLY	ING TO	BOTH F	LAIN B	GEAR	ED TI	PES		
N 0.	DIA.	TTEL	(LBS.)	RAIL	RATIO	(LBS.)	A	B	C	E	н	J	к	м	0	Р	R	s	T	U
3681	12*	NON-GEARED	12,500	40#		131	12	13-1/4	2-3/4	7-3/16										
3682	12	GEARED	12,500	40	4.12-1	2.05	12	13+1/4	2-3/4	7-3/16	5-3/8	12	10-9/16	4-1/4	1-7/16	5	3/8	8.20	2-1/8	13/16
3683	12	NON-GEARED	15,000	60	-	158	12	13-1/4	3-1/8	7-15/16										
3684	12	GEARED	15,000	60	4.12-1	233	12	13-1/4	3-1/8	7-15/16	5-3/4	12-3/8	11-5/16	4-1/4	1-7/16	5	3/8	8.20	2-1/8	13/16
3689	15	NON-GEARED	17,500	50		177	15.	16-1/2	3	7-15/16										
3690	15	GEARED	17,500	50	4.00-1	284	1.5	16-1/2	3	7-15/16	5-3/4	12-1/2	11-7/16	4-1/4	1-7/16	5	3/8	10.00	2-1/8	13/16
3693	15	NON-GEARED	20,000	70		212	15	16-1/2	3-3/16	8-5/16			-							
3694	15	GEARED	20,000	70	4.00-1	320	15	16-1/2	3-3/16	8-5/16	6	12-3/4	11-7/8	4-1/4	1-7/16	5	3/8	10.00	2-1/8	13/16
3697	18	NON-GEARED	30,000	70	1	344	18	19-1/2	3-3/16	8-9/16										
3698	18	GEARED	30,000	70	4.11-1	495	18	19-1/2	3-3/16	8-9/16	6	15	12-1/16	6	1-15/16	5	1/2	11.50	3-1/16	13/16
3705	21	NON-GEARED	50,000	80		443	21	22-3/4	3-5/8	9-3/4		1								
3706	21	GEARED	50,000	80	4.32-1	837	21	22-3/4	3-5/8	9-3/4	6-5/8	16	13-1/4	6	2-7/16	6-1/2	5/8	14.16	3-3/4	15/16
3713	24	NON-GEARED	70,000	100		596	24	25-3/4	3-3/4	10-1/4										
3714	24	GEARED	70,000	100	4.11-1	971	24	25-3/4	3-3/4	10-1/4	6-7/8	16	14	6	2-7/16	6-1/2	5/8	15,33	3-3/4	15/16

BULLETIN No. 3540

STEEL WHEEL ASSEMBLIES—DIRECT DRIVE TYPE

These roller bearing wheel assemblies are for use where it is desired to couple the drive or squaring shaft direct to the axle without a gear reduction at the wheels. The cartridge type housing should be installed in the truck members with a small amount of side play so that bearings can align themselves under operating conditions. This style of wheel may also be supplied with the M.C.B. type housings and selfaligning spherical roller bearings.

WHEELS — Cast steel, double flanged, with treads finished for the runway rail specified.

WHEEL BEARINGS — Standard heavy duty quill type roller bearings with inner races and a large overload capacity.

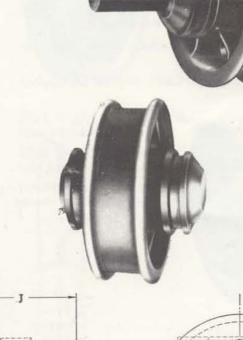
WHEEL BEARING HOUSINGS—Outboard cartridge type with a flat surface for a keeper plate to bear against and a machined mounting groove.

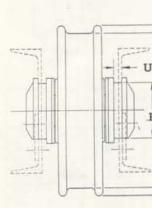
AXLES — Finished all over, pressed and keyed in finished wheel bore. Long shaft extension on driving wheel axle is fitted with a standard keyway for coupling direct to a squaring shaft.

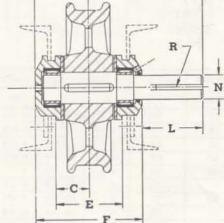
LUBRICATION — All bearings are provided with grease fittings for pressure lubrication.

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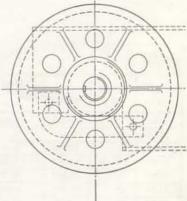
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ITEM	TREAD		CAPACITY	FOR MAX.	WGT.		DIMEN	SIONS IN	INCHES	APPLYIN	G TO B	TH SHOR	T & LON	NG SHAFT	TYPES		
NO.	DIA	TYPE	PER WHEEL (LBS.)	A.S.C.E. RAIL	(LBS.)	A	B	С	Ε	F	н	J	L	N	Р	R	U
3735	10-1/2"	SHORT SHAFT	12,000	40#	110	10-1/2	11-3/4	2-3/4	5-7/16	9-1/4	4-5/8				5		13/16
3736	10-1/2	LONG SHAFT	12,000	40	120	10-1/2	11-3/4	2-3/4	5 - 7/16	9-1/4	4-5/8	10	5-3/8	1-15/16	5	1/2	13/16
3741	12	SHORT SHAFT	12,500	40	120	12	13-1/4	2-3/4	5-7/16	9-1/4	4-5/8				5		13/16
3742	12	LONG SHAFT	12,500	40	130	12	13-1/4	2-3/4	5-7/16	9-1/4	4-5/8	10	5-3/8	1-15/16	5	1/2	13/16
3743	12	SHORT SHAFT	15,000	6.0	154	12	13-1/4	3-1/8	6-3/16	10	5				5		13/16
3744	12	LONG SHAFT	15,000	60	165	12	13-1/4	3-1/8	6-3/16	10	5	10-1/2	5-1/2	1-15/16	5	1/2	13/16
3749	15	SHORT SHAFT	17,500	50	177	15	16-1/2	3	5-15/16	9-3/4	4-7/8				5		13/16
3750	15	LONG SHAFT	17,500	50	184	15	16-1/2	3	5-15/16	9-3/4	4-7/8	10-3/8	5-1/2	1-15/16	5	1/2	13/16
3753	15	SHORT SHAFT	20,000	70	208	15	16-1/2	3-3/16	6-5/16	10-1/8	5-1/16				5	_	13/16
3754	15	LONG SHAFT	20,000	70	221	15	16-1/2	3-3/16	6-5/16	10-1/8	5-1/16	11	5-15/16	1-15/16	5	1/2	13/16
3757	18	SHORT SHAFT	30,000	70	259	18	19-1/2	3-3/16	6-5/16	10-1/8	5-1/16				5		13/16
3758	18	LONG SHAFT	30,000	70	275	18	19-1/2	3-3/16	6-5/16	10-1/8	5-1/16	11-1/4	6-3/16	2-7/16	5	5/8	13/16
3765	21	SHORT SHAFT	50,000	80	436	21	22-3/4	3-5/8	7-1/4	11-1/8	5-9/16				5-3/4	_	13/16
3766	21	LONG SHAFT	50,000	80	457	21	22-3/4	3-5/8	7-1/4	11-1/8	5-9/16	12-1/2	6-15/16	2-11/16	5-3/4	5/8	13/16
3773	24	SHORT SHAFT	70,000	100	575	24	25-3/4	3-3/4	7-1/2	12	6				6-1/2	-	15/16
3774	24	LONG SHAFT	70,000	100	597	24	25-3/4	3-3/4	7+1/2	12	6	13	7	2-15/16	6-1/2	3/4	15/16

DOWNS CRANE & HOIST CO., INC. LOS ANGELES • CALIFORNIA, U. S. A.

UNMOUNTED IRON WHEELS

These double flanged iron wheels are entirely suitable for all hand operated cranes. They may also be used for power driven cranes where the service is light and travel speeds are low and of an intermittent nature.

The treads are designed with a proper contour for operating on standard runway rails with a minimum of friction and wear. The hubs are large and may be adapted to any style of mounting.

Wheels will be furnished either "Rough Cast" or "Finished", as ordered.

When specified "Rough Cast", they will be supplied

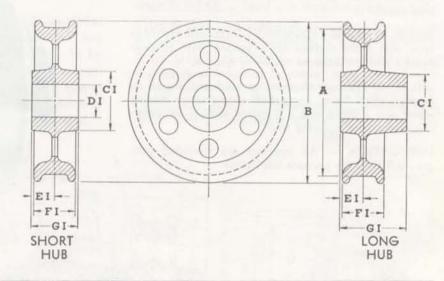
with sufficient excess material to finish to the dimensions listed.

"Finished" wheels will be machined to the purchasers' specifications. Rail size should be specified, otherwise wheels will be finished with straight treads for the maximum size of rail, as listed.

NOTE: The cored hole diameter "D1" may be varied to suit and either the core diameter or finished bore dimension must be specified.

We have a number of wheel patterns, which are not listed, and solicit your inquiries for crane wheels of any style or size.





ITEM	TREAD	HUB	CAPACITY	FOR MAX.	WEIGHT			DIMENS	IONS IN	INCHES		
NO.	DIA.	TYPE	PER WHEEL (LBS.)	A.S.C.E. RAIL	(LBS.)	A	B	CI	DI	El	FI	GI
3781	7-1/2*	SHORT	5,000	30#	36	7-1/2	8-3/4	4-1/4		1-13/16	3-1/8	3-5/8
3783	9	SHORT	6,000	35	47	9	10-1/2	4-3/4		1-13/16	3-1/8	3-5/8
3784	9	LONG	6,000	35	51	9	10-1/4	4-1/4		1-15/16	3-5/16	5-1/16
3785	10-1/2	SHORT	7,500	40	63	10-1/2	11-3/4	5-1/4	SEE	1-15/16	3-3/8	3-7/8
3787	12	SHORT	5,000	30	49	12	15-1/4	3	NOTE	1-13/16	3-1/8	3-5/8
3789	12	SHORT	10,000	40	73	12	13-1/4	5-1/2		1-15/16	3-3/8	3-7/8
3790	12	LONG	10,000	40	65	12	13-1/4	5-1/4		1-15/16	3-3/8	5-3/8
3791	15	SHORT	15,000	50	72	15	16-1/2	5-7/8		2 - 3/16	3-7/8	4-3/8
3792	15	LONG	15,000	50	83	15	16-1/2	5-7/8		2-3/16	3-7/8	6-1/8
3797	18	SHORT	20,000	60	139	18	19-3/8	6-5/8		2-7/16	4-1/8	4-7/8
3798	18	LONG	20,000	60	153	18	19-3/8	6-5/8		2-7/16	4-1/8	6-7/8

NOTES ON THE USE OF CRANE WHEELS

Wheels should be installed on a crane in such manner that they may be easily and quickly removed or replaced. This is a detail which, if overlooked, may mean a costly delay at some future time.

Driving wheel tread diameters should be matched as closely as possible to insure even travel on th runway.

Cranes should not be accelerated or decelerated at such a

rate as to cause the wheels to slip or spin. This will cause excessive wear, flat spots, and frequent wheel repairs.

All large structures, such as a crane or runway, will weave and deflect more or less under variations of loading, speed and runway conditions. The wheels should, therefore, be mounted in such a manner that they can readily adjust themselves to this condition without imposing severe overloads on bearings or other parts.

Crane runways must be straight, level, and parallel. Crooked or kinked rails will cause excessive wheel-flange loads and wear.

IRON WHEEL ASSEMBLIES—PIN & KEEPER TYPE

Complete wheel assemblies ready for mounting in end truck frames. They are suitable for all hand operated cranes and may be used for power operation where the travel speeds are low and of an intermittent nature.

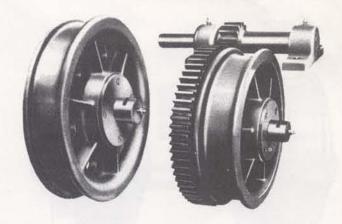
WHEELS — Grey iron, double flanged, with treads finished to fit the runway rail specified.

WHEEL BEARINGS — Standard quill roller bearings with a large overload capacity. They are carefully fitted in finished bore of the wheels and operate directly on the hardened axle which serves as a inner race.

AXLES — Hardened and precision ground to the bearing manufacturers' standard dimensions. They are hollow bored for grease, and have a milled cross slot for the keeper plate.

WHEEL GEAR — Grey iron with standard pitch cut teeth. Pressed and keyed on finished wheel hub.

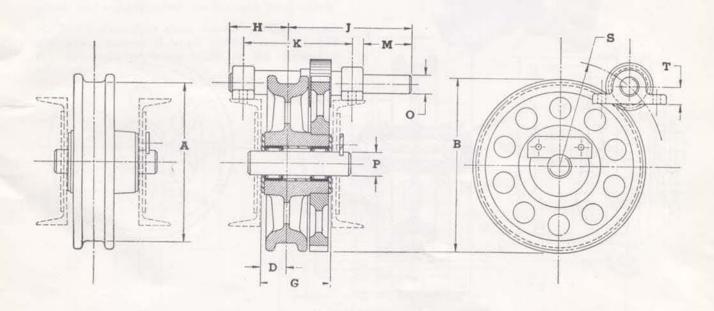
PINION GEAR — Steel with standard pitch cut teeth.



STUB SHAFT — Extended for coupling directly to a squaring shaft.

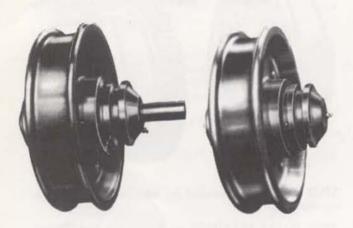
STUB SHAFT BEARINGS — Plain grey iron journal type housings with machined grease groove.

LUBRICATION — All bearings are provided with grease fittings for pressure lubrication.



ITEM	TREAD		CAPACITY	FOR MAX.	GEAR	WGT.		DI	MENSION	S IN INC	HES AP	PLYING T	O BOTH	PLAIN 8	GEARED	TYPES		
NO.	DIA.	TYPE	PER WHEEL (LBS.)	A.S.C.E. RAIL	RATIO	(LBS.)	A	8	D	6	н	J	ĸ	м	0	P	\$	т
3803	9	NON-GEARED	6,000	35#	4	62	9	10-1/2	2-3/16	5-9/16						1-5/8		
3804	9	GEARED	6,000	35	3.75-1	95	9	10-1/2	2-3/16	5-9/16	4-1/8	7-1/2	7-15/16	2-1/4	1-3/16	1-5/8	6.33	1-3/16
3809	12	NON-GEARED	10,000	40		83	12	13-1/4	2-3/16	5-7/8						2-1/4		1
3810	12	GEARED	10,000	40	4.12-1	141	12	13-1/4	2-3/16	5-7/8	4-7/8	10	9	3-3/4	1-7/16	2-1/4	8.20	1-5/8
3811	15	NON-GEARED	15,000	50		103	15	16-1/2	2-7/16	6-5/8		-	-			2-1/4		
3812	15	GEARED	15,000	50	4.00-1	205	15	16-1/2	2-7/16	6-5/8	5-1/2	11-1/2	10-1/4	4-1/2	1-3/4	2-1/4	10.00	1-5/8
3817	18	NON- GEARED	20,000	60		183	18	19-3/8	2-11/16	7-3/8						2-3/4		
3818	18	GEARED	20,000	60	4.11-1	322	18	19-3/8	2-11/16	7-3/8	5-3/4	12-1/2	.10-1/2	5	1-7/8	2-3/4	11.50	2

IRON WHEEL ASSEMBLIES—DIRECT DRIVE TYPE



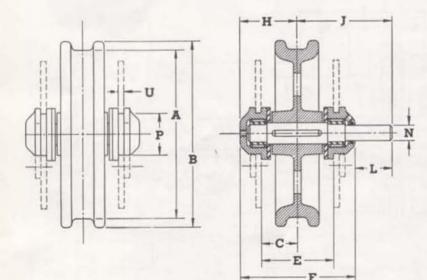
Light, free running, full roller bearing wheel assemblies ready for mounting in end truck frames. They are suitable for push type hand cranes, or other similar service where a gear reduction at the wheel is not required. The cartridge type housings should be mounted in the end truck frames with a small amount of side clearance so that bearings may properly align themselves without binding.

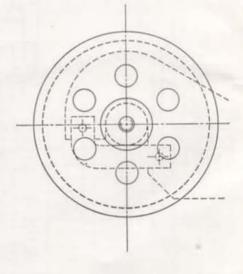
WHEELS — Grey iron, double flanged, with treads finished to fit the runway rail specified.

WHEEL BEARING HOUSINGS—Outboard cartridge type, with a flat surface for keeper plate and machined groove for mounting in truck frame.

AXLES — Finished all over, pressed and keyed in finished wheel bore. The long shaft extension on driving wheel axle is for coupling directly to a squaring shaft.

LUBRICATION — All bearings are provided with grease fittings for pressure lubrication.





ITEM	TREAD	-	CAPACITY	FOR MAX.	WEIGHT		DIMEN	SIONS IN	INCHES	APPLYING	TO BOT	H SHORT	& LONG	SHAFT TI	PES	
NO.	DIA.	TYPE	PER WHEEL (LBS.)	A.S.C.E. RAIL	(L85.)	A	8	c	E	F	н	J	L	N	P	U
3847	12"	SHORT SHAFT	5,000	30#	64	12	13-1/4	2-9/16	5-1/16	8-1/8				-	3	7/16
3848	12	LONG SHAFT	5,000	30	66	12	13-1/4	2-9/16	5-1/16	8-1/8	4-1/16	6-5/8	2-9/16	1-3/16	3	7/16
3849	12	SHORT SHAFT	10,000	40	100	12	13-1/4	2-11/16	5-3/8	8-7/8					3 - 3/4	5/8
3850	12	LONG SHAFT	10,000	40	102	12	13-1/4	2-11/16	5-3/8	8-7/8	4-7/16	7-7/16	3	1+7/16	3-3/4	5/8

IRON WHEEL ASSEMBLIES—SINGLE FLANGE TYPE

Single flange wheels are suitable for use on underhung cranes and trolleys. The plain wheels may be used on light free running push cranes. For heavier service or longer spans, geared wheels should be used to drive the crane and keep it square on the runway.

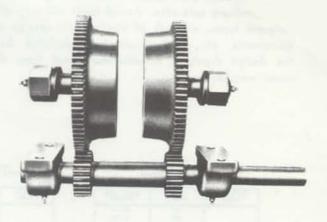
The wheel treads are designed with the proper taper to operate on the lower flanges of standard beam sections. These wheels may be fitted with quill type roller bearings or ball bearings, either of which may be specified. Axles are machined all over, hollow bored for grease, and are fitted with a heavy nut. The axle collar has a milled cross flat which is to be set against a key or lug on the truck members to prevent the axle from turning or working loose.

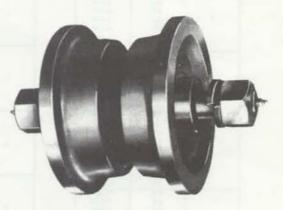
Gears are of standard pitch with machine cut teeth. The pinion shaft is provided with a long keyway and spacing sleeve between the pinions for adjusting the width to fit various sizes of runway beam sections. This shaft is supported in plain journal bearings with holes for bolting to the truck members. The shaft extension is for coupling directly to a squaring shaft.

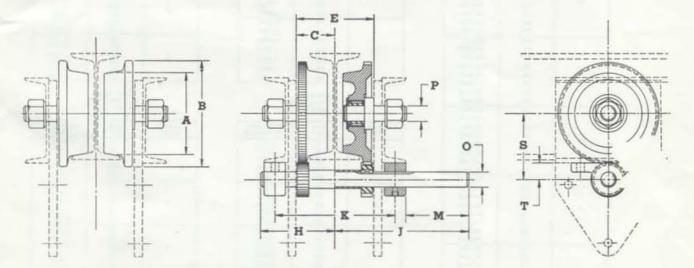
All bearings are provided with grease fittings for pressure lubrication.

The weights given below are for one pair of (two) wheels and the capacities are for each (one) wheel.

Horizontal dimensions given are for minimum, standard runway beams. If larger sections are used, add the difference in flange width to the dimensions affected.







ITEM	TREAD	aver.	CAPACITY	MIN, STD.	GEAR	WGT.		D	MENSION	S IN IN	CHES AP	PLYING T	0 BOTH	PLAIN B	GEARED	TYPES		
NO.	DIA.	TYPE	PER WHEEL (LBS.)	BEAM	RATIO	(LBS.)	A	8	c	£	н	J	к	M	0	P	s	T.
3873	4"	NON-GEARED	1,000	6-12.5#		2.4	4	5-3/8	2-1/2	5						1		
3875	5	NON-GEARED	1,500	7-15.3		39	5	6-1/2	3	6						1-1/4		
3876	5	GEARED	1,500	7-15.3	2.50-1	52	5	6-1/2	3	6	5-1/2	9-7/8	9-1/4	4-5/8	1-3/16	1-1/4	4-3/8	1-3/16
3877	6	NON-GEARED	2,000	8-18.4		43	6	7-3/4	3-3/16	6-3/8						1-1/4		
3878	6	GEARED	2,000	8-18.4	3.00-1	60	6	7-3/4	3-3/16	6-3/8	5-7/8	10-1/4	9-7/8	4-5/8	1-3/16	1-1/4	5	1-3/16
3879	8	NON-GEARED	3,200	10-25.4		78	8	9-3/4	3-21/32	7-5/16			1			1-1/2		
3880	8	GEARED	3,200	10-25.4	3.17-1	110	8	9-3/4	3-21/32	7-5/16	6-7/8	12-1/2	11-1/4	5-7/8	1-7/16	1-1/2	6-1/4	1-5/8

CRANE WHEEL LOADS APPROXIMATE FOR ESTIMATING ONLY

The wheel loads given below are sufficiently accurate for preliminary estimates. Actual loads will vary with different types, methods of construction, service requirements, etc., and should be calculated from the design drawings, or obtained direct from the crane manufacturer.

A.S.C.E. RAIL SIZES	WEIGHT	A	8	C	1
DIMENSIONS IN INCHES	12	2	2	1	5/32
WEIGHT IN POUNDS	16	2-3/8	2-3/8	1-11/64	3/16
PER YARD	20	2-5/8	2-5/8	1 = 11/32	1/4
FER TARE	25	2-3/4	2-3/4	1-1/2	1/4
	30	3-1/8	3-1/8	1 - 11/16	5/16
	35	3-5/16	3-5/16	1-3/4	5/16
S -11	40	3-1/2	3-1/2	1-7/8	5/16
H F	45	3-11/16	3-11/16	2	5/16
S CO.	50	3-7/8	3-7/8	2-1/8	5/16
	35	4-1/16	-4-1/16	2-1/4	5/16
A	60	4-1/4	4-1/4	2-3/8	5/16
	65	4-7/16	4-7/16	2-13/32	5/16
	70	4-5/8	4-5/8	2-7/16	5/16
15	75	4-13/16	4-13/16	2-15/32	5/16
-	80	5	5	2-1/2	5/16
	85	5-3/16	5-3/16	2-9/16	5/16
-	90	5-3/8	5-3/8	2-5/8	516
B	100	5-3/4	5-3/4	2-3/4	5/16

VERHEAD
GIRDER CRANES

HAND GEARED SINGLE "1" BEAM CRANES WITH CHAIN HOIST & TROLLEY

CAPACITY SPAN WHEEL LOAD

HAND GEARED DOUBLE 'I' BEAM CRANES WITH CABLE REEVED TROLLEY HOIST

CAPACITY (TONS)	SPAN (FEET)	(POUNDS)
144 March 1	20	8,400
	25	8,700
	30	9,200
	35	10,000
5	40	11,500
	50	12,500
	60	15,000
Contract of	70	16,000
	20	10,900
	20	11,500
	\$0	12,100
	35	12,800
	40	13,200
	50	14,500
	60	16,600
	70	\$7,700
	20	14,500
	2.5	15,300
	30	16,000
7-1/2	35	17,000
1.02	40	17,500
	50	18,800
	60	20,500
	70	23,000
211	20	17,300
	25	17,700
	30	18,200
	35	19,000
10	40	20,400
	50	22,100
	60	24,500
	70	28,800
	20	23,500
	25	24,400
	30	25,100
	35	25,500
18	40	- 26,400
	80	27,000
	60	29,200
1. S.	70	30,000
	20	28,000
	25	29,500
	30	32,000
	35	33,000
20	40	34,000
	80	36,000
	60	39,000
	70	42,000
	20	38,000
	2.5	39,000
	30	40,000
25	55	41,000
	40	41,500
	50	43,000
	60	44,600
	70	47,000
	20	44,500
	25	45,500
	30	47,000
30	35	48,500
	40	50,000
	50	52,000
	60	55,500
	70	57,000

(TONS)	(FEET)	(POUNDS)
	10	1,500
	15	1,600
	20	1,700
	25	1,800
	30	1,850
	35	1,900
	40	2,000
	10	2,550
	15	2,700
	20	2,800
1	25	2,900
	30	3,000
	35	3,100
	40	3,200
1	10	3,600
	15	3,650
	20	3,750
3	2.5	3,900
	30	4,000
	35	4,050
	40	4,200
	10	5,900
	15	6,000
	20	6,300
5	2.5	6,450
	30	6,600
	35	6,700
	40	6,900
	10	11,300
10	15	11,400
	20	11,600
	25	11,800
	30	12,000
	35	12,250
	40	12,400

UNDERHUNG SINGLE "I" BEAM CRANES WITH CHAIN HOIST & TROLLEY

CAPACITY (TONS)	SPAN (FEET)	WHEEL LOAD (TWO WHEELS)
î.,	10	1,500
	15	1,550
	20	1,600
	25	1,700
	30	1,800
	10	2,500
	15	2,600
	20	2,700
	25	2,800
	30	2,900
3	10	3,500
	15	3,600
	20	3,700
	25	3,900
	30	4,000
8	10	5,600
	15	5,700
	20	5,800
	25	6,000
	30	6,100

CAPACITY (TONS)	SPAN (FEET)	WHEEL LOAD (POUNDS)
	15	4,400
	20	4,500
	25	4,650
3	30	5,200
	35	5,500
	40	5,900
	15	6,750
10.000	20	8,900
5	25	7,100
	30	7,300
1.1 - 1 1.1	35	7,500
	40	8,000
	15 20	9,300 9,400
	25	9,600
7-1/2	30	9,800
	35	10,400
	40	10,700
	15	11,700
	20	11,900
10	25	12,300
10	30	12,600
	35	13,200
	40	13,400
The Horses	15	18,250
	20	18,400
15	25	18,600
	30	19,100
	35	19,600
	and the second se	23,750
1000	15 20	23,900
	25	24,150
20	30	24,500
	35	25,100
	40	25,800
	15	29,050
	20	29,300
	25	29,700
25	30	30,250
	35	30,900
	40	31,300

HAND PUSH SINGLE "I" BEAM CRANES WITH CHAIN HOIST & TROLLEY

CAPACITY (TONS)	SPAN (FEET)	WHEEL LOAD (POUNDS)
	10	1,500
	15	1,350
1	20	L400
	25	1,475
	30	1,600
	10	2,450
	15	2,500
2	20	2,600
1	2.5	2,750
	30	2,850
	10	3,550
	15	3,700
3	20	3,775
	25	3,900
	30	3,975
	10	5,800
	15	5,950
5	20	6,075
	25	6,300
	30	6,375

DOWNS CRANE & HOIST CO., INC.

8827 S. JUNIPER STREET . LOS ANGELES, CALIFORNIA, U.S.A. 90002