CRANK BALANCED PUMPING UNITS

GENERAL CATALOG

Trico Crank Balanced Pumping Units are designed and manufactured in accordance with API standards 11-E and the API monogram is carried on both the structural assembly and gearbox.

Each Trico pumping unit is a precision piece of machinery manufactured to the highest standards of the industry — so much so that each unit carries a full two-year warranty on parts and labor backed by Trico Industries, Inc. Provided proper installation and normal use and maintenance procedures are followed, Trico pumping units should provide many years of dependable, trouble-free service.

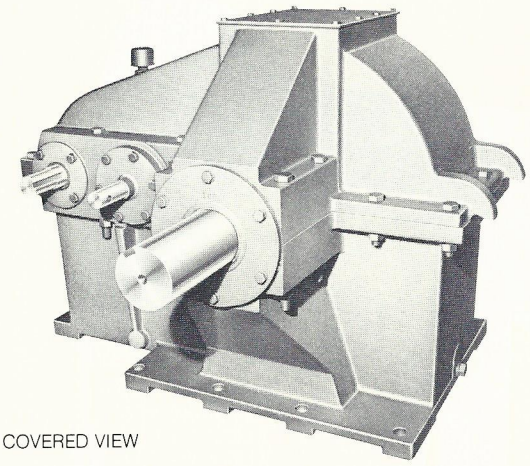
Trico pumping units are furnished with API-rated double-reduction gear reducers, with gear ratios of approximately 30:1. The structural assemblies can be furnished with T-type bases for use on cement foundations or with heavy-duty portable-type bases for use on gravel foundations with cross timbers as supports. Elevated electric-motor prime-mover bases can be furnished as well as prime-mover bases to fit multi-cylinder gas or slow speed engines. Belt guards are available for all types of prime movers. Crank guards and foundation holddowns are also available.

Trico Crank Balanced Pumping Units are available in the following API sizes:

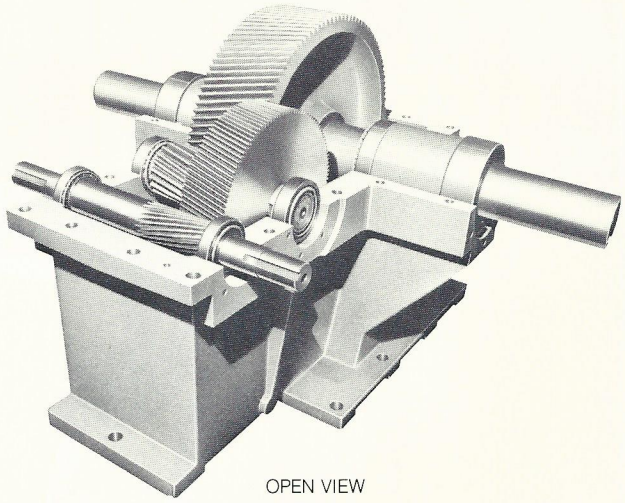
C-114D-143-64
C-114D-119-86
C-160D-143-64
C-160D-173-74
C-160D-200-74
C-160D-213-86
C-160D-173-100
C-228D-213-86
C-228D-246-86
C-228D-213-120
C-320D-305-100
C-320D-256-120

Trico also furnishes "California" models of the above sizes for shallow well, high production applications.

Trico Industries, Inc. has capable sales and service personnel throughout U.S. oil producing areas. These men are not only well versed in the proper sizing of pumping units, but are trained to provide any service, from routine maintenance to complete design and construction of turn-key production facilities.



COVERED VIEW



OPEN VIEW

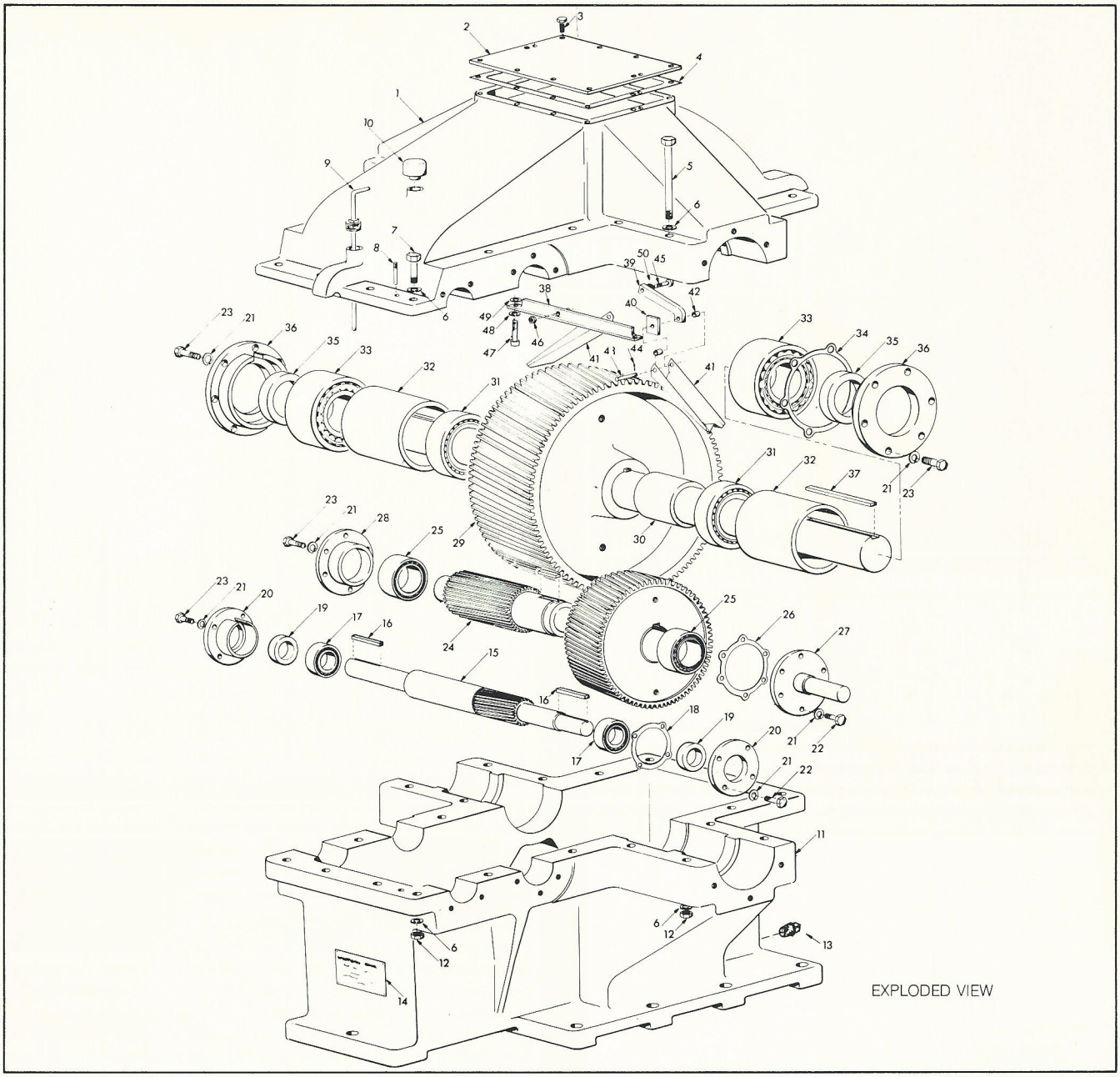
Trico Crank-Balanced Pumping Units feature a heavy-duty helical, double-reduction gearbox manufactured exclusively for Trico by Western Gear Corporation. These gearboxes are built in accordance with API standards and designed especially for rugged oilfield use.

The housings are of a cast iron, stress-relieved, two-piece design, featuring full depth external ribs and large continuous bearing bosses to ensure maximum support for the gear elements and rotating counterweights. Single helical gearing is employed throughout to achieve maximum space utilization and minimum weight, as well as smoothness of operation. Tapered roller bearings, with an average life of 100,000 hr at rated load, are fitted to all shafts to absorb gearing and external loads.

An oil splash and wiper lubrication system ensures positive lubrication of all gears and bearings. The gearbox can also be rotated in either direction without affecting the lubrication system. Nitrile, double lip-type oil seals on all shaft extensions provide maximum oil retention and protection against abrasive dust and moisture.

GEAR SPECIFICATIONS—DOUBLE REDUCTION (SINGLE HELICAL)

PEAK TORQUE @ MAX. CONT. SPEED (in.-lb)	114,000	160,000	228,000	320,000
Gear Ratio	29.96:1	29.53:1	29.30:1	29.61:1
Standard Sheave	30" 3C	30" 4C	30" 5C	30" 6C
(a) Hub Bore	2"	2-1/4"	2-1/2"	3"
(b) Hub Keyway	1/2" x 1/4"	1/2" x 1/4"	5/8" x 5/16"	3/4" x 3/8"
Weight of Gearbox (lb)	2,500	3,500	4,900	7,300
Shaft Diameter (in.)				
(a) Low Speed	4.330	5.500	5.875	6.250
(b) High Speed	2.00	2.25	2.50	3.00
Oil Capacity (gal)	27	22	57	53
Teeth Cut and Finish Process	Hobbing	Hobbing	Hobbing	Hobbing
Teeth Hardening	Thru	Thru	Thru	Thru
Gear to Shaft	Shrunk	Shrunk	Shrunk	Shrunk
Pinion Shaft Bearings	Tapered Roller	Tapered Roller	Tapered Roller	Tapered Roller
Crank Shaft Bearings	Tapered & Roller	Tapered & Roller	Tapered & Roller	Tapered &nRoller
Housing	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Oil Seals	Nitrile	Nitrile	Nitrile	Nitrile
Pinion Shaft Material, Steel	4340 Alloy	4340 Alloy	4340 Alloy	4340 Alloy
Crank Shaft Material, Steel	4140 Alloy	4140 Alloy	4140 Alloy	4140 Alloy
Gear Material, Steel	4340 Alloy	4340 Alloy	4340 Alloy	4340 Alloy
Pinion Hardness, BHn.	352/388	352/388	352/388	363/393
Gear Hardness, BHn.	302/341	302/341	302/341	311/341
Rated Input Speed (rpm)	600	600	600	600
Rated Output Speed (rpm)	20	20	20	20
Pitch Line Velocity (fpm)				
(a) Low Speed	121	128.1	144	170.2
(b) High Speed	339	459.5	501	612.9



EXPLODED VIEW

Item	Nomenclature
1	Gearcase, Upper (1)
2	Inspection Cover (1)
3	Cap Screw (10)
4	Gasket, Cover (1)
5	Cap Screw (12)
6	Washer, Lock (44)
7	Cap Screw (10)
8	Pin, Taper (2)
9	Dipstick (1)
10	Breather Cap (7)
11	Gearcase Lower (1)
12	Nut, Hex (22)
13	Plug, Drain (1)
14	Nameplate (1)
15	Pinion, H.S. (1)
16	Key, Square (2)
17	Roller Bearing (2)
18	Shim Set (1)
19	Seal, Oil (2)
20	Retainer (2)
21	Washer, Lock (32)
22	Cap Screw (10)
23	Cap Screw (22)
24	Gear and Pinion Assembly, I.S. (1)
25	Bearing, Roller, Tapered (2)
26	Shim Set (1)
27	Brake, Torque Shaft (1)
28	Retainer (1)
29	Gear Shaft Assembly, L.S. (1)
30	Spacer, Inboard, L.S. (1)
31	Bearing, Roller, Tapered (2)
32	Spacer, Outboard, L.S. (2)
33	Bearing, Roller, Cylindrical (2)
34	Shim Set (2)
35	Seal, Oil (2)
36	Retainer (2)
37	Key, Square (2)
38	Bracket, Support (1)
39	Arm, Scraper (2)
40	Blade, Scraper (2)
41	Trough, Oil (2)
42	Spacer (4)
43	Pin, Clevis (2)
44	Pin, Cotter (2)
45	Screw, Shoulder (1)
46	Nut, Self-Locking (1)
47	Screw (2)
48	Washer, Lock (2)
49	Washer, Flat (4)
50	Washer, Flat (1)

Number following nomenclature description indicates the number of units per assembly.

TRICO INDUSTRIES, INC.

TRICO PUMPING UNIT

Maintenance and Lubrication Instructions

GENERAL MAINTENANCE

After the **first week** of operation, the entire unit should be checked for proper alignment and all bolts should be checked and re-tightened if necessary. The oil level in the gearbox should be inspected and both the gearbox and structural bearings should be examined for abnormal leaks. The V-belt tension should also be checked.

On a **monthly** basis, the following procedures should also be performed in addition to those above. The gearbox, structural bearings and other working components should be checked for any unusual sounds. Further pinpointing of these sounds with appropriate correction and adjustment could prevent expensive repairs or a possible breakdown of the unit.

The entire unit should be inspected thoroughly for any misalignment, excessive oil leaks or abnormal rust that might indicate a joint is working loose or fretting.

The safety brake should be carefully inspected to guarantee all its components are in proper working order. **Please remember that the safety brake should always be applied slowly to avoid damage to the gearbox and bearings.**

Every six months, along with the above, a sample of gearbox oil should be collected in a glass container and visually inspected for any water emulsion, dirt, sludge or other contamination. If the oil has an abnormal odor or appearance, it should be replaced.

LUBRICATION SPECIFICATIONS

Gear Reducers

For 0° to 125°F operation, use an oil with an AGMA lube number of 5EP. The pour point of the oil should be 5°F, or lower.

For −30° to +15°F operation, use an oil with a AGMA lube number of 4EP. The pour point of the oil should be −15°F, or lower.

Please note that this is a premium-mild extreme pressure lubricant with rust and oxidation inhibitors and an anti-foam agent.

The oil capacities of the various sizes of Trico pumping units are:

114 - 27 gallons
160 - 22 gallons
228 - 57 gallons
320 - 53 gallons

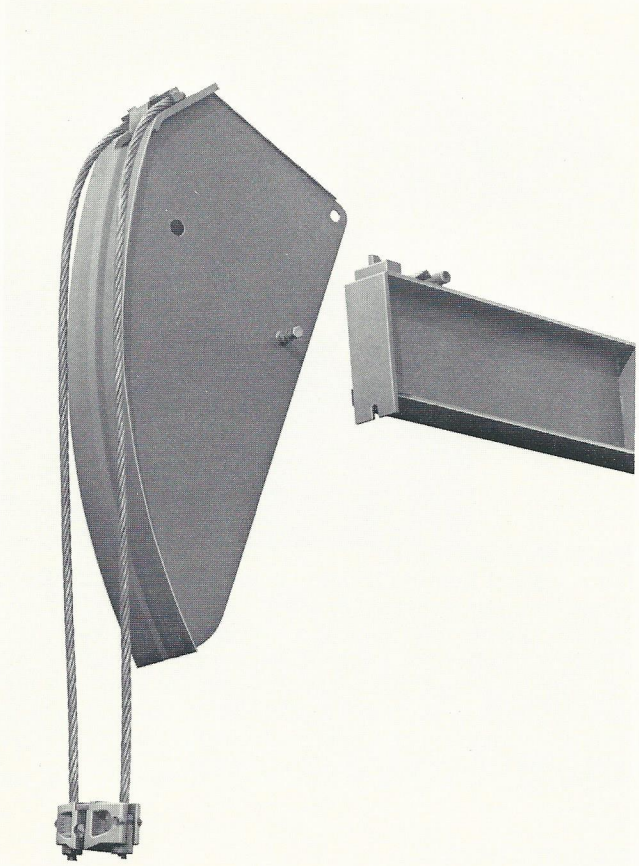
Structural Bearings

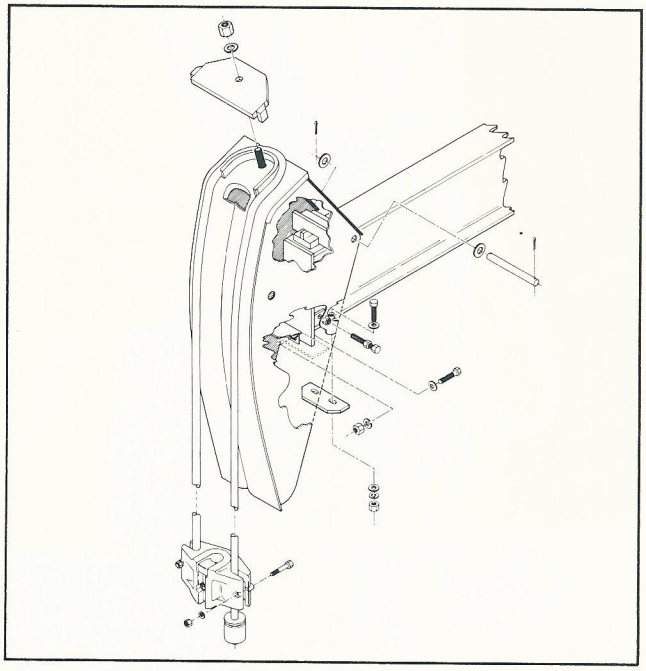
The structural bearings are lubricated at the factory, however, the ground lubrication system should be checked on a monthly basis with relubrication of all structural bearings as required to ensure proper operation.

For 0° to 125°F operation, use a premium NLG1 No. 1 lithium soap-base grease with a lead napthanate extreme pressure additive.

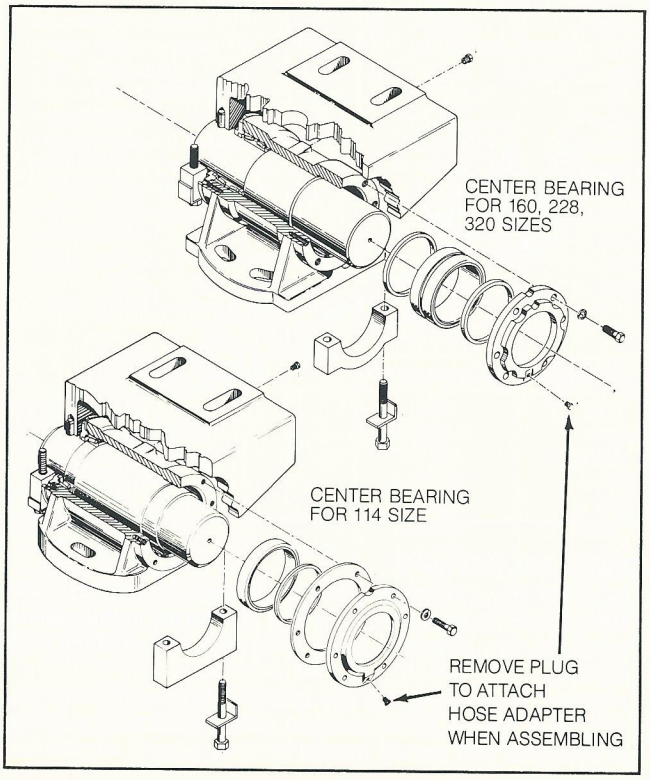
For −30° to 0°F operation, use a premium NLG1 No. 0 grease with a lead napthanate extreme pressure additive.

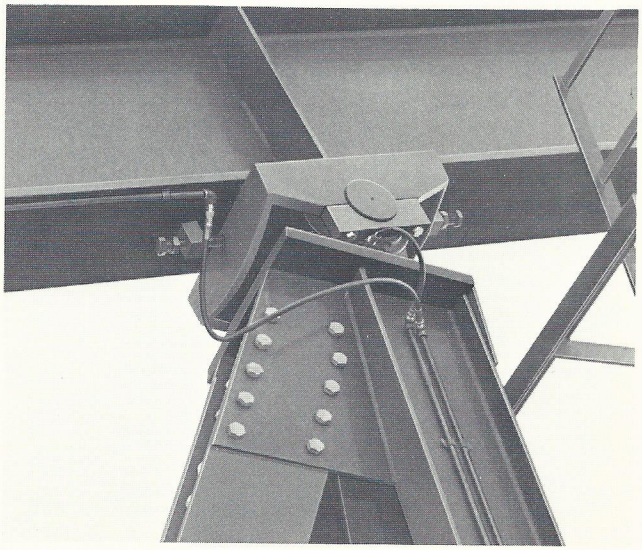
Do **not** use a soda soap grease.



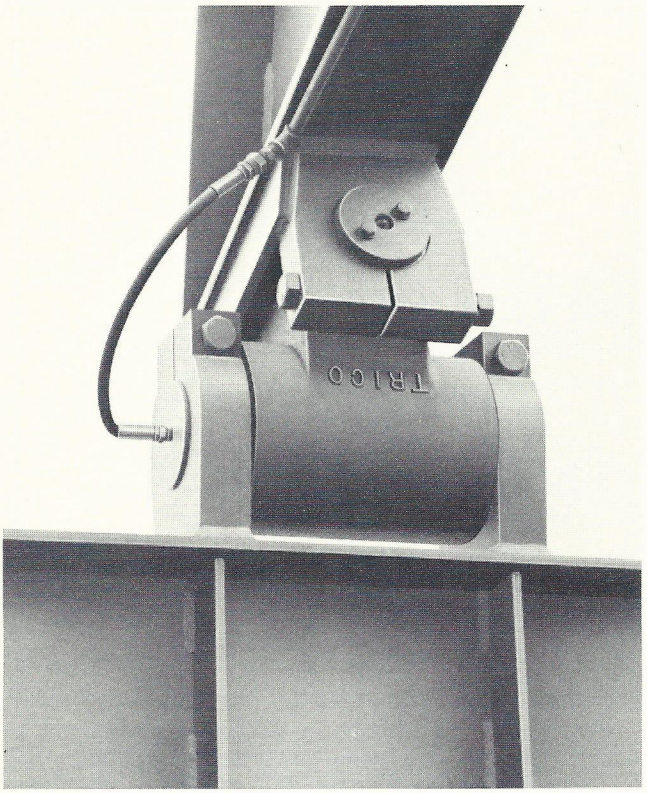


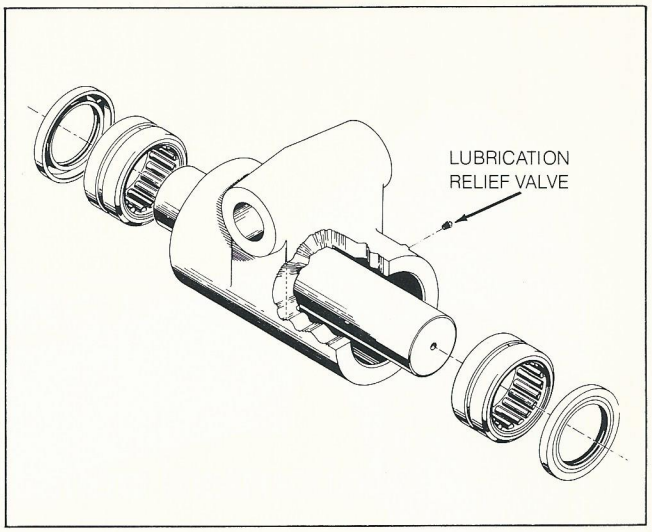
HORSEHEAD AND WIRELINE ASSEMBLY
The horsehead is made of heavy steel plate. Its rugged construction affords greater strength and structural durability. For all units with a stroke of up to 120 in. maximum, the horsehead is designed to hinge back over the walking beam to provide easy access and adequate clearance during well servicing operations. Adjusting lugs on both sides of the head allow proper alignment with the polished rod without disconnecting the well load.





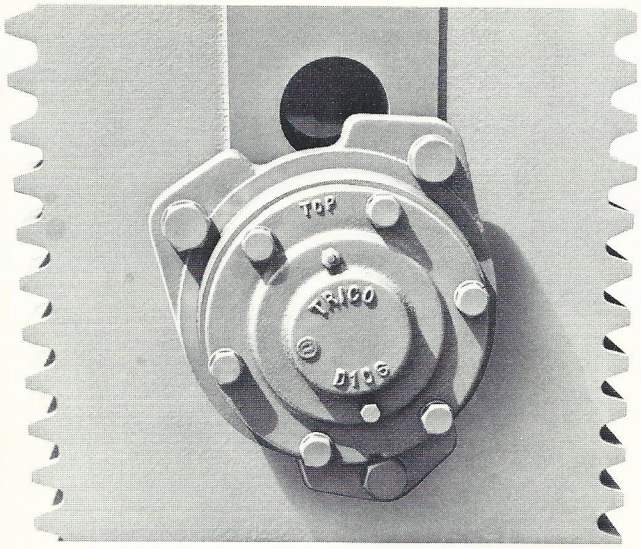
CENTER BEARING
The center bearing assembly consists of a heavy ductile-iron housing and heavy-duty, antifriction, tapered roller bearings designed for durability and long life. It is uniquely mounted to both the walking beam and samson post, to allow final adjustment in the alignment of the wireline assembly and polished rod to the center of the wellhead. Ground level lubrication provides easy and safe maintenance.

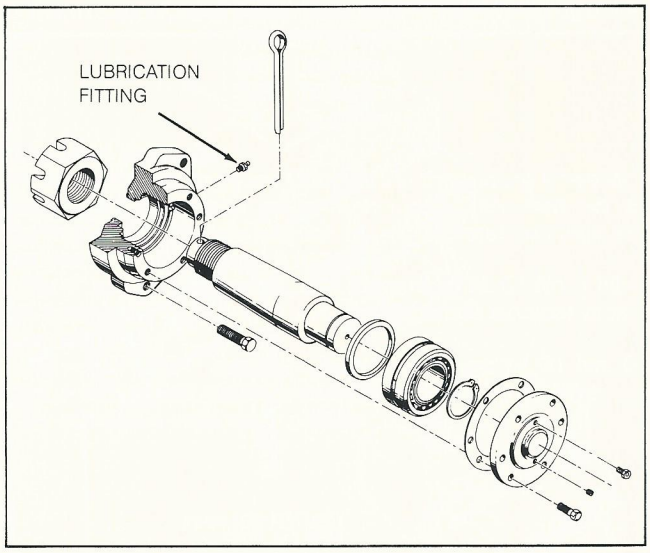




EQUALIZER BEARING

The equalizer bearing housing is manufactured of heavy ductile-iron, and machined to accommodate heavy-duty, antifriction, tapered roller bearings. This equalizer bearing assembly is designed to equalize loading on the pitman and crank pin bearings. An adjustable shaft, connecting the equalizer bearing assembly to the walking beam, serves to eliminate damaging end play. Lubrication is accomplished through the ground level lubrication system.

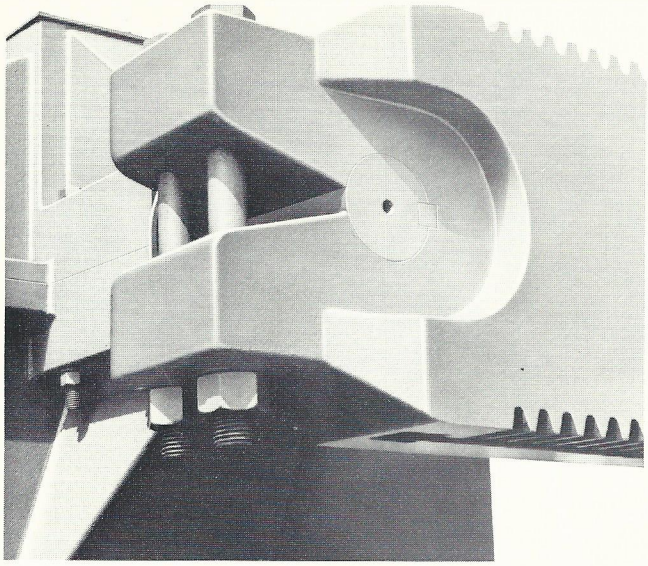


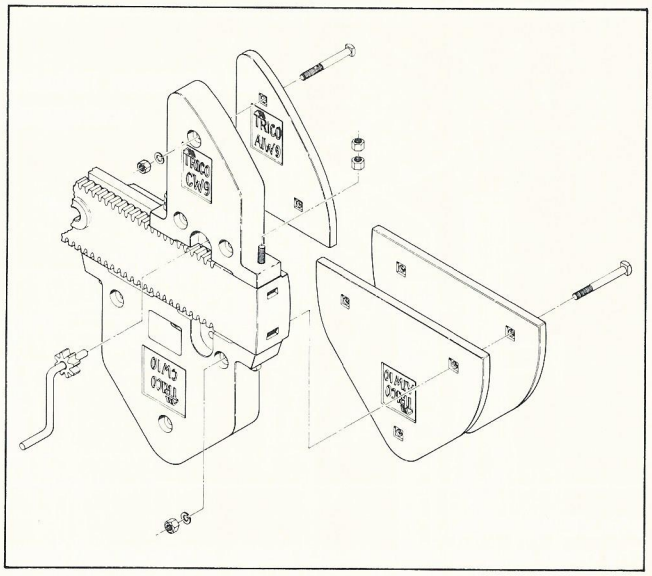


CRANK PIN BEARING

The crank pin bearing assemblies feature antifriction, self-aligning roller bearings that connect the cranks to the pitman arms. They are designed for long life with little maintenance required.

The crank pin bearings are adequately lubricated at the factory but should be re-checked prior to installation. They are equipped with grease fittings for easy ground lubrication.





COUNTERBALANCE CRANK

The cranks are designed for maximum safety and ease of operation in the field. The cranks are clamped on the slow speed shaft by means of bolts and additionally secured by heavy keys. This makes easy application and removal in the field practical.

The cranks also feature a rack and pinion adjustment system that uses horizontally sliding weights to change the counterbalance effect. This system allows fast and easy positioning of the counterweights by only one man. This rack and pinion system is furnished on all sizes of Trico pumping units.

Auxiliary counterweights that bolt onto the inner side of the master counterweights are also available for additional counterbalance.

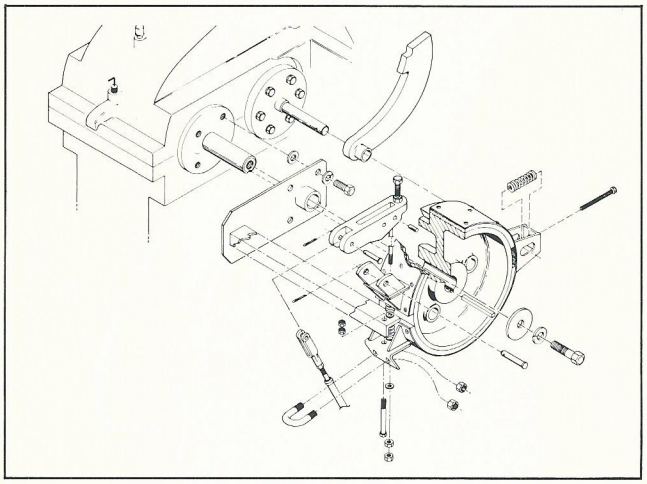
COUNTERBALANCE APPLICATION DATA

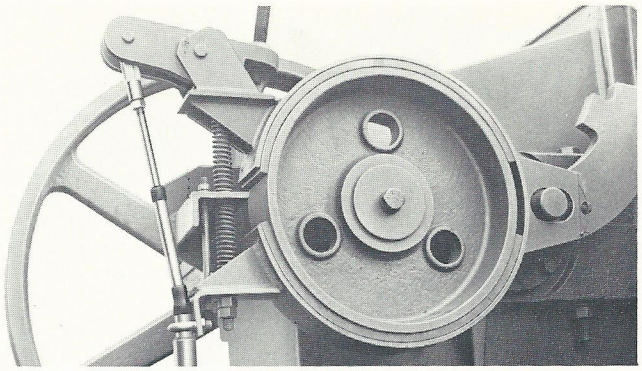
All counterbalance shown in pounds, effective at the polished rod, with weights at maximum position, including structural unbalance.

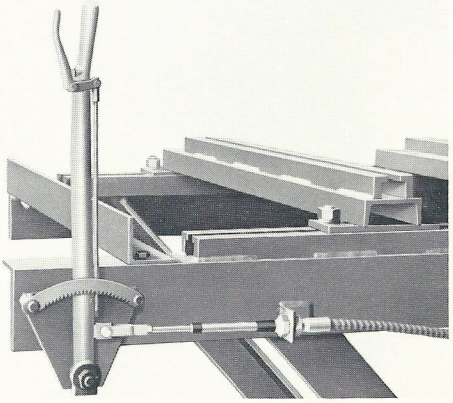
UNIT SIZE	C-114D-143-64	C-114D-119-86	C-160D-143-64	C-160D-173-74	C-160D-200-74	C-160D-213-86
Stroke	64″	86″	64″	74″	74″	86″
Structural Unbalance	+ 300 lb	− 300 lb	+ 300 lb	+ 450 lb	+ 800 lb	+ 400 lb
Cranks (Trico Number)	D 131	D 199	D 182	D 873	D 875	D 875
C'Bal. Cranks Only	2,679	3,238	2,679	4,524	7,061	5,815
2 No. 9 C'Wts. (800 #)	4,910	5,323	4,910	6,931	9,879	8,252
4 No. 9 C'Wts.	7,141	7,408	7,141	9,339	12,698	10,690
4 No. 9 C'Wts. + 2 Aux. C'Wts. (230 #)	7,782	8,008	7,782	10,031	13,508	11,391
4 No. 9 C'Wts. + 4 Aux. C'Wts.	8,424	8,608	8,424	10,723	14,319	12,092
4 No. 9 C'Wts. + 8 Aux. C'Wts.	9,707	9,807	9,707	12,107	15,940	13,494
2 No. 10 C'Wts. (1400 #)	6,229	6,416	6,229	8,193	11,457	9,617
4 No. 10 C'Wts.	9,780	9,594	9,780	11,862	14,854	13,419
4 No. 10 C'Wts. + 2 Aux. C'Wts. (430 #)	10,979	10,715	10.979	13,156	17,369	14,730
4 No. 10 C'Wts. + 4 Aux. C'Wts.	12,178	11,836	12,178	13,450	18,884	16,040
4 No. 10 C'Wts. + 8 Aux. C'Wts.	**	**	**	17,038	**	18,661

UNIT SIZE	C-160D-173-100	C-228D-213-86	C-228D-246-86	C-228D-213-120	C-320D-305-100	C-320D-256-120
Stroke	100″	86″	86″	120″	100″	120″
Structural Unbalance	+ 300 lb	+ 400 lb	+ 610 lb	− 400 lb	+ 450 lb	− 450 lb
Cranks (Trico Number)	D 875	D 876	D 433	D 516	D 682	D 682
C'Bal. Cranks Only	4,959	5,815	8,897	5,525	7,559	5,466
2 No. 9 C'Wts. (800 #)	7,057	8,252	11,982	7,738	10,213	7,675
4 No. 9 C'Wts.	9,154	10,690	15,067	9,950	12,868	9,885
4 No. 9 C'Wts. + 2 Aux. C'Wts. (230 #)	9,758	11,391	15,954	10,586	13,631	10,520
4 No. 9 C'Wts. + 4 Aux. C'Wts.	10,361	12,092	16,841	11,223	14,394	11,155
4 No. 9 C'Wts. + 8 Aux. C'Wts.	11,567	13,494	18,616	12,495	15,920	12,425
2 No. 10 C'Wts. (1400 #)	8,231	9,617	13,833	9,066	11,806	9,001
4 No. 10 C'Wts.	11,503	13,419	18,770	12,606	16,053	12,536
4 No. 10 C'Wts. + 2 Aux. C'Wts. (430 #)	12,630	14,730	20,429	13,795	17,480	13,723
4 No. 10 C'Wts. + 4 Aux. C'Wts.	13,758	16,040	22,087	14,984	18,907	14,911
4 No. 10 C'Wts. + 8 Aux. C'Wts.	16,013	18,661	**	17,363	21,760	17,285

**Not Recommended

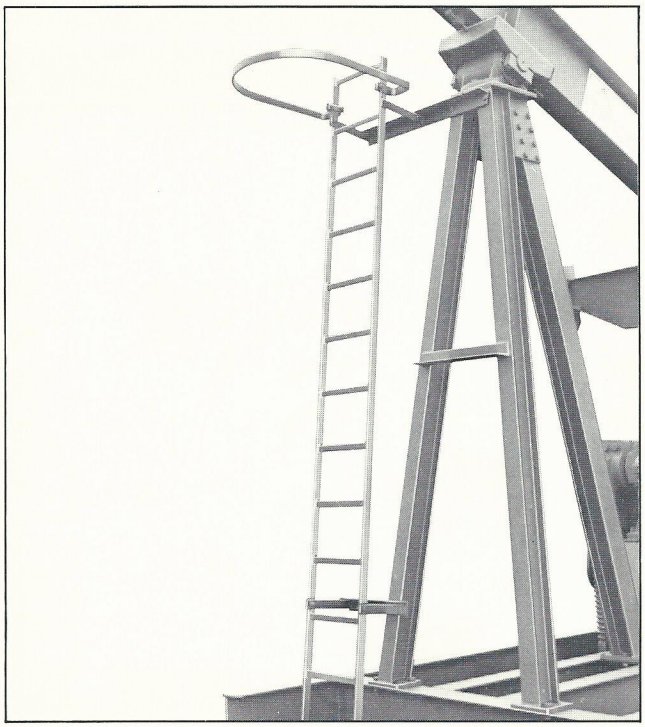






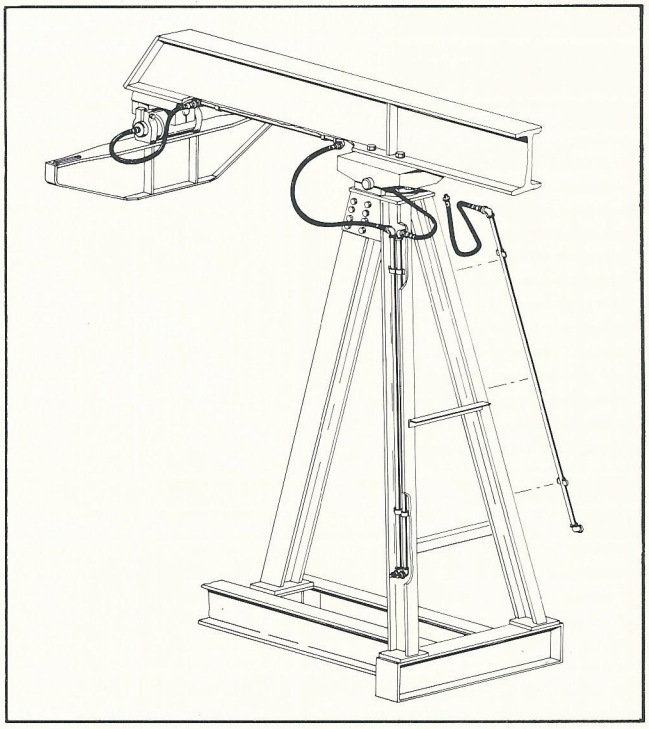
BRAKE ASSEMBLY

The brake assembly consists of a quality manufactured brake drum and a one-piece brake shoe that is actuated by a locomotive-type brake control lever. The brake control lever, which is safely located away from rotating counterweights by a connecting covered brake cable, has a spring actuated pawl that engages a ratchet-type assembly. This design provides greater holding capacity, and insures smoother braking action without grabbing. Trico units are also furnished with a safety stop as an additional safety measure during erection, maintenance and/or lubrication procedures.



SAFETY LADDER

The safety ladder is designed to conform to all OSHA safety regulations for proper support and protection of operating and maintenance personnel. It is made of heavy-duty steel and securely attached during erection to the upper and lower ends of the samson post.

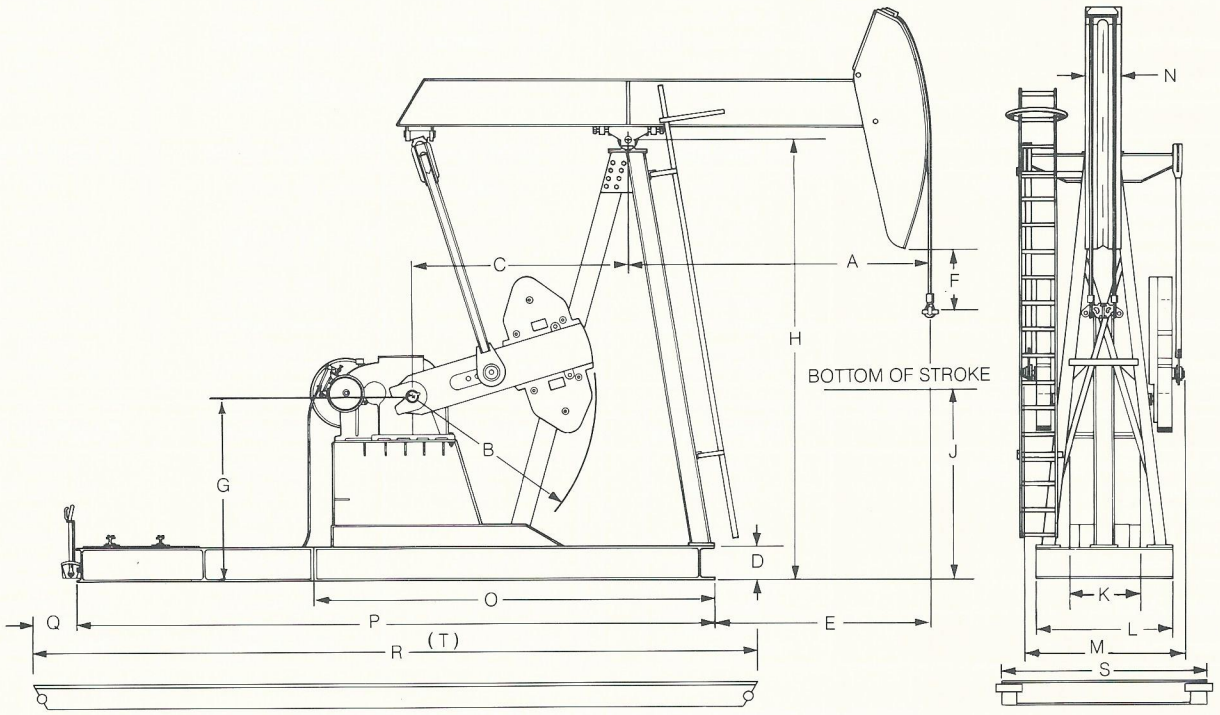


GROUND LUBRICATION SYSTEM

All Trico pumping units are equipped with ground level lubrication systems for trouble-free service and ease of maintenance. This system enables the structural bearings to be relubricated from a safe ground level position.

TRICO INDUSTRIES, INC.

CONVENTIONAL PUMPING UNIT ASSEMBLIES
GENERAL DIMENSIONS



GENERAL DIMENSIONS (in.)

SIZE	A	B	C	D	E	F	G	H	J	K	L	M	N	O
C-114D-143-64	84	56	72	12	62-3/4	18-3/4	57	144	53-1/4	25	72	66-3/4	9	128-1/4
C-114D-119-86	111	68	84	12	79	15-1/2	69	165-3/4	54	25	72	66-3/4	12	151
C-160D-143-64	84	56	72	12	62-3/4	18-3/4	57	144	53-1/4	25	72	66-3/4	9	128-1/4
C-160D-173-74	96	68	84	12	64	17-1/4	69	165-3/4	68-1/4	25	72	67-1/2	9	151
C-160D-200-74	96	78	96	16	59-1/2	35-3/4	80-1/8	192	77-1/4	29	72	67-1/2	9	169
C-160D-213-86	111	78	96	16	74-1/2	24-1/2	80-1/8	192	74-1/2	29	72	67-1/2	12	169
C-160D-173-100	129	78	96	16	92-1/2	12	80-1/8	192	63	29	72	67-1/2	12	169
C-228D-213-86	111	78	96	16	74-1/2	24-1/2	80-1/8	192	74-1/2	37	82	78-1/2	12	177-1/2
C-228D-246-86	111	95	111	16	69-1/2	60-3/4	96-3/8	228	75-1/2	37	82	78-1/2	12	197-1/2
C-228D-213-120	153	95	111	16	113-1/2	26	96-3/8	228	75-1/2	37	82	78-1/2	12	197-1/2
C-320D-305-100	129	95	111	16	87-1/2	46-1/4	97	228	75-3/4	43	82	86	12	203-1/2
C-320D-256-120	155	95	111	16	113-1/2	26	97	228	75-3/4	43	82	86	12	203-1/2

SIZE	P	Q	R	S	T
C-114D-143-64	243	3	258	80	152
C-114D-119-86	243	3	258	80	175
C-160D-143-64	243	3	258	80	152
C-160D-173-74	243	3	258	80	175
C-160D-200-74	261	5	281	83	211
C-160D-213-86	261	5	281	83	211
C-160D-173-100	261	5	281	83	211
C-228D-213-86	295	5	315	93	211
C-228D-246-86	315	5	335	93	211
C-228D-213-120	315	5	335	93	211
C-320D-305-100	315	5	335	93	235
C-320D-256-120	315	5	335	93	235

Dimension Description

- A Center bearing to center well
- B Crank radius
- C Center bearing to drive shaft
- D Base height
- E Center wellhead to front T-base
- F Top of carrier bar to horsehead
- G Bottom of base to drive shaft
- H Bottom of base to center bearing
- J Bottom of stroke
- K Width of main base
- L T-base front beam
- M Over crank-pin housing
- N Carrier bar spread
- O T-base
- P T-base & add on base
- Q Set-back
- R Wide base-multicycle
- S Wide base width
- T Wide base electric motor high prime

TRICO INDUSTRIES, INC.

STRUCTURAL SPECIFICATIONS

ITEM	C-114D-143-64	C-114D-119-86	C-160D-143-64	C-160D-173-74
Peak Polished Rod Capacity (lb)	14,300	11,900	14,300	17,300
Stroke Lengths (in.)	64, 52, 40	86, 72, 59	64, 52, 40	74, 62, 51
Walking Beam (in. x lb)	18 x 71	24 x 84	18 x 71	24 x 84
Wireline Hanger (in.)	1-1/8 x 202	1-1/8 x 255	1-1/8 x 202	1-1/8 x 298
Crank Pin Bearing	Self-Aligning Roller Bearings	Self-Aligning Roller Bearings	Self-Aligning Roller Bearings	Self-Aligning Roller Bearings
Equalizer Bearing	Roller Bearings	Roller Bearings	Roller Bearings	Roller Bearings
Center Bearing	Tapered Roller Bearings	Tapered Roller Bearings	Tapered Roller Bearings	Tapered Roller Bearings

ITEM	C-160D-200-74	C-160D-213-86	C-160D-173-100	C-228D-213-86
Peak Polished Rod Capacity (lb)	20,000	21,300	17,300	21,300
Stroke Lengths (in.)	74, 64, 54	86, 74, 62	100, 86, 73	86, 74, 62
Walking Beam (in. x lb)	24 x 94	24 x 104	24 x 104	24 x 104
Wireline Hanger (in.)	1-1/8 x 306	1-1/8 x 272	1-1/8 x 290	1-1/8 x 272
Crank Pin Bearing	Self-Aligning Roller Bearings	Self-Aligning Roller Bearings	Self-Aligning Roller Bearings	Self-Aligning Roller Bearings
Equalizer Bearing	Roller Bearings	Roller Bearings	Roller Bearings	Roller Bearings
Center Bearing	Tapered Roller Bearings	Tapered Roller Bearings	Tapered Roller Bearings	Tapered Roller Bearings

ITEM	C-228D-246-86	C-228D-213-120	C-320D-305-100	C-320D-256-120
Peak Polished Rod Capacity (lb)	24,600	21,300	30,500	25,600
Stroke Lengths (in.)	86, 74, 61	120, 102, 85	100, 85, 70	120, 102, 85
Walking Beam (in. x lb)	24 x 117	24 x 131	27 x 146	27 x 146
Wireline Hanger (in.)	1-1/8 x 345	1-1/8 x 322	1-1/4 x 332	1-1/8 x 332
Crank Pin Bearing	Self-Aligning Roller Bearings	Self-Aligning Roller Bearings	Self-Aligning Roller Bearings	Self-Aligning Roller Bearings
Equalizer Bearing	Roller Bearings	Roller Bearings	Roller Bearings	Roller Bearings
Center Bearing	Tapered Roller Bearings	Tapered Roller Bearings	Tapered Roller Bearings	Tapered Roller Bearings

WEIGHTS OF VARIOUS PUMPING UNIT COMPONENTS

UNIT	NARROW BASE WITH PEDESTAL (lb)	GEARBOX WITH CRANKS (lb)	TOTAL* (lb)
C-114D-143-64	1,337	5,876	7,213
C-114D-119-86	1,846	6,956	8,802
C-160D-143-64	1,337	7,000	8,337
C-160D-173-74	1,846	8,100	9,946
C-160D-200-74	3,850	8,500	12,350
C-160D-213-86	3,850	8,500	12,350
C-160D-173-100	3,850	8,500	12,350
C-228D-213-86	3,850	8,500	12,350
C-228D-246-86	4,271	12,699	16,970
C-228D-213-120	4,271	12,747	17,018
C-320D-305-100	4,652	16,911	21,563
C-320D-256-120	4,652	16,911	21,563

UNIT	PORTABLE BASE WITH PEDESTAL (lb)	GEARBOX WITH CRANKS (lb)	TOTAL* (lb)
C-114D-143-64	3,517	5,876	9,393
C-114D-119-86	4,306	6,956	11,262
C-160D-143-64	3,517	7,000	10,517
C-160D-173-74	4,306	8,100	12,406
C-160D-200-74	5,250	8,500	13,750
C-160D-213-86	5,250	8,500	13,750
C-160D-173-100	5,250	8,500	13,750
C-228D-213-86	8,608	8,500	17,108
C-228D-246-86	8,608	12,699	21,307
C-228D-213-120	8,608	12,747	21,355
C-320D-305-100	8,734	16,911	25,645
C-320D-256-120	8,734	16,911	25,645

No. 9 Master Counterweight — 800 lb
No. 9 Auxiliary Counterweight — 230 lb
No. 10 Master Counterweight — 1,400 lb
No. 10 Auxiliary Counterweight — 430 lb

*Total weight of base with pedestal and gearbox with cranks only.

V-BELT DRIVE FORMULAS

D = Diameter of Unit Sheave — $D = \frac{RPM \times d}{SPM \times R}$

d = Diameter of Engine Sheave — $d = \frac{SPM \times R \times D}{RPM}$

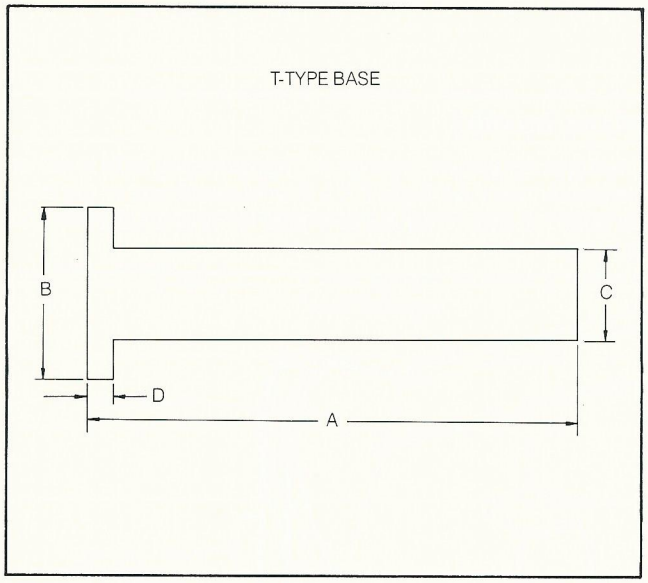
SPM = Strokes per Minute — $SPM = \frac{RPM \times d}{R \times D}$

RPM = Engine Speed — $RPM = \frac{SPM \times R \times D}{d}$

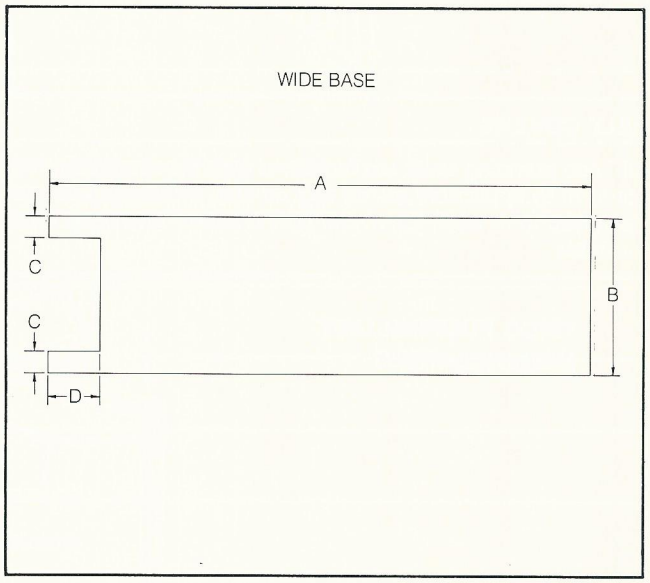
R = Gearbox Ratio — $R = \frac{RPM \times d}{SPM \times D}$

C = Shaft Center Distance

Belt length = $2C + 1.57\,(D+d) + \frac{(D-d)^2}{4C}$



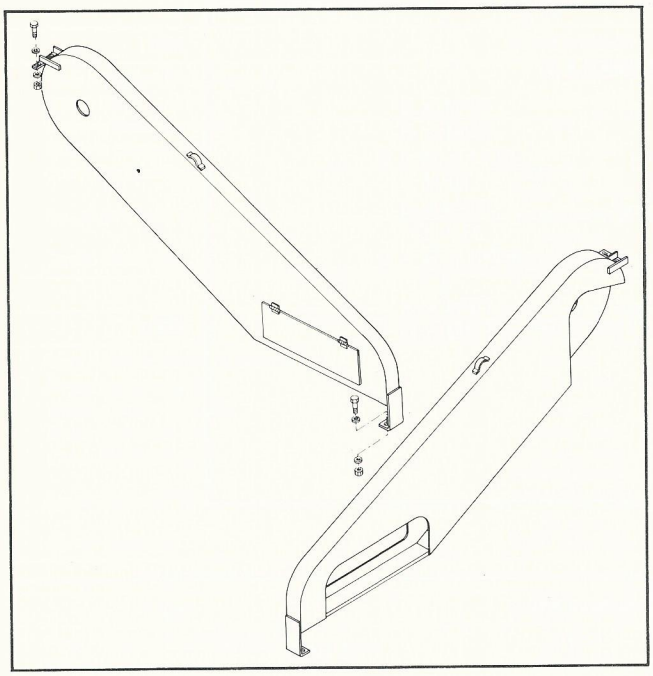
T-Base with High Prime Electric Motor Base, including slide rails for mounting and adjustment.



Wide Base for Electric Motor Both of these bases can be supplied to accommodate multi-cylinder gas engines or slow speed engines.

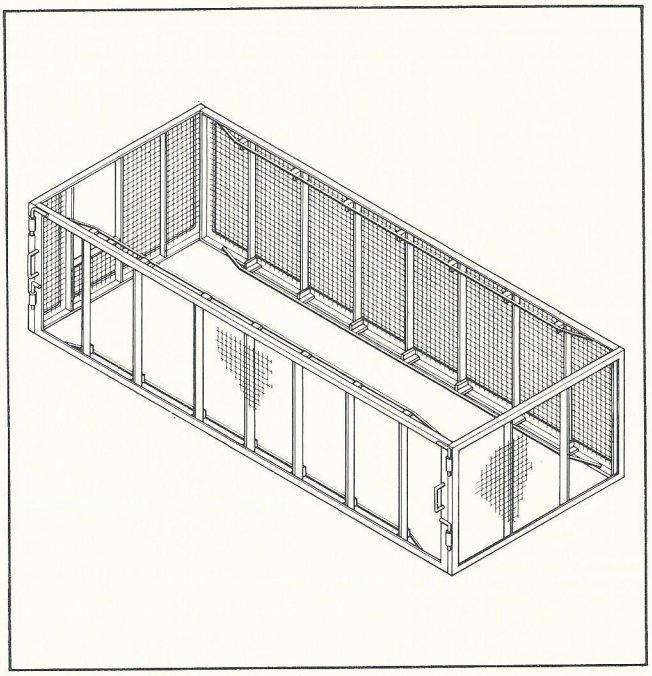
BASE DIMENSIONS (in.)

SIZE	T-TYPE				WIDE			
	A	B	C	D	A	B	C	D
C-114D-143-64	128-1/4	72	25	6-1/2	258	80	4	12
C-114D-119-86	151	72	25	8	258	80	4	12
C-160D-143-64	128-1/4	72	25	6-1/2	258	80	4	12
C-160D-173-74	151	72	25	8	258	80	4	12
C-160D-200-74	169	72	29	10-3/8	281	83	5-1/2	15
C-160D-213-86	169	72	29	10-3/8	281	83	5-1/2	15
C-160D-173-100	169	72	29	10-3/8	281	83	5-1/2	15
C-228D-213-86	177-1/2	82	37	10-3/8	315	93	5-1/2	15
C-228D-246-86	197-1/2	82	37	10-3/8	335	93	5-1/2	15
C-228D-213-120	197-1/2	82	37	10-3/8	335	93	5-1/2	15
C-320D-305-100	203-1/2	82	43	10-3/8	335	93	5-1/2	15
C-320D-256-120	203-1/2	82	43	10-3/8	335	93	5-1/2	15



BELT COVERS

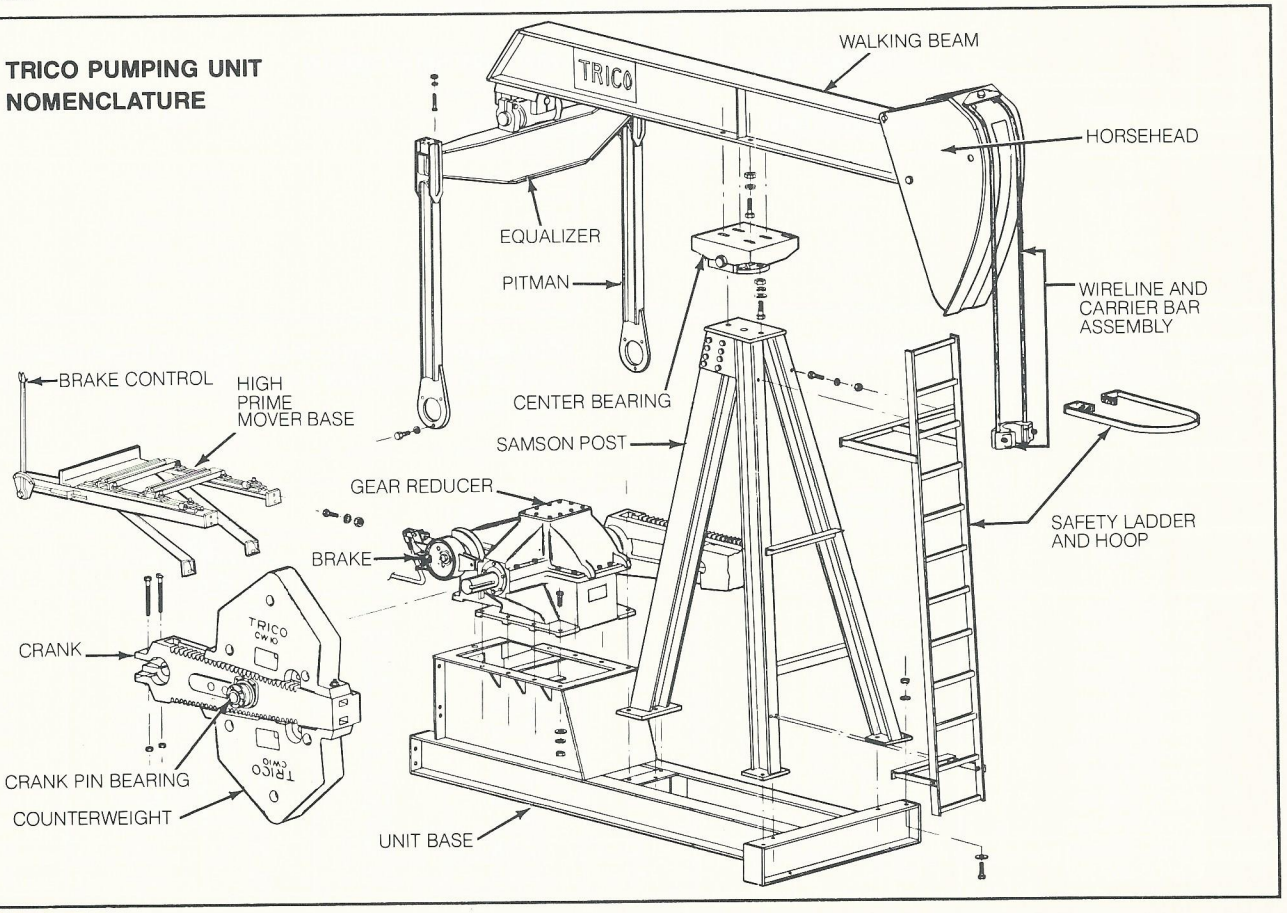
All Trico pumping units are furnished with V-belt guards that conform to applicable safety regulations. These guards are designed to fit each particular prime mover and base type available.



CRANK GUARDS

Crank guards are available for all Trico pumping units in either the conventional 5 ft high, 2 X 2 in. wire mesh type or the double open rail type. They are designed for easy installation and removal.

TRICO PUMPING UNIT NOMENCLATURE



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* Region Office and Warehouse.
‡ Region Office only.

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