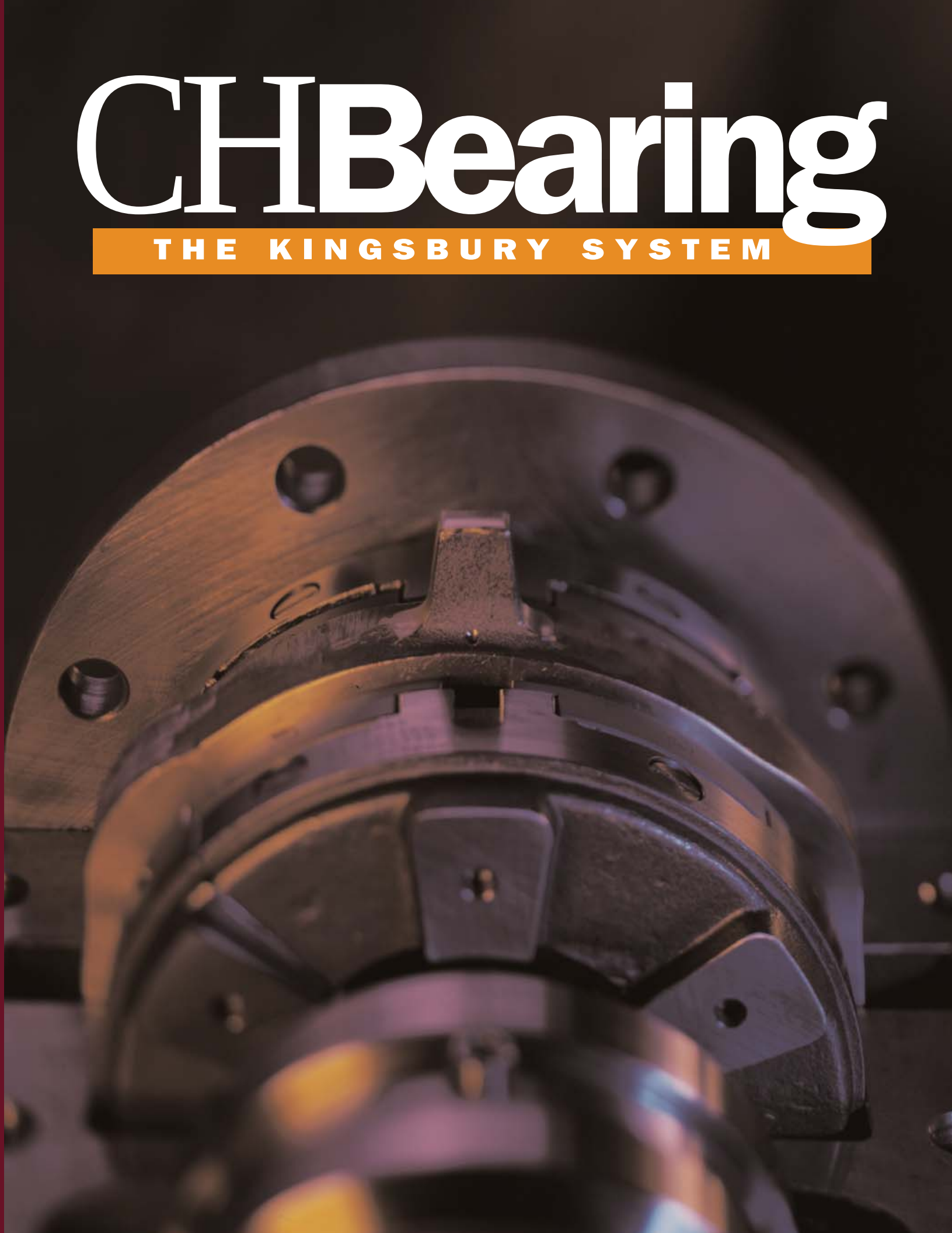
CHBearing

THE KINGSBURY SYSTEM



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The Kingsbury CH Bearing System integrates a fully self-contained, flange-mounted, horizontal equalizing double thrust bearing with a self-aligning journal bearing (CH); and a remote, separately mounted journal bearing (C).

Unlike any other bearing on the market, Kingsbury's CH Bearing System is a complete self-contained equalizing unit. The system eliminates the need for an electric motor/pump, emergency pump, accumulator, rundown tank, or other special arrangements for oil lubrication. No additional motor control system or any electric power is required to circulate the oil. And since no separate lube system is required, the cost savings is significant.

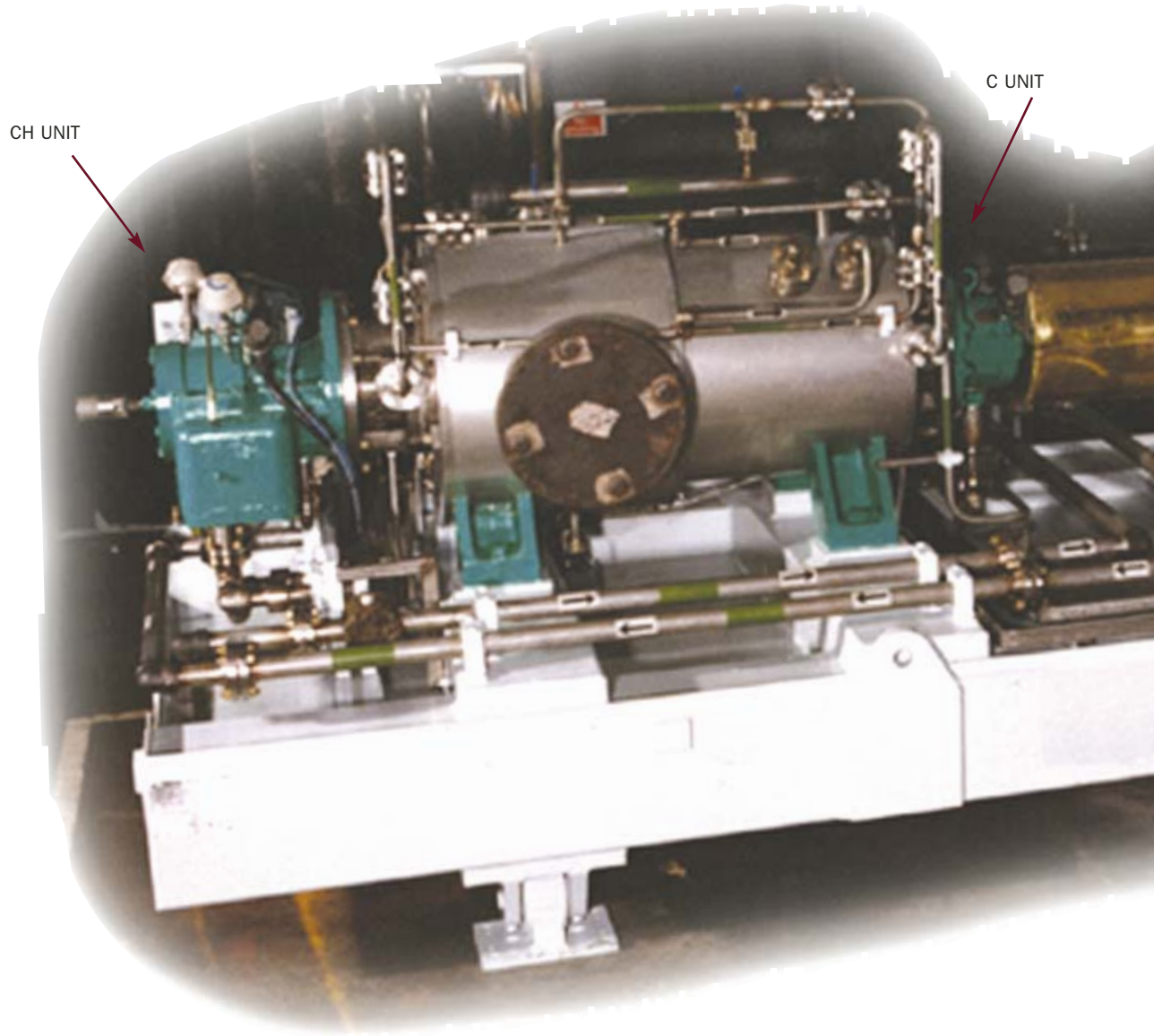
System lubrication is autonomous, provided by means of a viscosity pump driven by shaft rotation. This pump consists of the combination of the built-in mechanical oil circulator and the rotating collar, which draws oil up from the sump as soon as the shaft begins to rotate. As long as the shaft rotates, pumping action is achieved. No priming is necessary since the pump inlets are always submerged. Pumping action is bidirectional and automatically adjusts with shaft rotation. The pressure and flow generated by this pump force the oil out through passages in the housing to lubricate both thrust bearings and the internal journal bearing. The pressure in the thrust cavity then drives the hot oil through the oil cooler and then back into the oil sump. The fewer the restrictions in the system, the more the circulator can pump.

Sufficient flow and pressure are developed by this pump to send oil to a separate, remote journal bearing and — if required — additional equipment, for example, the system prime mover. Please contact your Kingsbury Sales Engineer if you wish to have the CH lubricate additional equipment.

QUALITY STANDARDS:

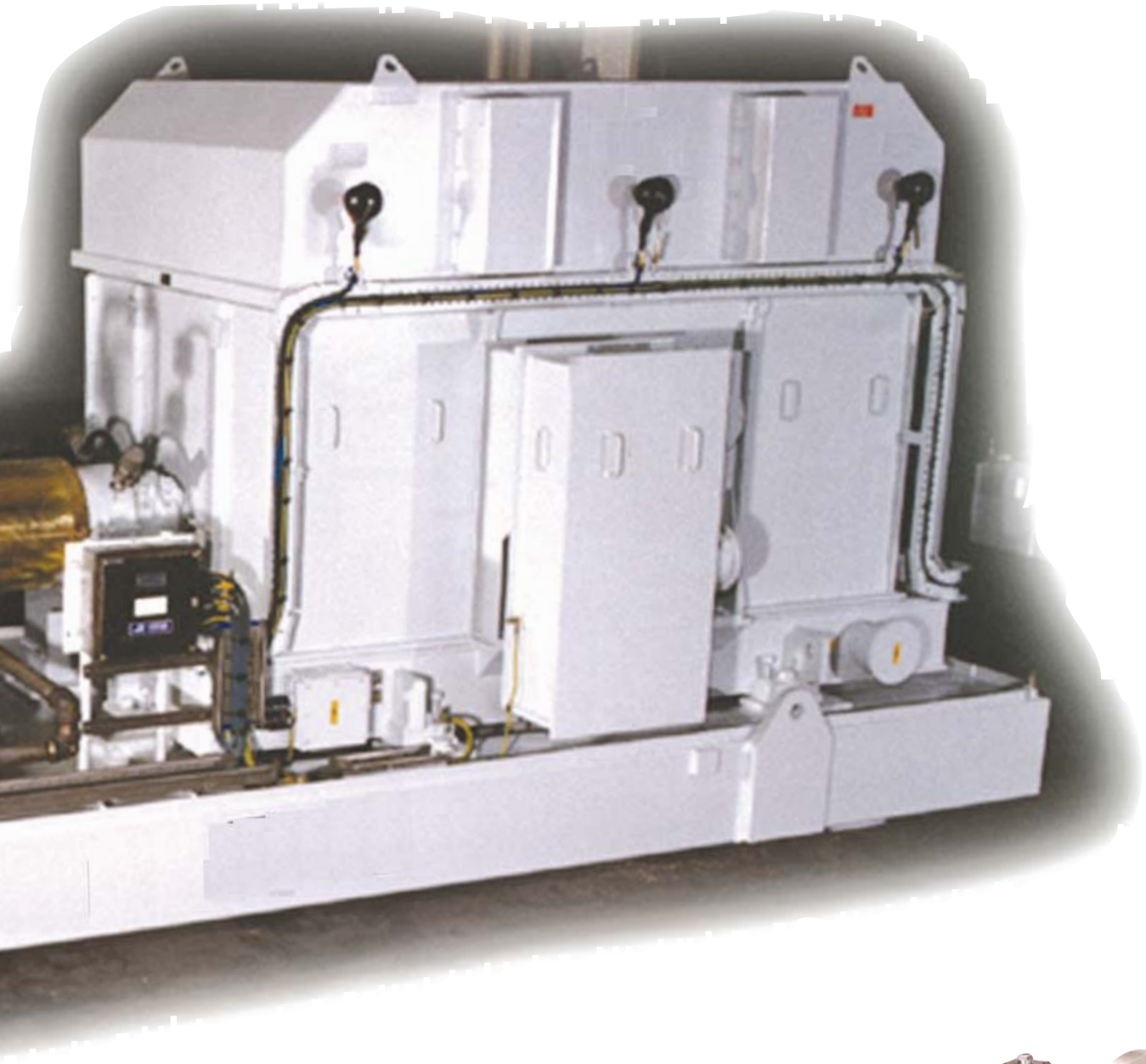
KINGSBURY, INC.
ISO 9001/94 Registered

ADVANTAGES OF KINGSBURY'S CH SYSTEM

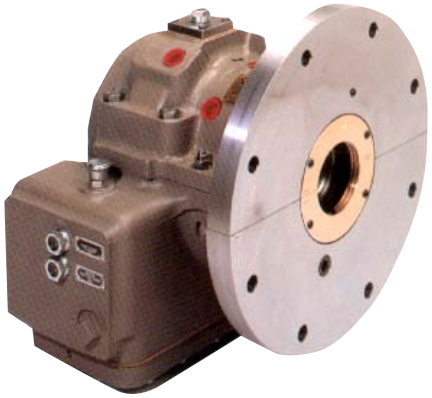


Only Kingsbury's CH Bearing System integrates: 1) a CH unit with a double, equalizing thrust bearing, a journal bearing, and an oil circulator within a single unified housing; and, 2) a C unit with an integral journal bearing in a second housing of its own. The CH's lubrication system even provides sufficient volume and pressure to lubricate additional externally mounted equipment, such as motor bearings or couplings.

Other bearing designs necessitate purchasing thrusts and journals separately, and then still require additional components — like a machined housing and external lubrication system.



The Kingsbury CH system is integrated, reliable, and saves initial cost. CH bearing users have seen the savings first hand, reporting that when all is said and done, the CH costs considerably less to install on high-performance pumps. The CH Bearing System's simple design has the same reliability as a full API lubrication system. The CH further demonstrates its superiority through its low maintenance, reduced weight and smaller footprint.



GENERAL DESCRIPTION

CH System

Kingsbury's complete CH system includes two separate components — the CH unit which includes thrust and journal bearings and provides the lubrication, and the C unit, with a remotely mounted journal bearing.

CH Unit

Thrust Bearings

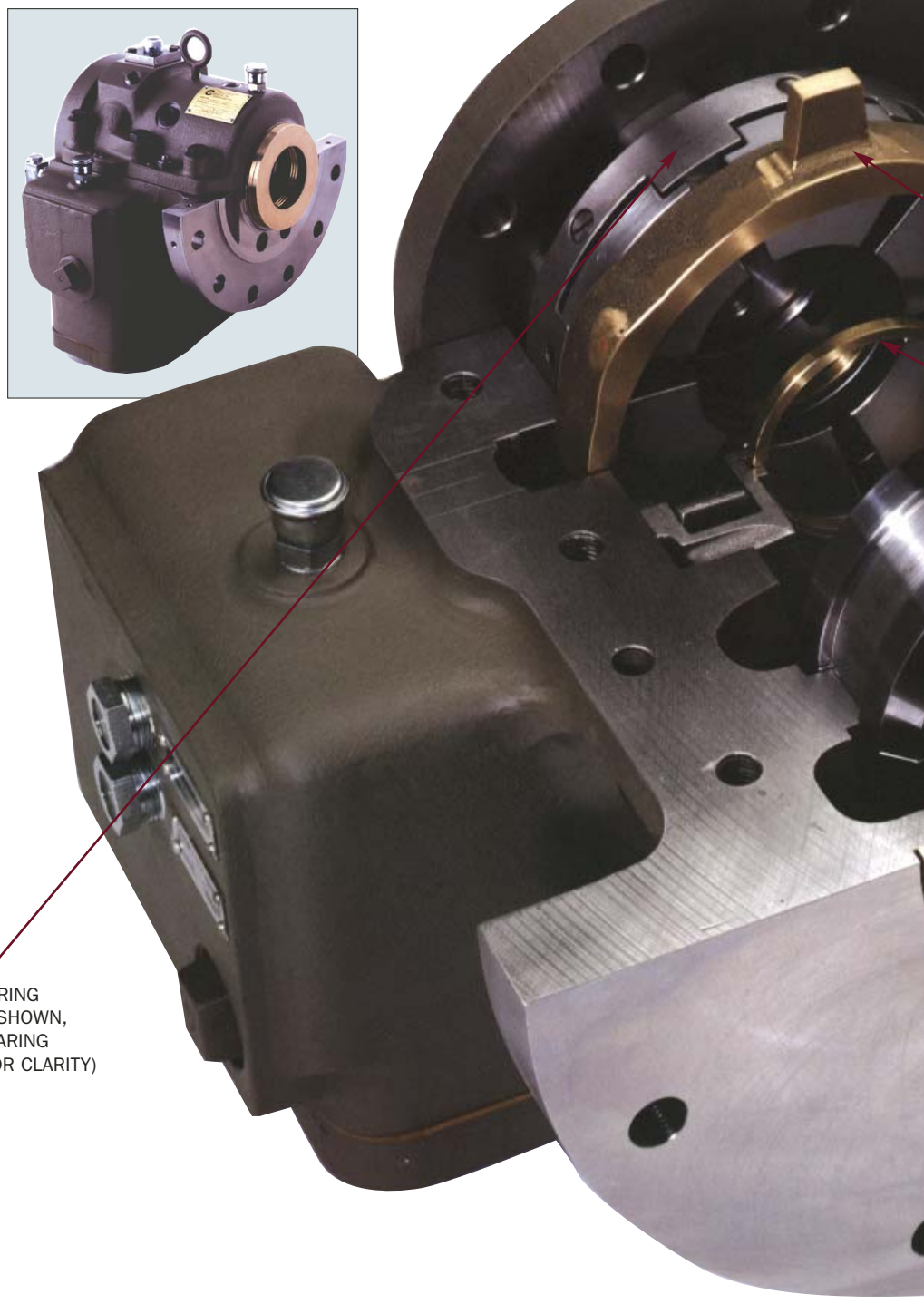
Kingsbury utilizes equalizing thrust bearings which conform to API 610 requirements. The Kingsbury principle and the workings of the equalizing thrust bearing are fully described in our EQH-1 catalog.

Journal Bearing

The CH unit contains an integral, self-aligning journal bearing designed to accurately locate the shaft under all loading conditions. Journal bearing diameters are based on the machine's shaft requirements. Each housing will accommodate a range of journal bearing sizes listed on pages 12-15.

C Unit

Also available are separate self-aligning journal bearings. These model C bearings are assigned designations similar to the CH unit. Typically at the inboard — or drive — end of the machine, they are generally of the same design and size as the journal in the CH unit. These bearings depend on the CH bearing for lubrication. C bearing units may be purchased separately, but require an external lubrication system if a CH unit is not incorporated. To ensure proper lubrication, the piping to and from these bearings should conform to Kingsbury's guidelines as described under "Oil Piping", page 10.



THRUST BEARING (OUTBOARD SHOWN, INBOARD BEARING REMOVED FOR CLARITY)

Oil Circulator

The oil circulator is the heart of Kingsbury's CH system. Work- ing in concert with the thrust collar to form a self-priming viscosity pump, it provides lubrication to the entire system by means of shaft rotation. As long as the shaft is rotating, pressurized oil is available, even during power outages or reverse rotation. It provides sufficient volume and pressure to lubricate additional, externally mounted equipment such as motor bearings or couplings.

Cooling

Standard oil cooling is provided by means of a shell-and-tube heat exchanger mounted directly on the CH unit. Standard coolers can be provided to suit any speed within catalog range. See page 11 for additional information on oil cooling. Remotely located options and special cooler materials are also available, as is the option of forced-air cooling.

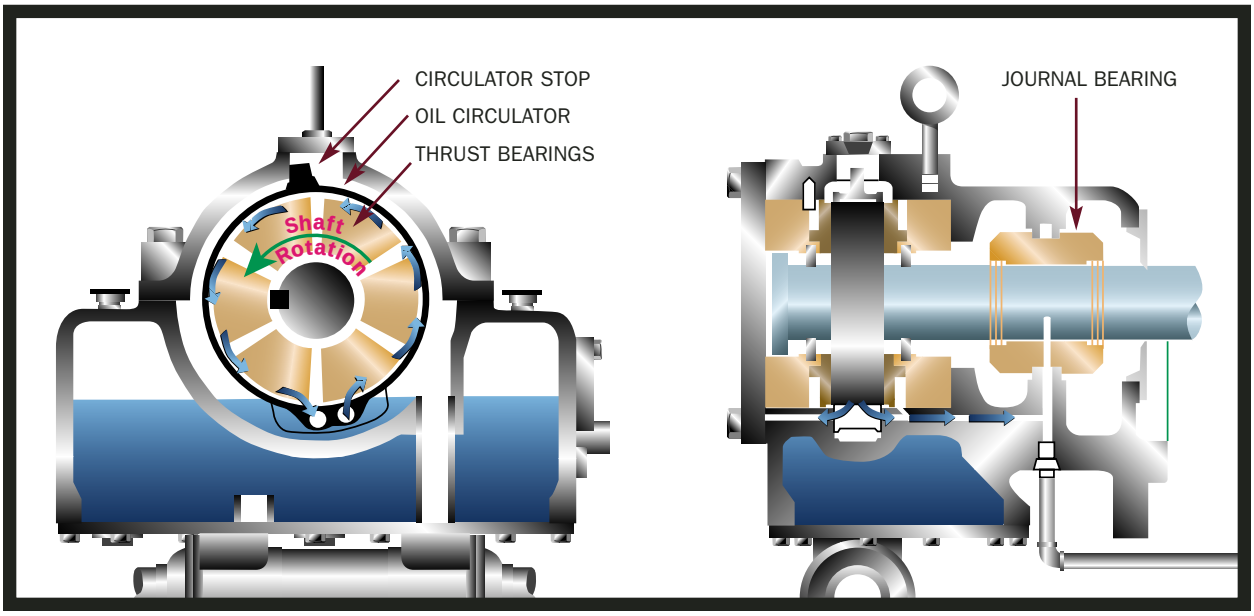
Standard Sizes and Capacities

Standard units listed in this catalog can accommodate thrust loads up to 40000 lbf (178 kN), shaft sizes up to 7.50 in. (191 mm), and sliding velocities up to 215 ft/sec (66 m/s) at the outer diameter of the thrust collar.

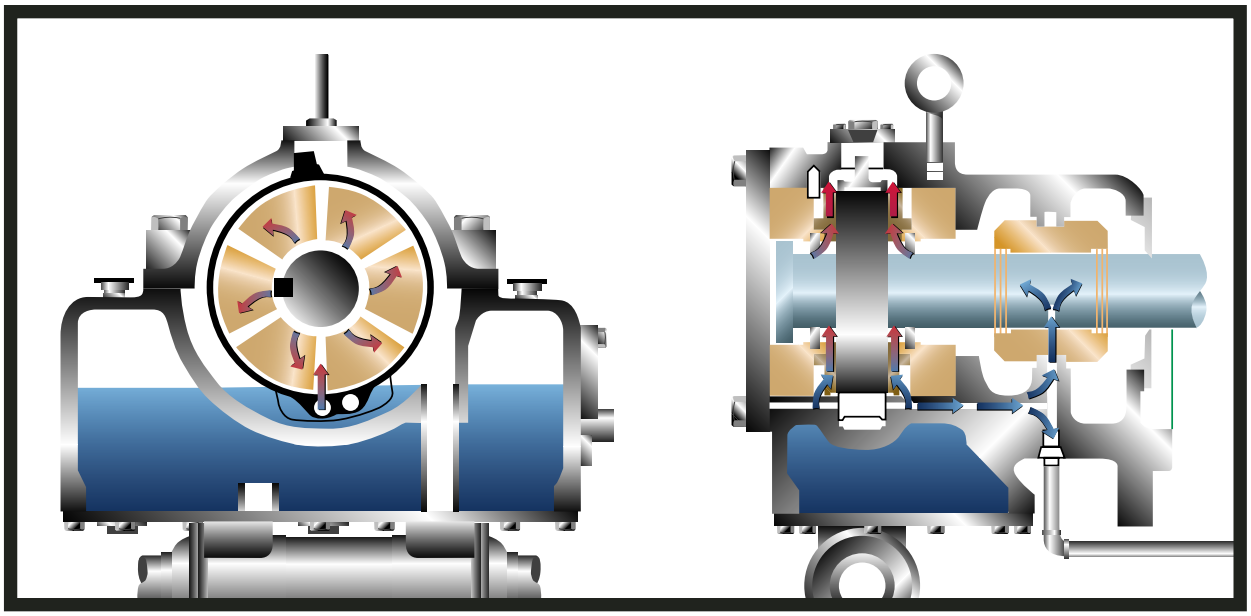
Custom Designs

The self-lubricating system has been incorporated successfully in applications larger than those listed in this catalog. Please consult our Sales Dept. for information on sizes and/or equipment not listed here.

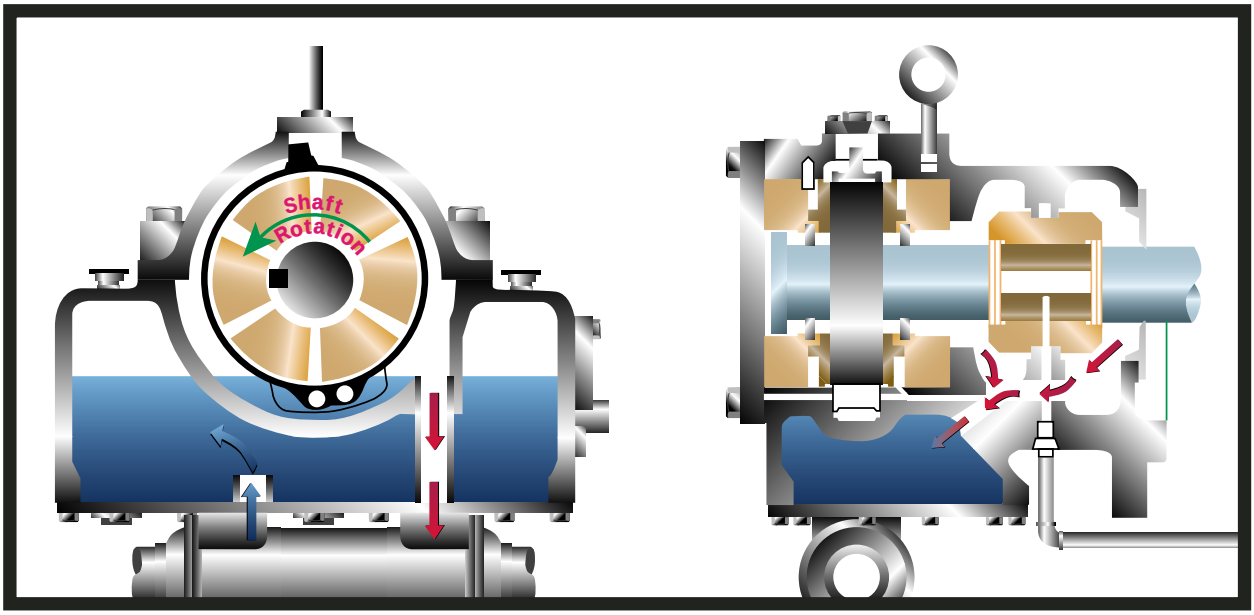
HOW THE CH LUBRICATION SYSTEM WORKS



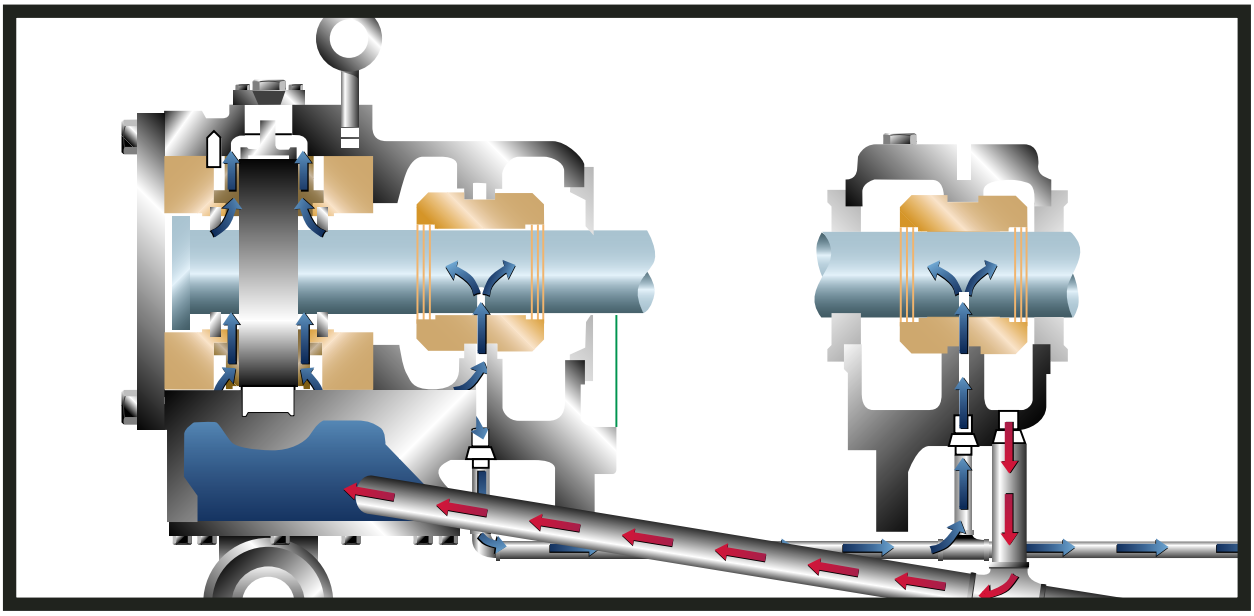
As the shaft begins to rotate, oil is drawn in from the reservoir through either of two ports, depending on the direction of shaft rotation. In the view shown, the oil circulator stop is set for the counter-clockwise rotation.



Pressurized oil from the central passage of the oil circulator enters the thrust bearings to be drawn across the shoes; and pressurized oil also flows to the journal bearing through a channel.



Hot oil from the thrust bearings enters the heat exchanger from the standpipe, and is cooled and returned to the oil reservoir (sump). Hot oil from the journal bearing is returned to the sump by a passage where it mixes with the cooled oil.



As pressurized oil is supplied to the integral journal in the CH unit, fresh oil is also pumped to the external journal bearing in the C unit and other externally mounted bearings. It is then returned to the reservoir by means of customer-supplied piping.

BEARING SELECTION

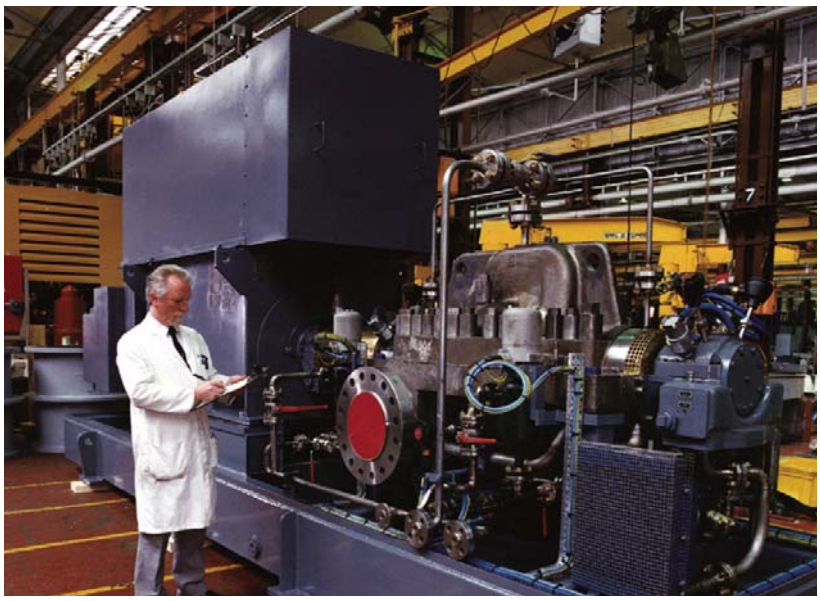
Guidelines for assigning load capacities take several factors into consideration, including theoretical analyses, our field experience, and test results. Thrust bearing rated loads (page 16 or 18) have been calculated based on the following design considerations: on low-speed applications, the limiting factor is film thickness; on high-speed applications, the limiting factor is shoe temperature. ***All the ratings published in this catalog have a factor of safety of at least two.*** This complies with standard industry specifications, including those of the American Petroleum Institute.

For most typical applications, the determining factor in selecting a CH unit size is the required shaft diameter.

1. Using the shaft size limits ("A" min/max from the tables on page 12) determine the smallest CH unit that accommodates your shaft size.

2. Next, check the bearing thrust capacities versus required load demands. The selected unit should be capable of handling the maximum thrust load. Use the following figures as a guide:

- See page 16 or 18 for the Thrust Bearing Rated Load curve for ISO VG 46.
- See page 17 or 19 for the Thrust Bearings Friction Loss curve.



3. Finally, confirm the journal load capacity from page 16 or 18.

See page 17 or 19 for Cooling Water Flow vs. Load/Shaft Speed for the standard cooler at water inlet temperature of 80˚F (27˚C).

Example: Given a thrust load of 2000 lbsf (8900N), shaft diameter at the journal of 3.25" (82.5mm), and a speed of 3600 rpm — journal load is 350 lbsf (1560N).

Selection: From the tables on pages 12-15, select the smallest unit size with the correct shaft diameter. The smallest unit capable of handling the given shaft is a CH-6. Next, refer to Thrust Bearing Rated Load curve, page 16 or 18, to confirm that the CH-6 is acceptable. Note that it is more than adequate for the given thrust load. Finally, verify from Journal Bearing Rated Load curve, page 16 or 18, that the journal size is adequate for the specified load. Therefore, a CH-6 will be the best solution for the given data.

Oil Piping

Oil piping between the remote C and the CH is not supplied by Kingsbury. Piping should be arranged with the C bearing return pipe going straight down far enough to give a continuous rise at a slope of between 5˚ and 8˚ to the CH unit. As the head pressure on the returning oil is slight, the return pipe must be of a minimum size (dimension "U") indicated on the C bearing tables, pages 14-15. All

oil piping must be carried well below the oil level. Trace heating on pipes and an oil heater in the CH sump are recommended if ambient temperatures are likely to go below 50˚F (10˚C) at startup.

Oil Cooling

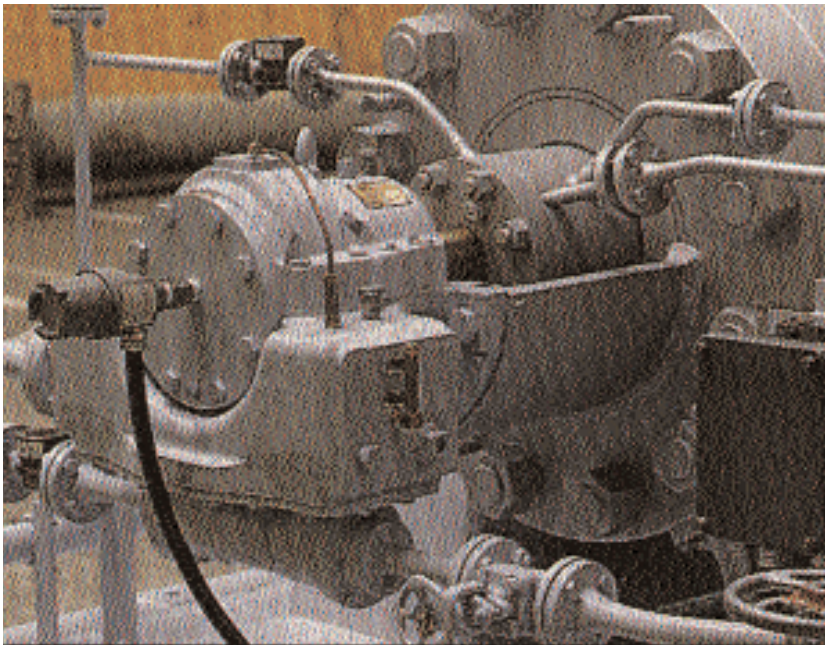
The integral heat exchanger's unique design combines a high thermal efficiency with a minimal pressure drop. The standard unit consists of a brass core capped with cast iron bonnets. Optional arrangements include an all-brass/bronze construction for seawater-cooling applications, and an all-ASTM A300-series stainless-steel construction.

For applications in which no cooling water is available, a forced-air oil cooler can be provided. Only the standard cooler and the all-brass coolers can be mounted directly to the CH unit. All other options must be remotely mounted as close as possible to the CH bearing.

When the cooling water is thermostatically controlled, the flow rate must be set to maintain the sump at 120˚F (50˚C) or the temperature specified.

Oil Selection

The charts and tables in this catalog are based on an oil viscosity grade of ISO VG 46.



However, other oil viscosity grades can be used. Their use is based largely on speed and load considerations. For example, ISO VG 32 is better suited for light loads and/or high speeds, where as ISO VG 68 should be used if the loads are higher and the speeds slower. If unsure of the best oil viscosity for your application, please consult Kingsbury for a recommendation.

Since the Kingsbury CH Bearing System is entirely self-contained, continuous filtration is not required. Initial oil fill is to be filtered to 10 microns or better. See Table on pages 12-13 for CH housing oil sump capacities. Please add a sufficient amount of oil to these capacities to allow for the application's piping.

Caution: The piping can usually accommodate more oil than the sump itself.

Shaft and Collar Details

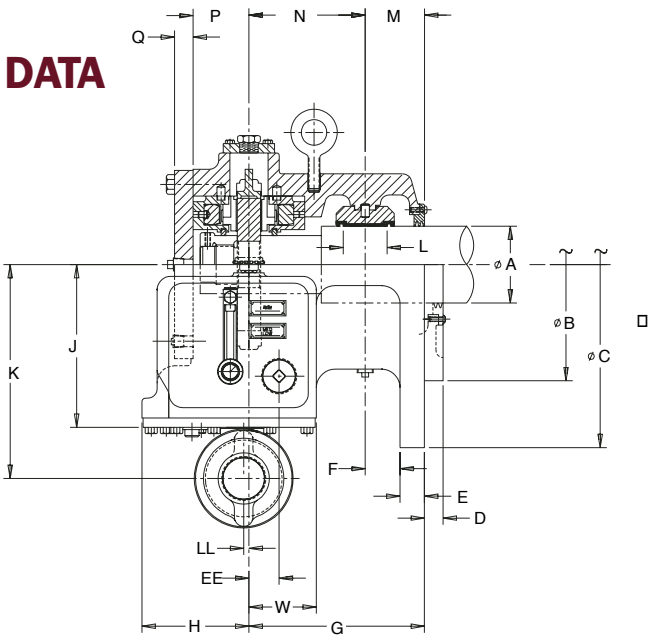
Typically, Kingsbury will supply a separate thrust collar. We recommend that the collars have a Sliding Fit (ANSI Class RC2) on the shaft. User must provide the shaft nut, nut locking device, and key.

Details of the arrangement are shown on page 13.

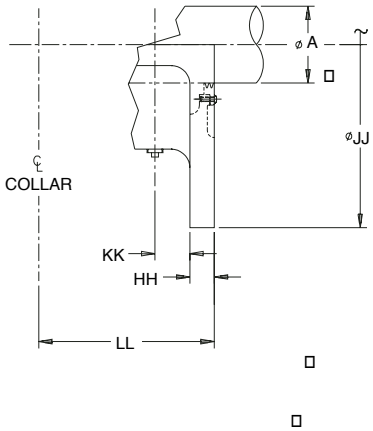
Paint

All units come painted on the exterior with a gray metal primer and the internal unmachined oil-containing surfaces painted with an insulating enamel. Attached coolers come painted with a styrenated alkyd enamel. All exterior surfaces that are painted can be re-coated.

CH BEARING DIMENSIONAL DATA



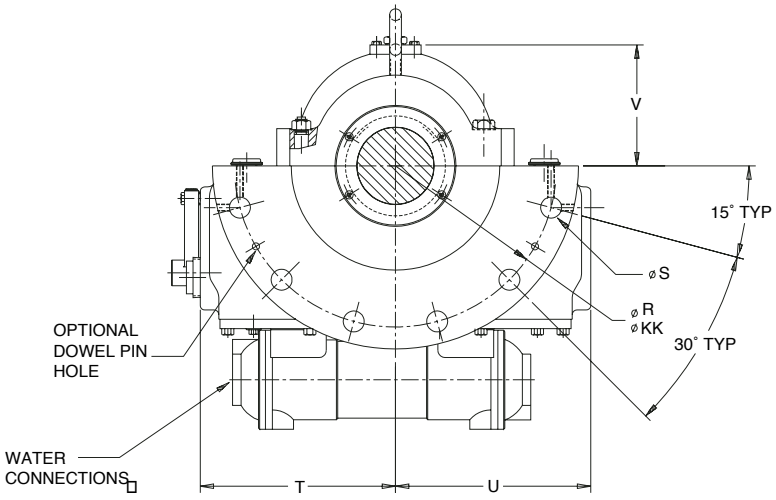
SPIGOT-MOUNT (STANDARD)

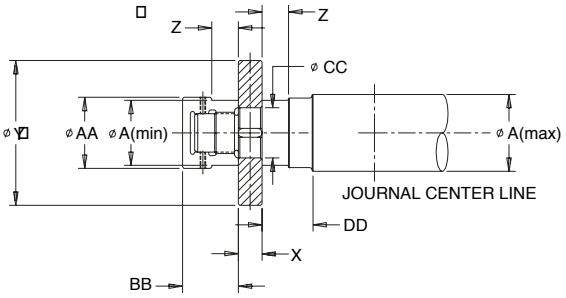


FLUSH-MOUNT

MODEL NO.	WEIGHT DRY lbs / kg	SUMP CAPACITY gal / liters	A min/max in / mm	B	C	D	E	F	G	H	J	K	L *	M	N	P	Q	R	S
CH-4	150	0.75	1.75/2.25	8.250	11.25	0.62	0.75	1.19	5.12**	3.62	6.25	9.88	1.75	2.12	3.88	2.06	0.75	8.88	0.75
CH-4	70	2.8	44.5/57.2	209.55	285.8	15.7	19.1	30.2	130.0	91.9	158.8	251.0	44.5	53.8	98.6	52.3	19.1	225.6	19.1
CH-5	200	1.5	2.25/2.75	11.500	15.75	1.00	1.00	1.75	7.75	3.00	7.25	10.88	2.50	2.75	5.00	2.19	0.81	13.38	0.94
CH-5	90	5.5	57.2/69.9	292.10	400.1	25.4	25.4	44.5	196.9	76.2	184.2	276.4	63.5	69.9	127.0	55.6	20.6	339.9	23.9
CH-6	325	2	2.75/3.25	11.500	17.25	0.62	1.12	1.32	7.88	3.44	10.25	13.88	3.00	3.06	5.44	2.56	0.88	15.25	1.12
CH-6	150	8	69.9/82.6	292.10	438.2	15.7	28.4	33.5	200.2	87.4	260.4	352.6	76.2	77.7	138.2	65.0	22.4	387.4	28.4
CH-7	425	4	3.25/3.75	12.500	17.25	1.12	1.25	1.12	8.62	5.75	8.75	11.50	3.50	3.19	6.25	3.00	1.00	14.25	0.94
CH-7	200	15	82.6/95.3	317.50	438.2	28.4	31.8	28.4	218.9	146.1	222.3	292.1	88.9	81.0	158.8	76.2	25.4	362.0	23.9
CH-8	600	5	3.75/4.25	14.250	19.50	1.00	1.38	1.50	9.59**	3.72	9.06	11.81	4.00	3.94	7.63	3.72	1.12	16.75	1.12
CH-8	275	18	95.3/108.0	361.95	495.3	25.4	35.1	38.1	243.6	94.5	230.1	300.0	101.6	100.1	193.8	94.5	28.4	425.5	28.4
CH-9	860	6	4.25/4.88	16.000	21.75	1.25	1.50	1.00	11.00	5.50	11.25	14.00	4.50	4.44	8.50	4.12	1.31	18.75	1.25
CH-9	400	23	108.0/123.8	406.40	552.5	31.8	38.1	25.4	279.4	139.7	285.8	355.6	114.3	112.8	215.9	104.6	33.3	476.3	31.8
CH-10.5	1200	17	4.88/5.75	18.000	25.00	1.25	1.62	2.38	14.00	6.25	14.50	19.25	5.25	5.00	10.00	4.69	1.50	22.00	1.50
CH-10.5	550	65	123.8/146.1	457.20	635.0	31.8	41.1	60.5	355.6	158.8	368.3	489.0	133.4	127.0	254.0	119.1	38.1	558.8	38.1
CH-12	1700	25	5.75/6.75	21.000	28.00	1.25	1.75	3.00	16.13	6.88	17.00	22.75	6.00	5.94	11.38	5.25	1.62	24.00	1.62
CH-12	775	95	146.1/171.5	533.40	711.2	31.8	44.5	76.2	409.7	174.8	431.8	577.9	152.4	150.9	289.1	133.4	41.1	609.6	41.1
CH-13.5	2200	45	6.25/7.50	22.000	31.00	1.50	2.00	4.50	19.25	7.69	20.00	25.75	6.75	6.50	12.75	5.94	1.75	27.00	1.75
CH-13.5	1000	170	158.8/190.5	558.80	787.4	38.1	50.8	114.3	489.0	195.3	508.0	654.1	171.5	165.1	323.9	150.9	44.5	685.8	44.5

Metrics are shown on the shaded bars. All dimensions should be confirmed by a certified drawing. NOTE: Add to sump capacity a sufficient amount of oil to allow for the application's piping. *Effective length will vary with shaft diameter. **For these sizes only, N+F+E G. ***Dimension KK applies only to flush mount units, otherwise use R.



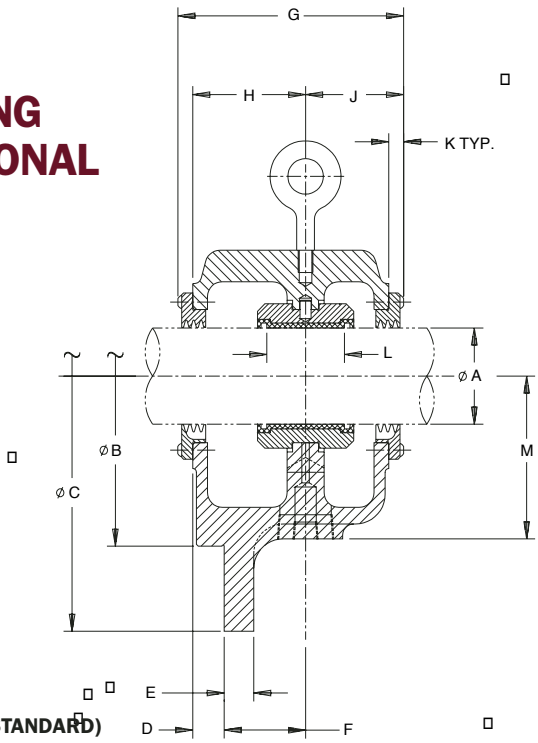


NOTE: SHAFT, SHAFT NUT AND KEY NOT SUPPLIED BY KINGSBURY

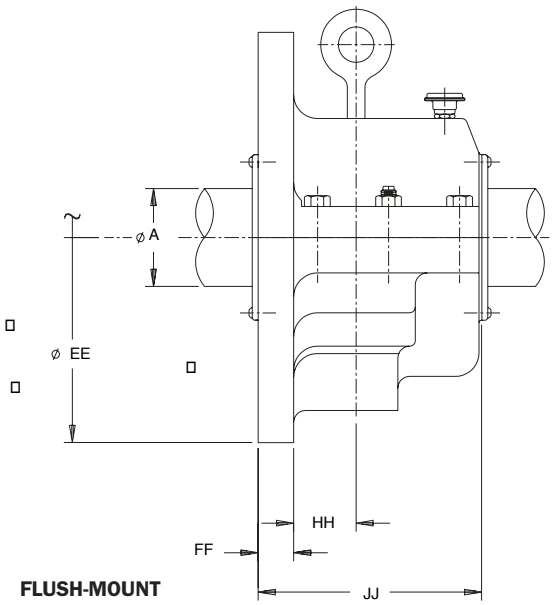
SHAFT AND COLLAR ARRANGEMENT

MODEL NO.	T	U	V	W	X	Y	Z	AA	BB	CC	DD min/max	EE	FF	GG	HH	JJ	KK***	LL
CH-4	6.88	6.88	4.00	2.12	0.88	4.62	1.38	1.62	1.38	1.00	2.19/2.19	T.B.D.	0.75	11.25	1.19	5.12	~	0.81
CH-4	174.8	174.8	101.6	53.8	22.2	117.3	35.1	41.1	35.1	25.3	55.6/55.6	T.B.D.	19.1	285.8	30.2	130.0	~	20.6
CH-5	7.12	7.12	4.69	3.62	0.88	5.12	1.00	2.50	1.56	1.75	1.00/2.75	1.88	1.00	15.75	1.75	7.75	~	0.75
CH-5	180.8	180.8	119.1	91.9	22.2	130.0	25.4	63.5	39.6	44.5	25.4/69.9	47.8	25.4	400.1	44.5	196.9	~	19.1
CH-6	8.25	8.25	5.25	2.88	1.00	6.12	1.25	3.00	1.81	2.13	1.25/3.00	1.62	1.12	17.25	1.32	7.88	~	0.38
CH-6	209.6	209.6	133.4	73.2	25.4	155.4	31.8	76.2	46.0	54.0	31.8/76.2	41.1	28.4	438.2	33.5	200.2	~	9.7
CH-7	10.50	10.50	6.50	3.62	1.25	7.12	1.38	3.50	2.00	2.50	1.38/3.75	1.75	1.31	19.68	1.88	9.44	17.25	0.03
CH-7	266.7	266.7	165.1	91.9	31.8	180.8	35.1	88.9	50.8	63.5	35.1/95.3	44.5	33.3	499.9	47.8	239.8	438.2	0.8
CH-8	10.50	10.50	6.75	5.12	2.06	8.12	1.50	4.00	2.25	3.00	1.50/3.75	1.00	1.38	19.50	1.50	9.59	~	~
CH-8	266.7	266.7	171.5	130.0	52.3	206.2	38.1	101.6	57.2	76.2	38.1/95.3	25.4	35.1	495.3	38.1	243.6	~	~
CH-9	11.62	11.62	7.25	7.75	2.25	9.12	1.75	4.50	2.50	3.50	1.75/4.50	2.00	1.50	21.75	2.94	12.94	18.75	~
CH-9	295.1	295.1	184.2	196.9	57.2	231.8	44.5	114.3	63.5	88.9	44.5/114.3	50.8	38.1	552.5	74.7	328.7	476.3	~
CH-10.5	14.00	14.00	8.50	7.44	2.62	10.69	1.88	5.25	3.00	4.13	1.88/5.00	3.50	1.62	25.00	3.45	15.00	~	~
CH-10.5	355.6	355.6	215.9	189.0	66.5	271.5	47.8	133.4	76.2	104.9	47.8/127.0	88.9	41.1	635.0	87.6	381.0	~	~
CH-12	16.00	16.00	9.75	8.00	3.00	12.19	2.19	6.00	3.38	4.75	2.75/6.00	4.00	1.75	28.50	5.88	17.25	~	~
CH-12	406.4	406.4	247.7	203.2	76.2	309.6	55.6	152.4	85.9	120.7	69.9/152.4	101.6	44.5	723.9	149.4	438.2	~	~
CH-13.5	18.00	18.00	10.75	10.62	3.38	13.69	2.50	6.75	3.75	5.38	2.50/6.50	6.00	2.00	31.00	4.44	19.25	~	~
CH-13.5	457.2	457.2	273.1	269.7	85.7	347.7	63.5	171.5	95.3	136.7	63.5/165.1	152.4	50.8	787.4	112.8	489.0	~	~

C BEARING DIMENSIONAL DATA



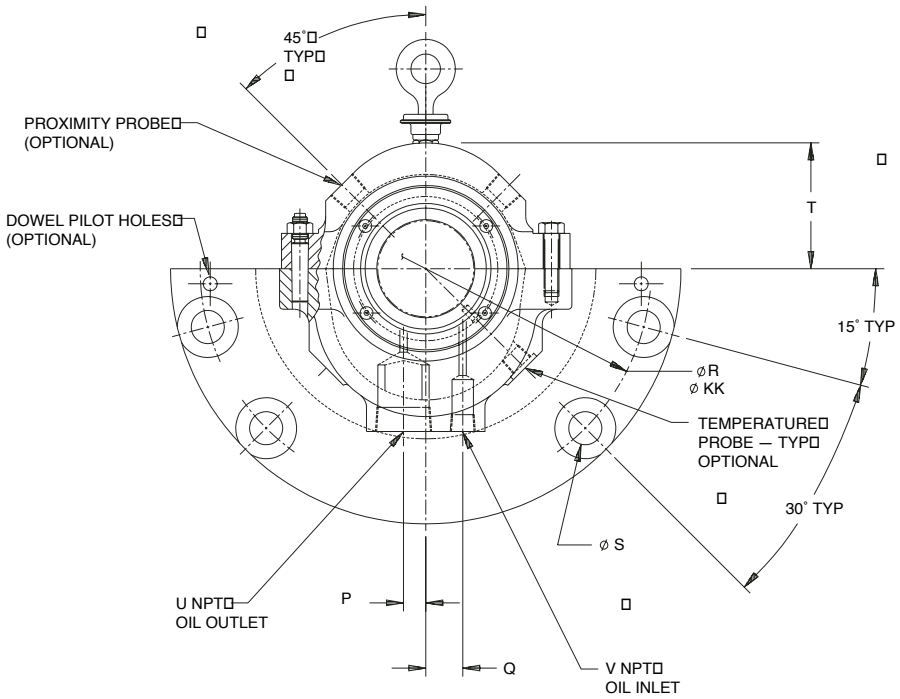
SPIGOT-MOUNT (STANDARD)



FLUSH-MOUNT

MODEL NO.	WEIGHT DRY lbs / kg	A min/max in / mm	B	C	D	E	F	G	H	J	K	L*	M
C-4	50	1.75/2.25	8.250	11.25	0.62	0.75	2.32	5.38	2.94	2.19	0.25	1.75	3.75
C-4	23	44.5/57.2	209.55	285.8	15.7	19.1	58.9	136.7	74.7	55.6	6.4	44.5	95.3
C-5	75	2.25/2.75	11.500	15.75	1.00	1.00	2.75	6.84	3.75	2.84	0.25	2.50	4.50
C-5	35	57.2/69.9	292.10	400.1	25.4	25.4	69.9	173.7	95.3	72.1	6.4	63.5	114.3
C-6	100	2.75/3.25	11.500	17.25	0.62	1.12	3.31	7.38	3.94	3.19	0.25	3.00	5.50
C-6	45	69.9/82.6	292.10	438.2	15.7	28.4	84.1	187.5	100.1	81.0	6.4	76.2	139.7
C-7	150	3.25/3.75	12.500	17.25	0.81	1.12	2.88	6.88	3.69	2.94	0.25	3.50	5.38
C-7	70	82.6/95.3	317.50	438.2	20.6	28.4	73.2	174.8	93.7	74.7	6.4	88.9	136.7
C-8	200	3.75/4.25	14.250	19.50	1.00	1.38	3.25	8.62	4.25	4.00	0.31	4.00	7.25
C-8	90	95.3/108.0	361.95	495.3	25.4	35.1	82.6	218.9	108.0	101.6	7.9	101.6	184.2
C-9	250	4.25/4.88	16.000	21.75	1.25	1.38	4.61	10.29	5.86	4.12	0.31	4.50	7.50
C-9	115	108.0/123.8	406.40	552.5	31.8	35.1	117.1	261.4	148.8	104.6	7.9	114.3	190.5
C-10.5	300	4.88/5.75	14.000	21.00	0.62	1.50	4.38	9.88	5.00	4.50	0.38	5.25	7.00
C-10.5	135	123.8/146.1	355.60	533.4	15.7	38.1	111.3	251.0	127.0	114.3	9.7	133.4	177.8
C-12	425	5.75/6.75	16.000	24.00	0.75	1.75	4.56	10.69	5.31	5.00	0.38	6.00	8.00
C-12	195	146.1/171.5	406.00	609.6	19.1	44.5	115.8	271.5	134.9	127.0	9.7	152.4	203.2
C-13.5	600	6.25/7.50	18.000	27.00	0.88	1.93	5.00	11.88	5.88	5.62	0.38	6.75	9.00
C-13.5	275	158.8/190.5	457.20	685.8	22.4	49.0	127.0	301.8	149.4	142.7	9.7	171.5	228.6

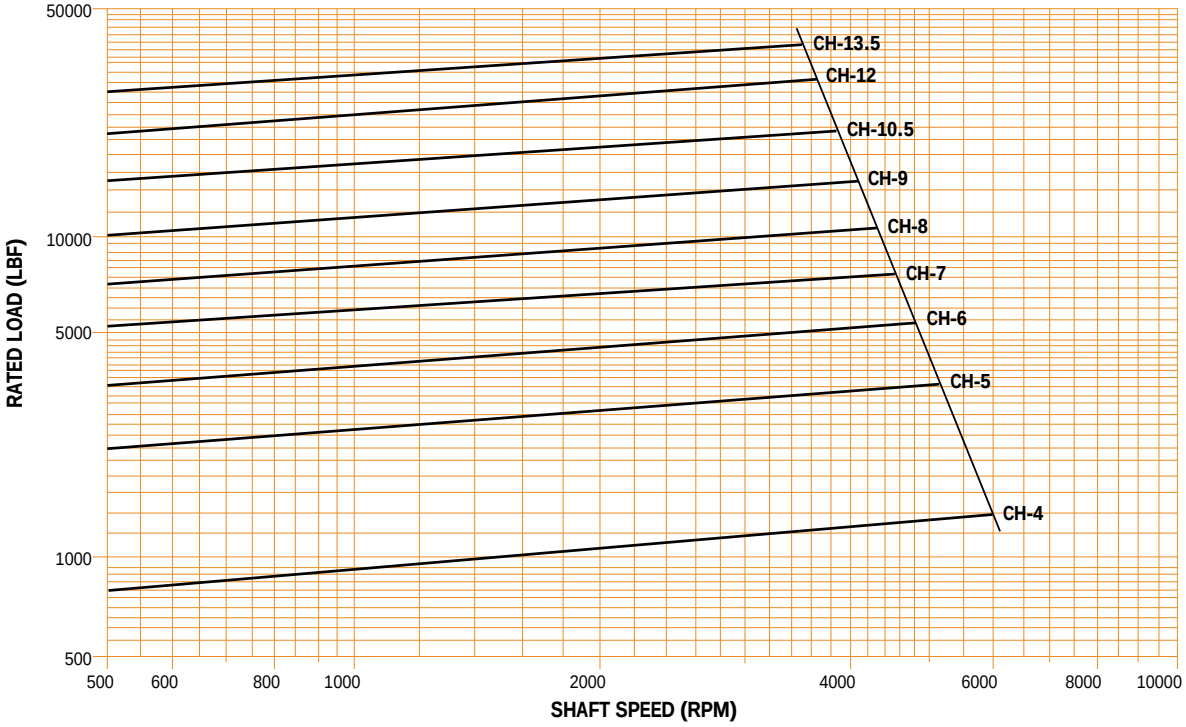
Metrics are shown on the shaded bars. All dimensions should be confirmed by a certified drawing. NOTE: Add to sump capacity a sufficient amount of oil to allow for the application's piping. *Effective length will vary with shaft diameter. **Dimension KK applies only to flush mount units, otherwise use R.



MODEL NO.	P	Q	R	S	T	U	V	EE	FF	HH	JJ	KK**
C-4	0.50	0.88	8.82	0.75	3.50	1.00	0.50	13.00	0.75	1.19	5.12	11.25
C-4	12.7	22.4	224.0	19.1	88.9	25.4	12.7	330.2	19.1	30.2	130.0	285.8
C-5	0.62	1.12	13.38	0.94	4.00	1.25	0.50	14.00	1.00	1.25	6.34	11.75
C-5	15.7	28.4	339.9	23.9	101.6	31.8	12.7	355.6	25.4	31.8	161.0	298.5
C-6	0.75	1.25	15.25	1.12	4.25	1.50	0.50	14.25	1.12	1.50	7.25	12.50
C-6	19.1	31.8	387.4	28.4	108.0	38.1	12.7	362.0	28.4	38.1	184.2	317.5
C-7	0.75	1.25	14.25	1.12	5.06	1.50	0.50	15.00	1.31	1.88	6.63	13.00
C-7	19.1	31.8	362.0	28.4	128.5	38.1	12.7	381.0	33.3	47.8	168.4	330.2
C-8	1.25	1.38	16.75	1.12	5.50	2.00	0.50	15.75	1.31	2.44	8.25	14.25
C-8	31.8	35.1	425.5	28.4	139.7	50.8	12.7	400.1	33.3	62.0	209.6	362.0
C-9	1.19	1.19	18.75	1.25	6.00	2.00	0.75	17.25	1.50	2.64	9.45	15.50
C-9	30.2	30.2	476.3	31.8	152.4	50.8	19.1	438.2	38.1	67.1	240.0	393.7
C-10.5	2.00	3.50	18.00	1.50	7.00	2.00	1.00	21.00	2.19	2.31	9.88	18.00
C-10.5	50.8	88.9	457.2	38.1	177.8	50.8	25.4	533.4	55.6	58.7	251.0	457.2
C-12	2.38	4.00	20.50	1.62	8.00	3.00	1.00	24.00	2.50	2.64	10.69	20.50
C-12	60.5	101.6	520.7	41.1	203.2	76.2	25.4	609.6	63.5	67.1	271.5	520.7
C-13.5	2.75	4.72	23.00	1.75	9.00	3.00	1.38	27.00	2.93	3.14	11.88	23.00
C-13.5	69.9	119.9	584.2	44.5	228.6	76.2	35.1	685.8	74.4	79.8	301.8	584.2

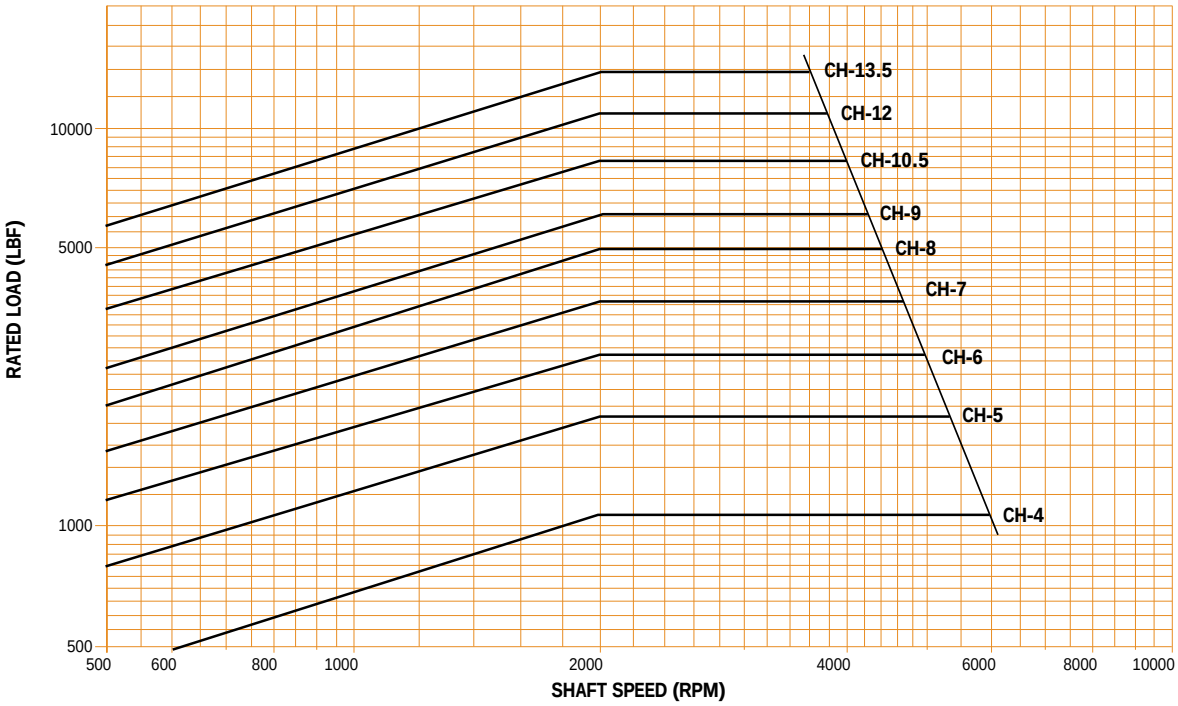
PERFORMANCE DATA CURVES

RATED LOAD FOR CH SYSTEM THRUST BEARINGS (ENGLISH)



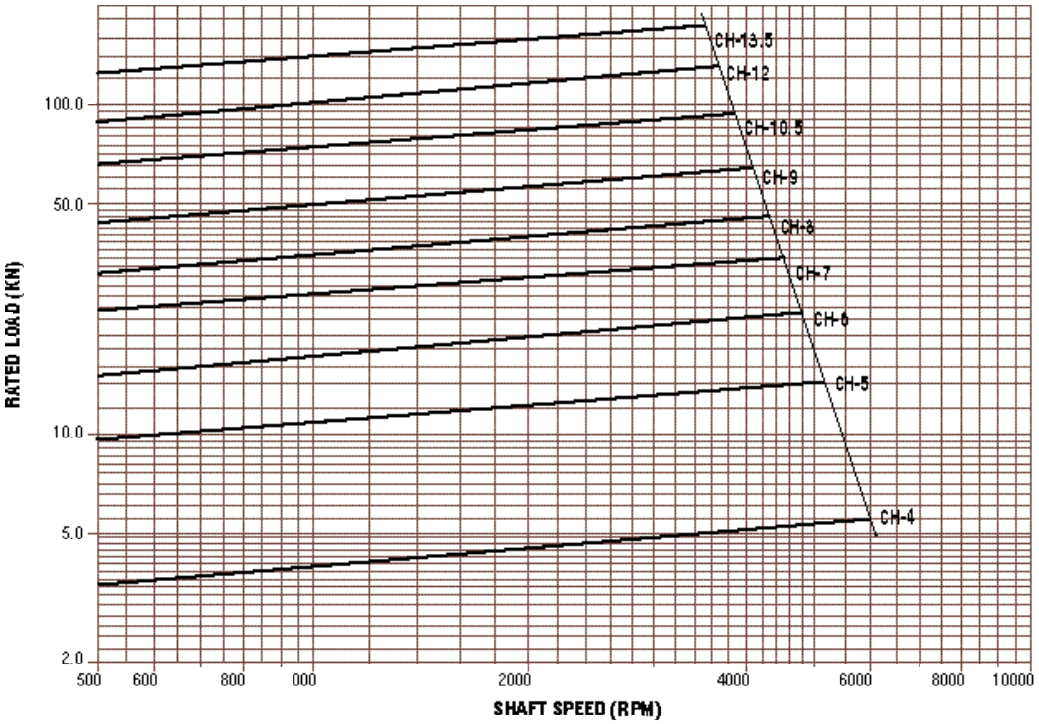
Based on ISO VG 46 oil at 120˚F sump temperature

RATED LOAD FOR CH SYSTEM JOURNAL BEARINGS (ENGLISH)



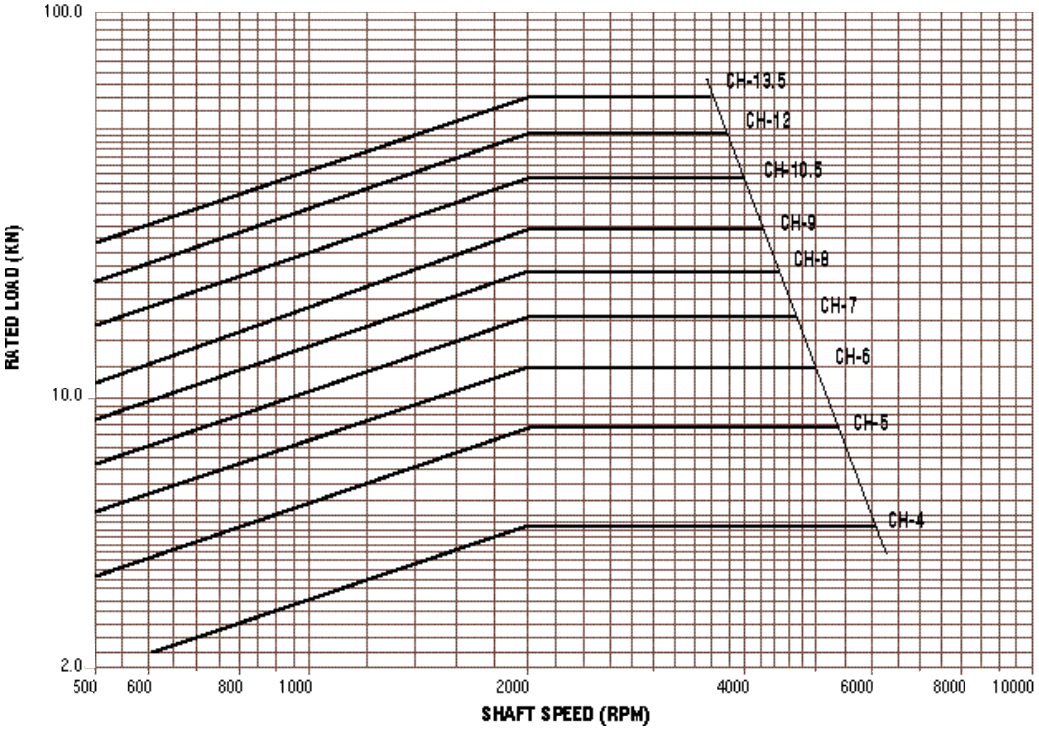
Based on ISO VG 46 oil at 120˚F sump temperature at the journal mean diameter

RATED LOAD FOR CH SYSTEM THRUST BEARINGS (METRIC)



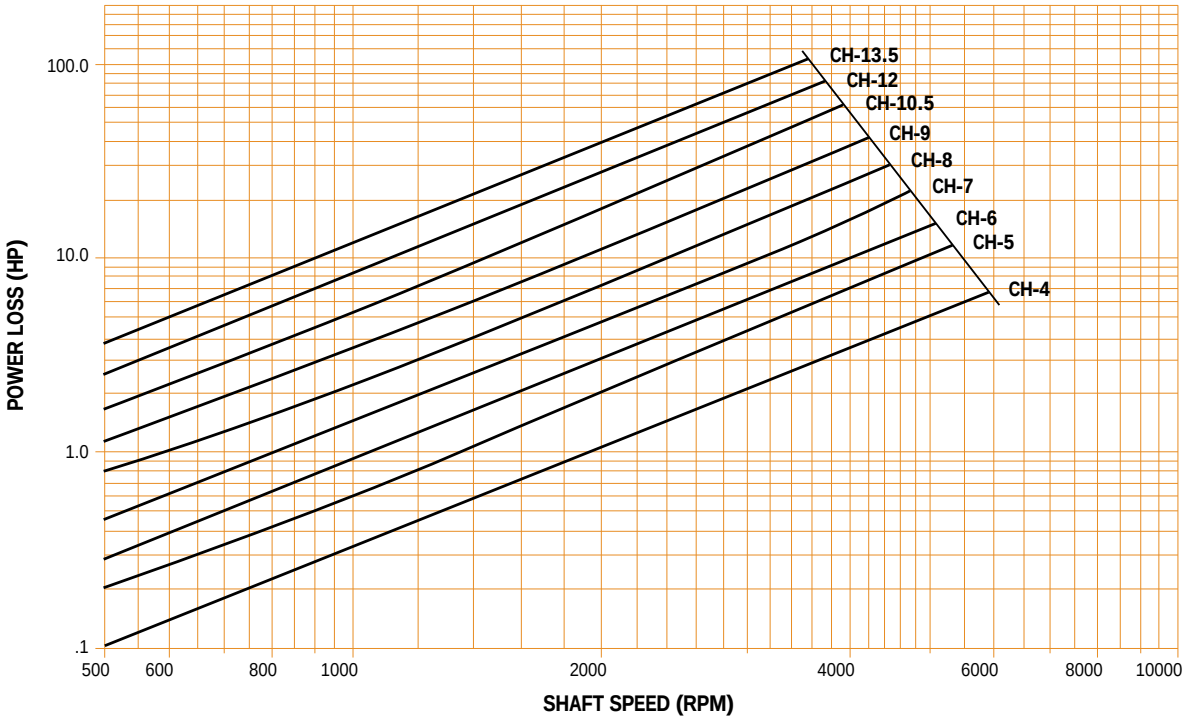
Based on ISO VG 46 oil at 49°C sump temperature

RATED LOAD FOR CH SYSTEM JOURNAL BEARINGS (METRIC)



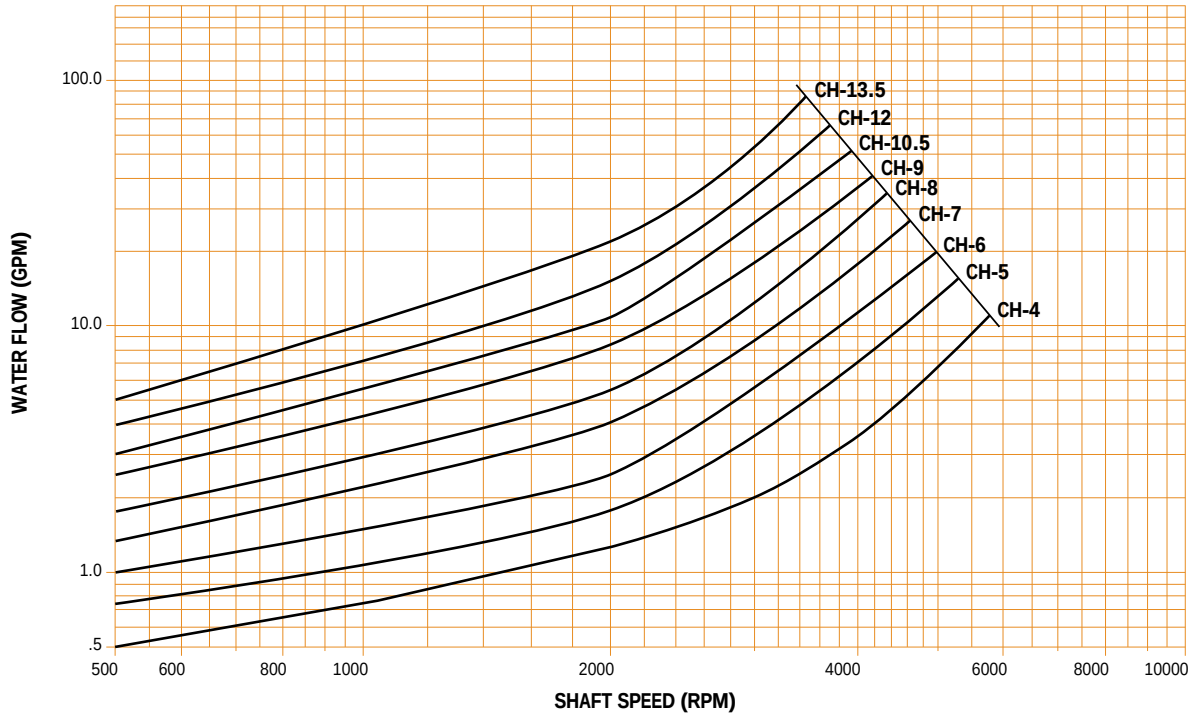
Based on ISO VG 46 oil at 49°C sump temperature at the journal mean diameter

TOTAL FRICTIONAL LOSS FOR CH SYSTEM (ENGLISH)



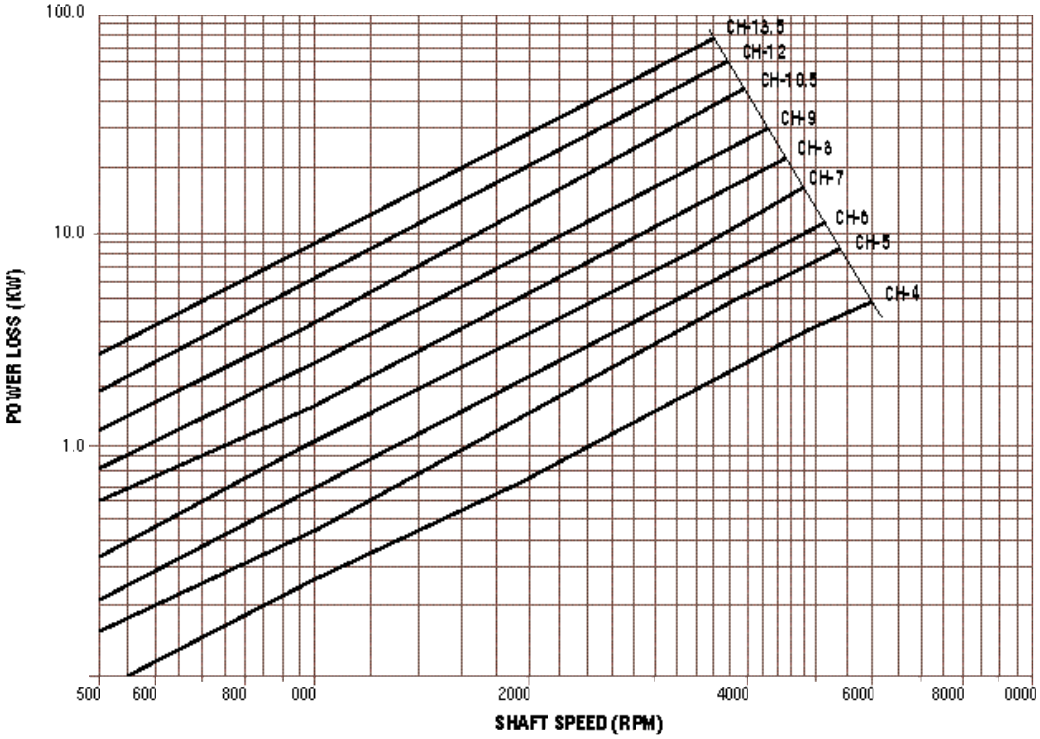
Based on rated thrust and journal loads, ISO VG 46 oil, 120˚F sump temperature

RECOMMENDED COOLING WATER FLOW FOR CH SYSTEM (ENGLISH)



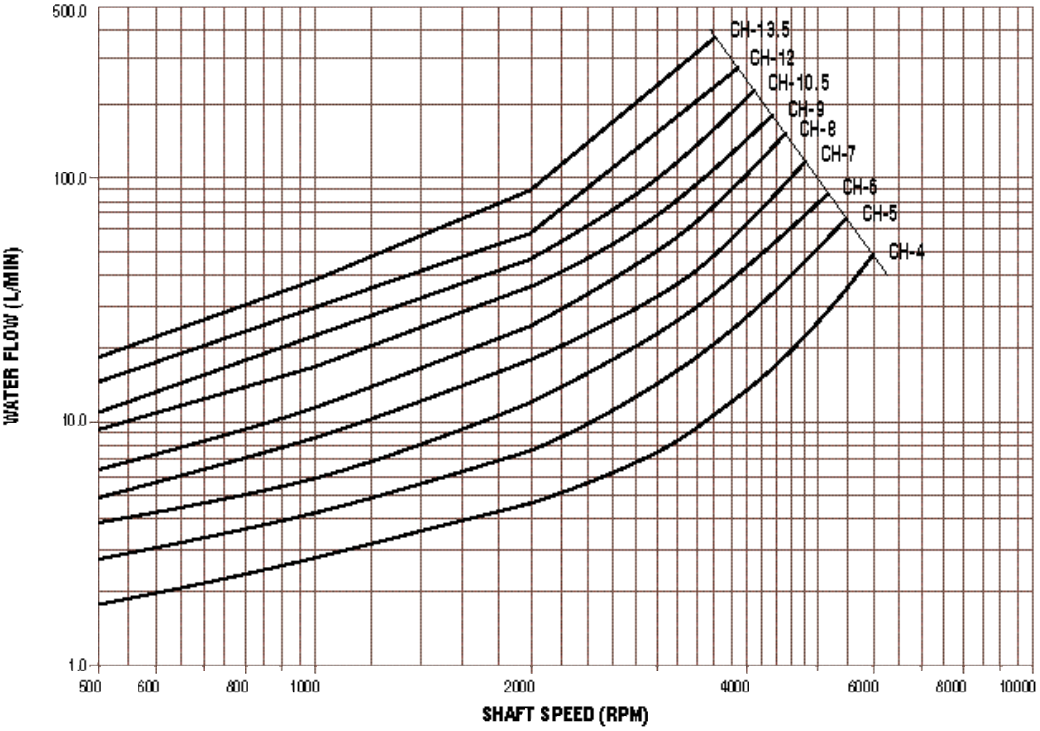
Based on rated loads, standard cooler, ISO VG 46 oil at 120˚F inlet, 80˚F cooling water

TOTAL FRICTIONAL LOSS FOR CH SYSTEM (METRIC)



Based on rated thrust and journal loads, ISO VG 46 oil, 49°C sump temperature

RECOMMENDED COOLING WATER FLOW FOR CH SYSTEM (METRIC)



Based on rated loads, standard cooler, ISO VG 46 oil at 49°C inlet, 27˚C cooling water

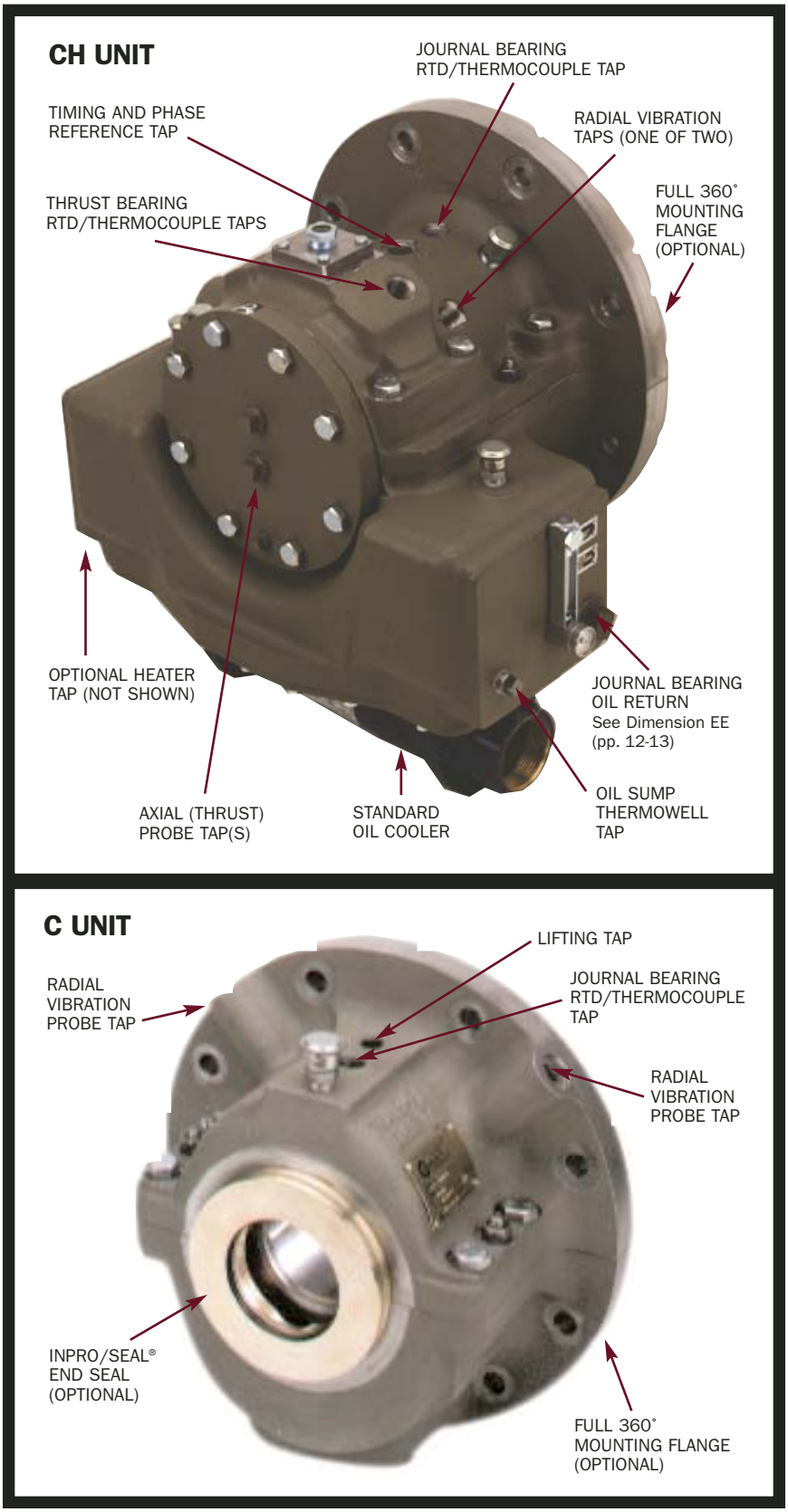
OPTIONS AND INSTRUMENTATION

BASIC MODEL

All Basic Models will be supplied as a half flange, spigot mount, with a standard shell and tube oil-to-water cooler and a labyrinth end seal. All CH and C units are equipped with standard lifting tap and eyebolt. Please refer to Options listed on the Inquiry sheet on page 21 for alternatives, or contact your Kingsbury Sales Engineer to discuss your application's specific needs. Some of these options are indicated by call-outs on the photos here.

INSTRUMENTATION

Instrumentation taps can be provided for temperature sensing, vibration monitoring, and phase reference monitoring. Please see the callouts indicated on these photos for tap options and locations. Tap options are listed on the Inquiry sheet on page 21. Kingsbury can also provide instrumentation, if requested.



INQUIRY AND ORDERING INFORMATION

Please include all the following information when ordering or inquiring about CH and/or C Systems. This information is also helpful in confirming your unit selection and providing you with accurate performance data. For applications outside the standard range, or for special features not listed in this catalog, please consult your Kingsbury Sales Engineer directly. In an effort to continually improve quality and performance, Kingsbury reserves the right to upgrade materials and/or design as we see fit. Please fax this form to Kingsbury, Inc.: 215-824-4999.

Project Reference # _____

Your Name _____

Company _____

Phone/Fax _____

APPLICATION DATA

Style and Shaft Diameter _____

Axial (Thrust) Load

Normal _____ Maximum_____ Start-Up _____

Radial Load

Normal _____ Maximum _____

Lubricant

ISO Viscosity Grade _____ or viscosity at stated temperature _____

Coolant

Type _____ Inlet Temperature _____ Inlet Pressure _____

Shaft Speed

Normal _____ Max Continuous _____ Overspeed (if applicable): _____

Special Requirements

Ambient temperature-min/max _____ /_____°F/°C Location: ☐ Sheltered ☐ Exposed

OPTIONS

- ☐ All bronze cooler for seawater (attached)
- ☐ All stainless cooler (remote)
- ☐ Forced air cooler (remote)
- ☐ Connections for cooling water thermostat
- ☐ Connections for remote cooler (no cooler included)
- ☐ Thrust RTDs or thermocouples taps (Only available on CH units)
- ☐ Journal RTD or thermocouple tap
- ☐ Radial vibration probe taps
- ☐ Axial (thrust) probe taps (Only available on CH units)
- ☐ Timing and phase reference (Only available on CH units)
- ☐ Oil sump heater tap/boss (Only available on CH units)
- ☐ Oil sump heater with thermostat (Only available on CH units)
- ☐ Explosion-proof heater/thermostat housing
- ☐ End seal arrangement—provision for customer-supplied seal
- ☐ End seal arrangement—Inpro/Seal® included
- ☐ Full-flange
- ☐ Flush-mount (no spigot)

Additional _____