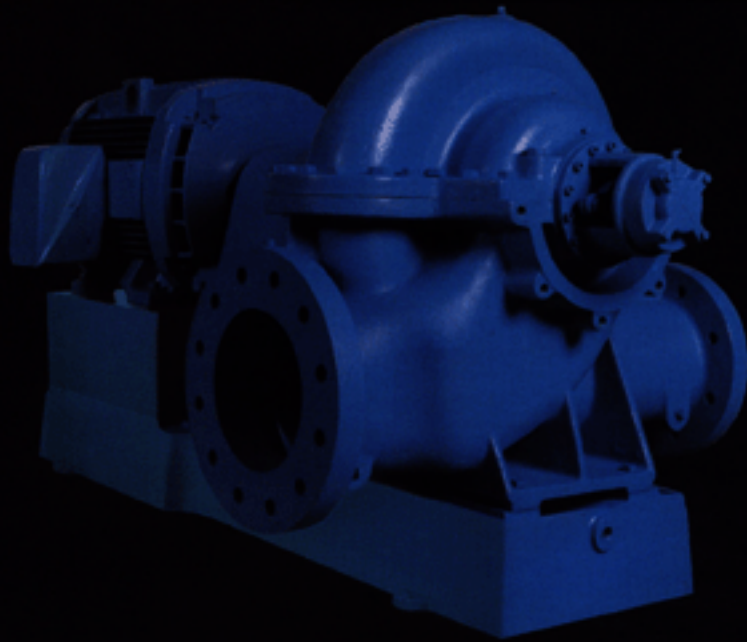


PACO



*Single Stage
Double Suction
Split Case Pumps*

Paco Pumps **One Step Ahead** **for Over 90 Years**

Paco (Pacific Pumping Company) has over 75 years of experience in the design, manufacture, and application of centrifugal pumps and pumping systems.

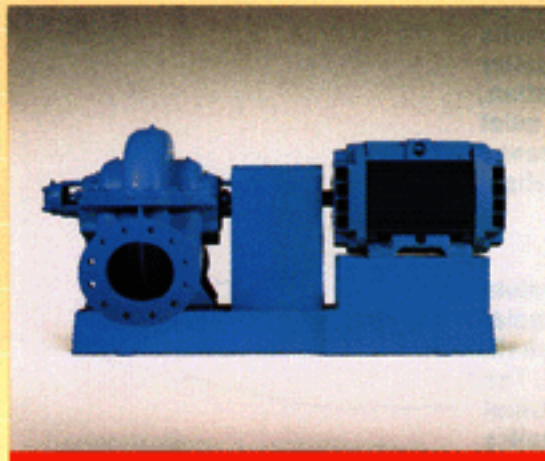
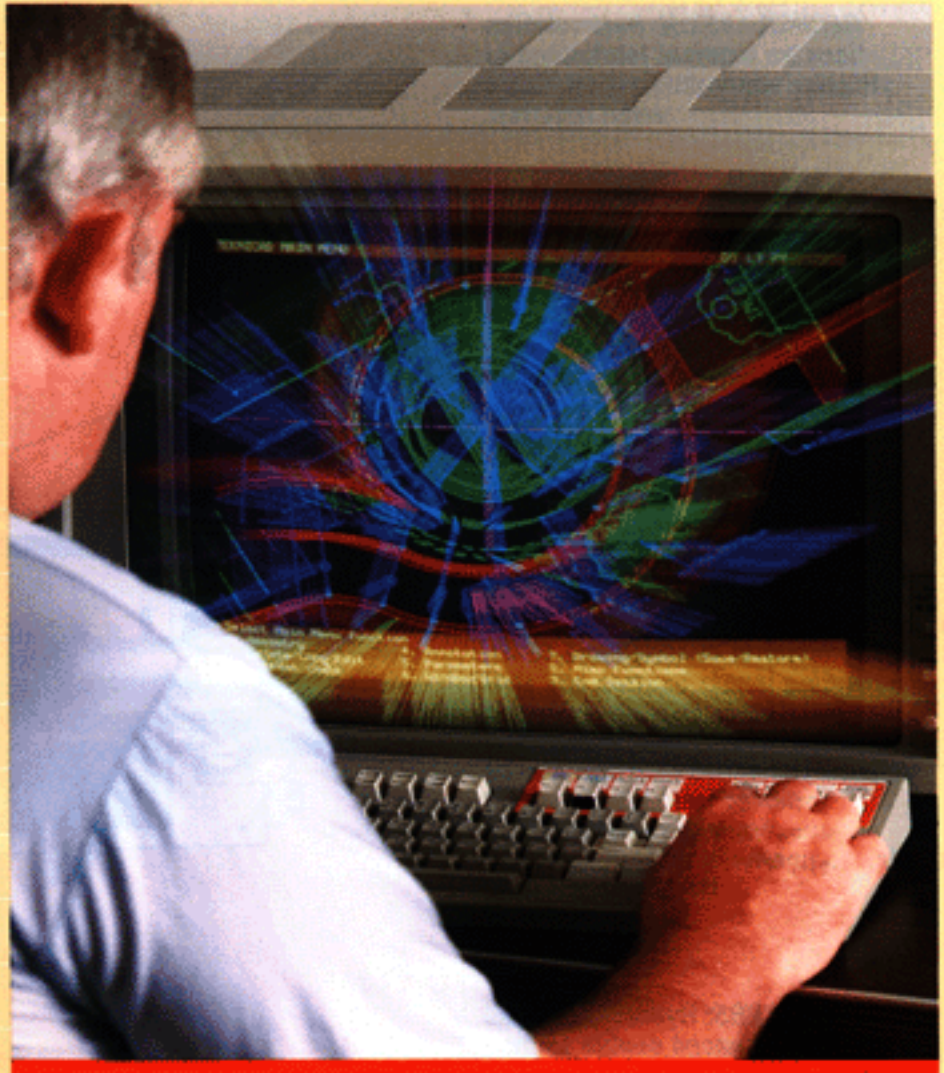


Paco's commitment to state-of-the-art pump design assures maximum user benefits with minimum life cycle cost.

Paco's experience plus their commitment to quality and an aggressive research and development program, has produced the latest development in split case pumps, the KP series. Using computer aided design technology, Paco has developed an energy efficient, longer lasting double suction split case pump with emphasis on ease of maintenance and installation.

The Paco KP series double suction split case pumps are available in sizes through 10" discharge, developing flows to 7000 GPM and heads to 500'. The KP models are available in a variety of metallurgies and mechanical configurations to meet your specific requirements.

Paco's commitment to their customers continues through an extensive service organization. Highly trained technicians can assist customers with initial start up, troubleshooting, repair, and system analysis.

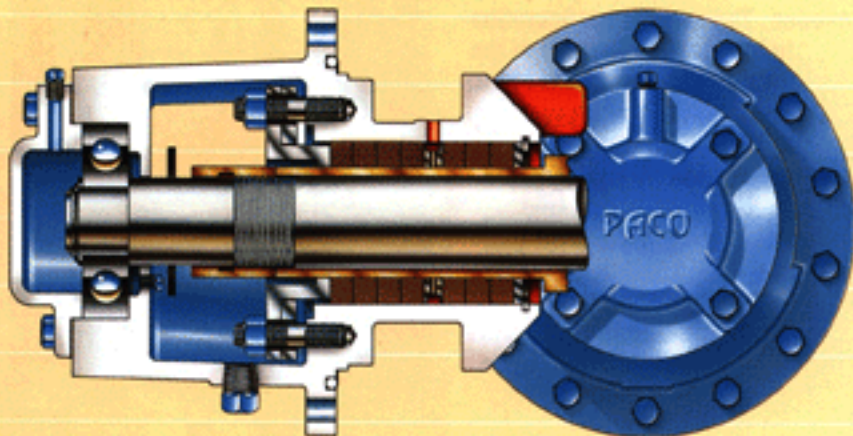


Features and Benefits

DOUBLE VOLUTE CONSTRUCTION: Paco's compensated double volute design virtually eliminates radial loads by balancing the hydraulic forces of the liquid within the pump casing. This balancing feature extends seal and bearing life, minimizes vibration and provides quiet operation. The double volute design improves efficiency by providing two individual volute passageways to guide the flow in the casing. Double volute construction is available on selected pumps ranging above 4" discharge.



BEARING HOUSING: Paco's unique self-contained bearing housing is attached to the upper and lower portions of the casing by a full 360 degree machined registered and bolted fit to optimize alignment and bearing life. This compact design limits shaft deflection by providing rigid shaft support. The combination bearing housing/seal chamber provides ease in maintenance and allows inspection of seals, sleeves and bearings without removing the top casing half.



IMPELLER: Paco's pump uses a Francis Vane impeller design specifically matched to the casing to produce broad band high efficiency and low NPSH. The hydraulically balanced double suction impeller, along with balanced radial loads provides quiet performance, minimum vibration and reduced operating costs.



90 Years of Experience

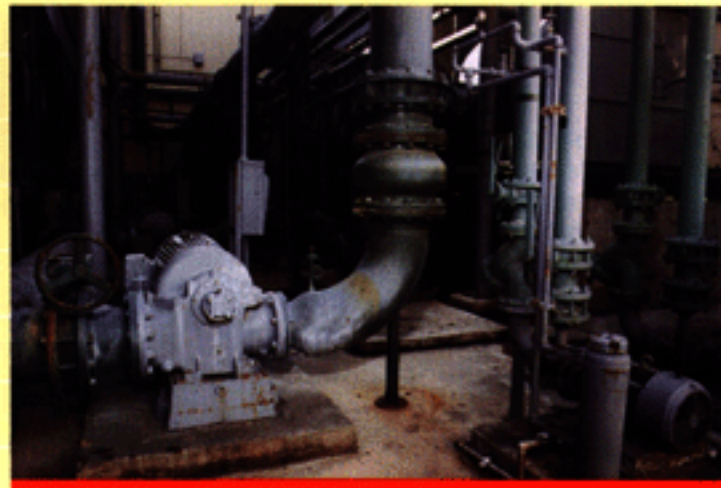
**COMMERCIAL HVAC SYSTEM
INSTALLATION:** Vertical split case
pumps provide chilled water in a
central mechanical equipment room
for a high rise bank. 150 HP pumps
operate 24 hours a day (when
required) with 215 pound suction
pressure to meet a variety of
weather conditions and heat loads.



FILTRATION SYSTEM: Supplying filter
water for the 1984 Olympics required
a rugged and dependable pump.
Paco all bronze KPVS pumps
provided the reliability that was
needed. The vertical configuration
helped reduce the size of the
mechanical equipment room.



PROCESS SYSTEM: Horizontal split
case pumps provide process cooling
water for this major customer. Energy
efficient operation and mechanical
reliability were major considerations
for this critical application.



Engineered and Tested for Quality Assurance



QUALITY CONTROL: Ongoing quality assurance/control is essential to maintain product reliability. Here, a Quality Control inspector measures a critical point of the pump volute. Hydrostatic tests are performed in accordance with Hydraulic Institute Standards.



ENGINEERING: Research and development engineers use computer aided design to predict pump performance and efficiency values. CAD results are confirmed by actual tests.



TEST LAB: Rigorous prototype testing is conducted to verify hydraulic performance, NPSH requirements as well as vibration and noise. These tests are conducted in strict accordance with Hydraulic Institute Standards. Ongoing production testing assures actual production units meet published performance. Instruments are calibrated and traceable to the U.S. Bureau of Standards.

Engineering Data

KP: CASE WORKING PRESSURE LIMITATIONS AT 150° F: FLAT-FACE FLANGES

CASING MATERIAL	125/150 LB FLANGE DRILLING		250/300 LB FLANGE DRILLING	
	CWP (1)	HYDRO (2)	CWP (1)	HYDRO (2)
Cast Iron (ASTM A48)	175 psi	265 psi	300 psi	450 psi
Ductile Iron (ASTM A536)	175 psi	265 psi	450 psi	600 psi
All Bronze (ASTM B145)	175 psi	265 psi	250 psi	375 psi

(1) CWP = Case Working Pressure (2) Hydro = Hydrostatic Test Pressure

GENERAL INFORMATION

	PUMP MODEL NUMBER					
	2095-1,2 2013-5,6 3095-7,8	3014-5,6 4012-1,2 4012-7,8 4015-5,6	5012-7,8 5015-7,8 6012-1,2 6012-3,4	6015-1,2 8012-5,6 8015-3,4 1012-9,0	6019-3,4 8018-5,6	1015-1,2
Nominal case thickness, min	¾"	¾"	½"	½"	½"	¾"
Shaft diameter at impeller (max. diameter)	1½"	1½"	1½"	2½"	2½"	3"
Shaft diameter at sleeve	1"	1½"	1½"	1¾"	2¾"	2¾"
Shaft diameter at coupling	1"	1½"	1½"	1¾"	2"	2¼"
Sleeve O.D.	1¼"	1¾"	1¾"	2¼"	2¾"	3"
Packing box I.D.	1¾"	2½"	2½"	3¼"	3¼"	4"
Packing box depth	1¾"	2¾"	2¾"	4¼"	4¼"	4"
Packing size	¼"	¾"	¾"	½"	½"	½"
No. of packings rings, with lantern ring (per packing box)	5	5	5	7	7	6
Lantern ring width	¾"	¾"	¾"	¾"	¾"	¾"
No. of rings w/o lantern ring (per packing box)	6	6	6	8	8	7
No. of rings in front of lantern ring (per packing box)	2	2	2	2	2	2
Seal O.D.	1½"	2¾"	2¾"	2¾"	3½"	3¾"
Basic bearing number, cplg. -end	305	308	308	407	211	312
Basic bearing number, opp. -cplg. -end	305	308	308	309	211	312
Minimum bearing life	5 years	10 years	10 years	10 years	10 years	10 years
Maximum shaft deflection at seal	.002"	.001"	.0015"	.0015"	.0015"	.001"
1st two digits of pump model no. = Pump Discharge size; last two digits = impeller size (Example: 2095 = 2" pump, 9.5" impeller)						

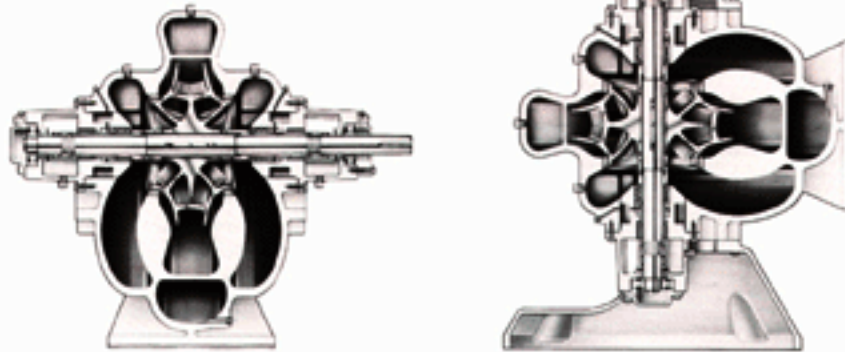
*No Sleeve when seal type

BEARING CENTERS DISTANCE (INCHES) BY MODEL NUMBER

MODEL NUMBER	BEARING CENTER	
	PACKED	SEALED
2095-1,2 2013-5,6 3095-7,8	15.25"	12.5"
3014-5,6 4012-7,8 4012-1,2 4015-5,6	20.5"	16.5"
6012-1,2	21.5"	17.5"
5012-7,9	23.5"	23.5"

MODEL NUMBER	BEARING CENTER	
	PACKED	SEALED
5015-9,0 6012-3,4	24.5"	24.5"
6015-1,2 8012-5,6	28.6"	28.6"
6019-3,4 8018-5,6	26"	26"
8015-3,4	29.5"	29.5"
1012-9,0	30.5"	30.5"
1015-1,2	30"	30"

Engineering Data



MATERIAL OF CONSTRUCTION

ITEM	CAST IRON BRONZE FITTED		ALL IRON		DUCTILE IRON BRONZE FITTED		ALL BRONZE	
	MATERIAL	SPEC. NO.	MATERIAL	SPEC. NO.	MATERIAL	SPEC. NO.	MATERIAL	SPEC. NO.
Casing	Cast Iron	A48	Cast Iron	A48	Ductile Iron	A536	Bronze	B145
Case Wear Rings	Bronze	SAE 660	Cast Iron	A48	Bronze	SAE 660	Bronze	SAE 660
Bearing Housing	Cast Iron	A48	Cast Iron	A48	Ductile Iron	A536	Bronze	B145
Casing Bolts	Steel	Grade 5 Com. Std.	Steel	Grade 5 Com. Std.	Steel	ASTM Grade 8	St. Steel	AISI-300
Brg. Housing "O" Ring	Synthetic	Buna-N	Synthetic	Buna-N	Synthetic	Buna-N	Synthetic	Buna-N
Case Gasket	Vegetable Fiber	HYD-401	Vegetable Fiber	HYD-401	Vegetable Fiber	HYD-401	Vegetable Fiber	HYD-401
Brg. Housing Bolts	Steel	Grade 5 Com. Std.	Steel	Grade 5 Com. Std.	Steel	ASTM Grade 8	St. Steel	AISI-300
Bearing Cap	Cast Iron	A48	Cast Iron	A48	Cast Iron	A48	Cast Iron	A48
Bearing Cap Bolts	Steel	Grade 5 Com. Std.	Steel	Grade 5 Com. Std.	Steel	Grade 5 Com. Std.	St. Steel	AISI-300
Bearing Cap Gasket	Vegetable Fiber	HYD-401	Vegetable Fiber	HYD-401	Vegetable Fiber	HYD-401	Vegetable Fiber	HYD-401
Impeller	Bronze	B145	Cast Iron	A48	Bronze	B145	Bronze	B145
Impeller Wear Rings	Bronze	SAE 660	Cast Iron	A48	Bronze	SAE 660	Bronze	SAE 660
Impeller Key	Steel	C1018	Steel	C1018	Steel	C1018	St. Steel	AISI-300
Shaft	Steel	High Tensile	Steel	High Tensile	Steel	High Tensile	St. Steel	AISI-300
Shaft Sleeve	Bronze	SAE 660	St. Steel	AISI-300	Bronze	SAE 660	Bronze	SAE 660
Packing Gland	Ductile Iron	A536	Ductile Iron	A536	Ductile Iron	A536	Bronze	B145
Gland Studs	Brass	SAE 40	Brass	SAE 40	Brass	SAE 40	St. Steel	AISI-300
Recirculation Lines	Copper Tubing	Com. Std.	St. Steel Tubing	AISI-300	Copper Tubing	Com. Std.	Copper Tubing	Com. Std.
Recirculation Fittings	Brass NPT	Com. Std.	Steel NPT	Com. Std.	Brass NPT	Com. Std.	Brass NPT	Com. Std.
Lantern Ring (optional)	TFE	TFE	TFE	TFE	TFE	TFE	TFE	TFE
Shaft O-Rings	Synthetic	Buna-N	Synthetic	Buna-N	Synthetic	Buna-N	Synthetic	Buna-N
Mechanical Seal	Refer to mechanical Seal Selection Guide (section B1g.1 page 5) for appropriate seal construction.							

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Fax: (309)792-8621

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3215 Producer Way
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Fax: (909)594-1335

East Regional Sales Office

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Peabody, MA 01960
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Fax: (978)535-8142

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