



Division of ASM Industries, Inc.

IMPROVED 'S' SERIES

Series S Self-Priming Centrifugal Pumps

Series "S" Self-Priming Centrifugal Pumps are lightweight, corrosion resistant pumps for general service on water, salt water, and many agricultural chemicals. They feature stainless steel internal fasteners, or non-metallic solution contact Viton, EPDM or Buna-N "O"-rings and gasket, with stainless steel external fasteners. The pumps are molded of tough, glass reinforced polyester, polypropylene or Ryton. Polyester models are available with or without lined volute for abrasion resistance.

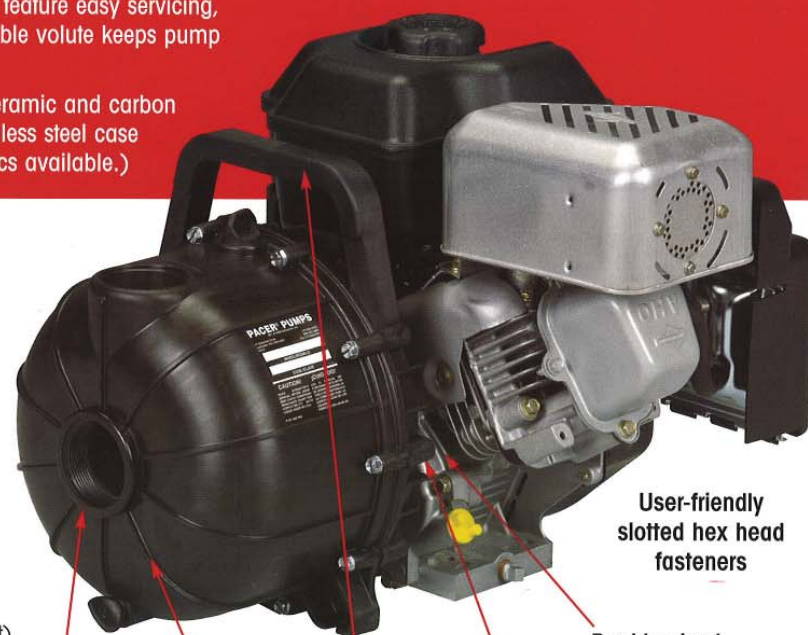
All pumps include a built-in check valve, feature easy servicing, and during pumping, a self-cleaning double volute keeps pump free of settled solids.

Mechanical Shaft Seal: Self-lubricating ceramic and carbon faces (silicon carbide optional) with stainless steel case and spring. (Hastelloy C and non-metallics available.)

Horizontal...Long or close-coupled

For industrial, agricultural and marine use

- Choice of materials— Pump constructed of: Polyester polypropylene—or Ryton
- **Optional elastomers and stainless steel or non-metallic fasteners available for chemical applications.** (Refer to our chemical resistance chart)
- Flow rates (electric driven) To 280 U.S. GPM or 120 ft. TDH (To 883 LPM or 25.4 TDH)
- Flow rates (fuel driven) To 280 U.S. GPM or 126 ft. TDH (To 1060 LPM or 38.4m TDH)
- Suction lift to 25 ft. (7.6m) vertical
- 1½", 2" or 3" ports, NPT and BSP (polyester)
- Electric motor, gasoline engine, hydraulic or pneumatic driven
- Close-coupled, long-coupled or pedestal mounted
- Built-in check valve: Prevents backflow and siphoning and allows for faster priming



Reinforced port for added strength

Ribbed body design for enhanced durability

Extra large tough handle

Molded threaded inserts for ease of inspection

User-friendly slotted hex head fasteners

Double-sized weep hole

PACER PUMPS

Division of ASM Industries, Inc.

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SERIES 'S' SELF-PRIMING CENTRIFUGAL PUMPS

HORIZONTAL . . . LONG or CLOSE COUPLED for industrial, agricultural and marine use

CLOSE-COUPLED ELECTRIC



GASOLINE ENGINE



PEDESTAL MOUNTED for flexible coupling



HYDRAULIC



PNEUMATIC



LONG COUPLED

- **CHOICE OF MATERIALS -** Glass reinforced — polyester, polypropylene or Ryton® EPDM, Buna-N or Viton® elastomers, and stainless steel or non-metallic fasteners for resistance from chemical attack (See Chemical Resistance Chart)
- **FLOW RATES (electric driven)** To 280 U.S. GPM or 120 ft. TDH @ 60 Hz (To 883 LPM or 25.4m TDH @ 50 Hz)
- **FLOW RATES (Engine driven)** To 280 U.S. GPM or 126 ft. TDH (To 1060 LPM or 38.4m TDH)
- Suction lift to 25 ft. (7.6m) VERTICAL*
- 1-1/2", 2" or 3" NPT ports. All polyester and 2" polypropylene also available with BSP threads.
- **ELECTRIC MOTOR, GASOLINE ENGINE, DIESEL ENGINE, HYDRAULIC or PNEUMATIC DRIVEN**
- **CLOSE-COUPLED, LONG-COUPLED or PEDESTAL MOUNTED**
- **BUILT-IN CHECK VALVE FOR QUICK PRIMING**

* Based on water-like liquids at 70°F and at 3450 RPM after initial priming of pump housing.



AQUACULTURE



AGRICULTURE



MARINE



IRRIGATION AND SOLUTION TRANSFER



OIL FIELD



INDUSTRIAL AND WASTE TREATMENT



CHEMICAL APPLICATIONS

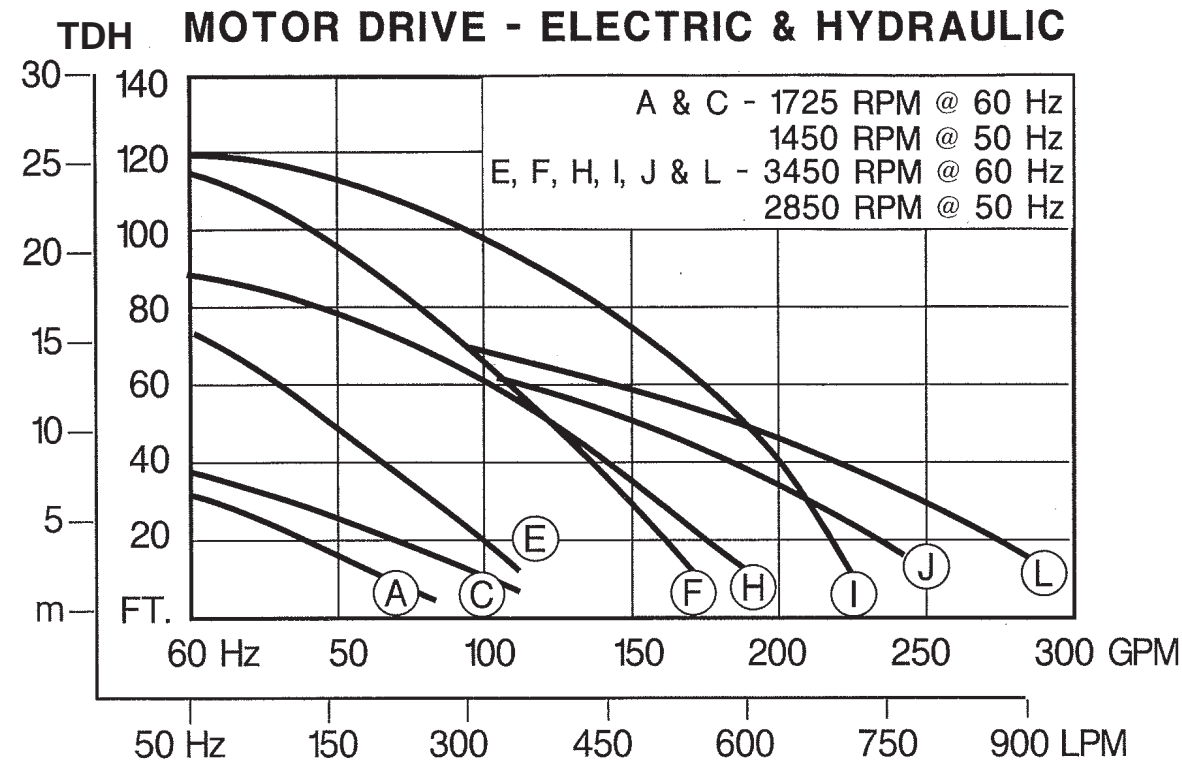


SPRAY RIG

www.pacerpumps.com

'S' PUMP FLOW CURVES

SERIES 'S' PEDESTAL MOUNTED PUMPS



'PE' - plastic pedestal with carbon steel shaft



'CSS' - cast iron pedestal with stainless steel shaft

GENERAL INFORMATION AND POWER REQUIREMENTS

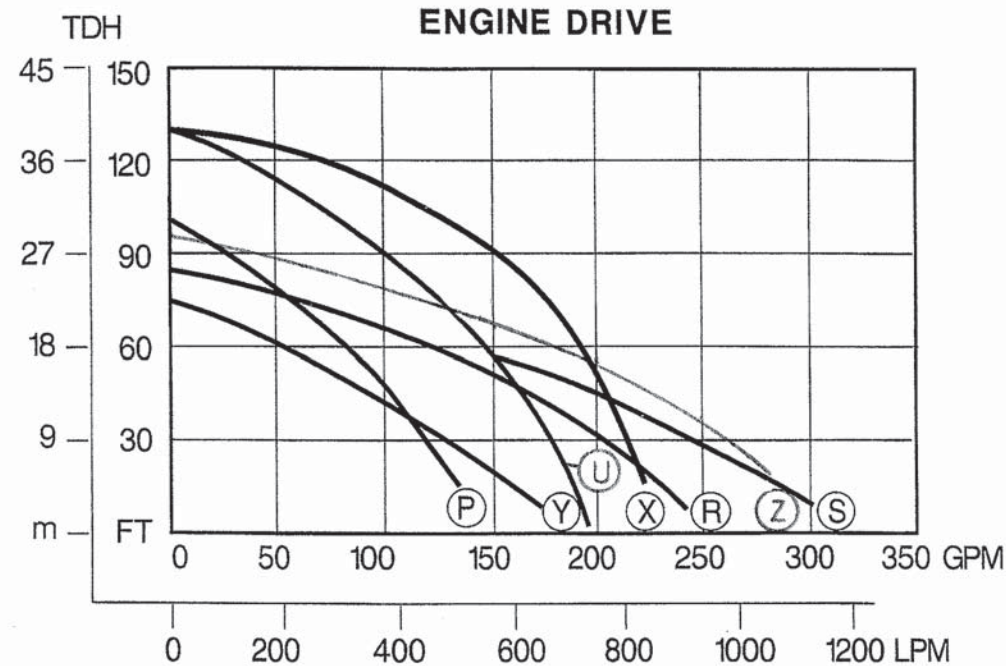
Pacer 'S' series pumps are manufactured in port sizes 1 1/2", 2" and 3" from engineered thermoplastics. These thermoplastics are Poloyester, Polypropylene and Ryton® for pumping water, saltwater, agricultural chemicals and many industrial chemicals.

The power source can be supplied from the factory in the form of electric motors or gasoline and diesel engines. The same power sources may also be supplied and installed by the customer.

All internal and external fasteners are stainless steel. Buna-N, EPDM or Viton® elastomers are available from stock. As pictured above, the Pacer Pedestal Pump is coupled to either a plastic pedestal with carbon steel shaft or a cast iron pedestal with stainless steel shaft.

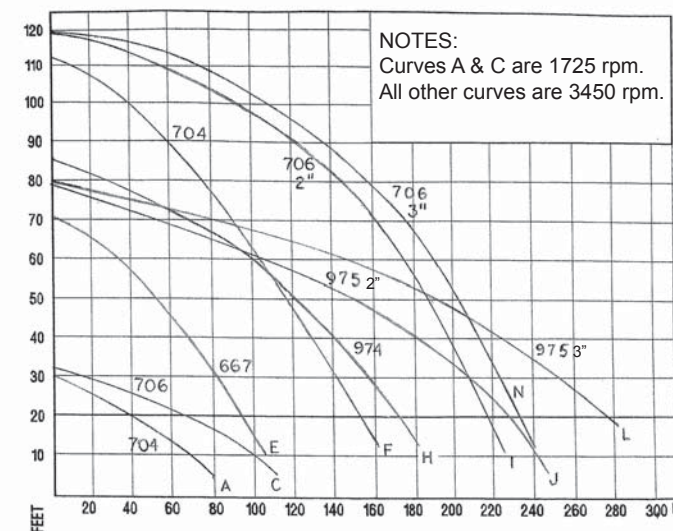
Pacer pedestal mounted pumps are available with five different impellers, each having different flow characteristics. The chart at left below shows the flow curves for the five impellers operated by 1725 RPM or 3450 RPM, 60Hz electric motors. The curve letters A, C, E, etc. also become part of the model number shown on the chart at right below.

For example, the third model listed, SE2EL has the number 667 impeller and will perform to flow curve E (E is fourth character in model number). The horsepower required is 2.0 at 3450 RPM. Therefore, this pump can be operated efficiently by coupling to a 2 Hp or greater electric motor (3450 RPM) or it can be driven by a 2Hp or larger gasoline engine. The flow curves can be achieved by gas engines operating at typically 3600 RPM. The suction and discharge port size for the first model listed below right is 1 1/2" and the last is 3". The balance of models shown have 2" ports.



Curve	Impeller	HP *
A 1 1/2"	704	.75
C 1 1/2"	706	1.5
E 2"	667	2
F 2"	704	3
H 2"	974	3
I 2"	706	5
J 2"	975	5
L 3"	975	5
P 2"	704	3.5
R 2"	975	5.5
S 3"	975	5.5
U 2"	706	5.5
X 3"	8706	8
Y 3"	974	3.5
Z 3"	8975	8

* HP Based on specific gravity of 1.0



PUMP MODEL	CAST IRON PEDESTAL	PLASTIC PEDESTAL	CURVE	IMPELLER	RPM	REQUIRED HP
SE11/2AL	CSS	PE	A	704	1725	.5
SE2CL	CSS	PE	B	706	1725	1.0
SE2EL	CSS	PE	E	667	3450	2.0
SE2FL	CSS	PE	F	704	3450	3.0
SE2HL	CSS	PE	H	974	3450	3.0
SE2IL	CSS	PE	I	706	3450	5.0
SE2JL	CSS	PE	J	975	3450	5.0
SE3LL	CSS	PE	L	975	3450	5.0
SE3NL	CSS	PE	N	706	3450	5.0

- For a complete model number add pump model and desired pedestal.
- Example: SE2EL CSS
- Plastic pedestal (PE) not recommended for side loading

MOTOR TABLE

Electric Motors Close Coupled		Electric Motor Key
TEFC (60 Hz)	TEFC (50 Hz)	60 Hz
HP Model	HP Model	G = 1750 RPM 1φ C = 3450 RPM 1φ H = 1750 RPM 3φ D = 3450 RPM 3φ
G.5C G.75C G1.0C G1.5C C2.0C C3.0C C5.0C	A.5C A.75C A1.0C A1.5C B2.0C	50 Hz
H.5C H.75C H1.0C H1.5C D2.0C D3.0C	E.5C E.75C E1.0C E1.5C F1.5C F2.0C F3.0C	A = 1450 RPM 1φ B = 2850 RPM 1φ E = 1450 RPM 3φ F = 2850 RPM 3φ
		60 Hz 1φ 115/230 50 Hz 1φ 208-230/50 60 Hz 3φ 208/230/460

Gasoline/Diesel Engines

DESCRIPTION	MODEL	PRICE CODE
Briggs & Stratton series 525, 148cc (4hp)	E3C	58-0634
Briggs & Stratton series 825, 206cc (5.5hp)	E5IC	58-0644
Honda 5hp GC 160 OHC residential	E5HOC	58-0635GC
* Honda 5.5hp GX 160 OHV commercial	E5HCP	58-0635H
* Briggs & Stratton 6.5hp Vanguard	E6CP	58-0646V
Briggs & Stratton series 1450, 305cc (8hp)	E8ICP	58-0967
* Lombardini 6 hp Diesel	E5DCP	58-0635L

* AVAILABLE WITH ELECTRIC START OPTION

Pneumatic Motor

HP	RPM	Req'd PSI	Req'd SCFM	Model & PCN
.5	1750	30	25	PNC
1	1750	37	38	
1	2900	27	45	
2	2900	49	70	
3	2900	74	100	
4	2900	102	130	

To approximate flow at 2900 RPM, reduce flow by 20%, head by 29% and HP by 40%

Hydraulic Motor

HP	RPM	Req'd PSI	Req'd GPM	Model & PCN
2	3450	500	9	- HYC
3	3450	750	9	
5	3450	1200	9.2	

POLYESTER PUMPS



CLOSE-COUPLED ELECTRIC

PUMP CLOSE-COUPLED TO ELECTRIC MOTOR

FLOW CURVE LETTER	PORT SIZE IN.	MAXIMUM FLOW RATE		MAX. TDH		HP REQ'D		MODEL NUMBER	PRICE CODE NUMBER	ELECTRIC MOTOR 60 Hz ADD TO MODEL & PRICE CODE NO. . . .	
		GPM @ 60 Hz	LPM @ 50 Hz	FT. @ 60 Hz	m @ 50 Hz	60 Hz /RPM	50 Hz 2850 RPM			115/230V 1/60 TEFC	230/460V 3/60 TEFC
A	1½	80	252	30	6.4	.5/1750	.25/1450	SE1½AL-	58-11A4-	G.5C	H.5C
C	1½	120	378	32	6.8	1.0/1750	.5/1450	SE1½CL-	58-11C4-	G1.0C	H1.0C
E	2	110	346	70	14.8	2/3450	1.1	SE2EL-	58-12E4-	C2.0C	D2.0C
H	2	180	567	85	18	3/3450	1.7	SE2HL-	58-12H4-	C3.0C	D3.0C
*F	2	160	504	115	24.3	3/3450	2.2	SE2FL-	58-12F4-	C3.0C *	D3.0C
J	2	240	756	75	15.9	5/3450	3	SE2JL-	58-12J4-	C5.0C *	D5.0C
*I	2	230	725	120	25.4	5/3450	4	SE2IL-	58-12I4-	C5.0C *	D5.0C
L	3	280	883	75	15.9	5/3450	4.2	SE3LL-	58-13L4-	C5.0C *	D5.0C

Pump molded of glass reinforced polyester with 316 stainless steel internal fasteners, 304 SS external fasteners, EPDM "O"-rings and gasket, check valve. (Viton® available) Polypropylene baseplate, close-coupled electric motor. Also available in polypropylene & Ryton. * 230 Volt only. HP requirements based on specific gravity of 1.0.

* 'F' and 'I' curves limited to 1.0 SG (water). Exceeding 1.0 SG requires next highest horsepower.

PUMP CLOSE-COUPLED TO 12 & 24 VOLT DC MOTORS

FLOW CURVE LETTER	PORT SIZE IN.	MAXIMUM FLOW RATE		MAX. TDH		HP	MODEL NUMBER	PRICE CODE NUMBER	DC MOTOR ADD TO MODEL & PRICE CODE NO. . . .	
		GPM @ 60 Hz	LPM @ 50 Hz	FT. @ 60 Hz	m @ 50 Hz				12V	24V
A	2	80	252	30	6.4	.5	SE2AB-	58-12A2-	DC.5C-12	
A	2	80	252	30	6.4	.5	SE2AB-	58-12A2-		DC.5C-24
C	2	120	378	32	6.8	1.0	SE2CB-	58-12C2-	DC1.0C-12	
C	2	120	378	32	6.8	1.0	SE2CB-	58-12C2-		DC1.0C-24

Pumps close-coupled to DC motors are fitted with Buna-N elastomers only. These pumps are suitable for fresh or saltwater applications. All specifications are based on a specific gravity of 1.0.

PUMP with GASOLINE ENGINE DRIVE

* See page 6 for engines available with electric start option



GASOLINE ENGINE DRIVE

FLOW CURVE LETTER	PORT SIZE IN.	MAX. FLOW RATE		MAX. TDH		SHIPPING WEIGHT		MODEL NUMBER	PRICE CODE NO.	GASOLINE ENGINE ADD TO MODEL & PRICE CODE NO. . . .	
		GPM	LPM	FT.	m	LBS.	kg.			STANDARD	HEAVY DUTY
Y	2	170	643	76	23	40	19	SE1½YL-	58-11Y4-		
P	2	150	568	100	30	40	19	SE2PL-	58-12P4-	-E3CP	
R	2	230	871	83	25	46	23	SE2RL-	58-12R4-	E5IC B&S E5HOC Honda	E6CP B&S E5HCP Honda
U	2	200	757	130	40	46	23	SE2UL-	58-12U4-		same as above
S	3	280	1060	83	25	50	24	SE3SL-	58-13S4-		
X	3	230	871	126	38	70	32	SE3XL-	58-13X4-	N/A	
Z	3	290	1102	90	27	70	32	SE3ZL-	58-13Z4-	N/A	E8ICP

Molded of glass reinforced polyester with carrying handle, 316 stainless steel internal fasteners and 304 ss external fasteners. EPDM O-rings and gasket, check valve. (Viton® available) See motor table on page 6 for diesel engine drive. 'S' pumps are also available with 5.5 HP Lombardini Diesel engine.

'S' PUMP CONSTRUCTION GUIDE (Build a pump for your application)



HYDRAULIC



PNEUMATIC

PUMP with HYDRAULIC or PNEUMATIC DRIVE

FLOW CURVE LETTER	PORT SIZE IN.	HYDRAULIC @ 3450 RPM					PNEUMATIC @ 2900 RPM					SHIP. WT LBS.		MODEL NUMBER	PRICE CODE NUMBER	ADD TO MODEL & PRICE CODE NO.	
		FLOW RATE		MAX. TDH		REQ. HP	FLOW RATE		MAX. TDH		REQ. HP	HY	PN			HYD.	PNEU
		GPM	LPM	FT.	m		GPM	LPM	FT.	m							
E	2	110	416	71	22	2.0	90	340	49	15	1.0	18	44	SE2EL-	58-12E4-		
F	2	160	605	115	35	5.0	133	503	80	24	2.0	18	44	SE2FL-	58-12F4-		
•I	2	230	870	120	37	5.0	190	719	83	25	3.0	18	44	SE2IL-	58-12I4-	-HYC	-PNC
J	2	240	908	75	23	5.0	200	757	52	16	3.0	18	44	SE2JL-	58-12J4-		
L	3	280	1060	75	23	5.0	242	915	52	16	3.0	21	47	SE3LL-	58-13L4-		

Pump molded of glass reinforced polyester with 316 stainless steel internal fasteners, 304 SS external fasteners, EPDM "O"-rings, gasket and check valve. (Viton® available) Pneumatic driven includes a steel baseplate. Motor shaft is a 316 stainless steel stubshaft. Also available in polypropylene & Ryton. • 'I' curve is limited to 1.0 SG (water). Exceeding 1.0 SG requires next highest HP.



I. Close coupled pump

- Select flow curve
- Determine HP required.
- Determine materials of construction (consult chemical resistance guide)
- Construct pump model and price code numbers using pump table below
- Add drive model and price code number suffix from motor table
- Order as 1 item.

(Ordering example: close coupled pump)

ITEM	QUANTITY	DESCRIPTION/ MODEL	MODEL NUMBER
1	1	'S' pump, polyester, 2" ports, 'E' impeller, EPDM elastomers. 2.0 HP, 3450 RPM, 230/460/3/60 TEFC motor.	SE2EL D2.0C

II. Long coupled pumps

Pacer 'S' series pumps are also available in a long coupled configuration. The complete unit consists of the pump mounted to a bearing pedestal, flexible coupling and coupling guard and electric motor or gasoline engine, assembled and mounted on an epoxy coated steel base plate.



CONSULT FACTORY FOR CONFIGURATION AND PRICING ASSISTANCE

CLOSE COUPLED ELECTRIC POLYPROPYLENE PUMPS

POLYPROPYLENE / VITON®

FLOW CURVE LETTER	PORT SIZE IN.	MAXIMUM FLOW RATE		MAX. TDH		HP REQUIRED		MODEL NUMBER	PRICE CODE NUMBER	ELECTRIC MOTOR 60 Hz ADD TO MODEL & PRICE CODE NO. . . .	
		GPM @ 60 Hz	LPM @ 60 Hz	FT. @ 60 Hz	m @ 60 Hz	60 Hz /RPM	50 Hz /2850 RPM			115/230V/1/60 TEFC	230/460V/3/60 TEFC
A	1½	80	252	30	6.4	.5/1750	.25/1450	SPRY1½AV-	58-21A1-	G.5C	H.5C
C	1½	120	378	32	6.8	1.5/1750	.5/1450	SPRY1½CV-	58-22C1-	G1.0C	H1.0C
E	2	110	346	70	14.8	2/3450	1.1	SPRY2EV-	58-22E1-	C2.0C	D2.0C
H	2	180	567	85	18	3/3450	1.7	SPRY2HV-	58-22H1-	C3.0C	D3.0C
•F	2	160	504	115	24.3	3/3450	2.2	SPRY2FV-	58-22F1-	C3.0C	D3.0C
J	2	240	756	75	15.9	5/3450	3	SPRY2JV-	58-22J1-	C5.0C	D5.0C
L	3	280	883	75	15.9	5/3450	4.2	SPRY3LV-	58-23L1-	C5.0C	D5.0C

Pump molded of glass-filled polypropylene with glass-filled Ryton® volute, 304 SS external fasteners, Viton® "O"-rings, gasket, check valve, (EPDM available) polypropylene baseplate, close coupled electric motor. • 'F' curve is limited to 1.0 SG (water). Exceeding 1.0 SG requires next highest horsepower.

RYTON PUMPS

RYTON / VITON

FLOW CURVE LETTER	PORT SIZE IN.	MAXIMUM FLOW RATE		MAX. TDH		HP REQUIRED		MODEL NUMBER	PRICE CODE NUMBER	ELECTRIC MOTOR 60 Hz ADD TO MODEL & PRICE CODE NO. . . .	
		GPM @ 60 Hz	LPM @ 60 Hz	FT. @ 60 Hz	m @ 60 Hz	60 Hz /RPM	50 Hz /2850 RPM			115/230V/1/60 TEFC	230/460V/3/60 TEFC
A	1½	80	252	30	6.4	.5/1750	.25/1450	SY1½AV-	58-31A1-	G.5C	H.5C
C	1½	120	378	32	6.8	1.5/1750	.5/1450	SY1½CV-	58-32C1-	G1.0C	H1.0C
E	2	110	346	70	14.8	2/3450	1.1	SY2EV-	58-32E1-	C2.0C	D2.0C
H	2	180	567	85	18	3/3450	1.7	SY2HV-	58-32H1-	C3.0C	D3.0C
•F	2	160	504	115	24.3	3/3450	2.2	SY2FV-	58-32F1-	C3.0C	D3.0C
J	2	240	756	75	15.9	5/3450	3	SY2JV-	58-32J1-	C5.0C	D5.0C
L	3	280	883	75	15.9	5/3450	4.2	SY3LV-	58-33L1-	C5.0C	D5.0C

Pump molded of glass-filled Ryton® with 304 SS external fasteners, Viton® "O"-rings and Ryton gasket, check valve, (EPDM available) polypropylene baseplate, close coupled electric motor. • 'F' curve is limited to 1.0 SG (water). Exceeding 1.0 SG requires next highest horsepower.

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PUMP TABLE

PUMP MATERIAL			+	PORT SIZE (NPT)		+	IMPELLER	+	ELASTOMERS, SEAL, INTERNAL FASTENERS		
Series 'S'	Model	PCN		Model	PCN		Model & PCN		Description: Internals	Model	PCN
Polyester	SE	58-1		1½	1		A, C		Viton® - carbon/ceramic 316SS fasteners, (unlined volute)	V	1
Polypro.	SPRY	58-2		2	2		E, F, H, I, J, P, R, U, Y		Buna - carbon/ceramic 316SS fasteners, (unlined volute)	B	2
Ryton®	SY	58-3		3	3		L, N, S, X, Z		Buna - carbon/ceramic, 316SS fasteners, (Buna lined volute)	BL	3
External fasteners are 304SS											

+ MOTOR (see Motor Table on next page)

NOTE:

All 'S' pumps are glass reinforced. Polypropylene pump includes Ryton® volute. (SPRY) Volute lining is same as gasket material. Polypropylene baseplate furnished with close-coupled models and epoxy painted steel with 5 HP close coupled models. For BSP threads, add B in 4th digit of Model No. and change Price Code No. from 1 to 4, 2 to 5, 3 to 6. Note: Impeller designation now becomes the 5th digit of model number only for BSP pumps. (Available with polyester pumps, and limited polypropylene pumps).

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