



**TECHNICAL
ARTICLE
SERIES**

Sump Pump Upgrade

ARTICLE # TL-110

INDUSTRY: Pollution control

ENTITY: Burbank Drum & Barrel Co.

SOLUTION(S) PUMPED: Sodium hydroxide, Sulfuric acid

PUMP TYPE(S): SUMP-GARD Thermoplastic Vertical Pump

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SUMP PUMP UPGRADE

Reduces downtime for barrel reconditioner

Burbank Drum & Barrel Co., Glenside, TX, reconditions, grades and resells half-a-million, 55-gal. steel drums per year.

The reconditioning and recycling process consists of these steps: grading drums for recycling or crushing, submersion in NaOH stripper for general drum cleaning, water rinse, de-denting, NaOH/steam flush, dry/siphon station, H_2SO_4 power rinse to remove oxidation, shot blast, double end chime sealer, air test to 7 psi, preheater, and painting.

Pumps are used at the reconditioning stations, including the 20% sulphuric acid power rinse. Oxidation is removed from the barrel's interior at a multihead nozzle spray station.

Wear factors, which caused pump downtime, were: chemical heat generated by the addition of acid and water makeup; frequent start/stop, 3600 rpm service; abrasion from oxide and scale; and chemical attack of pump's material-of-construction weakened its tensile strength, allowing shaft deflection and column bearing wear.

In order to solve these problems, the existing pump was replaced with a heavy-duty, bearingless, cantilever-design sump pump, engineered for this demanding service by Vanton Pump & Equipment Corp.

The new pump is constructed of CPVC, with a PVDF casing and impeller. The shaft is rigidized by a twin bearing motor pedestal and welded vertical gussets on the column. This combination of cantilever design and high tensile strength-engineered thermoplastic material has resulted in uninterrupted service. The new pump performs flawlessly, without downtime for pump repair.

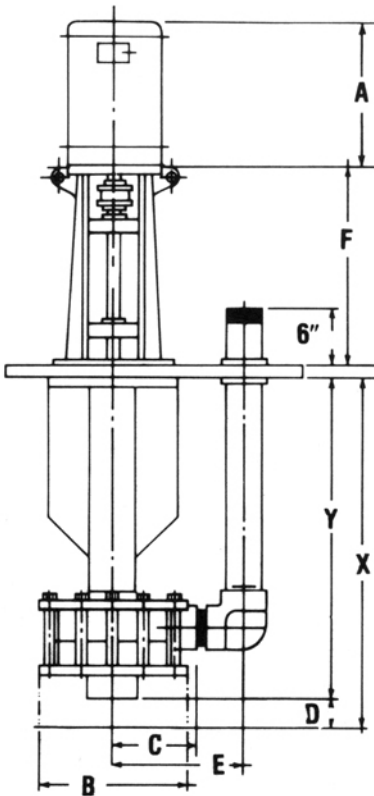
VANTON SUMP-GARD® SGK SUMP PUMPS WITH CANTILEVERED SHAFTS

This Vanton vertical cantilever design features oversized diameter, heavy-duty ball bearings housed in a cast iron bracket which supports both the rugged shaft and the motor. The coupling arrangement makes it possible to utilize this design with just about every available type of motor: chemical duty, explosion-proof or air. It also makes possible depths to 4 feet (8 feet with tail pipe). Capacities to 1000 gpm, heads to 140 feet at temperatures to 275°F. Motors to 15 HP.

Welded structural ribbing on SGK pumps provides additional strength for columns. The heavy-duty combination radial and thrust ball bearing assembly provides solid support to the large diameter shaft.



DIMENSIONS AND SPECIFICATIONS



MODEL	R.P.M.	H.P.	A	B	C	D	E	F	X or Y
200 1 x 1	1750 3600	1 2	10-1/4 11-1/4	9	7-1/2	1-1/2	5-3/8	20-7/8	MAXIMUM LENGTH 4 FT
300 1 1/2 x 1 1/2	1750 3600	1 7-1/2	10-1/4 15-7/8	11-1/4	8-13/16	2	6-3/16	20-7/8	
500 2 x 2	1750 3600	1-1/2 7-1/2	11-1/4 15-7/8	11-1/4	9-5/8	2	6-3/16	20-7/8	
800 2 x 2	1750 3600	3 10	13-1/4 17-3/8	11-1/4	9-5/8	2	6-3/16	20-7/8	
1200 3 x 2	1750 3600	7-1/2 15	15-7/8 19-3/8	15	13-1/4	3	8-1/2	20-7/8	
1800 4 x 3	1750 3600	10 25	17-3/8 18-7/8	15	13-1/4	3	8-1/2	20-7/8	
2400 6 x 4	1150 1750	20 60	20 24	22-3/4	17-1/8	4	12-1/2	25	

Note: Due to the Vanton policy of continual product upgrading, dimensions and design features may vary. Certified prints are available on request. All dimensions are in inches unless otherwise specified.

