

EXPLOSION-PROOF SUBMERSIBLE SUMP PUMP



ESSCO heavy duty submersible explosion-proof sump pumps are of the 100% recessed impeller design. Each unit is capable of handling long stringy material, large size solids and slurries within maximum solids handling efficiency. The **ESSCO** pump incorporates the vortex pumping action along with unique pump design, allowing the greatest flexibility in the submersible pump field.

VOLUTE: Each volute is engineered for maximum life in "sump pump" duties.

ESSCO utilizes a single piece volute design with extra material in high wear areas.

IMPELLER: **ESSCO** pumps are available with various impeller designs to allow for high capacity low head or low capacity high head applications. **ESSCO** utilizes investment cast impellers for higher casting density and thicker vanes and back shrouds which allow for maximum life. By use of the JLI manufacturing techniques **ESSCO** offers trimmed impellers in extremely hard and difficult to handle alloys. By use of this production technique, impellers can be machined to act as a shredder (for solids coming in contact with the eye of the impeller) or machined to handle solids more delicate in nature.

WEAR PLATE: The **ESSCO MODEL 252** comes standard with a wear plate located behind the impeller. The wear plate is designed to protect the motor bracket and mechanical seal from particle erosion. The wear plate can also act as a barrier for a seal flushing fluid when a simple wear plate is not sufficient protection against wear created by the pumped media. Again **ESSCO** utilizes the JLI production method for manufacturing this pump component to ensure the best possible casting quality and material density.

COOL AGIVENT: Each **ESSCO** submersible pump includes a Cool Agivent apparatus which is for venting pump case and cooling external surface of the motor. This patented

ESSCO Pumps & Controls

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device will allow a more shallow wet well design, as well as keeping the motor cool when not submerged. All **ESSCO** submersible pumps are capable of running dry continuously. (consult factory for specific applications).

MOTOR: **ESSCO** offers U.L. listed explosion-proof motors for Class 1, Division 1, group D hazardous locations. The motor is manufactured by Reliance Electric Co. and includes moisture detection and thermal protection as standard features. Heavy duty bearings and dual mechanical seals are standard for both motor designs and on special request high temperature and energy efficient designs are available. (Not all motor options are available on U.L. listed motors.)

In addition to the above listed standard items **ESSCO** offers the following options:

- ~ 316 S.S. motor shaft
- ~ Nitronic 50 acid resistant stainless steel
- ~ Tungsten carbide lower mechanical seal with stainless steel metal components and Buna-N elastomer
- ~ Silicon carbide lower mechanical seal with stainless steel metal components and Viton elastomers
- ~ Mechanical seal flush
- ~ 316 S.S. motor mounting bracket
- ~ 2-part epoxy coating
- ~ Steel motor jacket
- ~ 316 S.S. motor jacket

- ~ Motor jacket flush connection (for cooling in hot liquid applications)
- ~ Viton motor "O" rings
- ~ Teflon coated Viton "O" rings

OPTIONAL LIQUID END MATERIALS:

- ~ Ni Hard 550 Brn
- ~ Ni Hard 650+ Brn
- ~ HCl 550 Brn
- ~ HCl 650+ Brn
- ~ CD4MCu
- ~ 316 S.S.
- ~ 304 S.S.
- ~ Hastalloy
- ~ Alloy 20
- ~ Navy Bronze
- ~ Other

ADDITIONAL OPTIONS:

- ~ Certified Performance Test*
- ~ Certified Hydrostatic Test*
- ~ Certified Motor Test
- ~ Explosion-proof Slide Rail Assembly
- ~ U.L. Listed Control Panels

*All tests are conducted as per Hydraulic Institute Standards.

ESSCO maintains a large stock of complete pump units and spare parts for quick shipment. For special alloy parts **ESSCO** has a quick shipment program to ensure customer a minimum of down time.

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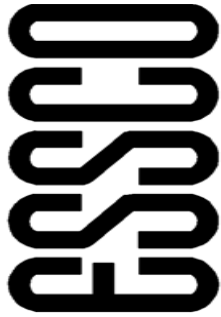
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Member of the Hydraulic Institute

Form: Tufsub Brochure

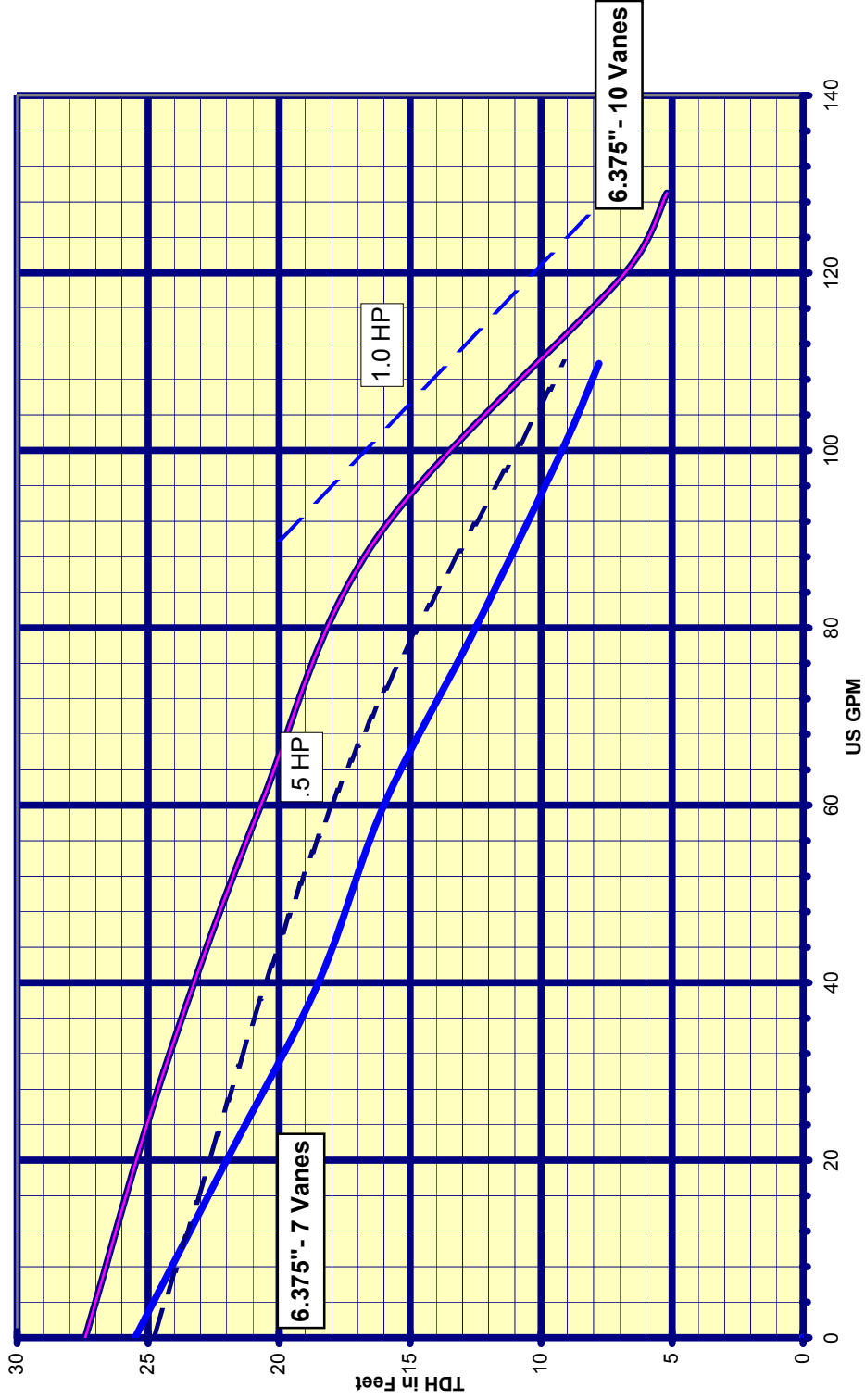




Pumps
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Pump Model:	252	Impeller No.:	1050
RPM:	1750	Sphere Size:	2"
Type:	Submersible		
Impeller Type:	Vortex 7 Vane		
Impeller Dia:	6.375		
Condition Point:	0 GPM	0 TDH	
Condition Point:	0 GPM	0 TDH	
Condition Point:	0 GPM	0 TDH	

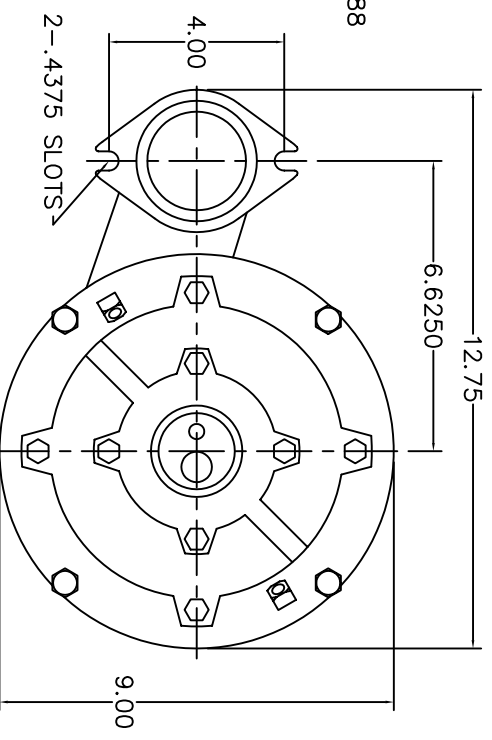
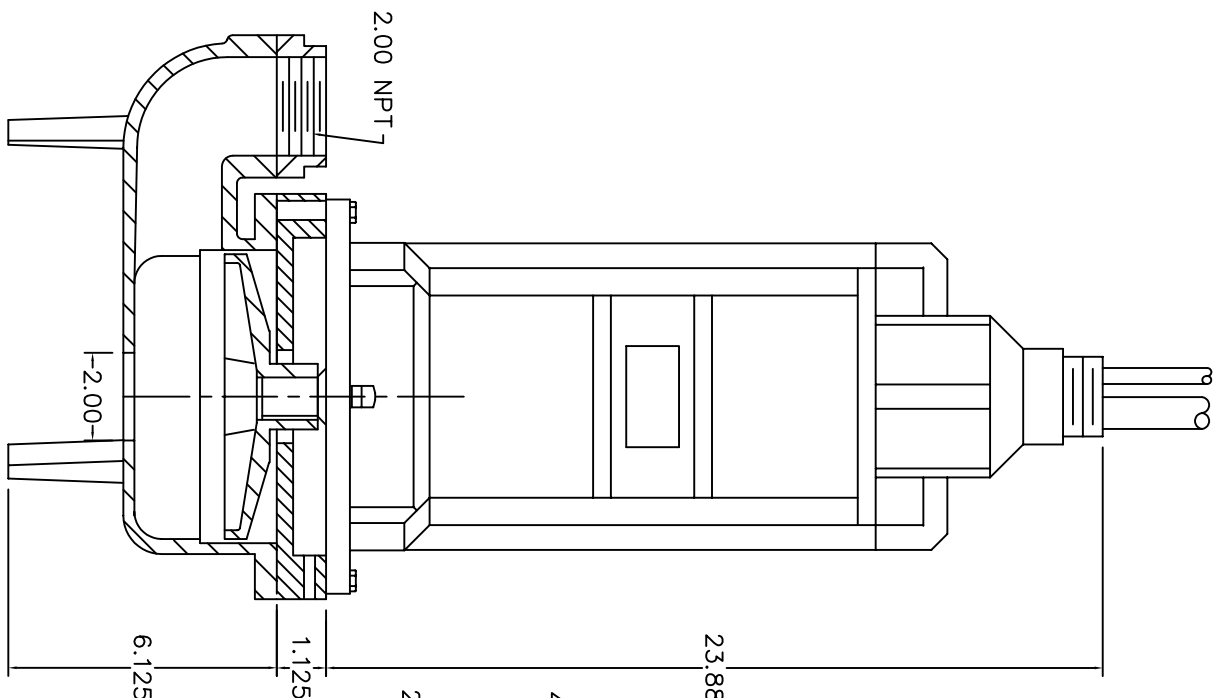


JOB #:

MODEL	HP	VOLTAGE	PHASE
252-.5-4-A	.5	115	1
252-.5-4-B	.5	230	1
252-.5-4-C	.5	230	3
252-.5-4-D	.5	460	3
252-.75-4-A	.75	115	1
252-.75-4-B	.75	230	1
252-.75-4-C	.75	230	3
252-.75-4-D	.75	460	3
252-1-4	1	460	3

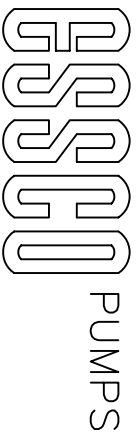
LIQUID END MATERIAL
CAST IRON
316 S.S.
NI-HARD
HIGH CHROMIUM IRON
MECHANICAL SEAL FACES
CARBON/CERAMIC
SILICON CARBIDE
TUNGSTEN CARBIDE
MECHANICAL SEAL ELASTOMERS
BUANA-N
VITON
OTHER

MECHANICAL SEAL METAL PARTS
18-8 S.S.
304 S.S.
316 S.S.
OTHER



ALL DIMENSIONS ARE IN INCHES

DATE:	3/4/91
FILE NAME:	252SUBZA
DRAWN BY:	BRAD J. MANN
CHECKED BY:	J.L.
REVISED BY:	
REV. DATE:	

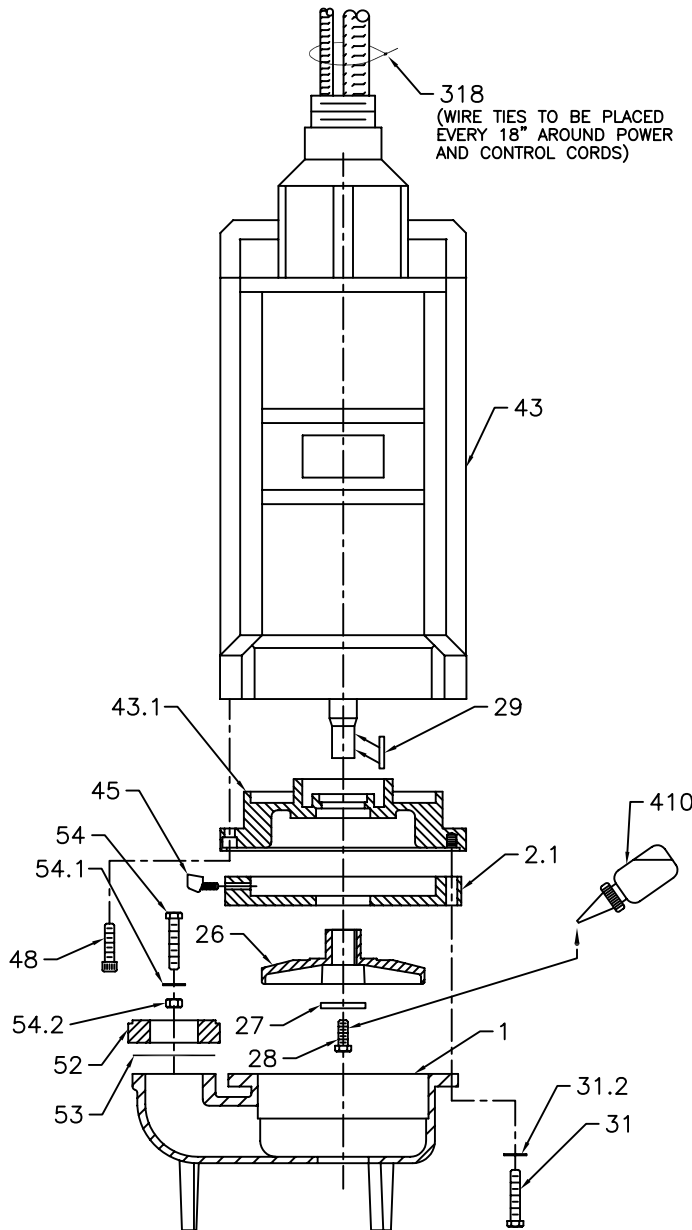


ESSCO MODEL 252

PARTS LIST				MATERIALS OF CONSTRUCTION		BOLT SIZE/FILE NAME
NO.	QTY.	SHIPPED	DESCRIPTION	CAST IRON	HARD IRON	
1	1		VOLUTE	CAST IRON		252SUBAA
2.1	1		WEAR PLATE	CAST IRON		252AA
26	1		IMPELLER	CAST IRON		1050AA
27	1		IMPELLER WASHER	304 S.S.		W140TY
28	1		IMPELLER BOLT	304 S.S.		3/8x1
29	1		IMPELLER KEY	316 S.S.		3/16x1-1/4
31	4		VOLUTE BOLT	304 S.S.		3/8x2
31.2	4		VOLUTE WASHER	304 S.S.		3/8" WASHER
43	1		U.L. SUBMERSIBLE MOTOR	CAST IRON		MTR180TY
43.1	1		MOTOR PLATE	CAST IRON		180TYAH
45	2		COOLING AGIVENT	BRASS		1/4 NPT
48	4		MOTOR BOLT	304 S.S.		3/8x1-1/2
52	1		2" DISCHARGE FLANGE	CAST IRON		252FAA
53	1		DISCHARGE FLANGE GASKET	NEOPRENE		DESCRIPTION
54	2		DISCHARGE FLANGE BOLT	304 S.S.		3/8x2
54.1	2		DISCHARGE FLANGE WASHER	304 S.S.		3/8" WASHER
54.2	2		DISCHARGE FLANGE NUT	316 S.S.		3/8" NUT
316	1		NAME PLATE	304 S.S.		2"x4"
317	4		NAME PLATE RIVETS	80-8 S.S.		418RSUS
318	8		WIRE TIES	NYLON		8"
410	1		THREAD LOCKING COMPOUND	ADHESIVE		HENKEL #1550

BOM# 252V002
JOB# _____

NOTES: (1) ALL CAST STAINLESS STEEL PARTS ARE CF8M UNLESS OTHERWISE NOTED.
(2) STACK DRAWING IS: 252SUBAA



ASSEMBLY LOCATION	LAC	DPF	EI	CO	DO
ESSCO TORQUE FLUID PUMP					
Model No.	Impeller Dia.	Capacity	Head	GPM	Serial No.
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

ALL DIMENSIONS ARE IN INCHES

DATE:	10/28/99
FILE NAME:	A-252AA
DRAWN BY:	BRIAN B.
CHECKED BY:	J. I.
REV. DATE:	

ESSCO PUMPS

252 PUMP WITH 180TY MOTOR AND 140TY SHAFT, CAST IRON WEAR PLATE AND 140TY MOUNT MOTOR