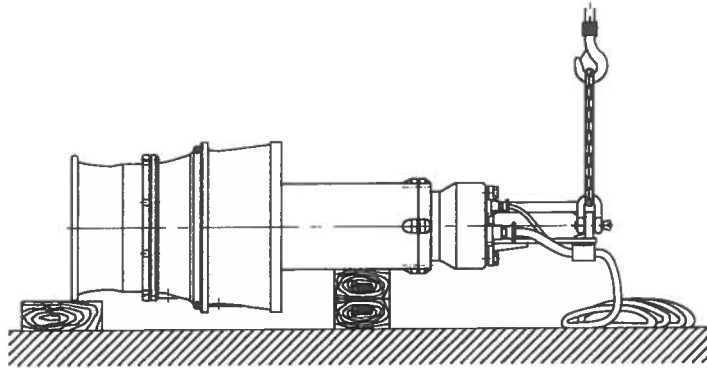
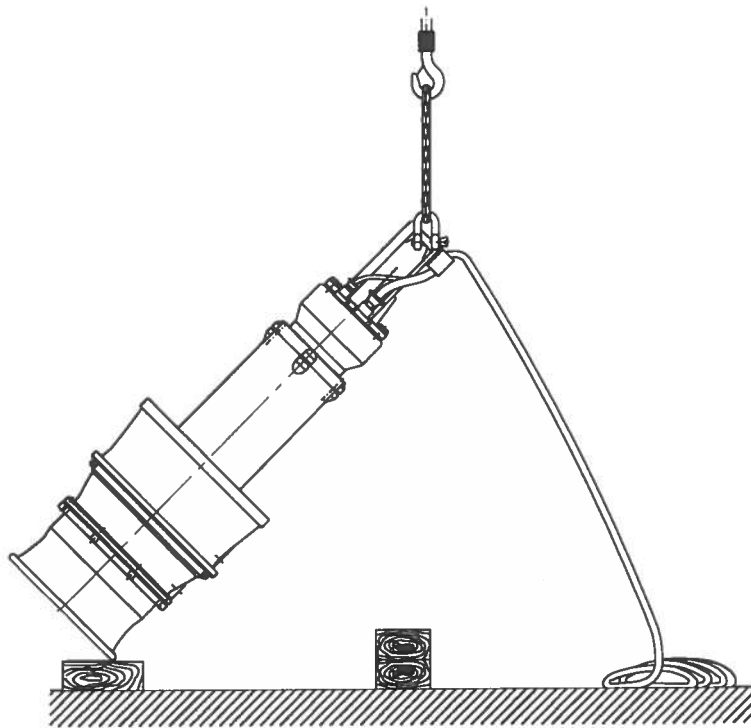


General Pump Diagram

Erecting Pump Unit Fig. 1



Place unit horizontally on wooden supports and engage crane hook/shackle.



Tilting of unit on rim of inlet nozzle is permissible only on a wooden support!

Lowering the Pump into the Tubular Casing Fig. 2

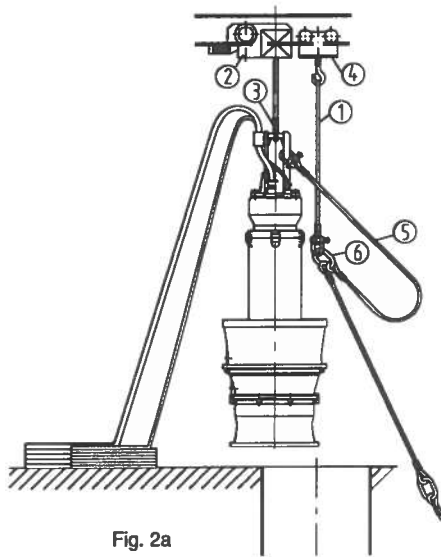


Fig. 2a

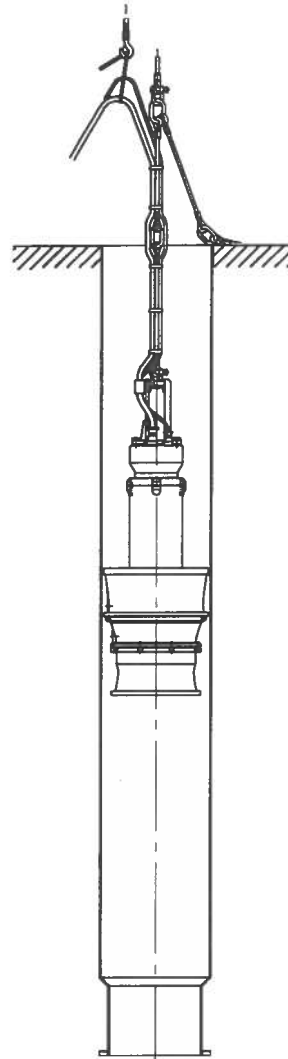
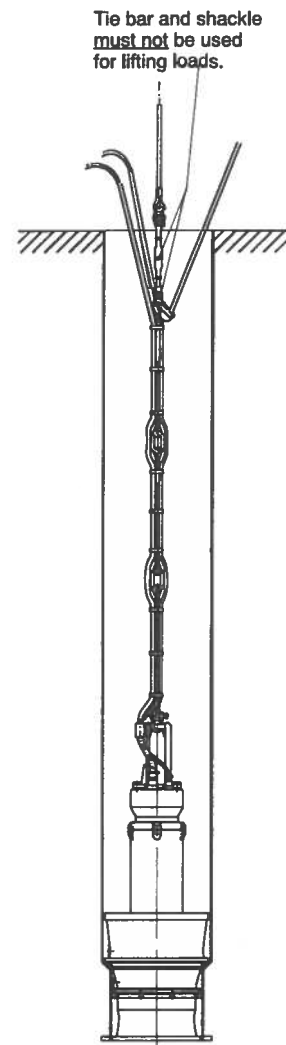


Fig. 2d



Tie bar and shackle must not be used for lifting loads.

Fig. 2e

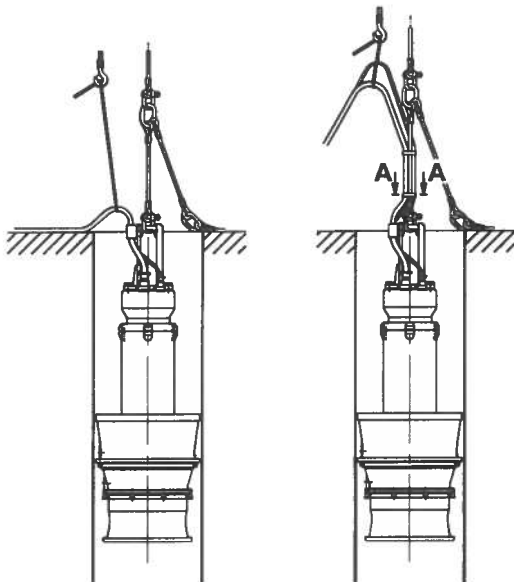


Fig. 2b

Fig. 2c

Section A - A

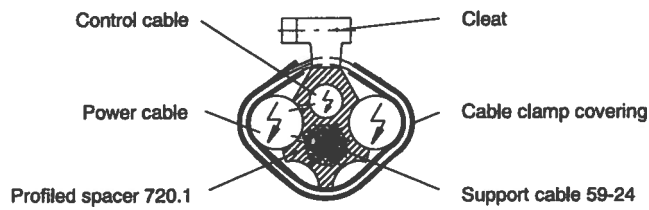
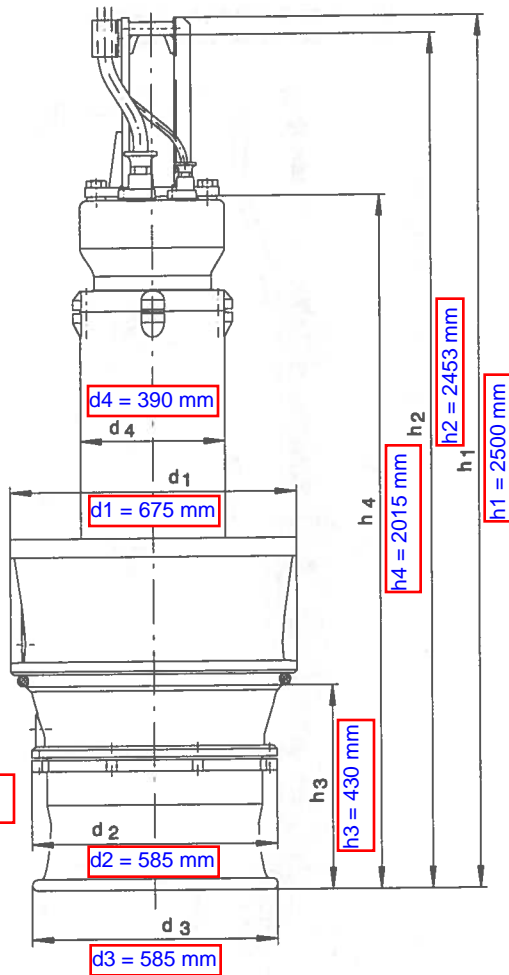


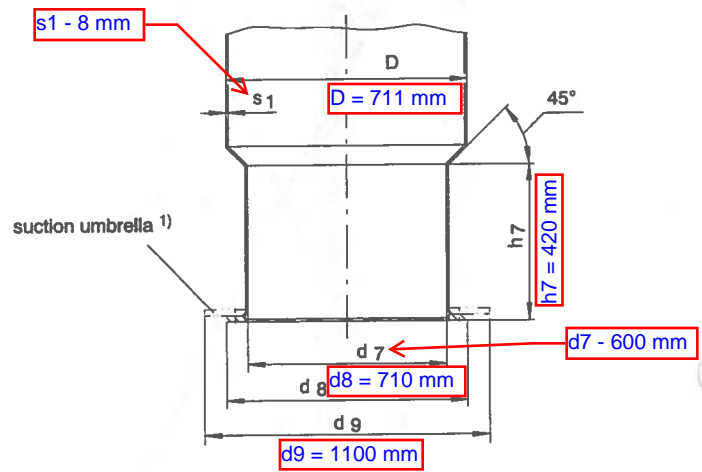
Figure 2e is how the existing pumps sit in the draft discharge tubes.

Dimension Table - Pump and Discharge Column

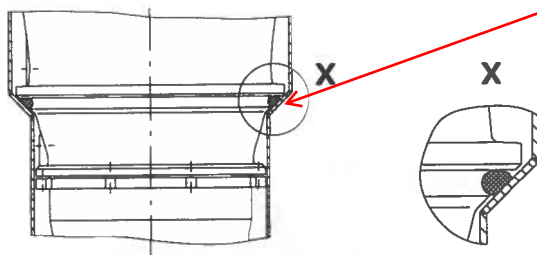


d1, d2 and h3 are important dimensions

Steel Pipe - Discharge Column Version



Assembly



X is the location where the existing pumps secure and seal to the draft discharge tube. New pumps to secure and seal to this location as indicated in tender section E4.1 (d).

1) Option for decreasing min. water level t₁

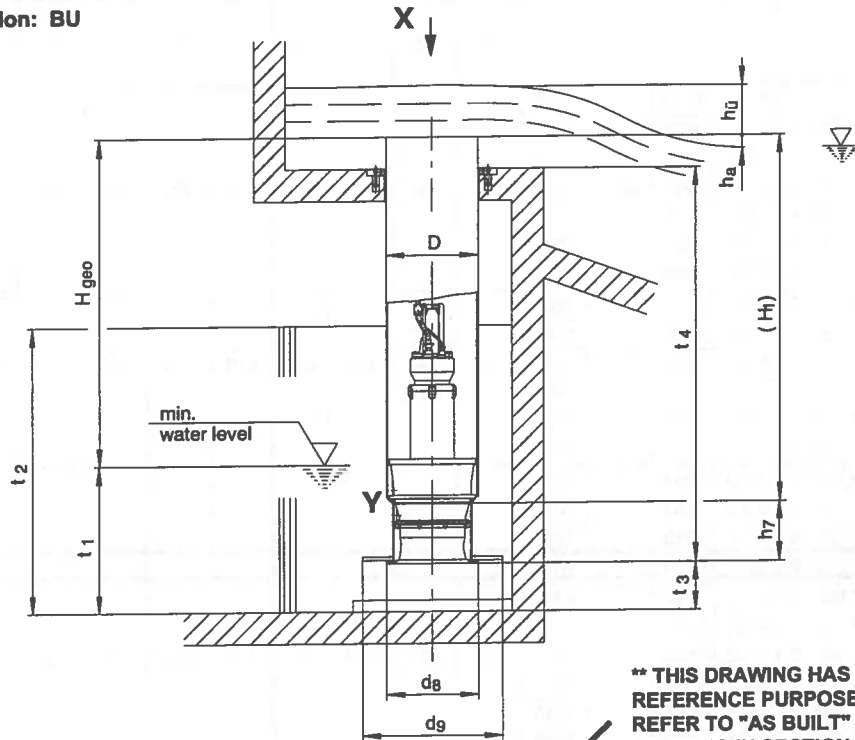
Dimension Table

Dimensions in mm

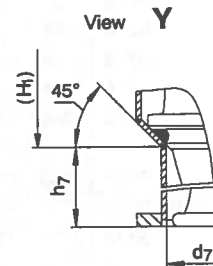
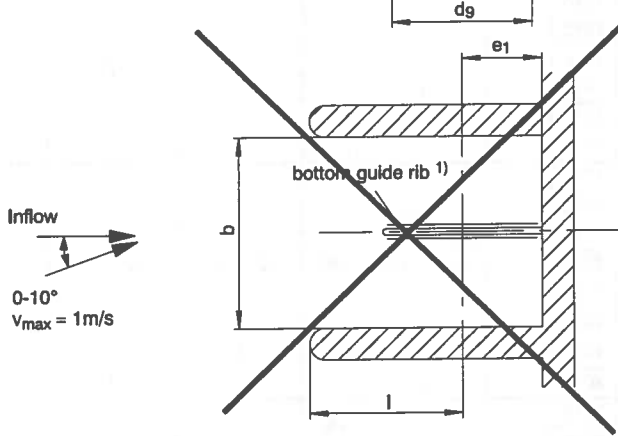
Amacan P...-.../...	h ₁	h ₂	h ₃	h ₄	d ₁	d ₂	d ₃	d ₄	D	d ₇	h ₇	d ₈	d ₉	s ₁	Weight complete unit [kg]
500-270/16 4	1550	1500		1150											365
/ 20 4	1710	1660		1310											405
/ 32 4	1710	1660		1310											445
/ 40 4	1710	1660	305	1310	470	380	380	280	508	400	295	505	650	7	450
/ 6 6	1550	1500		1150											355
/ 10 6	1550	1500		1150											355
/ 6 8	1710	1660		1310											395
600-350/16 6	1665	1615		1265											480
/ 25 6	1825	1775		1425											530
/ 40 6	2010	1960	555	1610	570	485	485	280	610	500	540	610	800	7	600
/ 6 8	1825	1775		1425											500
/ 10 8	1825	1775		1425											500
/ 18 8	1825	1775		1425											520
700-470/80 6	2300	2253		1815											1150
/100 6	2300	2253		1815											1200
/120 6	2300	2253		1815											1250
/140 6	2500	2453		2015											1350
/160 6	2500	2453		2015											1400
/ 25 8	2100	2053		1615											1000
/ 32 8	2100	2053	430	1615	675	585	585	390	711	600	420	710	1100	8	1000
/ 40 8	2100	2053		1615											1000
/ 60 8	2300	2253		1815											1150
/ 80 8	2300	2253		1815											1200
/ 16 10	2100	2053		1615											1000
/ 25 10	2100	2053		1615											1000
/ 32 10	2300	2253		1815											1150
/ 40 10	2300	2253		1815											1150
800-540/40 8	2155	2108		1670											1150
/ 60 8	2355	2308		1870											1250
/ 80 8	2355	2308		1870											1300
/110 8	2555	2508	550	2070	770	660	660	390	813	680	525	810	1250	8	1450
/140 8	2555	2508		2070											1550
/ 32 10	2355	2308		1870											1300
/ 40 10	2355	2308		1870											1300
/ 60 10	2555	2508		2070											1450
1000-700/100 10	2700	2643		2215											2100
/150 10	2780	2723		2295				480							2250
/180 10	3145	3085	780	2545	960	860	870		1016	880	765	1015	1600	10	2750
/220 10	3375	3315		2775				560							3050
/250 10	3375	3315		2775											3150
1200-870/180 12	3205	3145		2605											3200
/200 12	3205	3145		2605				560							3250
/250 12	3435	3375		2835											3650
/300 12	4035	3960	1015	3335	1150	1050	1050		1220	1070	1000	1220	2000	12	4600
/350 12	4035	3960		3335				650							4800
/400 12	4035	3960		3335											5000
/450 12	4035	3960		3335											5200
1500-1060/300 14	4070	3995		3370											6200
/400 14	4070	3995	1475	3370	1430	1300	1300	650	1525	1330	1460	1520	2450	12	6400
/450 14	4170	4095		3470											6700

Installation Drawing

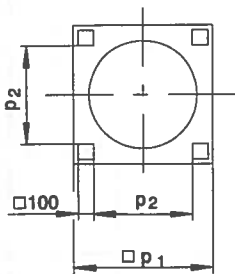
Type of Installation: BU



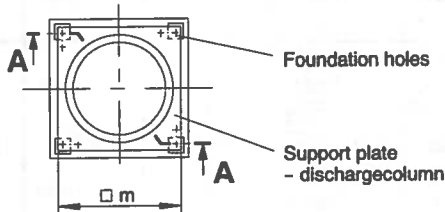
**** THIS DRAWING HAS BEEN SUPPLIED FOR REFERENCE PURPOSES ONLY - PLEASE REFER TO "AS BUILT" TUBE & PIPEWORK DRAWING IN SECTION 5 FOR CERTIFIED DRAWING OF INSTALLATION****



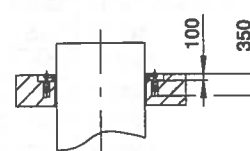
Foundation holes



View X (without pump)



Section A - A



¹⁾ Dimensions of bottom guide rib - see type series booklet
Subject to technical modifications

Main Dimensions Discharge Column and Civil Construction BU

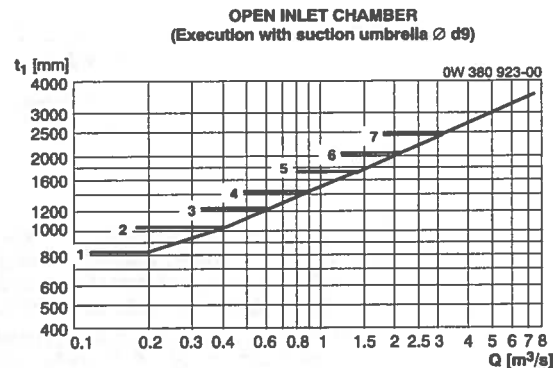
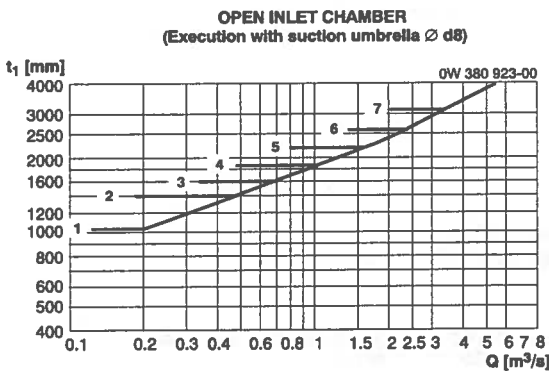
Dimensions in mm

Pump size	D	d ₇	h ₇	t _{4 min}	t ₃	d ₈	d ₉	h _a	b	l _{min}
500- 270	508	400	295	1400	230	505	650	100	880	530
600- 350	610	500	540	1650	280	610	800		1000	600
700- 470	711	600	420	2100	380	710	1100		1500	1050
800- 540	813	680	525	2200	440	810	1250		1800	1300
1000- 700	1016	880	765	2900	560	1015	1600		2300	1700
1200- 870	1220	1070	1000	3500	680	1220	2000		2800	2100
1500-1060	1524	1330	1460	3700	860	1520	2450		3500	2650

Pump size	e ₁		P ₁	P ₂	m
	without suction umbrella	with suction umbrella			
500- 270	350	400	700	440	600
600- 350	400	500	800	540	700
700- 470	450	650	900	640	800
800- 540	500	700	1000	740	900
1000- 700	600	900	1220	960	1150
1200- 870	700	1100	1420	1160	1350
1500-1060	850	1300	1720	1460	1650

 t₂ = 1.1 x water level; max. 2 x t₁

 t_{4 max} = depends on discharge head H and civil construction

Diagram for Minimum Water Level t₁


- 1 Amacan P .. 500 - 270
- 2 Amacan P .. 600 - 350
- 3 Amacan P .. 700 - 470
- 4 Amacan P .. 800 - 540
- 5 Amacan P .. 1000 - 700
- 6 Amacan P .. 1200 - 870
- 7 Amacan P .. 1500 - 1060

**** THIS DRAWING HAS BEEN SUPPLIED FOR REFERENCE PURPOSES ONLY - PLEASE REFER TO "AS BUILT" TUBE & PIPEWORK DRAWING IN SECTION 5 FOR CERTIFIED DRAWING OF INSTALLATION****

PUMPSAFE™ WIRING FOR KSB AMACAN PUMP

Having Winding Thermistor, Moisture Electrode,
(2) Bearing RTD's & Seal Moisture Float

PumpSafe™ Relays Required:

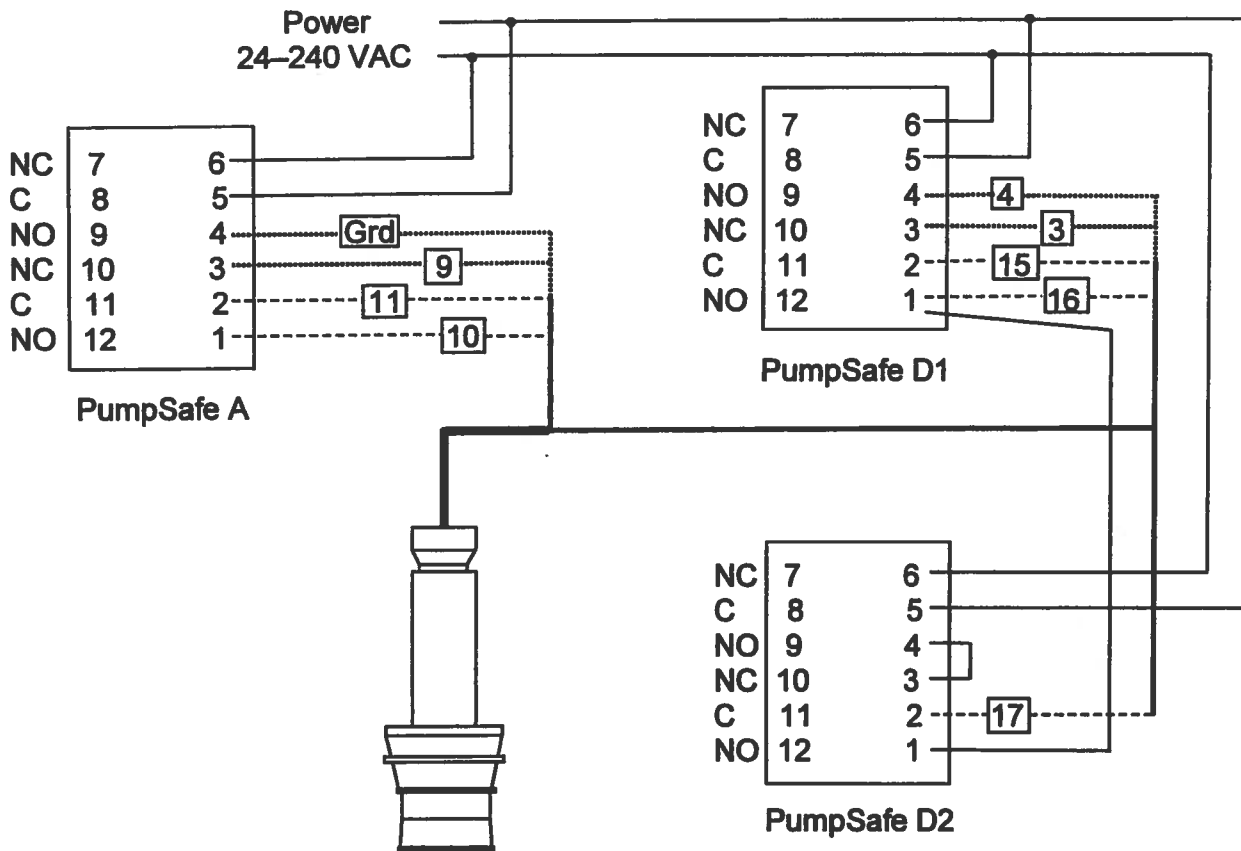
(1) Module A & (2) Module D's with form C outputs rated 5A @ 120VAC

Sensor	Pump Leads	PumpSafe™ Terminals	Module
Pump Winding Thermistor	10 & 11	1 & 2	A
Pump Moisture Electrode	9 & Grd	3 & 4	A
Bearing RTD Upper	16 & 15	1 & 2	D1
Pump Moisture Float	3 & 4	3 & 4	D1
Bearing RTD Lower	16 & 17	1 & 2	D2

Add jumpers between terminals D2-3 & D2-4 and terminals D1-1 & D2-1.

All explosion-proof pumps must have winding thermal protection properly monitored.

WIRING DIAGRAM



CAUTION!

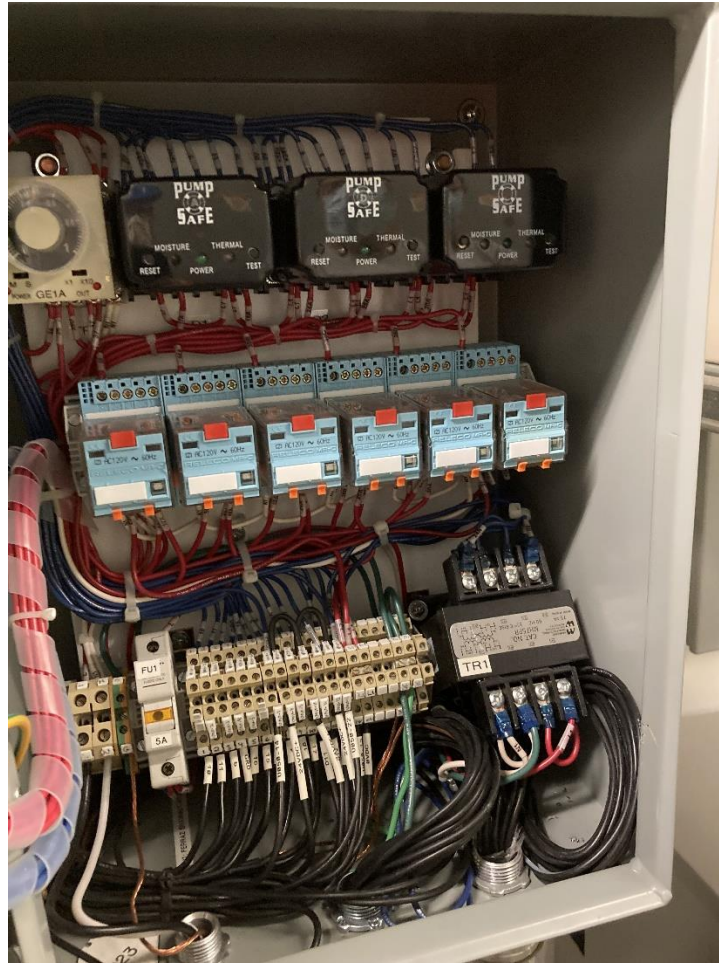
For check of Thermistor & Float use only an ohmmeter. **DO NOT** use a megger!



Picture of Existing UV Pump and Nameplate

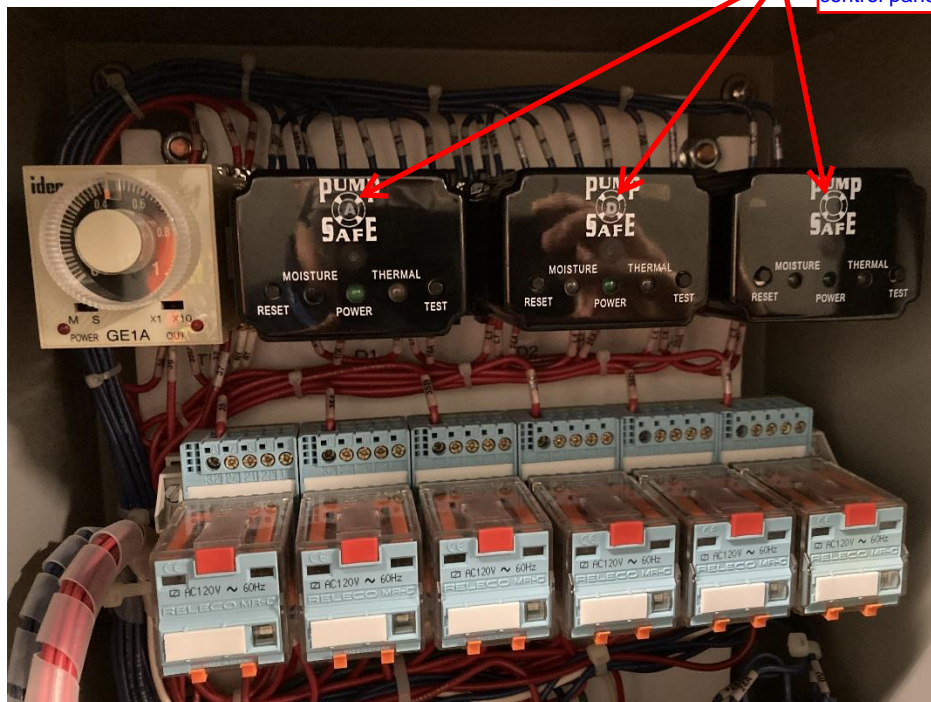


Picture of Existing Pump (Lower)



Picture of Existing Interior UV Pump Control Panel

These relays are to be replaced by new sensors for each pump control panel



Picture of Existing Interior UV Pump Control Panel showing KSB Pump Safe Relays