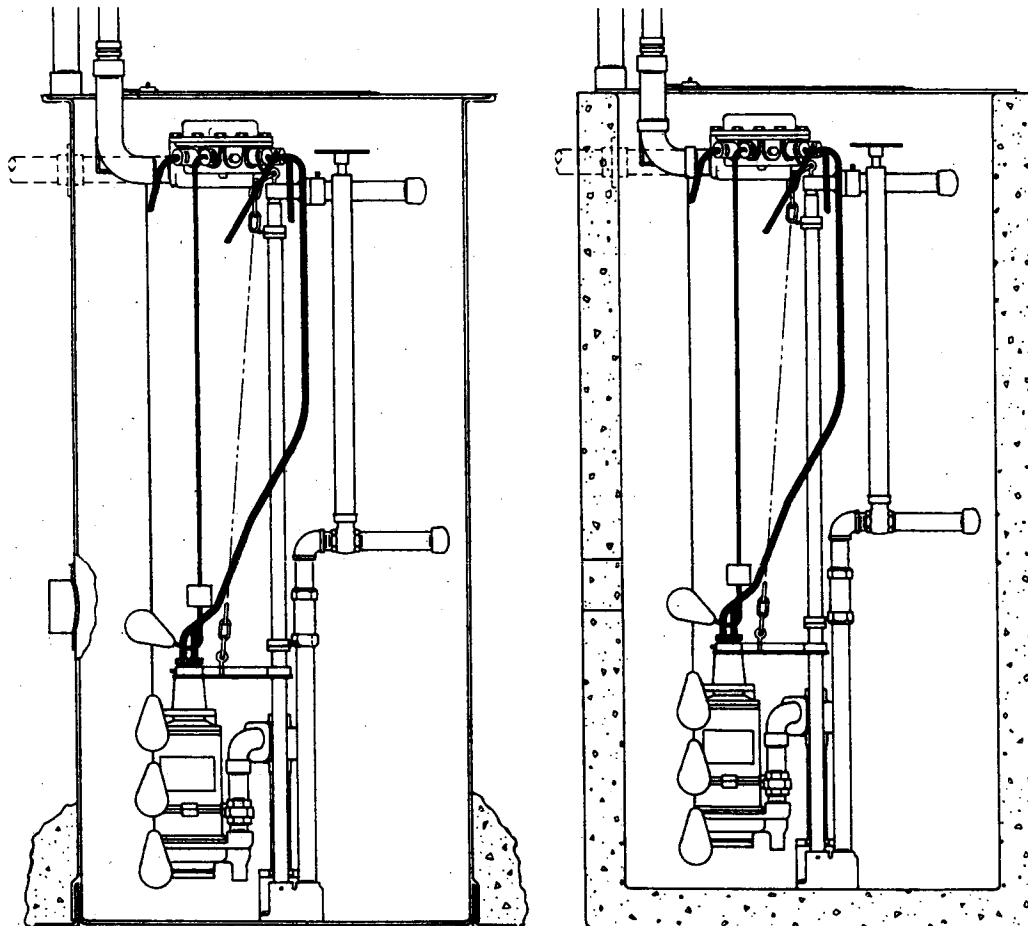


WG20 Duplex Grinder Pumps

INSTALLATION AND SERVICING
INSTRUCTIONS FOR MYERS WG20
DUPLEX GRINDER PUMPS WITH
LIFT-OUT RAIL SYSTEM
INSTALLED IN FIBERGLASS
BASIN AT FACTORY AS
COMPLETE SYSTEM, OR RAIL
PARTS FOR INSTALLING IN
FIBERGLASS OR CONCRETE
BASIN BY CUSTOMER.



NOTE – When complete packaged system, including fiberglass basin, is supplied from factory all parts are mounted in basin except pump and level controls. Piping and guide plates for pumps are shipped in separate package Cat. No. RWGB-125 and this must be ordered separately. Two packages are required for duplex system. See Fig. 6.

Level controls are to be ordered separately and must be mounted in basin. Controls are specified at time of order so proper brackets are mounted in basin for supporting controls. When mercury float controls are used 3 are required. If optional alarm control is to be used it must be specified at time of order so bracket can be mounted. Control box and pumps are ordered depending on voltage and phase and if Nema 1 or Nema 3R is required.

PARTS TO INSTALL IN CUSTOMER'S FIBERGLASS OR CONCRETE BASIN

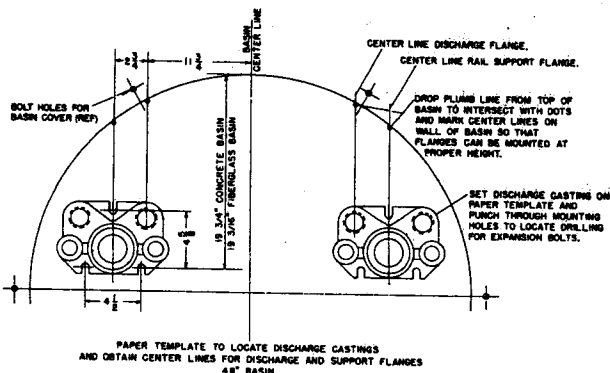
Parts are for 36" or 48" inside dia. basins and the following packages are required for duplex system.

NO. OF PACKAGES	CAT NO. OF PACKAGES	DESCRIPTION
2	RWGD-125	Lift-out rail parts.
2	RPD-125	Disch. Piping parts.
1	JB-2	Waterproof connection box and cord grips.
1	BCHM-36 or BCHM-48	Basin cover for mounting control box directly on cover.
1 (Optional)	BCH-36 or BCH-48	Basin cover if control box is to be mounted remote from sump.
1	MSD-H	Mounting Stand for control box when mounted on cover.
4	SM25NO	Level controls.
1	CB4SS	Mounting bracket for SM25NO controls.
1 (Optional)	CF-200	2" Conduit flange if control box is mounted remote from basin.
1 – or more	IF-400 or IF-600 or IF-800	Inlet flanges to be mounted in field.

IN ADDITION TO ABOVE PACKAGES THE FOLLOWING PACKAGES ARE REQUIRED FOR COMPLETE DUPLEX SYSTEM

2	WG20	Grinder pumps for phase and voltage required.
1	CG-20	Duplex control box for phase and voltage required and for Nema 1 or Nema 3R enclosure.

STEPS TO INSTALL RAIL SYSTEM IN FIBERGLASS OR CONCRETE BASIN



1. Unpack parts and check that all packages listed above are available. Remove full size paper template, see Fig. 1 to use in basin bottom to properly locate bolting for discharge cases and to locate vertical center lines for flanges. Drop plumb line from cover holes in basin rim to properly locate base castings.
2. Clean basin bottom thoroughly before placing paper template. If basin is concrete, chip out any protruding rocks. Punch through paper for bolt hole location. Drop plumb line from top of basin for center line locations and mark center line on basin wall with chalk. If basin is fiberglass it must be mounted on level surface with walls plumb before marking. All parts should be installed in fiberglass basin before placing in ground.
3. If basin is concrete, holes must be drilled in basin bottom and side walls for mounting parts. Use machine bolt expansion sleeves $1\frac{1}{2}$ " long $\frac{3}{8}$ " size. Use $\frac{5}{8}$ " Carbide drill to drill holes. If basin is fiberglass, rubber seal washers are furnished for hold down bolts.
4. Cut holes through concrete wall or fiberglass basin wall to locate discharge and support flange as shown on the drawings Fig. 2 and Fig. 3. Pipes can be cemented into wall instead of using flanges if desired.
5. Bolt discharge cases to basin bottom. If basin is fiberglass, seal washers are furnished to seal bolt heads where bolts pass through basin bottom. Bolt all flanges in place. Do not tighten bolts completely

tight at this stage as some adjustment may be necessary when rails are placed.

6. Install discharge piping from base casting to discharge flange. Be sure vertical piping is plumb so that it will not interfere with the rail guide pipes. Use slip coupling to join pipes.
7. Install 1" galv. pipe rails. Stainless steel or other corrosion resistant pipe may be used as long as the O.D. is same as 1" std. pipe, 1.315" O.D. In order to mount the rail support bracket it may be necessary to place the yoke in the rails then push the support nipple through the yoke and screw into mounting flange. Bolts can be loosened in the flange to allow alignment if necessary. If pipe is cemented in, be sure all piping is in place and plumbed and blocked before final cementing.
8. Align 1" rails plumb by using a level in both directions on pipe. Adjust rail support yoke if necessary. Once rails are properly aligned tighten all bolts in base castings and flanges.
9. Mount level control support brackets. See Fig. 4 and 5 for proper location of controls.
10. Install level controls on brackets and set SM25NO controls at proper levels. See assembly dwg. Figs. 4 & 5 for proper setting.
11. If basin cover is used where control box is mounted directly on cover, attach aluminum connection box to 2" elbow supplied with cover before mounting cover on basin.
12. Place cover on basin and bolt in place. If basin is concrete, expansion sleeves must be installed at proper bolt locations.
13. If basin is fiberglass, concrete must be poured over anti-flotation ring to prevent basin from floating up. See Table 1 for amount of concrete to use.
14. Inlet flange must be mounted to basin at depth required to get gravity flow into basin. Flanges are available for 4", 6" or 8" pipe and more than one inlet can be used if required. Inlet hole is cut and flange is mounted in the field.

TABLE 1

Cubic feet of concrete poured around basin to prevent flotation.

Basin Diam.	Cubic feet of concrete required per foot of basin depth
24"	2
30"	3.5
36"	5
48"	8.5

Example – 24" dia. basin 8 ft. deep requires $2 \times 8 = 16$ cu. ft. of concrete to prevent flotation. If basin is installed in dry ground without surface water $\frac{1}{3}$ of above values may be used. However, if basin is left in open hole without backfilling for several days, full amount of concrete should be used as a flash rain storm could fill the hole and cause basin to float up.

ASSEMBLING PIPING TO PUMP

Pump Grinder plate and pump discharge piping is supplied with other rail parts.

1. Attach guide plate and piping to pump as shown on Fig. 6. Be sure piping is plumb, then tighten all set screws. Attach lifting chain to lifting eye with clevis supplied. Pumps can now be lowered into position with lifting chain. Retain power and control cords at surface as pump is lowered. When pumps are in place, attach cords to connection box as shown by wiring diagrams Fig. 7 and Fig. 8. Remove slack from wires so that they will hang vertical without tangling.
2. Connect level control cords to connection box as shown on wiring diagrams.
3. Install control box on cover and connect to cover with 2" conduit as shown.
4. Run wires to control box and connect to cords coming into connection box. Mark or trace each incoming wire so that it can be connected to proper cord.
5. **Do not pour sealing compound into fitting until pumps have been run, to be sure all connections are correct.**

NOTE – If control box is to be installed, off-set from basin. The CF-200 conduit flange must be installed in basin and connection box to be connected to flange before installing cover. See Figs. 2 & 3.

6. Install hold down guides and $\frac{1}{2}$ " galv. hold down pipe. Screw pipe into lower guide.

Upper guides fasten to rails and hold down pipe with set screws. The hold down pipe is necessary to prevent hydraulic pressure from lifting pump from base seal casting. The hydraulic pressure keeps the pumps suspended when in operation so there is no side load on the rails and removal is easier when required. See Fig. 6.

7. Valve adapter and shut off handles are connected with $\frac{1}{2}$ " galv. pipe and held with set screws. These shut-off stems are installed in $1\frac{1}{2}$ " plastic pipe guides attached to valves as shown on Figs. 2, 3, 4, & 5.

STARTING SYSTEM

1. Open $1\frac{1}{4}$ " bronze gate valves, turn counter-clockwise to open.
2. Set pump switches on auto position and run water into sump until level control starts one pump. Allow pump to operate until sump level drops, stopping pump.

IMPORTANT – Lower level control or weight should be set so that sump level drops to within 1" or 2" from bottom of pump before stopping pump.

3. Turn both pump switches to off and fill sump until level is to override control, then turn both pump switches to auto position. Both pumps should come on and operate until sump level drops to the off position.
4. Leave both pump switches to auto position and system is now ready for automatic operation.

IN CASE OF TROUBLE CHECK THE FOLLOWING

Pumps will run but not deliver water.

- Cause – 1. Probably air lock. Start and stop pump several times. If this does

not clear air turn both pumps to off and run more water into sump 6" to 12" higher. If air still does not clear it may be necessary to raise hold down pipe and lift pump so that lower seal fitting is out of the discharge case to release air.

2. Be sure shut-off valve is open in discharge line.
3. If pump is 3 phase be sure rotation is correct. Grinder impeller must rotate counter-clockwise when looking at pump inlet. Do not put fingers near grinder impeller.

Pump seal fitting does not hold tight.

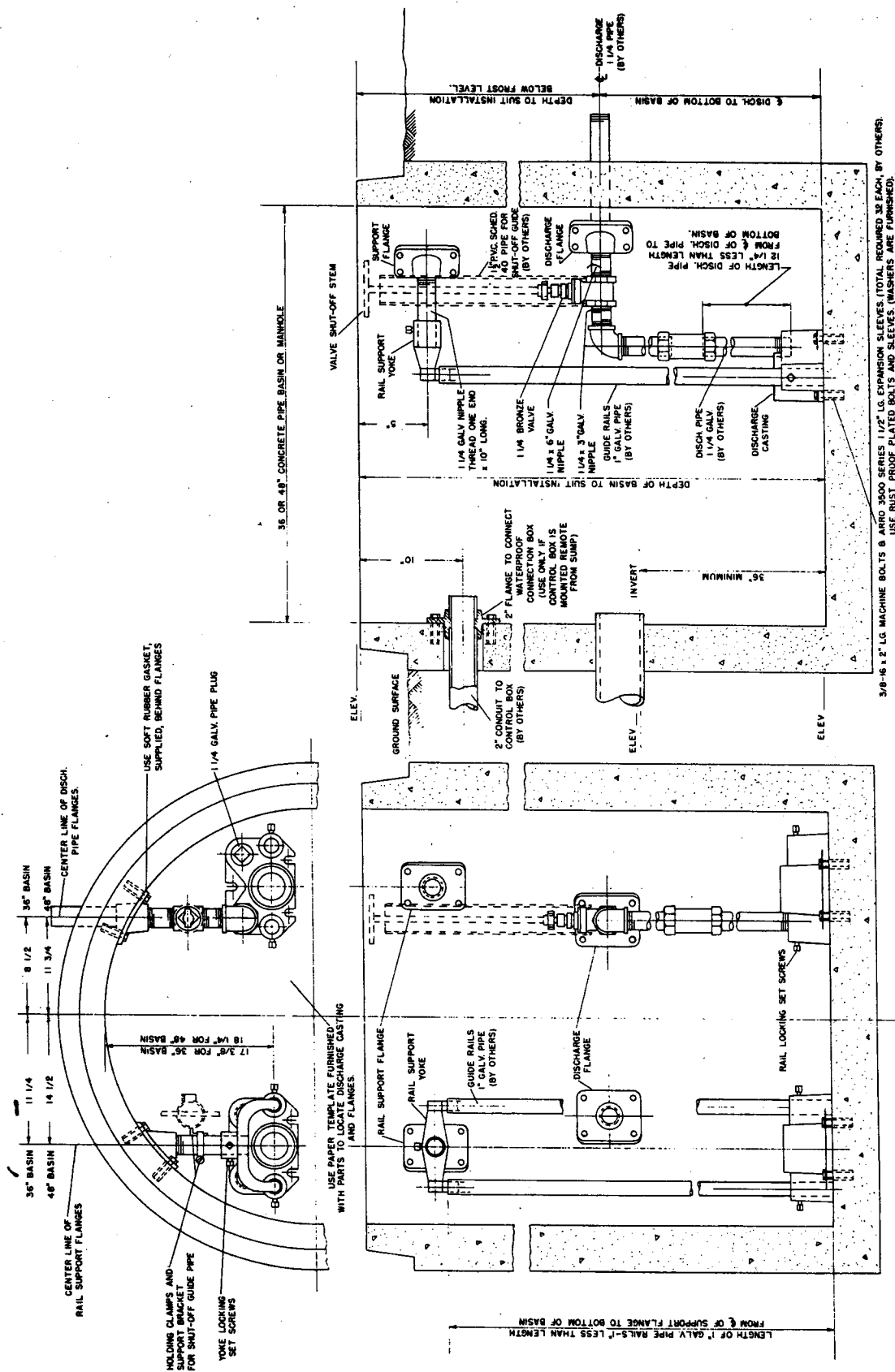
Cause – Probably cut or broken "O" ring. Replace if necessary. Trash may be caught in seal flange. Lift pump and open shut-off valve to back flush discharge casting.

On installation where discharge line is not filled it may be necessary to lift pump until seal flange is out of discharge case, then run pump to flush casting.

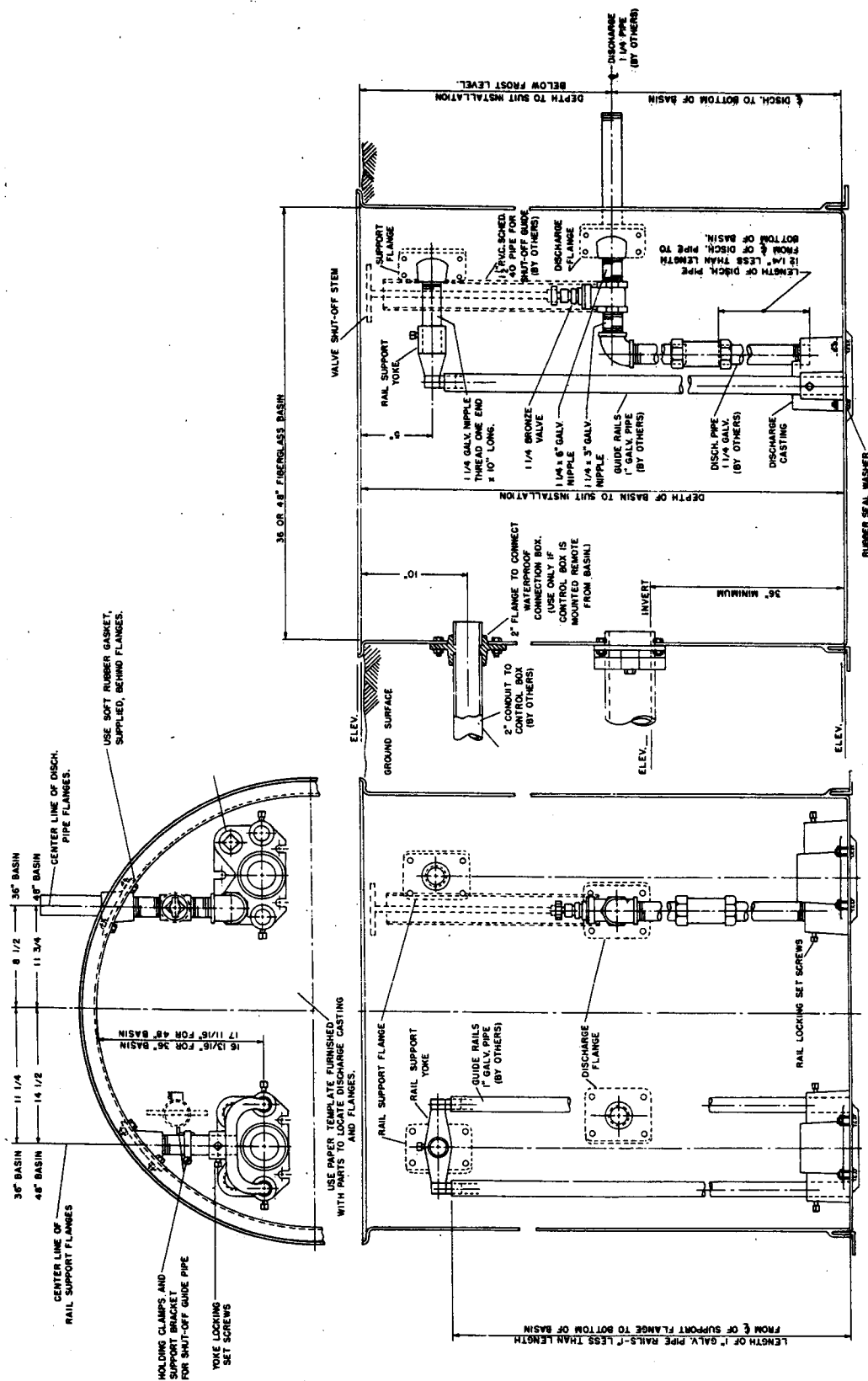
For all other trouble problems with pump or control box refer to pump and control box instructions included with these items.

CAUTION – Never work on pumps or controls unless power is turned off. If pump is remote from control box, disconnect wires to pumps to be certain power can not be turned on when working on pumps. Never put fingers near grinder impeller when pump cord is connected.

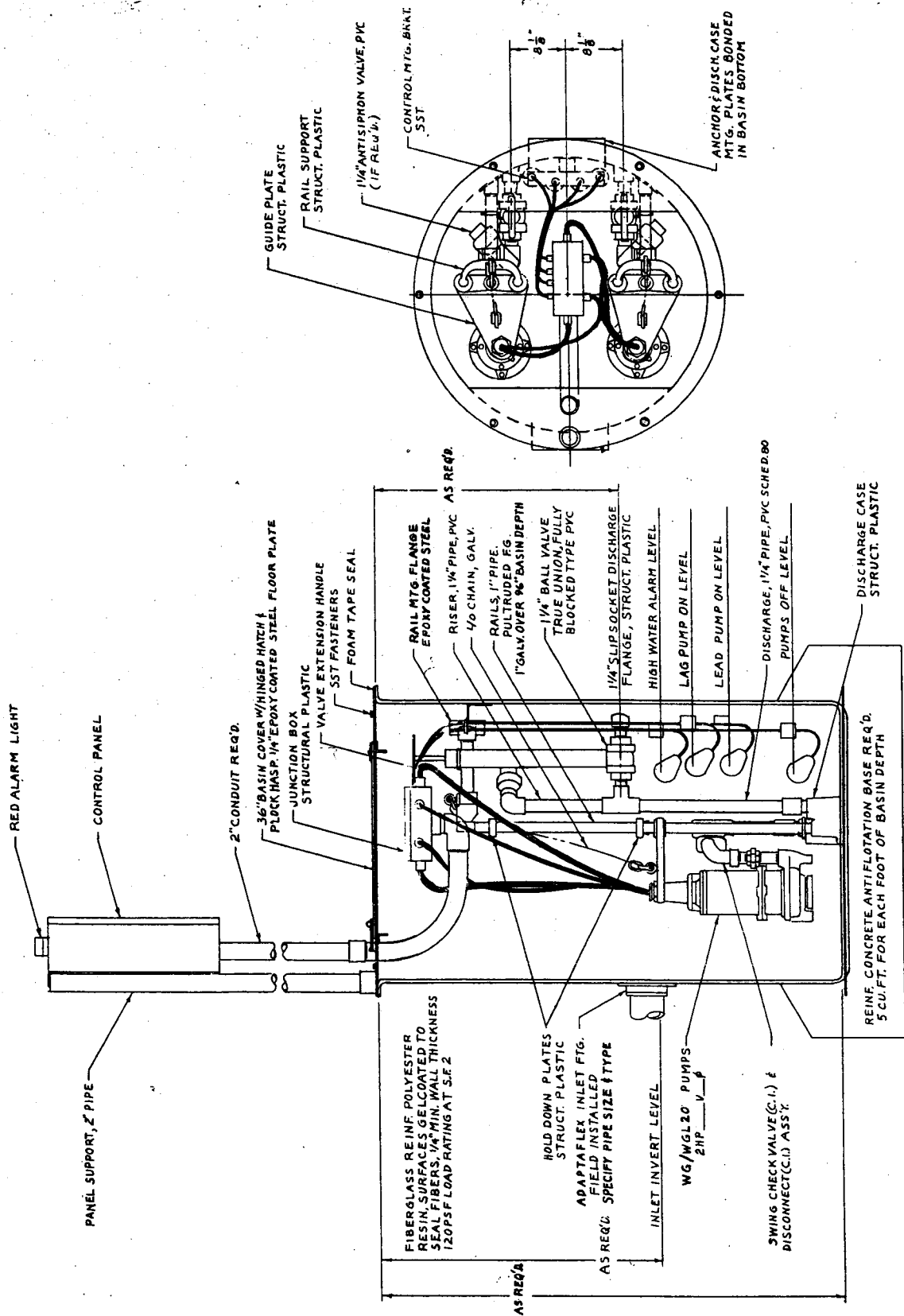
MYERS DUPLEX LIFT-OUT RAIL SYSTEM IN 36" OR 48" CONCRETE BASIN



MYERS DUPLEX LIFT-OUT RAIL SYSTEM IN 36" OR 48" FIBERGLASS BASIN

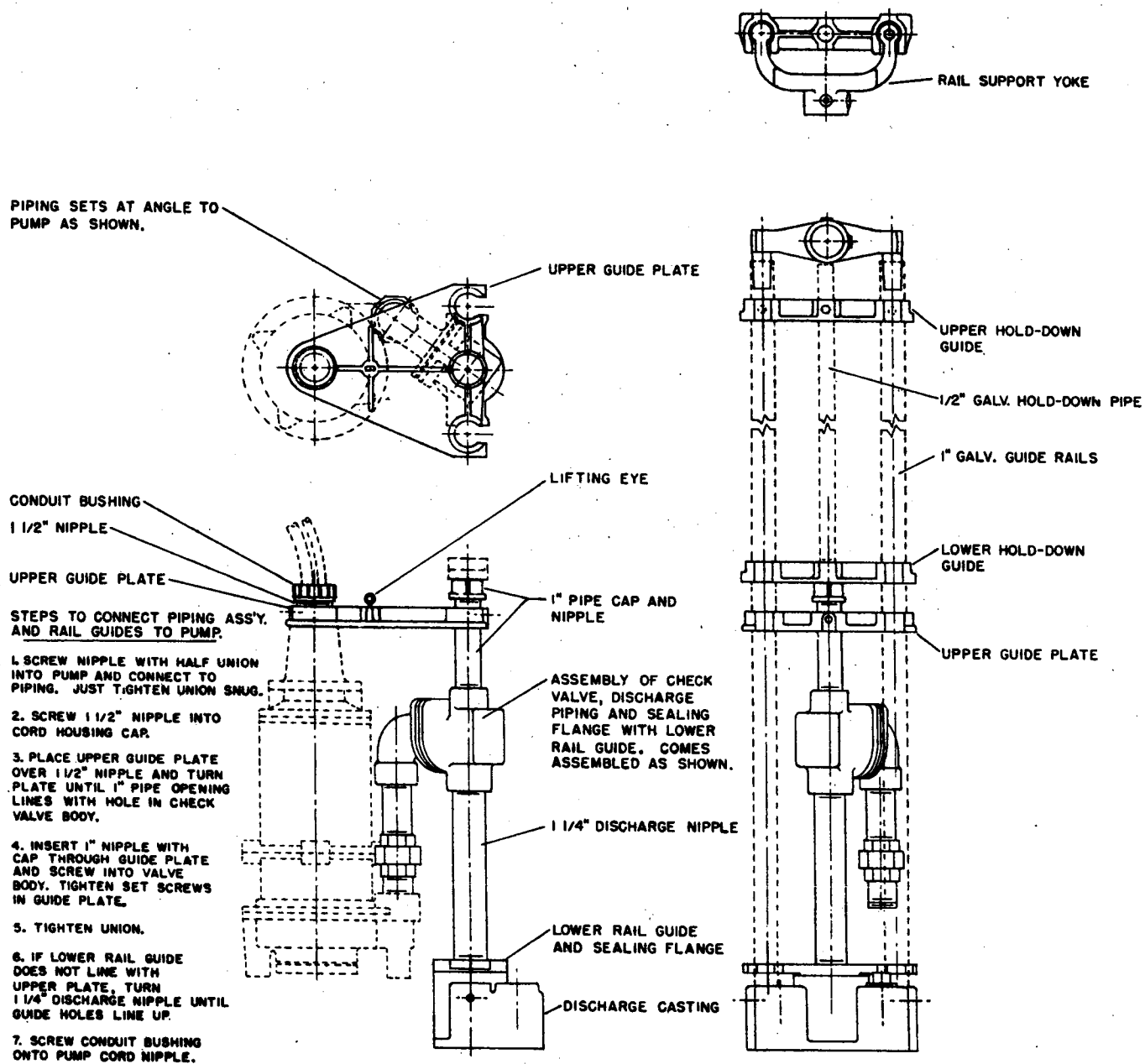


MYERS DUPLEX LIFT-OUT RAIL SYSTEM IN 36" OR 48" FIBERGLASS BASIN

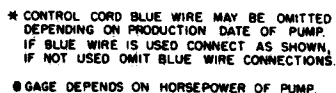




ASSEMBLING DISCHARGE PIPING AND RAIL GUIDES TO PUMP

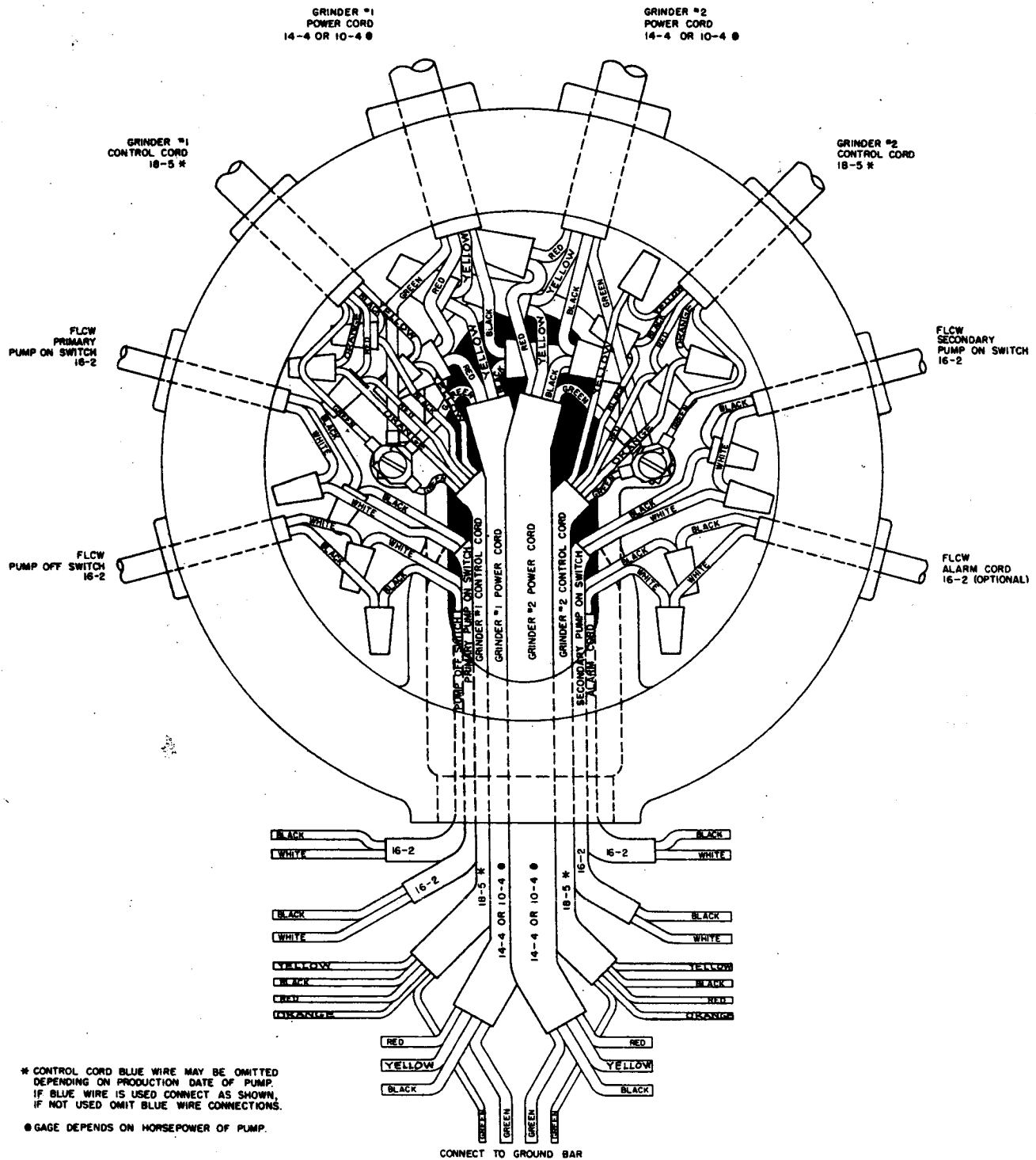


BOX CONNECTION, DUPLEX GRINDER SYSTEM ALC SWITCH AND FLC ALARM CONTROLS



● GAGE DEPENDS ON HORSEPOWER OF PUMP.

CONNECTION BOX, DUPLEX GRINDER SYSTEM, FLCW 4 BALL CONTROL



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