

INSTALLATION AND OPERATING INSTRUCTIONS

Armex Transfer Expansion Equipment

Integral transfer/*SAFE* units

Transfer units with separate or multiple *SAFE*s



ESSENTIAL SAFETY REQUIREMENTS

- 1) Locate units in a well ventilated environment and ensure that ventilation fans and apertures are not obstructed.
- 2) Check the supply voltage and overload protection is correct.
- 3) Electrical installation should be performed by a competent electrician.
- 4) Guards and covers must not be removed during operation.

Installation

1. Install the equipment as indicated on Fig. 1. (Integral transfer/*SAFE* units) or Fig. 2 (Separate/Multiple *SAFE*s)



Caution! If a finished floor screed is to be applied on completion of mechanical services the equipment should be mounted on concrete plinth.

2. Piping from the Armex Transfer unit to separate or multiple *SAFE* tanks.
 - a. The piping should rise at a minimum slope towards the *SAFE*.
 - b. For Multiple Tanks pipe velocity should be limited to 0.5 metres/sec, and the piping arrangement should be symmetrical to each *SAFE* to ensure even transfer of fluid.
 - c. All connections to the *SAFE* must be flexible to ensure correct operation of the load sensing foot.
3. Fit isolating valves where indicated on Figs. 1 & 2.
4. The size of the cold water supply should provided a flow rate equal to the maximum transfer rate of the Armex unit. Contact Armstrong Colchester office or your local agent if you do not have this information available.
5. Anti-gravity loop pipe diameter should be at least equal to transfer unit system connection size. The pipework from the system to the *SAFE*'s should not be lagged.
6. Connect electrical supply (Three Phase, Neutral, and Earth) to control panel. Note: Unit-specific wiring diagram located inside control panel.

Note! On units with separate or multiple *SAFE* tanks wiring from and sensing foot should be run in conduit and extended, if necessary, by others, ensuring compatibility of screened cable. Allowing short length of flexible cable adjacent to load sensing foot.
7. Fit air release valves (supplied loose) to top of *SAFE* (see Figs. 1 & 2).

Installation Diagrams

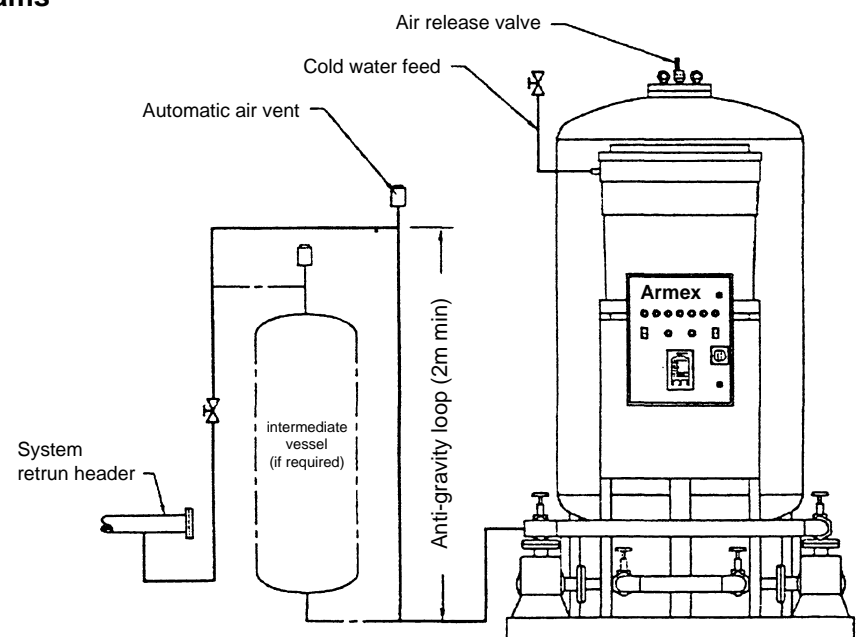


Fig.1

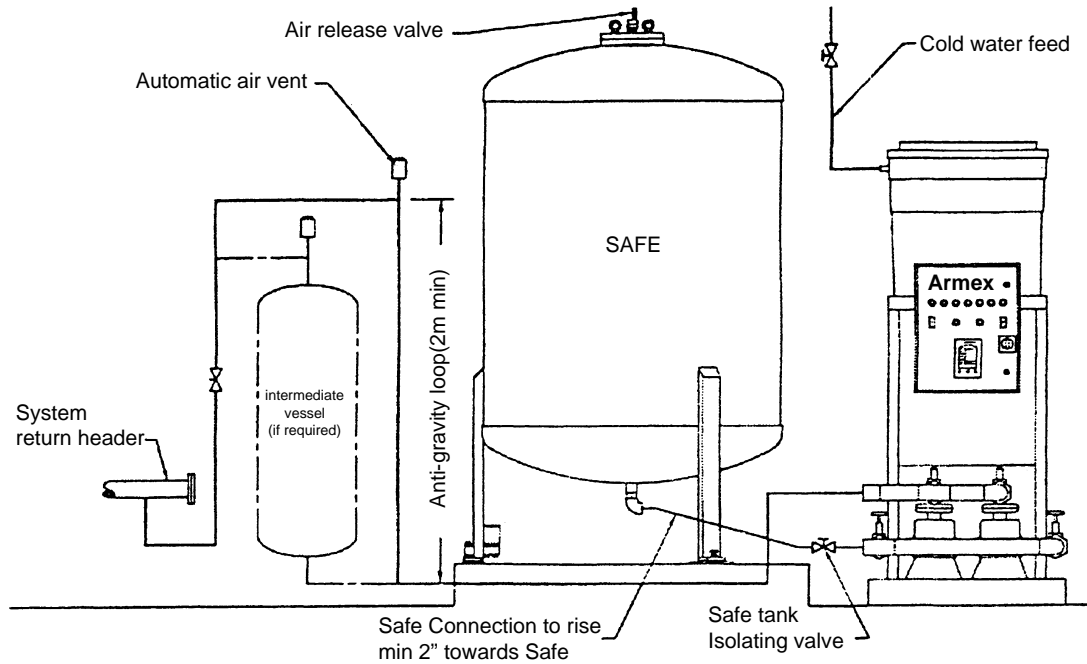


Fig.2

Commissioning Instructions

1. The system should be back-filled.
2. Check to ensure the equipment is correctly installed. Close system isolating valve, cold water supply valve and pump discharge valves. Open *SAFE* isolating valve and pump suction valve.
3. Check the air cushion pressure of the small bladder vessel(s) on the transfer unit.
4. Make connection from the load beam foot to the Contents Indicator Controller (Fig 3, Separate *SAFE*s only)
Note! The Controller will have been calibrated prior to shipping, but can be recalibrated on site if required.
 See instructions below.
5. Remove yellow painted travel bolts that fix the *SAFE* legs to the floor plates. Using the Jacking screws raise the legs so that there is 6 to 8 mm clearance between the bottom of the legs and top of floor indicate. (Fig 4)
6. Open the cold water supply valve and allow the break tank to fill.
7. Switch the pumps to 'off'.
8. Turn on the electrical supply: The contents indicator will show low water. The motorised valve from the break tank will open and water will flow into the *SAFE*. The display will first change to normal with the second lamp flashing to indicate make-up is taking place. When there is sufficient water in the *SAFE* the second light will stop flashing and show a constant green.
9. Prime the pumps it is normally sufficient to remove the priming plugs from the pump and water will flow from the *SAFE*.
10. Switch the pumps to hand momentarily to check rotation.
11. Slightly open pump discharge valves and switch pumps to auto. Both pumps will run. When the pressure reaches the threshold of the first pump pressure switch one pump will switch off. The second pump will switch off at the threshold of the second pump pressure switch.
12. Adjust pressure switches as required.
13. The *SAFE* should now be back-filled to check high water alarm. Close the *SAFE* isolating valves and pressurise the Armex Transfer Unit to check pressure switch settings.
14. Check the unit for any leaks that may have been occurred during transit.
15. The Armex system is now fully commissioned.
16. With the exception of the system-isolating valve, fully open all other valves. With the unit switched on and pumps on 'auto'. Slightly open the system-isolating valve and allow the Armex to pressurise the hydronic system. Fully vent the system following which the system-isolating valve can be fully open and the system fired up.

Calibration of the Contents Indicator.

17. The controller is self-calibrating. Backfill the *SAFE* with water. Set pumps to 'off'. Switch on panel with door open. Connect the calibration link to the two pins on the controller marked 'CALIB' (Fig. 3). Switch on one or both pumps and drain the *SAFE*. Remove the calibration link. The controller is now fully calibrated.
Note! The calibration procedure will also operate in reverse i.e. filling. During calibration the controller will show a single central lamp and the top and bottom lamps will flash as the controller senses new higher or lower signals.
CAUTION! During the calibration procedure if any load is applied to the *SAFE* the calibration will be incorrect.

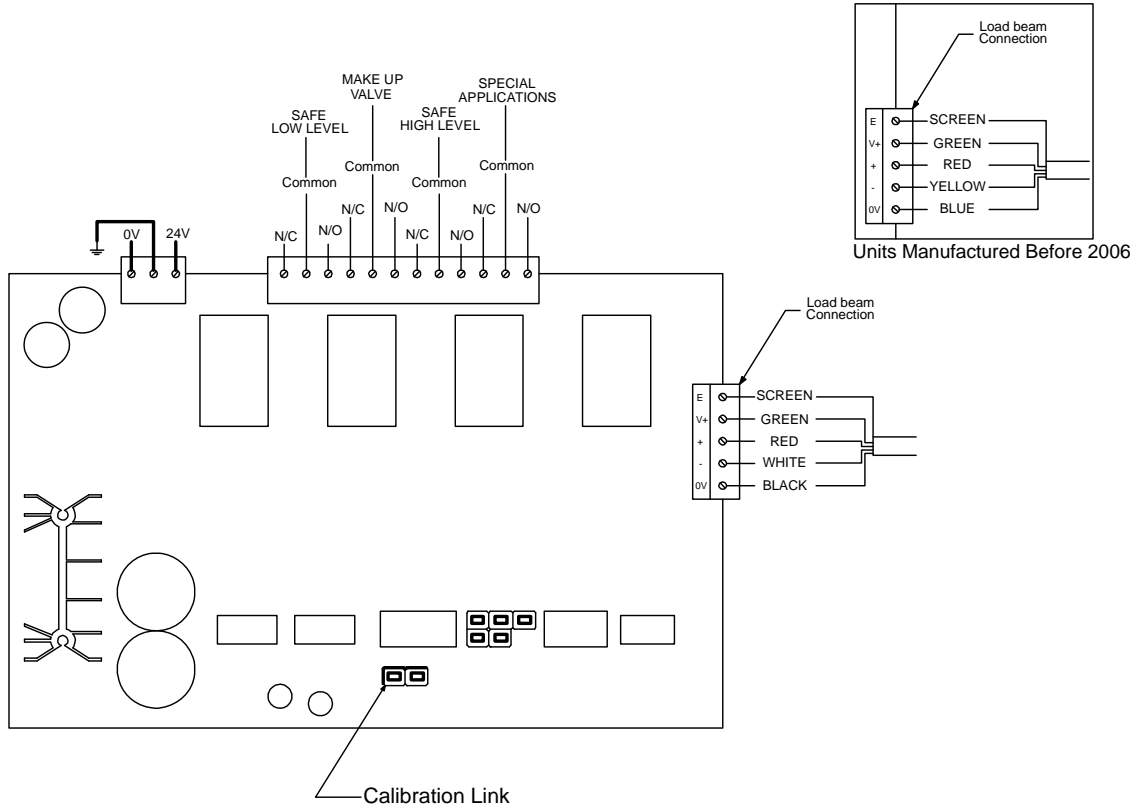


Fig.3

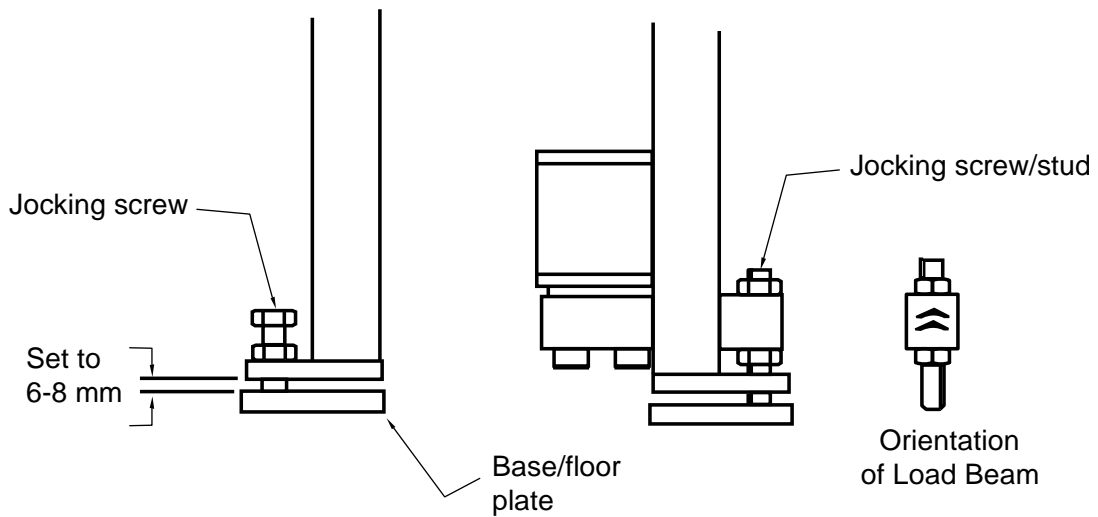


Fig.4

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