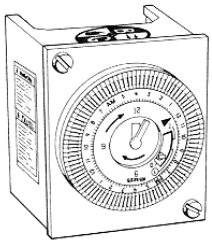
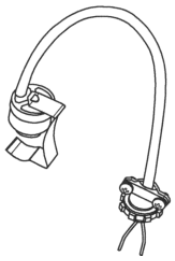
ITT

SUBMITTAL

A-128D

JOB:	**REPRESENTATIVE:**	
UNIT TAG:	**ORDER NO.**	**DATE:**
ENGINEER:	**SUBMITTED BY:**	**DATE:**
CONTRACTOR:	**APPROVED BY:**	**DATE:**





Automatic Timer Kit

Model TC-1

Aquastat

Models: AQS-1/2, AQS-3/4

DESCRIPTION

TC-1 AUTOMATIC TIMER KIT - To increase the overall efficiency of a hot water recirculation system, the TC-1 timer control kit can be installed for use on any B&G NBF/NRF/SSF/PL and most 3-piece circulators. The TC-1 timer control is programmable to turn the circulator ON and OFF automatically at preset times. This permits the user to have the pump circulate hot water only during those times when high usage can be expected throughout the day.

AQS-1/2 and AQS-3/4 AQUASTAT - are designed to thermostatically turn any B&G NBF/NRF/SSF circulator ON and OFF. The AQS-1/2 or AQS-3/4 will switch the pump OFF at 120ºF (48.9ºC) and ON at 100ºF (37.8ºC). The aquastats are available in separate models that will sense the temperature for either 1/2" or 3/4" copper pipe.

AUTOMATIC TIMER KIT and AQUASTAT COMBINATION - The automatic timer and aquastat kits can be used in combination. When they are used together, the pump will only circulate water when the ON time conditions are met and when water temperature is low enough to cause the aquastat to switch ON.

OPERATIONAL LIMITS

TC-1 AUTOMATIC TIMER KIT:

Power Supply: 115/120 VAC, 60 HZ, 1Ø

Minimum Switch Interval: 15 minutes

Run Modes: ON (continuous run), OFF (at all times), TIMER (run at programmed intervals)

Maximum Switch Current: 16 amps

AQS-1/2, AQS-3/4 AQUASTATS

Thermostatic Switch Modes: OFF (open) at 120°F (48.9°C) and ON (closed) at 100°F (37.8°C) operation of the aquastat is dependent on ambient settings. In setting where there is excessive heat loss or in installations where heat from the boiler or other components can affect the aquastat, the actual on and off temperatures may vary.

Thermostatic Element: Bimetal, senses surface temperature of outside diameter of pipe.

Pipe Size: AQS-1/2 clips onto 1/2" copper pipe or 3/8" steel pipe (OD of pipe 5/8"). AQS-3/4 clips onto 3/4" copper pipe or 1/2" steel pipe (OD of pipe 7/8").

Mounting: May be installed to sense temperature at the suction or discharge pipe of the pump.

CONSTRUCTION MATERIALS

TC-1 AUTOMATIC TIMER KIT:

Timer Body: Noryl Plastic

AQS-1/2, AQS-3/4 AQUASTATS:

Thermostat Covering: Epoxy (Environmentally Sealed)
Pipe Clip: Stainless Steel
Sensing Element: Bimetal
Wire Leads: Insulated 18" (457mm) #18 AWG

APPROX. SHIPPING WEIGHT

TC-1: 11oz. (.31Kg)
AQS-1/2: 5oz. (.14Kg)
AQS-3/4: 5oz. (.14Kg)

SCHEDULE

MODEL NUMBER	PART NUMBER	SIZE INCHES	VOLTAGE RATING 60 HZ 1Ø	TAGGING INFORMATION	QUANTITY
TC-1	113210	–	115-120		
AQS-1/2	113223	1/2	115-120		
AQS-3/4	113224	3/4	115-120		

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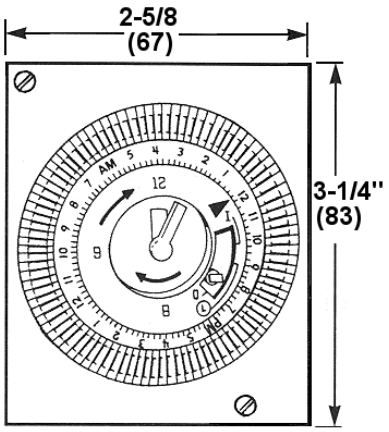
Bell & Gossett

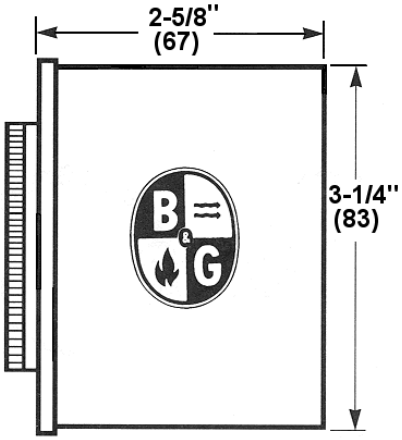
AUTOMATIC TIMER KIT AQUASTATS

A-128D

TIMER KIT DIMENSION IN INCHES (MM)



FRONT VIEW



SIDE VIEW

TYPICAL SPECIFICATIONS

Furnish and install as shown on the circulator plans and in accordance with the following specifications:

AUTOMATIC TIMER KIT:

1. The timer kit shall be UL approved.
2. The timer kit shall be installed on the connection box of any Bell & Gossett NBF/NRF/SSF system lubricated circulator.
3. The timer kit will be suitable for 115/120V, 60 HZ operation.
4. The timer shall provide automatic ON-OFF control at minimum interval of every 15 minutes. It shall also have the option of providing manual ON-OFF control.

All units shall be ITT Industries - Bell & Gossett Model No.: TC-1

AQUASTATS:

1. The aquastat shall be UL approved.
2. The aquastat shall be connected to the lead wires in the connection box of any Bell & Gossett NBF/NRF/SSF system lubricated circulator.
3. The aquastat will be suitable for 115/120V, 60 HZ operation.
4. The aquastat shall provide thermostat control to the circulator. It will turn OFF (open) at 120ºF (48.9ºC) and ON (closed) at 100ºF (37.8ºC) the use of insulation in installation with excessive heat or cooling may be necessary. Use of fiberglass insulation with R-values greater than 1.6 is recommended.

All units shall be ITT Industries - Bell & Gossett Model No.:
(Choose: AQS-1/2 or AQS-3/4).

AUTOMATIC TIMER KIT AND AQUASTAT COMBINATION:

1. The automatic timer kit and either aquastat model can be combined to provide automatic time and temperature control to any Bell & Gossett NBF/NRF/SSF circulator.
2. When the automatic timer and the aquastat are used together, the pump will only circulate water when the ON time conditions are met and when the water temperature is low enough to cause the aquastat to switch ON.

All units shall be ITT Industries - Bell & Gossett Model No.: TC-1 and Bell & Gossett Model No.: (Choose: AQS-1/2 or AQS-3/4).

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