## AQUA HUE FOUNTAINS

BEAUTIFULLY LIGHTED FOUNTAIN KITS AND CUSTOM DESIGNED WATER EFFECT FOUNTAINS



## HYDREL CORPORATION

SUN VALLEY, CALIFORNIA

## A Thing of Beauty



Man has been fascinated by water since the world began, often coming from far distances to gaze upon a beautiful waterfall, a spouting geyser, or a rippling stream. Europeans recognized this interest hundreds of years ago and started to build fountains in their parks and town squares. Some of these fountains, like the Trevi Fountain in Rome, were so lovely that they actually became world famous and even today are attracting tourists to these cities. Most of these early fountains took many years to build with each part carefully engineered and hand made.

Today, with the development of new products, techniques and materials, fountains are being installed everywhere from a small fountain in a home garden or pool to a large multi-effect, multi-color fountain

designed to beautify a park or large civic or industrial center. In this busy, hectic world of today, there is something soothing and peaceful about the sight of softly rising and falling water. A fountain is particularly beautiful at night when equipped with lights which play upon the water as it forms its pattern.

With the development of different types of jets and spray patterns, fountains can be designed to complement any type of structure or outdoor area — and within any budget figure. This catalog illustrates some of the most popular types of fountains available from Hydrel, but the designs and creations possible by combining different patterns and effects are practically limitless. Hydrel Fountains include many distinctive and unique installations such as: Decorative fountains functioning as heat exchanger sprays for air conditioning systems, water curtains for concealment of stages — and purely aesthetic creations.

Every one a thing of beauty



#### **FOUNTAINS ARE DIFFERENT**

For the most part, effects and water patterns have become more or less standardized in the fountain industry. Available to the prospective purchaser are fountains with cascading waterfalls, open flower patterns, columns of aerated water, spray rings and twirling heads — all of them produced in different sizes and in multiples or combinations, either lighted or unlighted and with changing water, light and color effects.

Although these patterns are standardized, FOUNTAINS ARE DIFFERENT and this difference is the key to Hydrel's superiority. Because a fountain primarily is intended to be "a thing of beauty," design is all important — and Hydrel's designers are skilled in translating form and balance into a finished Fountain Masterpiece. The wide variety of Hydrel fountain components enables our designers to develop fountains of any size, shape or form, from the smallest to the largest and most complex. Design and Engineering work closely together so that the resultant artistic values are retained, while satisfying the exacting demands of efficiency and simplicity of mechanical design and construction.

Because Hydrel is dedicated to the ideal of quality as the very foundation of their reputation, only the finest equipment and components go into a Hydrel fountain, assuring years and years of trouble-free satisfaction. All fountains are fabricated by carefully trained and highly skilled craftsmen under extremely rigid quality control standards. Complete test facilities at the Hydrel plant are used to test each fountain before delivery, assuring that all parts will function properly when installed.

Hydrel also offers a wide choice of underwater fountain lights, and wet and dry niche type swimming pool lights from 75 to 1000 watts, as well as a complete line of accessory equipment. All fixtures and junction boxes are heavy cast bronze construction. For complete information, see Hydrel "Swimming Pool Lighting" and "Fountain Lighting" brochures.

When you select a Hydrel Aqua-Hue Fountain, or Hydrel Lighting Fixture, you can be assured that you have purchased the finest equipment obtainable, backed by a company that has earned an enviable reputation as a manufacturer of quality products.

Remember: "You have the right to expect the best from Hydrel"

©Hydrel Corporation 1972

#### INDEX

	1 ages
FOUNTAINS	A-thru-D
IN KITS	
Water Effects	2-3-4
Water Effects	5-6
Vater Effects	7
fect, Automatic Changing	8-9-10
Fountains	10
IN COMPONENTS	
tex Assemblies	23
tic Control Panels	26
— Pool	23
alves	25
ds	.13 thru 18
v Standpipe Assembly	24
	19-20-21
rs	23
Rings	12
s, Pump	24
Screens	24
Devices	25-26
Automatic Solenoid	24-25
evel Control Units	25
ontrols	26
O FOLUDATATE	
G EQUIPMENISee Ligh	
	Water Effects

#### ADDITIONAL HYDREL PRODUCTS

Fountain Lighting
Swimming Pool Lighting
Recessed Lighting
Architectural Lighting
Landscape Lighting

For Information Contact Your Hydrel Representative

COVER PHOTO: BOARD OF WATER SUPPLY, HONOLULU, HAWAII

## A PARTIAL LIST OF FOUNTAIN INSTALLATIONS



First National Bank

Broadview Senior Citizens' Home

Polynesian Cultural Center

North Star Center

Beckman Auditorium

Mid Valley Savings & Loan

City of Ensenada

Hines Office Building

**Buffam Department Store** 

Oak Cliff Savings & Loan

Har Mar Shopping Center

Kitchens of Sara Lee

Western Airlines Office

Park Lido Professional Building

Diplomat Inn

Citrus College

Casa Quajardo S.A.

University of Chicago Law School

Fantasia Golf Course

Delta Royale Apartments

**Ambassador College** 

Fresno State College

The Willowick Fountain

Ilikai Hotel

Apex Rotary (Subiaco)

Doral Beach Hotel

San Lorenzo Lagoon

First National Bank

Waco, Texas

Glendale, California

Honolulu, Hawaii

Minneapolis, Minnesota

Pasadena, California

Yuba City, California

Ensenada, Mexico

Houston, Texas

Rolling Hills Estates, Calif.

Arlington, Texas

St. Paul, Minnesota

Deerfield, Illinois

Los Angeles, California

Newport Beach, California

Montgomery, Alabama

Azusa, California

Durango, Mexico

Chicago, Illinois

Oranda, California

Burbank, California

Pasadena, California

Fresno, California

Houston, Texas

Honolulu, Hawaii

Perth, West Australia

Miami, Florida

San Lorenzo, California

Dallas, Texas

Valley Country Club Apartments

Department of Water & Power

Lakeside Country Club

City of Marysville

Museum of Modern Art

Wilshire Triangle

Glendale Federal Savings

Penrith Fountain

Peggy's Point Plaza

Southern Federal

Green Acres Memorial

Gardens

Prescolite Manufacturing

Tally Ho Inn

McAllen State Bank

Investor's Marine, Inc.

Tropicana Hotel

Steen Geological Office

Building

Inglewood Cemetery

Mortuary

**Ambassador Hotel** 

Springtown Fountain

Fountain of Planets\* New York World's Fair

Henry Sassoon Office

Building

Nekoosa-Edwards Paper

\* Supplier of Partial Equipment

Company

Sherman Oaks, California

Long Beach, California

Toluca Lake, California

Marysville, California

New York City, New York

Beverly Hills, California

Sherman Oaks, California

Palm Desert, California

Houston, Texas

Tarzana, California

Bloomington, California

San Leandro, California

Las Vegas, Nevada

McAllen, Texas

Newport Beach, California

Las Vegas, Nevada

Reno, Nevada

Inglewood, California

Taipei, Taiwan

Livermore, California

New York City, New York

Long Beach, California

Port Edwards, Wisconsin

#### OUTLINE GUIDE FOR DEVELOPING CUSTOM FOUNTAIN PROPOSAL INFORMATION

To assist the factory in developing proposals and cost estimates for you, the following information is essential

- A. Pool dimensions depth, diameter and configuration.
- B. Character of immediately surrounding area, terrain and buildings.
- C. Furnish plot and elevation drawings.
- D. Give distance of viewing points from fountain.
- E. If there is a preference of water patterns and total effect, please explain.
- F. Do you prefer changing water patterns or single constant
- pattern? G. Do you wish illuminated fountains? (a) With constant

unchanging light source. (b) With timed color changing.

- H. Do you wish automatic water level control?
- I. Do you wish Wind Controller unit to automatically diminish height of water patterns when wind reaches pre-determined velocity to avoid spray blow out?
- J. Do you wish recirculating filter system for cleansing
- K. Approximate budget planned for basic fountain equipment (exclusive of pool, piping to pool, electrical runs and installation).
- L. If there are any special applications or other features you wish to have included in the proposal for consideration, and not covered in the above, please outline.

#### FOR THE ATTENTION OF



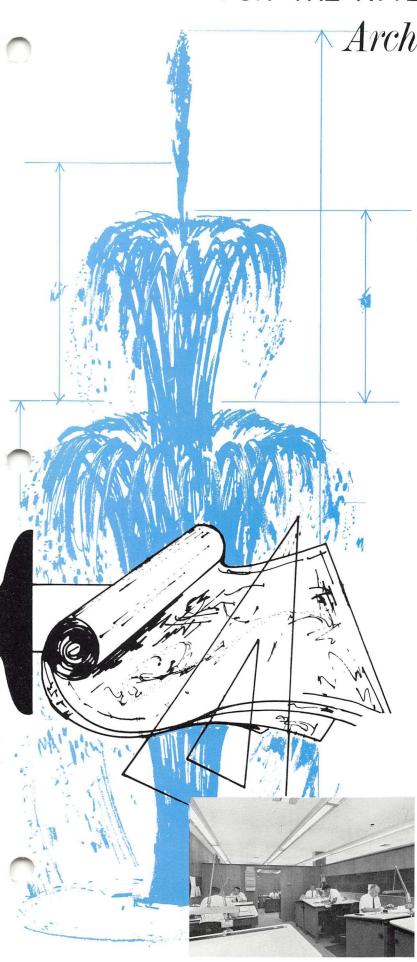
# **CUSTOM FOUNTAINS**

While this catalog illustrates and describes a wide and comprehensive line of fountain kits and components, one of the more important functions of Hydrel is the development and manufacture of custom fountain systems. Towards this end, Hydrel also designs and builds to specification, custom products not listed in this catalog.

Hydrel offers to architects and engineers complete technical assistance such as:

- Aesthetic and environmental design concept.
- · Hydraulic systems design.
- Lighting and electrical control equipment design.
- · Filtration system design.
- · Complete specification outline.
- · Budget development.









FLOATING FOUNTAINS • Tropicana Hotel • Las Vegas, Nevada

This fountain is unique in that it is not a permanent installation but actually floats in the swimming pool. A special designed crane is used to place the fountain in the center of the pool at dusk and remove it in the morning. Rows of spray jets are also placed around

the outer edge of the pool giving the effect of a fountain of tremendous size. The changing water patterns, combined with a beautiful variety of color changing underwater lights, provides a magnificent view for guests and diners at the Tropicana.

AQUA-HUE MUSICAL BALLET FOUNTAIN • Ilikai Apartment Hotel • Honolulu, Hawaii





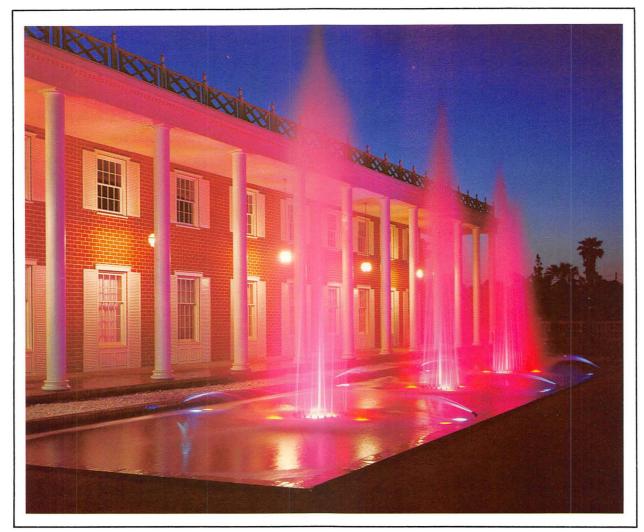


RAINBOW MUSICAL FOUNTAIN • Nekoosa Edwards Paper Company, Port Edwards, Wisconsin

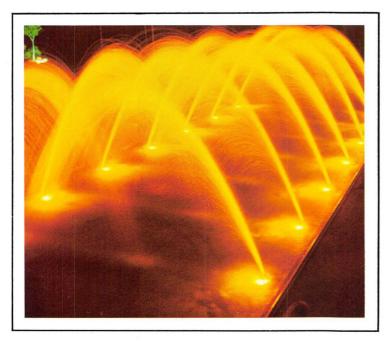


FOUNTAIN OF THE PLANETS New York World's Fair Fountain designed by J. S. Hamel-Hamel and Langer





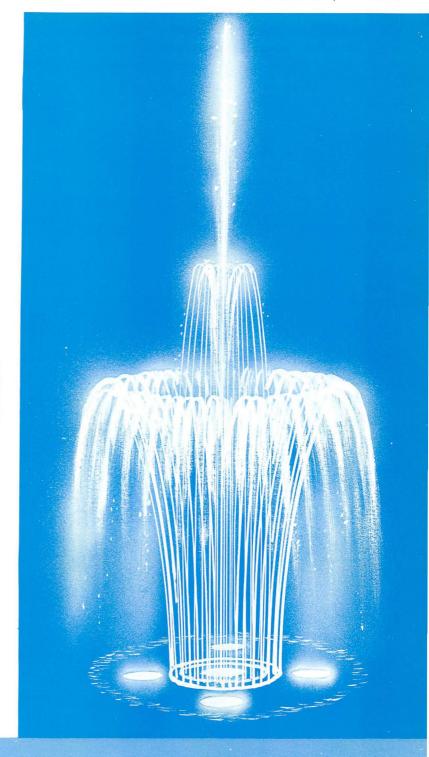
INGLEWOOD PARK CEMETERY • Inglewood, California



GOLDEN BOWER FOUNTAIN Ambassador College Pasadena, California



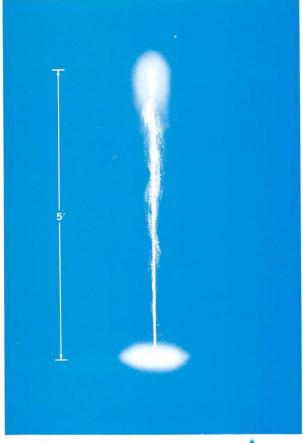
## FOUNTAIN KITS



In addition to the design, engineering and manufacturing of Custom Fountains, Hydrel has developed the line of pre-engineered fountain kits represented on the following pages. These fountains are the result of a great deal of effort over a long period of time to develop kits of some of the most popular fountain patterns which could be installed at a minimum cost. All of the basic technical and planning efforts which go into the construction of a fountain has been accomplished for these kits and they are designed to offer the finest value possible.

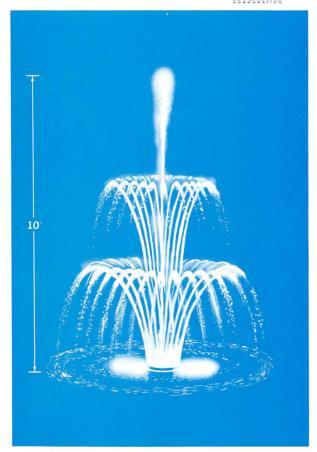
Each Hydrel Fountain Kit comes complete and ready for installation. Pool requirements and a list of parts are shown to aid in choosing the kit best suited for your specifications. Hydrel underwater lights which have been tested and proved effective for illuminating each fountain are also included. Should other lighting effects be desired, separate lights may be ordered from the section on underwater lights.

On the following pages, you will find Hydrel Fountain Kits ranging from a single effect spray ring to multi-effect, multi-colored fountains. Should none of these kits exactly suit your requirements, Hydrel engineers will be happy to design a custom fountain which will best give the effect you desire. All Hydrel Fountain Kits contain the finest quality materials to give years of trouble-free fountain enjoyment.

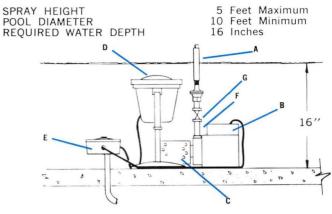


single water effect





A single jet producing a straight frothy stream of highly aerated water five feet high. May be used singly in a small pool, or several are effective when used in combination in a larger pool or pond.



- A. 1 AERATING JET.
- 1 1/10 HP 115V SUBMERSIBLE PUMP.
- 1 BRASS SUCTION SCREEN.
- 1 150 WATT UNDERWATER LIGHT WITH LENS COLOR AS SPECIFIED RED, BLUE, GREEN, AMBER OR CLEAR.
- E. 1 BRONZE UNDERWATER JUNCTION
  BOX WITH WATER-TIGHT PRESSURE
  BUSHINGS AND 3/4" NPT HUB IN
  BOTTOM.
  F. 1 COMPLETE BRASS MANIFOLD.
  G. 1 BRASS HEIGHT CONTROL VALVE.
  1 SET INSTALLATION DRAWINGS.

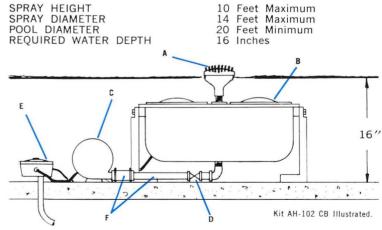
#### Kit AH-101 CB

Same specifications as Kit AH-101 except one Aqua-Hue Color Blender replaces the 150 watt underwater light. 18" minimum depth required

## **AQUA-HUE FOUNTAIN KITS**

#### **Kit AH-102**

This graceful Fleur-De-Lis Jet is a favorite with its delicate flower-like pattern. For other variations of this popular fountain, see the Components Section of this catalog.



- 1 FLEUR-DE-LIS JET.
- 1 300 WATT UNDERWATER LIGHT WITH LENS COLOR AS SPECIFIED — RE BLUE, GREEN, AMBER OR CLEAR.
- 1 1/3 HP BRONZE SUBMERSIBLE PUMP WITH BRASS SUCTION SCREEN.
- BRASS HEIGHT CONTROL VALVE. BRONZE UNDERWATER JUNCTION BOX WITH WATER-TIGHT PRESSURE BUSHINGS AND 3/4" NPT HUB IN
- BOTTOM
- COMPLETE BRASS MANIFOLD. SET INSTALLATION DRAWINGS

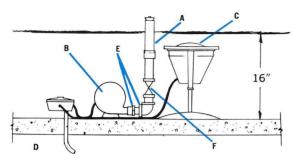
#### Kit AH-102 CB

Same specifications as Kit AH-102 except one Aqua-Hue Color Blender replaces the 300 watt underwater light.

The mushroom effect produced by this kit creates an unbroken dome sheet of clear water and when used with the Hydrel Aqua-Hue Color Blender, the iridescent reflection of colors is quite dramatic.

SPRAY DIAMETER POOL DIAMETER REQUIRED WATER DEPTH 3 Feet Maximum 7 Feet Minimum

16 Inches



- A. 1 MUSHROOM JET 18" HIGH
- B. 1 1/3 HP BRONZE SUBMERSIBE PUMP WITH BRASS SUCTION SCREEN.
- C. 3 300 WATT UNDERWATER LIGHTS WITH LENS COLOR AS SPECIFIED RED, BLUE, GREEN, AMBER OR CLEAR.
- D. 1 BRONZE UNDERWATER JUNCTION BOX WITH WATERTIGHT PRESSURE BUSH-INGS AND 3/4" NPT HUB IN BOTTOM.
- E. 1 COMPLETE BRASS MANIFOLD.
- 1 BRASS HEIGHT CONTROL VALVES. 1 SET INSTALLATION DRAWINGS.

#### Kit AH-103 CB

Same specifications as Kit AH-103 except one Aqua-Hue Color Blender replaces the three 300 watt lights.

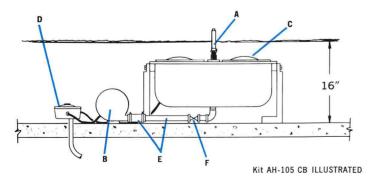
## **AQUA-HUE FOUNTAIN KITS**

#### **Kit AH-105**

An interesting water pattern is created by this exploding jet as the water literally bursts at the center when the rising and descending

SPRAY HEIGHT POOL DIAMETER REQUIRED WATER DEPTH

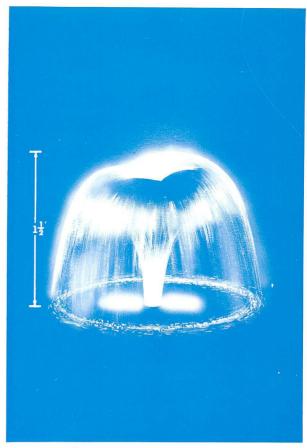
- 6 Feet Maximum
- 10 Feet Minimum
- 16 Inches



- A. 1 EXPLODING JET.
- B. 1 ½, HP BRONZE SUBMERSIBLE PUMP WITH BRASS SUCTION SCREEN. C. 1 150 WATT UNDERWATER LIGHT WITH LENS COLOR AS SPECIFIED RED, BLUE, GREEN, AMBER OR CLEAR.
- D. 1 BRONZE UNDERWATER JUNCTION BOX WITH WATERTIGHT PRESSURE BUSHINGS AND 34" NPT HUB IN BOTTOM.
- E. 1 COMPLETE BRASS MANIFOLD. 1 - BRASS HEIGHT CONTROL VALVE. 1 - SET INSTALLATION DRAWINGS.

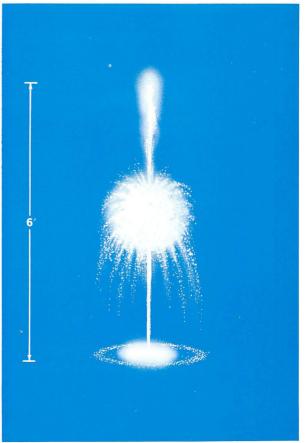
#### Kit AH-105 CB

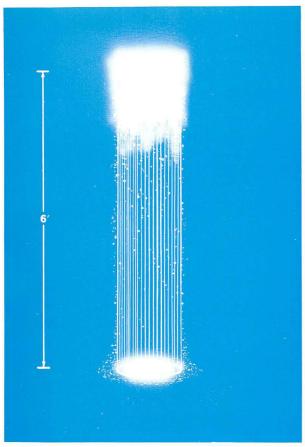
Same specifications as Kit AH-105 except one Aqua-Hue Color Blender replaces the 150 watt underwater light.





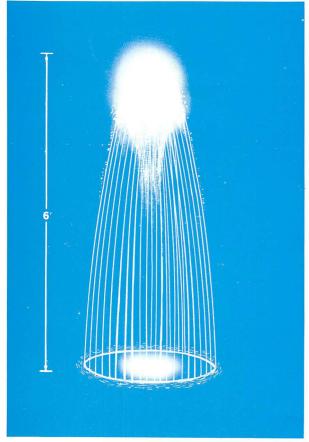
single water effect





single water effect





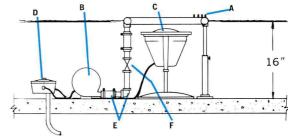
#### **Kit AH-120**

The vertical pattern produced by this kit forms an interesting "Column" effect that is quite popular in pools located in confined areas.

SPRAY HEIGHT POOL DIAMETER 6 Feet Maximum

10 Feet Minimum

16 Inches REQUIRED WATER DEPTH



16" DIAMETER SPRAY RING WITH VERTICAL FALL SPRAY PATTERN.

D. 1 - BRONZE UNDERWATER JUNCTION BOX WITH WATERTIGHT PRESSURE BUSHINGS AND 3½" NPT HUB IN BOTTOM.

B. 1 -  $\frac{1}{3}$  HP BRONZE SUBMERSIBLE PUMP WITH BRASS SUCTION SCREEN.

E. 1 - COMPLETE BRASS MANIFOLD.

C. 1 - 300 WATT UNDERWATER LIGHT WITH LENS COLOR AS SPECIFIED — RED, BLUE, GREEN, AMBER OR CLEAR.

F. 1 - BRASS HEIGHT CONTROL VALVE. 1 - SET INSTALLATION DRAWINGS.

Kit AH-120 CB Same specifications as Kit AH-120 except one Aqua-Hue Color Blender replaces the 300 watt underwater light.

Kit AH-121 Same specifications as Kit AH-120 except with a 16" spray ring having a center fall pattern.

Kit AH-121 CB Same specifications as Kit AH-121 with Aqua-Hue Color Blender.

Kit AH-122 Same specifications as Kit AH-120 except with a 16" spray ring having an outside fall pattern.

Kit AH-122 CB Same specifications as Kit AH-122 with Aqua-Hue Color Blender.

## **AQUA-HUE FOUNTAIN KITS**

#### **Kit AH-123**

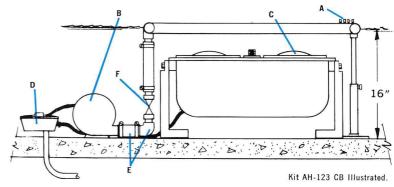
The center fall water pattern makes this fountain ideal for use in smaller pools and provides a point of interest for apartments, motels, office buildings or wherever a smaller fountain is desired. It is also effective when used in multiples in larger pool areas.

SPRAY HEIGHT POOL DIAMETER REQUIRED WATER DEPTH

6 Feet Maximum

12 Feet Minimum

16 Inches



A. 1 - 30" DIAMETER SPRAY RING WITH CENTER FALL SPRAY PATTERN.

D. 1 - BRONZE UNDERWATER JUNCTION BOX WITH WATERTIGHT PRESSURE BUSH-ING AND 3/4" NPT HUB IN BOTTOM.

B. 1 - 1/3 HP BRONZE SUBMERSIBLE PUMP
WITH BRASS SUCTION SCREEN.
C. 1 - 300 WART UNDERWATER LIGHT WITH
LENS COLOR AS SPECIFIED — RED,
BLUE, GREEN, AMBER OR CLEAR.

E. 1 - COMPLETE BRASS MANIFOLD.

1 - BRASS HEIGHT CONTROL VALVE. 1 - SET OF INSTALLATION DRAWINGS.

#### Kit AH-123 CB

Same specifications as Kit AH-123 except one Aqua-Hue Color Blender replaces the 300 watt underwater light.

LAMPS NOT INCLUDED EXCEPT ON SPECIAL ORDER.

The use of two different spray patterns, designed to attractively complement each other, makes this fountain a handsome addition to any outdoor area. Available in three different kit sizes to fit different size requirements.

SPRAY DIAMETER
POOL DIAMETER
REQUIRED WATER DEPTH

12 Feet Minimum
16 Inches

A

16"

- A. 1 60" DIAMETER SPRAY RING WITH IN-SIDE FALL SPRAY PATTERN. 3' HIGH.
- B. 1 24" DIAMETER SPRAY RING WITH CENTER FALL SPRAY PATTERN. 6' HIGH.
- C. 1 ½ HP BRONZE SUBMERSIBLE PUMP WITH BRASS SUCTION SCREEN.
- D. 1 300 WATT UNDERWATER LIGHT WITH AMBER LENS.
- E. 4 150 WATT UNDERWATER LIGHTS WITH GREEN LENS.
- F. 1 BRONZE UNDERWATER JUNCTION BOX WITH WATERTIGHT PRESSURE BUSH-INGS AND 3/4 NPT HUB IN BOTTOM.
- G. 1 COMPLETE BRASS MANIFOLD.
- H. 2 BRASS HEIGHT CONTROL VALVES. 1 - SET INSTALLATION DRAWINGS.

Kit AH-215 CB Same specifications as Kit AH-215 except one Aqua-Hue Color Blender replaces the 300 watt underwater light.

Kit AH-216 Same specifications as Kit AH-215 modified to use 48'' and 16'' diameter spray rings and  $\frac{1}{3}$  HP bronze submersible pump.

**Kit AH-216 CB** Same specifications as Kit AH-216 with Aqua-Hue Color Blender.

Kit AH-217 Same specifications as Kit AH-215 modified to use 36" and 12" diameter spray rings and 1/4 HP bronze submersible pump.

**Kit AH-217 CB** Same specifications as Kit AH-217 with Aqua-Hue Color Blender.

## **AQUA-HUE FOUNTAIN KITS**

#### **Kit AH-218**

The outside fall pattern forms a base for the aerated center stream. This fountain is especially effective when lighted. It may be ordered with exploding center jet for slightly different pattern. (See Kit AH-219)

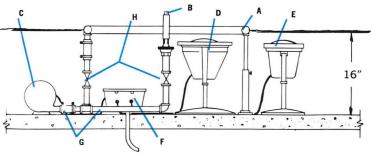
SPRAY DIAMETER

POOL DIAMETER
REQUIRED WATER DEPTH

4 Feet Maximum

10 Feet Minimum

16 Inches

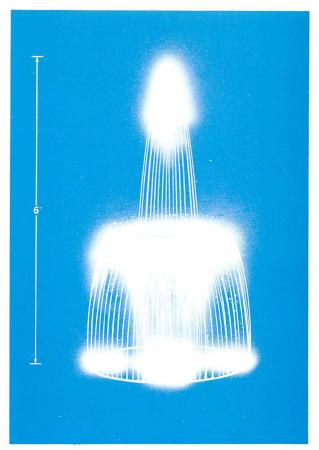


- A. 1 30" DIAMETER SPRAY RING WITH OUTSIDE FALL SPRAY PATTERN. 3' HIGH.
- B. 1 AERATING JET. 5' HIGH.
- C. 1 ¾ HP BRONZE SUBMERSIBLE PUMP WITH BRASS SUCTION SCREEN.
- D. 1 300 WATT UNDERWATER LIGHT WITH AMBER LENS TO ILLUMINATE AERAT-ING JET.
- E. 4 150 WATT UNDERWATER LIGHTS WITH BLUE LENS. TO ILLUMINATE SPRAY RING.
- F. 1 BRONZE UNDERWATER JUNCTION BOX WITH WATERTIGHT PRESSURE BUSH-INGS AND 34" NPT HUB IN BOTTOM.
- G. 1 COMPLETE BRASS MANIFOLD.
- H. 2 BRASS HEIGHT CONTROL VALVES. 1 - SET INSTALLATION DRAWINGS.

Kit AH-218 CB Same specifications as Kit AH-218 except one Aqua-Hue Color Blender replaces the 300 watt underwater light. 18" minimum water depth required at jet.

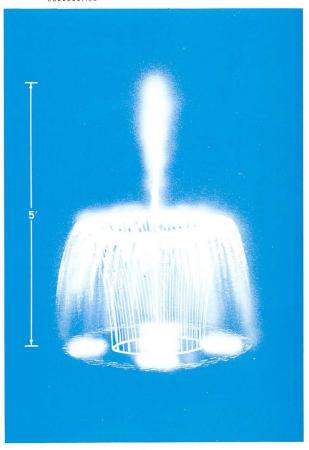
**Kit AH-219** Same specifications as Kit AH-218 except one exploding jet replaces the aerating jet.

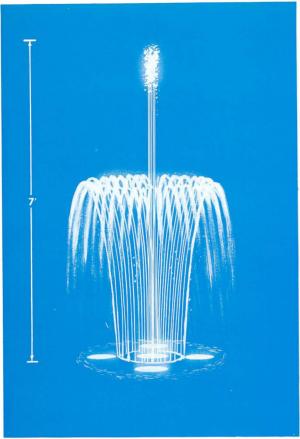
Kit AH-219 CB Same as Kit AH-219 with Aqua-Hue Color Blender.





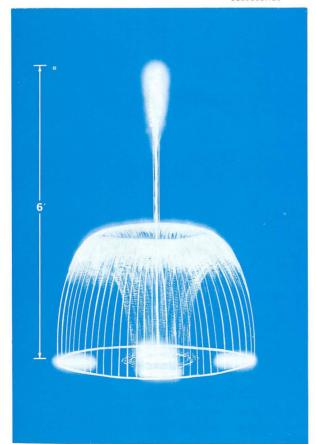
double water effect





double water effect

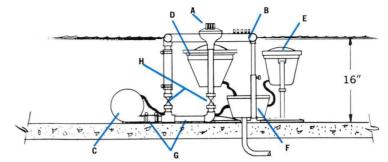




An unusual fountain effect is obtained by this combination of a center cluster of fine streams of water shooting upward and a ring of spray rising upward and falling softly to the outside.

SPRAY DIAMETER
POOL DIAMETER
REQUIRED WATER DEPTH

- 5 Feet Maximum
- 14 Feet Minimum 16 Inches



- A. 1 MJH SERIES JET CLUSTER. 7' HIGH.
- B. 1 16" DIAMETER SPRAY RING WITH OUTSIDE FALL SPRAY PATTERN. 4" HIGH.
- C. 1 1/3 HP BRONZE SUBMERSIBLE PUMP WITH BRASS SUCTION SCREEN.
- D. 1 300 WATT UNDERWATER LIGHT WITH AMBER LENS TO ILLUMINATE CENTER JET CLUSTER.
- E. 4 150 WATT UNDERWATER LIGHTS WITH RED LENS TO ILLUMINATE 16" RING.
- F. 1 BRONZE UNDERWATER JUNCTION BOX WITH WATERTIGHT PRESSURE BUSH-INGS AND 3/4" NPT HUB IN BOTTOM.
- G. 1 COMPLETE BRASS MANIFOLD.
- H. 2 BRASS HEIGHT CONTROL VALVES. 1 - SET INSTALLATION DRAWINGS.

#### Kit AH-220 CB

Same specifications as Kit AH-220 except one Aqua-Hue Color Blender replaces the 300 watt underwater light.

## **AQUA-HUE FOUNTAIN KITS**

#### **Kit AH-221**

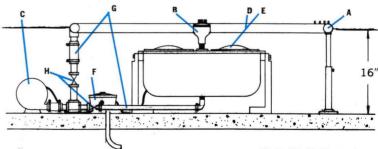
A similar fountain to the one above except the outside pattern is a larger spray ring which sends the water rising up and inward, falling to the center of the fountain. Very effective when illuminated.

SPRAY DIAMETER
POOL DIAMETER
REQUIRED WATER DEPTH

4 Feet Maximum

12 Feet Minimum

16 Inches



Kit AH-221 CB Illustrated.

- A. 1 48" DIAMETER SPRAY RING WITH IN-SIDE FALL SPRAY PATTERN. 3' HIGH.
- B. 1 MJH SERIES JET CLUSTER. 6' HIGH.
  C. 1 ½ HP BRONZE SUBMERSIBLE PUMP
  WITH BRASS SUCTION SCREEN.
- D. 1 300 WATT UNDERWATER LIGHT WITH RED LENS TO ILLUMINATE CENTER JET CLUSTER.
- E. 4 150 WATT UNDERWATER LIGHTS WITH BLUE LENS TO ILLUMINATE 48" RING.
- F. 1 BRONZE UNDERWATER JUNCTION BOX WITH WATERTIGHT PRESSURE BUSH-INGS AND 34" NPT HUB IN BOTTOM.
- G. 1 COMPLETE BRASS MANIFOLD.
- H. 2 BRASS HEIGHT CONTROL VALVES. 1 - SET INSTALLATION DRAWINGS.

#### Kit AH-221 CB

Same specifications as Kit AH-221 except one Aqua-Hue Color Blender replaces the 300 watt light and the four 150 watt lights.

Many splendid effects can be obtained by the use of three different spray patterns. In the medium price range, these kits are ideal for use in courts of office buildings, department stores or malls.

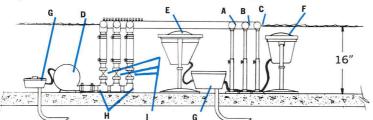
SPRAY DIAMETER

POOL DIAMETER

6 Feet Maximum

16 Feet Minimum

REQUIRED WATER DEPTH



- A. 1 24" DIAMETER SPRAY RING WITH CENTER FALL SPRAY PATTERN. 6" HIGH.
- B. 1 30" DIAMETER SPRAY RING WITH VERTICAL FALL SPRAY PATTERN. 4'6" HIGH.
- C. 1 36" DIAMETER SPRAY RING WITH OUTSIDE FALL SPRAY PATTERN. 3' HIGH.
- D. 1 3/4 HP BRONZE SUBMERSIBLE PUMP WITH BRASS SUCTION SCREEN.
- E. 1 300 WATT UNDERWATER LIGHT WITH
- BLUE LENS TO ILLUMINATE CENTER EFFECT.
- F. 5 150 WATT UNDERWATER LIGHTS WITH GREEN LENS TO ILLUMINATE OUTER SPRAY RINGS.
- G. 1 BRONZE UNDERWATER JUNCTION BOX WITH WATERTIGHT PRESSURE BUSH-INGS AND 34" NPT HUB IN BOTTOM.
- H. 1 COMPLETE BRASS MANIFOLD.
- I. 3 BRASS HEIGHT CONTROL VALVES. 1 - SET INSTALLATION DRAWINGS.

#### Kit AH-315 CB

Same specifications as Kit AH-315 except one Aqua-Hue Color Blender replaces the 300 watt underwater light.

#### **Kit AH-316**

Same specifications as Kit AH-315 except  $24^{\prime\prime}$  ring with vertical fall,  $30^{\prime\prime}$  ring with outside fall and  $36^{\prime\prime}$  ring with outside fall spray pattern.

#### Kit AH-316 CB

Same as Kit AH-316 with Aqua-Hue Color Blender.

## **AQUA-HUE FOUNTAIN KITS**

#### Kit AH-317

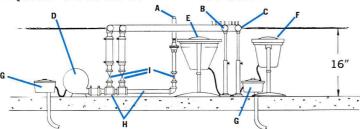
Another combination of three spray effects brought together to form a beautiful fountain. Although not a large fountain, a dramatic effect is obtained by the use of proper balance.

SPRAY DIAMETER POOL DIAMETER

5 Feet Maximum 12 Feet Minimum

REQUIRED WATER DEPTH

16 Inches

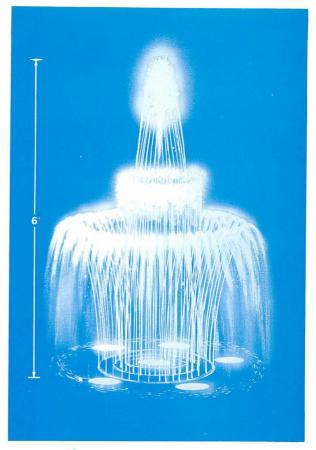


- A. 1 AERATING JET. 7' HIGH.
- B. 1 24" DIAMETER SPRAY RING WITH VERTICAL FALL SPRAY PATTERN 5' HIGH.
- C. 1 30" DIAMETER SPRAY RING WITH OUTSIDE FALL SPRAY PATTERN 4' HIGH.
- D. 1 34 HP BRONZE SUBMERSIBLE PUMP WITH BRASS SUCTION SCREEN.
- E. 1 300 WATT UNDERWATER LIGHT WITH
- AMBER LENS TO ILLUMINATE CENTER EFFECT.
- F. 5 150 WATT UNDERWATER LIGHTS WITH BLUE LENS TO ILLUMINATE OUTER SPRAY EFFECT.
- G. 1 BRONZE UNDERWATER JUNCTION BOX WITH WATERTIGHT PRESSURE BUSH-INGS AND 3/4" NPT HUB IN BOTTOM.
- H. 1 COMPLETE BRASS MANIFOLD.
- I. 3 BRASS HEIGHT CONTROL VALVES. 1 - SET INSTALLATION DRAWINGS.

**Kit AH-317 CB** Same specifications as Kit AH-317 except one Aqua-Hue Color Blender replaces the 300 watt underwater light. 20" water depth required.

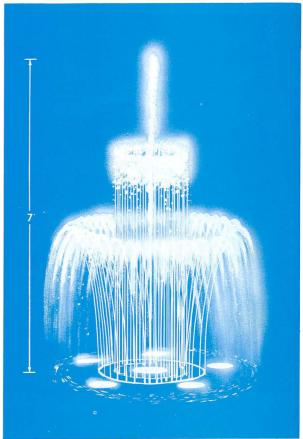
Kit AH-318 Same as Kit AH-317 except the center Aerating Jet is replaced by an exploding jet.  $\frac{1}{2}$  HP bronze submersible pump provided.

Kit AH-318 CB Same as AH-318 with Aqua-Hue Color Blender.





triple water effect



## **AQUA-HUE FOUNTAIN KITS**

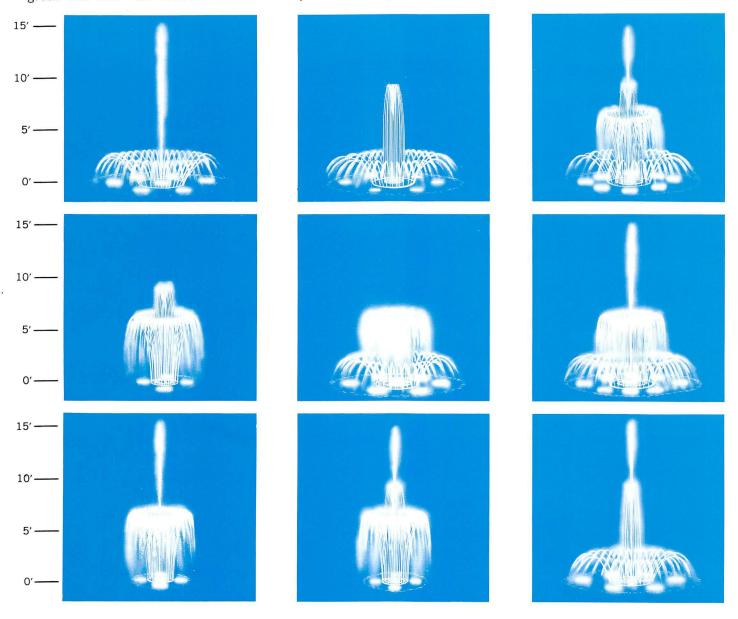


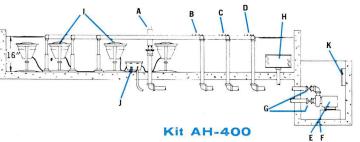
multi-effect fountains

#### Kit AH-400

This multi-effect fountain, employing 3 spray rings and a large aerating jet, forms a different water pattern as it builds to a well balanced pyramid design. Lighted by thirty-three 300 watt lights in banks of amber, blue, green and red. This fountain becomes a spectacular

display as it cycles through water and colored lighting sequences. Controlled by a remote sequence program unit complete with timer and mercury relays. The hydraulic source is a 10 H.P. dry pit type pump. Minimum pool size 25' diameter and 18" depth.





- 1 AERATING JET 15' HIGH.
  1 48" DIAMETER SPRAY RING
  W/ADJUSTABLE JETS 9' HIGH.
  1 72" DIAMETER SPRAY RING
  W/ADJUSTABLE JETS 6' HIGH.
  1 96" DIAMETER SPRAY RING
  W/ADJUSTABLE JETS 4' HIGH.
  1 10 HP 230/460V 3 & PUMP.
  1 PUMP MOTOR STARTER.
  1 PUMP MOTOR STARTER.
  1 PUMP MOTOR STARTER.
  1 PUMP MOTOR STARTER.
  2 PUMP SUCTION SCREEN.
  3 300' WATT UNDERWATER
  LIGHTS.
  5 WITH AMBER LENS.
  5 WITH AMBER LENS.
  5 WITH RED LENS.

- 13 WITH BLUE LENS.
  10 WITH GREEN LENS.
  10 WITH GREEN LENS.
  1. 5 BRASS UNDERWATER JUNCTION BOXES WITH WATERTIGHT PRESSURE BUSHINGS AND 3/4"

  K. 1 FOUNTAIN CONTROL PANEL COMPLETE WITH SEQUENCE TIMER FOR WATER AND LIGHT PROGRAM CHANGES, RELAYS, TIME SWITCHES AND TOGGLE AND PILOT BOARD. PANEL PROVIDED COMPLETELY PRE-ASSEMBLED AND PRE-WIRED READY FOR SERVICE CONNECTIONS.
  1 WIND CONTROL UNIT.
  1 SET INSTALLATION DRAWINGS.

25'

20

multi-effect fountains



## **AQUA-HUE FOUNTAIN KITS**

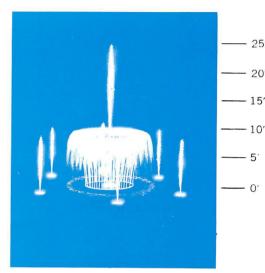
#### **Kit AH-500**

This fountain offers unlimited possibilities for installation in a small lake or more formal pool. The spacing of the peripheral effects can be expanded or contracted to satisfy aesthetic balance. The water sequence provides for progressive development of six distinct patterns while the programmed color light changes creates

an infinite variety of light and water combinations. Ideal for a pond 50' in diameter or larger, with 18" depth. Deeper ponds require piers for lights and nozzle assemblies. All underwater equipment copper and bronze. Interconnecting piping not furnished. Dry pit pumping system.

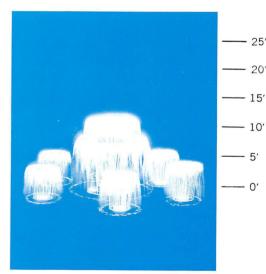


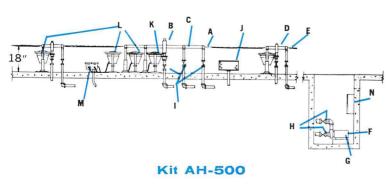












SPRAY DIAMETER POOL DIAMETER REQ'D WATER DEPTH 18 Foot Max. 50 Feet Min. 18 Inches

- 48" DIAMETER SPRAY W/OUT-SIDE FALL SPRAY PATTERN 6' HIGH.
- HIGH.

  1 2" AERATING JET 25' HIGH.

  1 24" DIAMETER SPRAY RING
  W/OUTSIDE FALL SPRAY PATTERN 8' HIGH.

  6 114" AERATING JETS 8'
  HIGH.
- 12" DIAMETER SPRAY RINGS W/OUTSIDE FALL SPRAY PAT-TERN 5' HIGH.
- 15 HP 230/460V-3  $\phi$  DRY TYPE PUMP.
- PUMP.
   PUMP MOTOR STARTER.
   PUMP MANIFOLD COMPLETE
  W/SOLENOID CONTROLLED HYDRAULIC VALVES FOR WATER
  PATTERN CHANGES.

- I. 12 BRASS HEIGHT CONTROL VALVES.

  J. 2 PUMP SUCTION SCREENS.

  K. 9 500 WATT UNDERWATER LIGHTS.

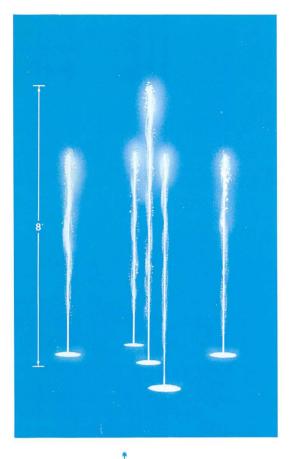
  L. 42 300 WATT UNDERWATER LIGHTS.

  M. 13 BRASS UNDERWATER JUNCTION BOXES W/WATERTIGHT PRESSURE BUSHINGS AND 3/4" NPT HUBS IN BOTTOM.

  N. 1 FOUNTAIN CONTROL PANEL CONTAINING SEQUENCE TIMER FOR AUTOMATIC LIGHT COLOR AND WATER PATTERN CHANGES, RELAYS TOGGLE AND PILOT LIGHT BOARD AND TIME SWITCHES. PANEL TO BE PREASSEMBLED AND PRE-WIRED READY FOR SERVICE CONNECTIONS.

  1 WIND CONTROL UNIT.

  1 SET OF INSTALLATION DRAWINGS.





#### SCP 106 SINGLE BOWL PORTABLE FOUNTAIN

Bowl - 46" Diameter Sump — 16" Diameter Height - 18" Overall Spray Ring — 8" Diameter red brass pipe Fixed jets inside fall 24" high pattern 1/10 H.P. Submersible Pump and Screen 75 Watt cast bronze light with color lens Specify color - Amber, Blue, Green or Red

#### SCP 114 2-TIER CASCADE PORTABLE FOUNTAIN

The cascading water falls reflect the golden amber light while the upper water spray is a deep wine red.

Lower Bowl — 46" Diameter

Upper Bowl — 221/2" Diameter

Sump — 16" Diameter

Height — 24" Overall

Spray Ring — 14" Diameter red brass pipe Fixed jets inside fall 18" high pattern 1/10 H.P. submersible pump and screen 300 Watt cast bronze light with amber lens Upper bowl lens - Red

#### **FOUNTAIN KIT AH-550 CB**

A stately fountain formed by 5 columns of aerated water. The center spire is 8' high, and the 4 peripheral spires are 6' high. The water pattern is constant while a AQUA-HUE color blender, located at the center of the effect, provides constant changing of light color. A 150 watt light is positioned at the base of each peripheral aerator providing constant colored light at these points. Each of these four lights may be furnished with a different color lens if desired. For installation in a pool not less than 15' diameter, 20" deep. Complete with a  $\frac{3}{4}$  H.P. bronze submersible pump. Two timer units to automatically switch pump and lighting circuits furnished.

SPRAY DIAMETER POOL DIAMETER

5 Feet Maximum 12 Feet Minimum

REQUIRED WATER DEPTH

22 Inches

- A. 1 LARGE AERATING JET FOR CENTER SPRAY EFFECT 8' HIGH. B. 4 MEDIUM AERATING JETS FOR PERIPHERAL
- SPRAY EFFECT 6' HIGH.

  3/ HP BRONZE SUBMERSIBLE PUMP WITH
  COPPER SUCTION SCREEN.

- AQUA-SCOPE COLOR BLENDER.
   150 WATT UNDERWATER LIGHTS WITH GREEN LENS FOR PERIPHERAL JET ILLUMI-NATION.
- NATION.

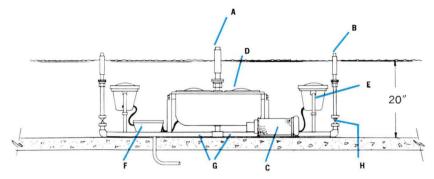
  1 BRASS UNDERWATER JUNCTION BOX WITH WATERTIGHT PRESSURE BUSHINGS AND 3/4" NPT HUB IN BOTTOM.

  1 COMPLETE COPPER MANIFOLD.

  5 BRASS HEIGHT CONTROL VALVES.

  2 TIME CLOCK SWITCHES.

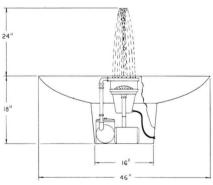
  1 SET INSTALLATION DRAWINGS.



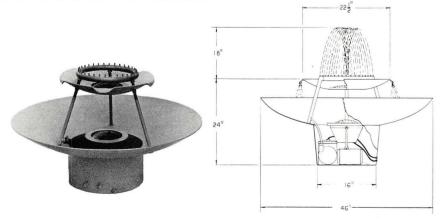
#### PORTABLE FOUNTAINS

These portable fountains are completely self contained — you need only to fill them with water and attach the electric cord to any 120 Volt convenient outlet. They can be installed free standing or recessed to bowl edge. The bowls are formed of heavy gauge tank steel and finished with a special epoxy coating. The exterior is matte black and interior marine blue.





LAMPS NOT INCLUDED EXCEPT ON SPECIAL ORDER.





## FOUNTAIN COMPONENTS



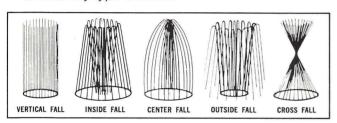
Every fountain installation, large or small, is composed of a number of component parts put together to produce the desired effect. The following pages show the Hydrel line of fountain components for those who wish to create their own fountain or for ordering separate parts. All Hydrel fountain components are manufactured of the finest quality materials to give years of trouble free fountain enjoyment.

### **FOUNTAIN SPRAY RINGS**

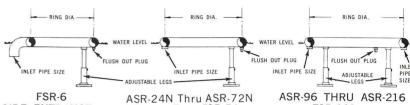
Hydrel spray rings are constructed of the finest red brass pipe and sized to provide maximum hydraulic efficiency. Fitted with precision taper bored brass jets and brass flush out plug. Complete with adjustable height legs, connecting hose coupling and clamps. Adjustable jet spray ring models permit angle adjustment of jets up to 20° from vertical.

**IMPORTANT.** When ordering fixed jet rings, specify water pattern, i.e.: center fall, outside fall, etc. and state maximum height of water pattern from ring.

Hydrel custom builds distribution rings to any dimension and form for special application, and to accommodate any type of nozzle.



Illustrated above are five water patterns most commonly used. When ordering, designate by name pattern desired.



SIDE ENTRANCE FSR-8 Thru FSR-72 FSR-120

These line drawings illustrate connection details of Hydrel spray rings.

Maintained water level should be at center line of ring.

#### FOUNTAIN SPRAY RINGS — FIXED POSITION JET

Catalog	Ring	Pipe	No.	Inlet	Jet	Require-					SPRAY	HEIG	H T			
No.	Dia.	Size	Jets	Size	Orifice	ments	2'	3'	4'	5'	6'	8'	10'	12'	14'	16'
Summer and	6"	2/11		2/4	.093	GPM	5	6	7	8	10					
FSR-6	6.	3/4"	14	3/4"	.093	Head	4	5	6	8	10					
500.0	8"	2/11	22	3/4"	.093	GPM	7	8	9	10	12					
FSR-8	8"	3/4"	22	3/4	.093	Head	4	5	6	8	10					
FOD 10	10"	1//	24	1"	.093	GPM	7.5	9	10	12	14					
FSR-12	12"	1"	24	1	.093	Head	4	5	6	8	10					
FCD 14	14"	11/"	32	11/4"	.093	GPM	8	10	12	14	16					50
FSR-14	14	11/4"	32	1./4	.055	Head	4	5	6	8	10					
FSR-16	16"	11/4"	38	11/4"	.093	GPM	9	11	14	16	19					
L2K-10	10	1 1/4	36	1 -/4	.053	Head	4	5	6	8	10					
FSR-18	18"	11/4"	42	11/4"	.093	GPM	10	13	16	18	22					
L2V-10	10	1./4	42	1./4	.093	Head	4	5	6	8	10	11	15	18		
FSR-24	24"	11/4"	56	11/4"	.093	GPM	11	15	18	21	24	28	30	33		
F5K-24	24	1./4	30	1./4	.093	Head	4	5	6	8	10	11	15	18	THE RES	
FSR-30	30"	11/4"	69	11/4"	.093	GPM	15	20	24	28	30	34	38	41	48	54
r3n-30	30	1./4	09	1-/4	.093	Head	4	5	6	8	10	11	15	18	22	26
FSR-36	36"	11/4"	83	11/4"	.093	GPM	18	23	29	32	35	41	44	48	57	63
124-20	30	1./4	03	1./4	.053	Head	4	5	6	8	10	11	15	18	22	26
FSR-48	48"	11/4"	110	11/4"	.093	GPM	24	31	39	43	47	55	59	65	77	85
131.40	40	1./4	110	1-/4	.033	Head	4	5	6	8	10	11	15	18	22	26
FSR-54	54"	11/4"	123	11/4"	.093	GPM	28	37	45	50	54	60	66	70	84	94
130-34	34	1-/4	123	1-/4	.033	Head	4	5	6	8	10	11	15	18	22	26
FSR-60	60"	11/4"	138	11/4"	.093	GPM	31	43	50	55	59	65	71	76	89	100
1311-00	00	1-/4	130	1-74	.033	Head	4	5	6	8	10	11	15	18	22	26
FSR-72	72"	11/2"	124	11/2"	.125	GPM	40	49	60	68	76	87	95	108	120	135
1311-72	12	1-/2	124	1-/2	.123	Head	4	5	6	8	10	11	15	18	22	26
FSR-120	120"	11/2"	206	11/2"	.125	GPM	78	98	128	148	169	189	201	220	240	260
1311-120	120	1/2	200	1/2	.123	Head	4	5	6	8	10	11	15	18	22	26

#### FOUNTAIN SPRAY RINGS — ADJUSTABLE JET

The adjustable jets permit an adjustment of up to 20° from vertical. This enables the fountain pattern to be changed at will.



Used on ASR-24N Thru ASR-72N



Used on ASR-96 Thru ASR-216

Cat.	Ring	Pipe	No.	Jet	Require-						SPR	AY H	EIGH	T				
No.	Dia.	Size	Jets	Orifice	ments	3'	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'	14'	15'
ASR-24N	24"	11/4"	38	.110	GPM	16	20	22	24	27	29	31	33	35	37	39	41	44
H3R-24N	24	1 7/4	30	.110	Head	5	6	8	9	11	12	14	15	17	18	20	21	23
ASR-30N	30"	11/4"	48	.110	GPM	20	24	27	30	33	36	39	42	45	47	49	51	53
ASK-SUN	30	174	40	.110	Head	5	6	8	9	11	12	14	15	17	18	20	21	23
ASR-36N	36"	11/4"	56	.110	GPM	24	29	32	36	39	42	46	49	52	55	58	61	64
ASK-SUIT	30	1 74	30	.110	Head	5	6	8	9	11	12	14	15	17	18	20	21	23
ASR-48N	48"	11/4"	75	.110	GPM	32	38	43	48	53	58	62	65	70	75	80	84	88
NON TON	70	174	,,,	.110	Head	5	6	8	9	11	12	14	15	17	18	20	21	23
ASR-60N	60"	11/4"	95	.110	GPM	40	49	55	61	67	73	78	83	88	93	98	103	108
7.01. 0011		174	- 00		Head	5	6	8	9	11	12	14	15	17	18	20	21	23
ASR-72N	72"	11/4"	114	.110	GPM	49	58	66	73	80	87	94	100	107	114	121	128	135
71011 7 211	/-	1/4	** 1		Head	5	6	8	9	11	12	14	15	17	18	20	21	23
ASR-96	96"	2"	54	.172	GPM	75	81	87	92	97	102	108	113	119	130	135	146	157
7.01.00			0.		Head	5	6	8	9	11	12	14	15	17	18	20	21	23
ASR-120	120"	2"	60	.203	GPM	114	120	132	138	150	156	168	174	186	198	210	216	222
					Head	5	6	8	9	11	12	14	15	17	18	20	21	23
ASR-144	144"	3"	72	.203	GPM	137	144	158	167	180	187	201	209	223	238	252	260	266
					Head	5	6	8	9	11	12	14	15	17	18	20	21	23
ASR-168	168"	3"	72	.203	GPM	137	144	158	167	180	187	201	209	223	238	252	260	266
					Head	5	6	8	9	11	12	14	15	17	18	20	21	23
ASR-192	192"	3"	72	.234	GPM	209	216	230	238	252	266	281	302	317	338	360	367	382
				.201	Head	5	6	8	9	11	12	14	15	17	18	20	21	23
ASR-216	216"	3"	72	.234	GPM	209	216	230	238	252	266	281	302	317	338	360	367	382
		7041			Head	5	6	8	9	11	12	14	15	17	18	20	21	23

### **CASCADE JETS**

The cascade nozzle produces an unusual, highly aerated, conical water pattern. The force of the line water sustains the central core of the cone while the outer surface gradually tapers from the broad base to the upper peak. The frothy texture of the plume creates a beautiful effect and lends itself to dramatic lighting.

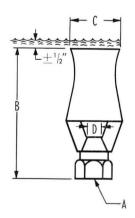
The location of the nozzle mount (top of jet) in relation to the surface of the water is critical and it should be positioned with  $\pm \frac{1}{2}$ " below surface for best operation.











CATALOG		DIMENS	IONS	
NUMBER	Α	В	С	D
CAS-75	3/4" NPT	4-7/8"	2"	27/64"
CAS-150	1-1/2" NPT	9"	3-1/2"	9/16"
CAS-300	3" NPT	14"	7"	1-1/4"

CATALOG		23' Hea	d	:	35' Hear	d	-	16' Hear	1		58' Head	i	6	9' Head	1		81' Head	i
NUMBER	Ht.	Dia.	GPM	Ht.	Dia.	GPM	Ht.	Dia.	GPM	Ht.	Dia.	GPM	Ht.	Dia.	GPM	Ht.	Dia.	GPM
CAS-75	24"	12"	16	36"	18"	20	4'6"	24"	23	6′	30"	25	7′6′′	36"	28	9'	4′	30
CAS-150	3'6"	18"	32	5′6″	24"	39	8′	30"	45	11'	3′6″	50	13′	4′0″	55	15'	5′0″	60

CATALOG		42' Hear	1		49' Hea	d		63' Hea	d		83' Hea	d	1	02' Hea	d	1	25' Hea	ad
NUMBER	Ht.	Dia.	GPM	Ht.	Dia.	GPM	Ht.	Dia.	GPM	Ht.	Dia.	GPM	Ht.	Dia.	GPM	Ht.	Dia.	GPM
CAS-300	8′	3′6″	180	10′	4′	200	15′	5′	230	20′	6′	280	25′	7′	320	30′	8′	345

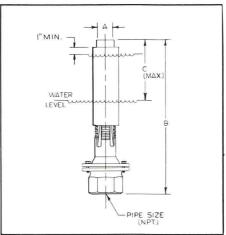


### **AERATING JET, ADJUSTABLE**

Hydrel aerating jet nozzles are designed to produce columns of highly aerated water with a frothy effect. High light reflection characteristic of stream is ideal for lighted fountain. The aerating jets are made of cast bronze and heavy brass stock, machined to close tolerances. The inner nozzle has an internal tapered bore.

Precision ball socket swivel base permits universal adjustment of  $15\,^\circ$  from vertical.







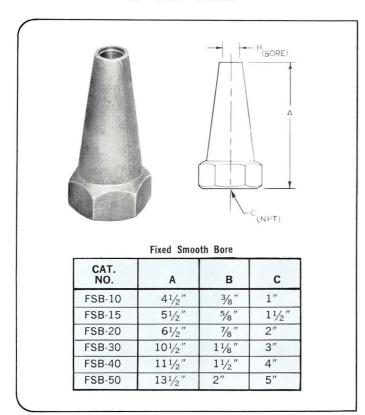
CATALOG	A	В	С	PIPE	REQUIRE-							SPF	RAY	HE	IGH	T					
NO.	DIM.	DIM.	DIM.	SIZE	MENTS	2'	3′	4′	5′	6′	8′	10′	12'	15′	20′	25′	30′	35′	40′	45′	50′
AJ-500	1/2"	71/2"	21/2"	1/2"	GPM HD	3.5 15	4 18	4.5 24	5 31	5.5 35	6 46	8 55									
AJ-750	3/4"	81/2"	23/4"	3/4"	GPM HD	4.5 15	5.5 18	6 20	7 24	8 29	9 35	10 44									
AJ-1000	1"	101/2"	31/2"(	1")	GPM HD			9.5 24	10 29	11 31	12 39	14 48	15 58								
AJ-1250	11/4"	121/2"	4"	11/4"	GPM HD			10 15	12 18	14 24	17 41	19 48	21 59								
AJ-1500	11/2"	141/2"	5″	11/2"	GPM HD				21 18	23 24	25 32	28 41	31 46	34 55	37 69	58 83	71 89	80 100			
AJ-2000	2"	171/4"	51/4"	2"	GPM HD				22 24	25 30	34 38	40 44	44 52	50 60	58 72	62 80	70 88	78 96	85 104		
AJ-2250	21/4"	19"	51/2"	21/2"	GPM HD					28 28	35 35	40 41	44 45	51 56	61 69	72 80	88 89	93 95	100 101		
AJ-2500	.21/2"	203/4"	61/2"	21/2"	GPM HD					42 29	52 39	60 45	64 52	70 60	90 75	98 86	106 91	112 99	118 103	125 107	145 114
AJ-2750	23/4"	211/2"	8"	3"	GPM HD					58 33	65 43	69 46	73 51	90 60	100 71	115 80	135 88	148 97	170 105	177 110	180 115

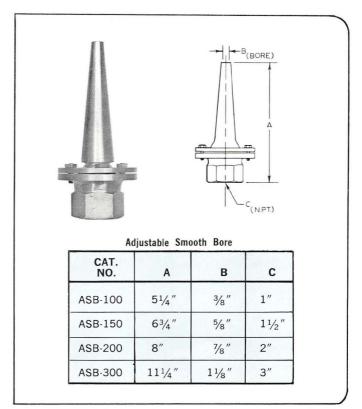


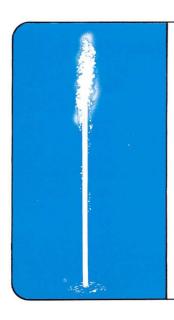
## **SMOOTH BORE JETS**

#### FIXED AND ADJUSTABLE POSITION

A series of heavy duty smooth taper bore nozzles designed to produce a high straight stream of water with a minimum tearing within designated heights. Made of bronze and brass. Inner bore surface high gloss finish. Ball and socket swivel base (on adjustable models) permits universal adjustment 15° from vertical.







Adjustable Smooth Bore	Fixed Smooth Bore	Flow				s	PRAY	HEIGH	т			
Cat. No.	Cat. No.	Charact.	10'	20′	30′	40′	50′	60′	70′	80′	90′	100′
ACD 100	FCD 10	GPM	12	18	22	24		11.18				
ASB-100	FSB-10	HD	14	27	40	53	-					
ACD 150	CCD 1E	GPM	30	45	56	66						
ASB-150	FSB-15	HD	14	27	40	53						
. 2D 000	FOD 00	GPM	52	81	104	120	135					
ASB-200	FSB-20	HD	14	27	40	53	66					
AOD 200	FOD 20	GPM	62	103	145	180	205	225	240			
ASB-300	FSB-30	HD	14	27	40	53	66	80	93			
	FOD 40	GPM	105	185	250	305	350	385	405	445	465	
	FSB-40	HD	14	27	40	53	66	80	93	105	120	
	FOD FO	GPM	185	210	440	525	600	670	740	785	825	885
	FSB-50	HD	14	27	40	53	66	80	93	105	120	136



The "PN" type jets are small, inexpensive tapered smooth bore nozzles designed for use with spray rings or other installations where straight clear columns of water at heights not to exceed 12' are desired.

**NOTE.** The maximum efficient height will vary with the orifice size and for best results the larger "PN" jets should be used for higher streams.

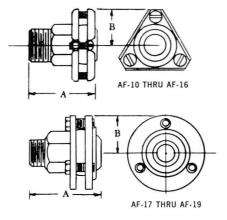
Cat. No.	Pipe Conn.	Orifice	Nozzle	Require-			Spray I	Height*		
Out. Ho.	N.P.T.	Dia.	Length	ments	2'	4'	6′	8′	10'	12'
DN 40	1/"	5/ "	1"	GPM	.63	.95	1.2	1.3	1.5	1.7
PN-40	1/4"	5/32"	1	Head	2.0	5.0	8.0	10.0	13.0	16.0
PN-70	1/"	13/ "	1"	GPM	1.1	1.7	2.1	2.4	2.7	2.9
PN-70	1/4"	13/64"	1	Head	2.0	5.0	8.0	10.0	13.0	15.5
PN-100	3/"	15/64"	11/4"	GPM	1.6	2.4	2.9	3.4	3.8	4.1
FN-100	3/8"	1 7/64	1 1/4	Head	2.0	5.0	8.0	10.0	13.0	15.5
PN-120	3/ "	1/4"	11/4"	GPM	1.9	2.8	3.4	4.0	4.5	4.8
FN-120	3/8"	-/4	1 -/4	Head	2.0	5.0	8.0	10.0	13.0	15.0
PN-200	1/2"	21/64"	11/2"	GPM	3.2	4.7	5.7	6.5	7.4	8.1
FN-200	1/2	- 764	1 1/2	Head	2.0	5.0	8.0	10.0	13.0	15.0
PN-350	3/4"	7/16"	2"	GPM	5.5	7.8	10.0	11.4	13.0	14.1
FI4-350	7/4	716		Head	2.0	4.0	6.0	9.0	10.0	12.7
PN-1000	1"	3/4"	23/4"	GPM	15.8	21	26	31	34	37
LI4-1000	1	7/4	2 9/4	Head	2.0	4.0	6.0	9.0	10.0	13.0

\*Approximate height in still air



#### **ADJUSTABLE FLANGES**

The adjustable flanges are designed for use with the "PN" jets where universal adjustability is required. Maximum angle  $20^{\circ}$  from vertical axis.

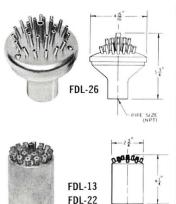


Catalog	Inlet	Outlet	Dim	ension
Number	NPT	NPT	Α	В
AF-10	1/4" Male	½" Female	11/4"	3/4"
AF-11	1/4" Male	1/4" Female	1%"	1"
AF-12	3/8" Male	1/4" Female	1%"	1"
AF-13	3/8" Male	3/8" Female	1%"	1"
AF-14	1/2" Male	3/8" Female	1%"	1"
AF-15	1/2" Male	½" Female	23/8"	11/2"
AF-16	3/4" Male	3/4" Female	31/2"	11/2"
AF-17	1" Male	1" Female	31/2"	113/16 Rad.
AF-18	11/4" Male	1½" Female	51/8"	113/16 Rad.
AF-19	1½" Male	11/4" Female	51/4"	113/16 Rad.



#### FLEUR-de-LIS JET

The FLEUR-de-LIS, or Flower Jet, produces a pleasing graceful multi-tier pattern that is very effective either singly or when used as a part of a more elaborate fountain design. Constructed of brass and bronze. Available in two sizes.



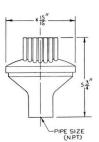
			NO.					SP	RAY	н	EIGH	T		
	CATALOG NO.	SIZE	OF JETS	REQUIRE- MENTS	1'	2'	3'	4'	5'	6'	7'	8'	9'	10'
				GPM	3	5	7	8	10	11	12	13	15	17
	FDL-13	3/4 "	13	Head	2.5	4	5	10	12	14	15	18	20	22
700				Spray Dia.	2'	3'	4'	7'	9'	10'	11'	13'	15'	17'
	B- 10.			GPM	7	9	10	12	13	14	15	16	17	19
THE WATER	FDL-22	3/4 "	22	Head	5	8	11	12	14	16	17	19	23	25
/// <b>//////////////////////////////////</b>				Spray Dia.	3'	5'	7'	8'	10'	11'	12'	14'	16'	18'
				GPM			16	19	23	26	28	30	34	38
	FDL-26	1"	26	Head			5	6	7	8	10	12	14	17
				Spray Dia.			5'	6'	7'	8.	9'	11'	12'	14'

NOTE: If smaller spray diameter is desired, jet angles can be altered to meet specifications on special order without additional charge.

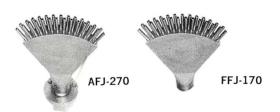
#### **MULTI JET HEAD**

Same basic design as FDL-26 FLEUR-de-LIS except that 35 jets are positioned vertically to form a cluster and produce a compact multi-stream column of water. Copper and bronze construction.

		NO.					SP	RAY	HEI	GHT			
CATALOG NO.	PIPE SIZE	OF JETS	REQUIRE- MENTS	1'	2'	3'	4'	5'	6'	7'	8'	9'	10'
	1841		GPM	20	23	28	33	35	38	40	42	45	48
MJH-350	1"	35	HEAD	3	4	6	7	9	10	12	14	16	20





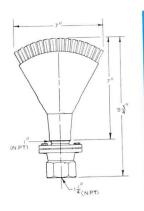


PIPE SIZE

#### **FAN JET**

This unusual nozzle has many applications either as a single effect or as a part of a more elaborate pattern. Often used in multiples as a base for higher rising center jet plumes, its adjustability from a parallel axis affords development of many interesting patterns.

#### PERFORMANCE CHART AFJ-270, FFJ-170



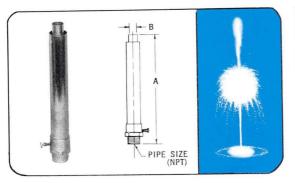


HEIGHT OF FAN JET	FAN SPRAY WIDTH	G.P.M.	HEAD	THROW IN FEET	DEGREE FROM HORIZONTAL
18"	8'	25	5	5	30 Degrees
24"	10'	30	10	10	30 Degrees
30"	12'	35	15	15	30 Degrees
24"	8'	25	5	5	45 Degrees
36"	16'	30	10	10	45 Degrees
48"	20'	35	15	15	45 Degrees
36"	15'	30	10	5	60 Degrees
72"	25'	40	15	10	60 Degrees



#### EXPLODING JET

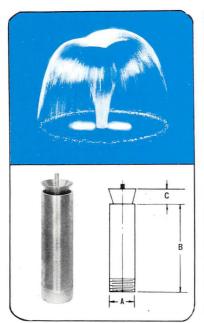
The Hydrel exploding jet is designed to momentarily interrupt a stream of water and as it falls back, the ascending stream explodes against it causing it to burst in midair. Very effective when lighted with amber or red light.



	DIDE	A .	В			5	PRA	Y HE	IGHT		
CAT. NO.	PIPE SIZE	DIM.	DIM.	REQ.	2'	3′	4'	5′	10'	12'	15′
			GPM	2.5	3.5	4	5				
EJ-75	3/4"	53/4"	3/8"	HD	5	7	8	10			
				Burst Ht.	12	18	24	30			
				GPM				12	16	18	21
EJ-100	1"	111/4"	3/4"	HD				5	12	16	19
		11/4		Burst Ht.				12	24	36	36

#### MUSHROOM JET

The mushroom jet produces a clear, unbroken sheet of water falling in a circular pattern. When lighted with colored lights or Aqua-Hue Color Blender, the sparkling iridescent sheen creates a most dramatic effect. Nozzles available in sizes  $1\frac{1}{2}$ ", 2", 3", 4" and 6" with 25 or 35 degree cones. Cones are adjustable for control of water density. Copper and bronze construction.



			'B'	'C'	Charact-				S	PR	AY	DIA	ME	TEF	}				
Cat. No.	Plug	'A' Dim.	_	Dim.	eristics	1'	2'	3′	4'	5′	6′	7′	8′	9′	10′	12'	14'	16′	
	050			11/ //	GPM	18	25												
MJ-1525	25°	11/2	6"	11/8"	Spray Ht.	14"	18"												
WI 1525	35°	11/2	0	1"	GPM		25		35										
MJ-1535	33			1	Spray Ht.		12"		20"	i									
MJ-2025	25°			11/4"	GPM		35			45									
1413-2023	23	2"	8"	1 /4	Spray Ht.		14"			24"									
MJ-2035	35°	1	0	1"	GPM			40				60							
1413-2033	33			1	Spray Ht.			12"				20"	i In m m s						
MJ-3025	250				15/8"	GPM					100					160			
1413-2023	25	3"	12"	1 /8	Spray Ht.					24"					40"				
MJ-3035	250	١	12	13/8"	GPM						130					170			
1411-2022	33				1/8	Spray Ht.						20"					36"		
MJ-4025	25°			15/8"	GPM							170				240		25	
1417-4023	25	4"	12"	1 78	Spray Ht.							30"				48"			
MJ-4035	35°	-	12	13/8"	GPM								190				250	-	
1113-4033	33			1/8	Spray Ht.								24"				40"		
MJ-6025	25°		-	15/8"	GPM								220				300		
1113-0023	25	6"	18"	1 /8	Spray Ht.								36"				54"		
MJ-6035	35°	1 -	10	11/4"	GPM									250				350	
1113-0033	33			1 1/4	Spray Ht.									30"				48"	
					height x 2														

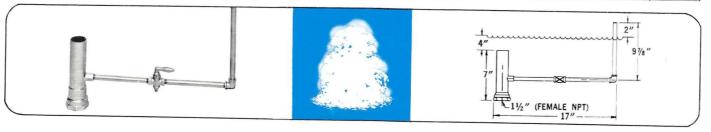
#### **BUBBLER JET**

This unusual jet produces mounds of highly aerated water and is often positioned around the periphery of higher water plumes, or is used separately in fountains where there is a continuing wind problem.

CATALOG No.	PIPE SIZE (FEM)	SPRAY HEIGHT	SPRAY DIA.	G.P.M.	HEAD	JET LENGTH
ABJ-150	11/2"	18"	18"	50	10'	7"
ABJ-300	3"	42"	30"	125	25'	91/2"

UNBROKEN

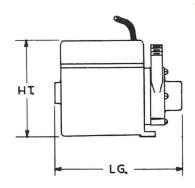
**BROKEN** SHEET



## SMALL FRACTIONAL HORSEPOWER SUBMERSIBLE PUMPS SERIES ESP

These small fractional horsepower submersible pumps are completely encapsulated in epoxy to protect them against corrosion. A very durable pump assembly ideally suited for smaller fountains. Pumps are provided with brass suction screen.





#### **ESP SUBMERSIBLE PUMP SPECIFICATIONS**

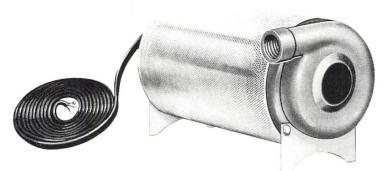
MODEL	CONNE	CTORS	FIL	ECTRIC	AI			G.P	.H. AT	LISTE	D HEAI		MAX.	P.S.I.	DI	MENSIC	PACK	
MODEL NO.	INLET	OUTLET			AMPS	1 FT.	3 FT.	5 FT.	6 FT.	12 FT.	18 FT.		HEAD		GAGE HT.			WT.
ESP-2M	3/8 FPT 3/4 MPT	1/4 MPT	1/35	60	1.1	300	260	210	195	45	0		13 FT.	5.7	4	41/4	6	5 LBS.
ESP-3M	1" FPT	½ MPT ¾ O.D.	1/20	122	2.35	510	490	405	385	180	0		17 FT.	7.5	43/4	41/4	71/4	6.5 LBS.
ESP-4M	1" FPT	½ MPT ¾ O.D.	1/12	145	1.4	750	640	580	560	390	200	0	24 FT.	10.5	51/2	4	81/2	12 LBS.
ESP-5M	1" FPT	½ MPT ¾ O.D.	1/8	195	1.7	1000	800	710	680	535	440	340	32 FT.	14	7	51/4	9	15.5 LBS.

Non-Corrosive

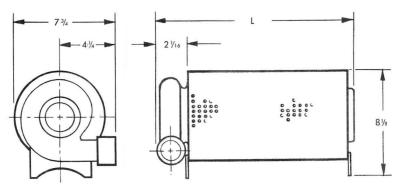
Now With 6 Ft.-3 Wire "UL" Cord and Molded Plug, 120 Volts 60 Cycle.

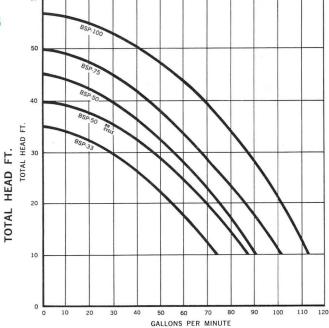
#### HEAVY DUTY FRACTIONAL HORSEPOWER SUBMERSIBLE PUMPS SERIES BSP

The superior performance of this heavy duty all bronze and brass submersible pump has been established over many years of demanding service. Designed for continuous operation.



For submersible pumps of greater capacity contact the factory.





#### BSP SERIES BRONZE SUBMERSIBLE PUMPS

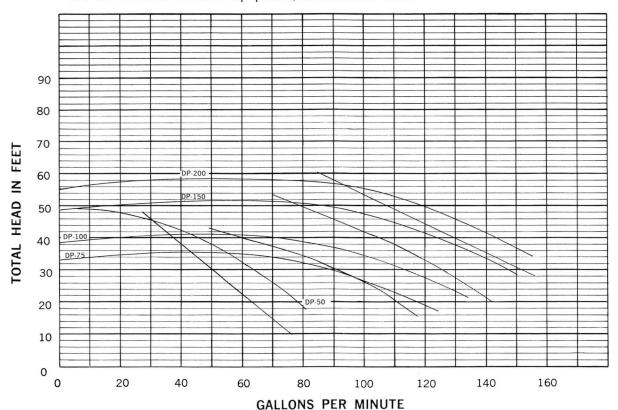
Cat. No.	H. P.	Voltage	Length
BSP-33	1/3	115	141/8"
BSP-50	1/2	115	141/8"
BSP-50C	1/2	230-50C	153/4"
BSP-75A	3/4	115	152/11
BSP-75B	3/4	230	153/4"
BSP-100	1	230	153/4"



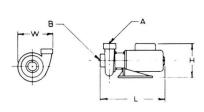
#### SINGLE STAGE END SUCTION CENTRIFUGAL DRY TYPE PUMPS SERIES DP

Heavy duty industrial pumps designed to maintain top performance under continuous full load operation. Because of limited space, only a few of the large selection of available pumps of different sizes and characteristics are listed. For additional information, please write the Factory.

NOTE: ALL SINGLE PHASE 60 CYCLE pump motors 1/2 H.P. through 2 H.P., listed here, do not require external motor starters. All 3 H.P. through 10 H.P., single or 3 phase and all 1/2 H.P. through 3 H.P., 3 phase, require external motor starters. Where they are required, magnetic motor starters complete with overload heaters, and "Start-Stop" push button, housed in general purpose NEMA No. 1 enclosure are furnished as standard equipment, at additional cost.



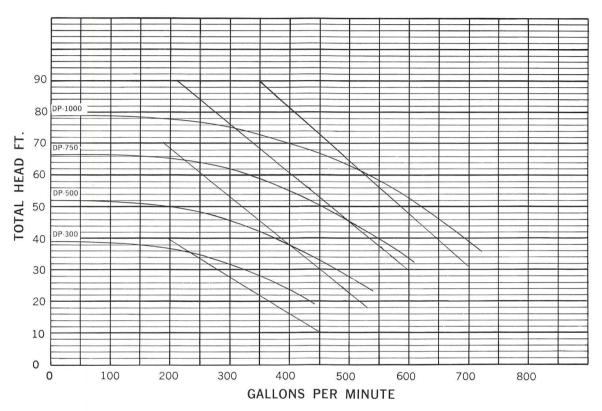
DP-50, 75, 100, 150 & 200 DRY PUMPS

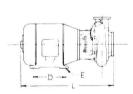


Cat. No.	H.P.	Voltage	$\begin{array}{c} \textbf{Phase} \\ \phi \end{array}$	Discharge A	Suction B	L	w	Н
A DP-50	1/2	115/230	1	11/2"	2"	145/16"	81/2"	85/16"
В		230/460	3					
A DD 75	3/	115/230	1	11///	2"	1.45/ //	01/#	05/ "
DP-75 B	3/4	230/460	3	11/2"	2"	145/16"	81/2"	85/16"
A	1	115/230	1	2"	21/"	165/ "	8"	03/#
DP-100 B	1	230/460	3	2	21/2"	165/16"	0	93/8"
A	11/	115/230	1	0"	01/#	165/ "	0"	03/#
DP-150 B	11/2	230/460	3	2"	21/2"	165/16"	8″	93/8"
A A	0	115/230	1	0"	01/#	105/ "	0"	07/#
DP-200 B	2	230/460	3	2"	21/2"	165/16"	8″	9%"



#### SINGLE STAGE END SUCTION CENTRIFUGAL DRY TYPE PUMPS SERIES DP







DP 300, 500, 750 & 1000 DRY PUMPS

			Phase	Dis- charge	Suc- tion		Mtg. Dim.			w	Н
Cat. No.	H.P.	Voltage	$\phi$	A	В	C	D	E		W	
A DP-300	3	115/230	1	3"	4"	81/2"	51/2"	13/32"	25"	13"	121/8"
B B	3	230/460	3	3″	4"	81/2"	51/2"	13/32"	25"	13″	121/8"
A	5	230	1	3"	4"	81/2"	7"	13/32"	26"	13"	15%,6"
DP-500 B	Э	230/460	3	3″	4"	81/2"	7"	13/32"	26"	13"	15% 6"
A A	71/	230	1	3″	4"	10"	81/4"	17/32"	271/2"	13"	15% 6"
DP-750 B	71/2	230/460	3	3"	4"	10"	81/4"	17/32"	271/2"	13"	15%,6"
DP-1000	10	230/460	3	3"	4"	10"	81/4"	17/32"	295/16"	13"	15%,6"

### FILTRATION EQUIPMENT

#### **DIATOMACEOUS EARTH SPIN FILTERS**

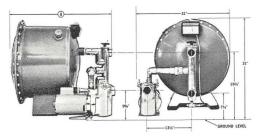
These diatomaceous earth filters offered by Hydrel are designed for commercial fountain installations. The tank and fittings are of stainless steel construction. Cast bronze self-priming pump and strainer assembly, 115/230 volts, single phase, 60 cycle. Equipped with a quick positioning back wash valve, pressure gauge, air relief valve, spin crank, and  $1\frac{1}{2}$ " NPT face piping.



CATALOG NUMBER	AREA	H.P.	GPM AT FT. OF HEAD	DIMENSIONS
DF-12	12	1/3	24 @ 45′	37 <sup>3</sup> / <sub>4</sub> "x19 <sup>5</sup> / <sub>8</sub> "x25 <sup>3</sup> / <sub>8</sub> "
DF-15	15	1/2	30 @ 45′	37 <sup>3</sup> / <sub>4</sub> "x19 <sup>5</sup> / <sub>8</sub> "x25 <sup>3</sup> / <sub>8</sub> "
DF-25	25	. 3/4	50 @ 45′	40 <sup>3</sup> / <sub>4</sub> "x19 <sup>5</sup> / <sub>8</sub> "x25 <sup>3</sup> / <sub>8</sub> "

#### **HIGH RATE PERMANENT MEDIA FILTERS**

Dependable, highly efficient and compact, the high rate permanent media filters remove particles down to three microns in size. It is extremely economical to operate with longer filter runs, less wasted water, and a faster back wash. Periodic cleaning is accomplished in less than two minutes by a simple fingertip manipulation of the Unitrol Valve. Other features are: complete porcelain lining on all wetted surfaces — maximum flow with minimum turbulence — extra large magnesium anode provides protection from electrolysis — Telometer Console center with two gauges, air elimination valve — all bronze self priming pump with extra large molded strainer basket. All pumps furnished standard with 115/230 volt single phase 60 cycle motors.



#### PHYSICAL DIMENSION CHART

CATALOG NO.	MODEL NO.	DIMENSION "A"
24600-25	HRU-25	001/#
24600-35	HRU-25	281/2"
24600-45	HRU-35	241/#
24600-55	HKU-35	341/2"
24600-65	HRU-45	401/#
24600-75	HRU-45	401/2"

#### RATE AND CAPACITY CHART

CATALOG	MODEL	SQ. FT.		PUMP		FLOW RATE	G.P.M. AT	CAPA	CITY IN GALLO	NS PER:
NUMBER	NUMBER	OF FILTER AREA	H.P.	MATERIAL	MODEL	G.P.M./SQ. FT. FILTER AREA	FT. OF HEAD	HOUR	8 HOURS	12 HOURS
24600-25	HRU-25	2.5	1/2	Bronze	XL-VI	15	37.5 @ 47′	2250	18,000	27,000
24600-35	HRU-25	2.5	3/4	Bronze	XL-VI	20	50 @ 47′	3000	24,000	36,000
24600-45	HRU-35	3.5	3/4	Bronze	XL-VI	15	52.5 @ 45′	3150	25,200	37,800
24600-55	HRU-35	3.5	1	Bronze	XL-VI	20	70 @ 48′	4200	33,600	50,400
24600-65	HRU-45	4.5	1	Bronze	XL-VI	15	67.5 @ 50′	4050	32,400	48,600
24600-75	HRU-45	4.5	11/2	Bronze	XL-VI	20	90.0 @ 49′	5400	43,200	64,800

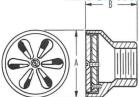
NOTE: All pumps furnished standard with 115/230 volt, 60 cycle, single phase motors.

#### FILTER MEDIA REQUIREMENTS CHART

MODEL			APPROXIMATE	GRADE #20	SILICA SAND	SIEVE ANALYSIS FOR GRADE #20 SILICA SAND		
NUMBER	DIAMETER	LENGTH	FREEBOARD	NUMBER OF SACKS REQ.	WEIGHT IN POUNDS	TYLER SIEVE NO.	% RETAINED	
HRU-25	24"	17"	9"	11/	150	20	2	
	24	1/	9	11/2	150	30	58	
HRU-35	24"	23"	9"	21/4	225	40	36	
HRU-45	24"	29"	9"	3	300	50	4	

#### **FITTINGS**

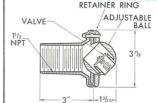
#### **ADJUSTABLE INLET FITTINGS**



These chrome plated, bronze, wall inlet fittings can be adjusted to regulate and balance the flow of filtered water into the pool. Available in two sizes:

ARF-150— $1\frac{1}{2}$ " NPT (A= $3\frac{1}{2}$ , B= $1\frac{5}{8}$ ) ARF-200—2" NPT (A= $4\frac{3}{8}$ , B=2)

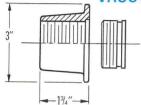
### EYEBALL INLET FITTING RETAINER RING



AEF-150

This wall inlet fitting is adjustable in direction and rate of flow. Maximum deflection approximately 45° and flow rate adjustable from suggested maximum of 25 G.P.M. to full closed. Body is cast bronze; retainer ring and adjustable ball is made of strong, smooth cycolac. AEF-150, 1½" NPT.

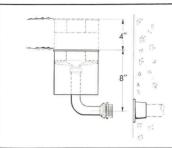
#### **VACUUM FITTING**



VF-150

The VF-150 vacuum fitting is installed in pool wall for use with a  $1\frac{1}{2}$ " pool vacuum cleaner. Constructed of heavy cast bronze, chrome finish.

VF-150, 11/2" NPT.

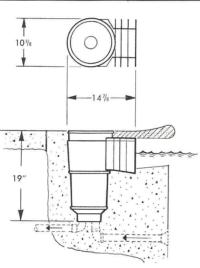


#### FLOATING SKIMMER

#### FS-150

Adapts to standard 1½" vacuum fitting. Six inch plastic float adjusts to water level for perfect skimming action.



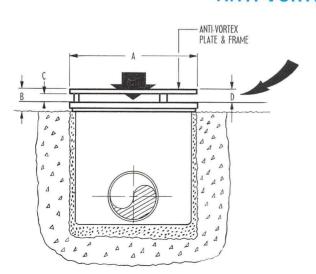


#### **SURFACE SKIMMER**

#### MODEL SK-300

The SK-300 automatic surface skimmer, constructed of Cycolac, provides a light-weight rugged unit that is simple to install. Designed for connection to equalizer line and has built in check valve to prevent flow through equalizer line until safety-float valve closes. Provided with removable debris basket and may be used for connection of vacuum hose.

#### ANTI-VORTEX PLATE ASSEMBLIES



In shallow pool applications, it is often desirable to place an anti-vortex plate assembly over a sump in the floor of the pool to avoid water vortexing as it is drawn into the suction line. The assembly consists of a cast bronze mounting ring and a polished chrome cast bronze diverter plate.

Cat. No.	Max. GPM	A	В	C	D
AVF-8	200	8"	3/4"	3/16"	3/8"
AVF-12	440	12"	1-11/16"	5/8"	7/8"
AVF-20	950	20"	2"	13/16"	1-1/16"

#### ANTI-VORTEX PLATE AND SUMP

#### Catalog No. AVF-8S

This is a complete 8" anti-vortex assembly with an integral sump, constructed entirely of Cycolac. Sump is 7" deep and provided with a 2" NPT side outlet.

#### SUCTION SCREENS

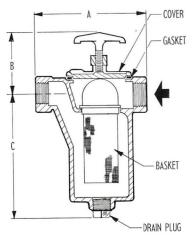
Designed to prevent clogging of nozzles and other elements of the hydraulic system, the suction screens are constructed of heavy brass sheet end plates and perforated brass screen. Complete with threaded collars for mounting to male N.P.T. suction line connection in pool.



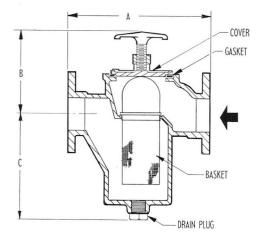
CATALOG	CAPACITY	DIMENSIONS		FEMALE PIPE
NUMBER	GPM MAX.	Α	В	SIZE
SS-100	100	6"	4"	2" NPT
SS-200	200	6"	6"	2" & 3" NPT Specify
SS-300	300	12"	6"	3" & 4" NPT Specify
SS-500	500	18"	6"	4" & 5" NPT Specify
SS-600	600	24"	6"	5" & 6" NPT Specify

#### **PUMP STRAINERS**

Pump strainers are available in several sizes and types. Models listed in this catalog are "in-line" with entrance and discharge openings at same elevation. Sizes  $1\frac{1}{2}$ " through 3" are screwed connection. 4" through 8" are flanged. "Off-set" models available on special order. Cast iron construction with brass basket.



CATALOG NUMBER	SIZE	А	В	С
LSS-15	11/2"	7"	31/2"	71/8"
LSS-20	2"	81/2"	43/8"	8"
LSS-25	21/2"	113/4"	47/8"	111/4"
LSS-30	3"	113/4"	47/8"	111/4"



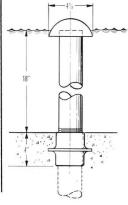
CATALOG NUMBER	SIZE	А	В	С
LSF-40	4"	133/4"	7"	10 1/8"
LSF-50	5"	161/8"	81/4"	123/4"
LSF-60	6"	175/8"	83/4"	141/8"
LSF-80	8"	235/8"	12"	171/8"

#### **AUTOMATIC SOLENOID VALVES**



Hydrel offers a wide selection of high quality solenoid activated automatic valves, such as the unit illustrated. Available for single step or multi-step operation. Cast iron construction, bronze trim. Available in pipe sizes from 1" through 16". Contact factory for specifications and quotation.

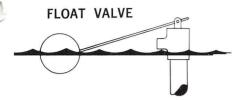
## OVER-FLOW STANDPIPE AND DRAIN FITTING



**OSP-20.** Consists of chrome plated copper dome, 18" length, 2" chrome plated copper standpipe, threaded one end, and cast bronze floor entrance fitting with integral capillary ring. For 2" N.P.T. drain line.

#### WATER LEVEL CONTROL UNITS

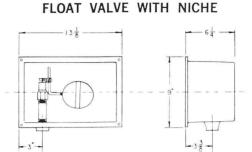
For automatic control of water make up, lost through evaporation or "splash-out."



	SIZE VALVE	NPT
FV-50	1/2"	1/2"
FV-75	3/4"	3/4"
FV-100	1"	1"

Economy model consists of float and valve assembly for connection to make up line exposed in open pool.





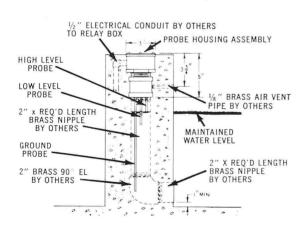
#### NICHE MODEL

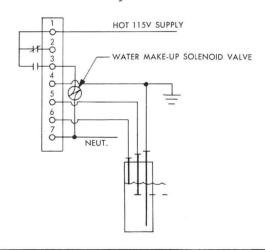
Heavy formed fiberglass niche is recessed in pool wall and houses float and valve. Face is covered with slotted chrome plated bronze cover. Protects assembly from damage and vandalism.

	VALVE SIZE	NPT
FVN-75	3/4"	3/4"

#### MODEL HLP—ELECTRIC WATER LEVEL SENSING SYSTEM

The HLP sensing unit measures pool water levels by making electrically conductive water a part of the control circuit. The assembly consists of probe unit and control relay panel mounted in NEMA enclosure. Control unit then activates automatic solenoid valve for water make up. Valves are listed as a separate item below. Valve not included with HLP assembly.





#### **AUTOMATIC SOLENOID FILL VALVES**

The listed automatic solenoid valves are of high quality bronze and stainless steel construction. They are ideal for use with the HLP Water Level Sensing System. Solenoid coils are 120 Volt A.C.

Cat. No.	Size	Height	Length
AVS-75	3/4" NPT	5-1/2"	3-1/4"
AVS-100	1" NPT	5-3/4"	3-13/16"
AVS-150	1-1/2" NPT	7-1/16"	4-7/8"
AVS-200	2" NPT	8"	5-7/8"

#### **TIME SWITCHES**

A well constructed series of time switches for automatically switching lighting circuits, fountain and filter pumps. Tungsten rated for 40 amps; 4375 watts Tungsten (incandescent); 1 HP; 125V AC. Clock motor rating: 125 Volts, 60 Cycle.

#### Standard Time Switches

ITC-1 125 Volt SPST ITC-2 125 Volt DPST

#### Astronomic Dial Time Switches

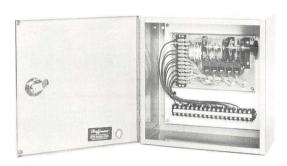
AD-1 125 Volt SPST AD-2 125 Volt DPST AD-4 125 Volt 4PST



#### **CONTROL EQUIPMENT**

#### DCC SERIES TIMERS

Quality engineered recycling timers, designed for maintenance free operation. The basic components are: U/L listed high quality synchronous motor with programmed phenolic cams and micro switches activating triac solid state relays. In ordering a DCC Timer, the desired program sequence and cycle time should be specified to permit proper cutting of cams. Time cycle available (one complete revolution of cam) 30 seconds to 6 minutes.

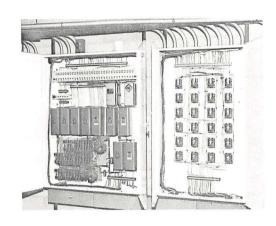


### CUSTOM SEQUENCE CONTROLS

Sequence program control units are designed to develop and control a pre-scheduled series of water pattern and color light changing sequences. The frequency of these sequences may be varied at will in certain models. All components used in these units are "rugged service" quality devices for heavy duty switching loads. While all program timers of this type are custom built to order, the photograph of a Hydrel assembly will illustrate a typical unit.

#### DCC TIMERS

Catalog Number	No. of Cams (Circuits) and Switches	Total Time Cycle	Incand. Wattage Rating per Sw. @ 115 V
DCC-1	1	30 Sec. to 6 Min.	1800 W
DCC-2	2	30 Sec. to 6 Min.	1800 W
DCC-3	3	30 Sec. to 6 Min.	1800 W
DCC-4	4	30 Sec. to 6 Min.	1800 W
DCC-5	5	30 Sec. to 6 Min.	1800 W



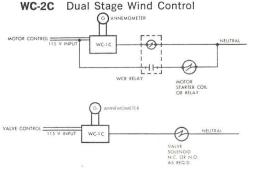
#### WIND CONTROL UNIT

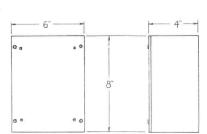
The Hydrel wind control unit was developed especially for fountain water control in exposed areas. The anemometer, consisting of the wind cups and a miniature generator, sends electrical impulses to the electronic balancing system housed in a control box at some convenient location. This unit will react to wind velocity change of the order of 1 mile per hour. Dial on face of cabinet permits adjustment of cut-off level at velocities from zero to 25 m.p.h. Integral time delay relay protects unit against over reacting to momentary gusts. Standard control suitable for solenoid valve controls. For motor starter control use intermediate relay WCR.

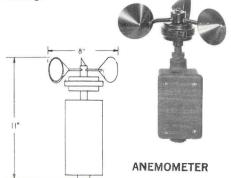


WC-1C Single Stage Wind Control

WCR Intermediate Relay, DPST 10 Amp Rating.







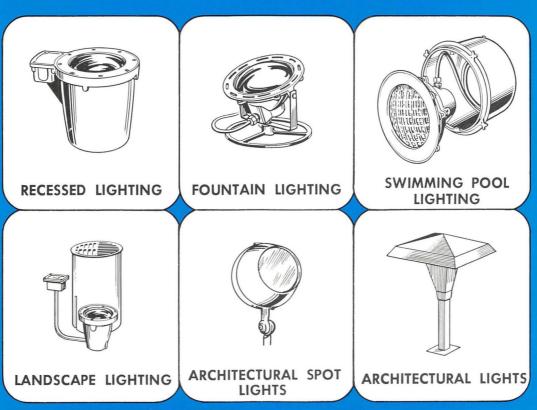
#### **GUARANTEE**

Hydrel products are guaranteed against mechanical and electrical defects for a period of one year from date of sale. Replacement or repair of authorized returns found upon inspection to be mechanically or electrically defective within the guarantee period shall constitute fulfillment of all obligations under this warranty. Hydrel assumes no responsibility for the proper installation of its products, or for labor or transportation costs involved in repair or replacement.

Hydrel products often require components and accessories not of its manufacture. The guarantee of the supplier of such components shall constitute the total liability of Hydrel.

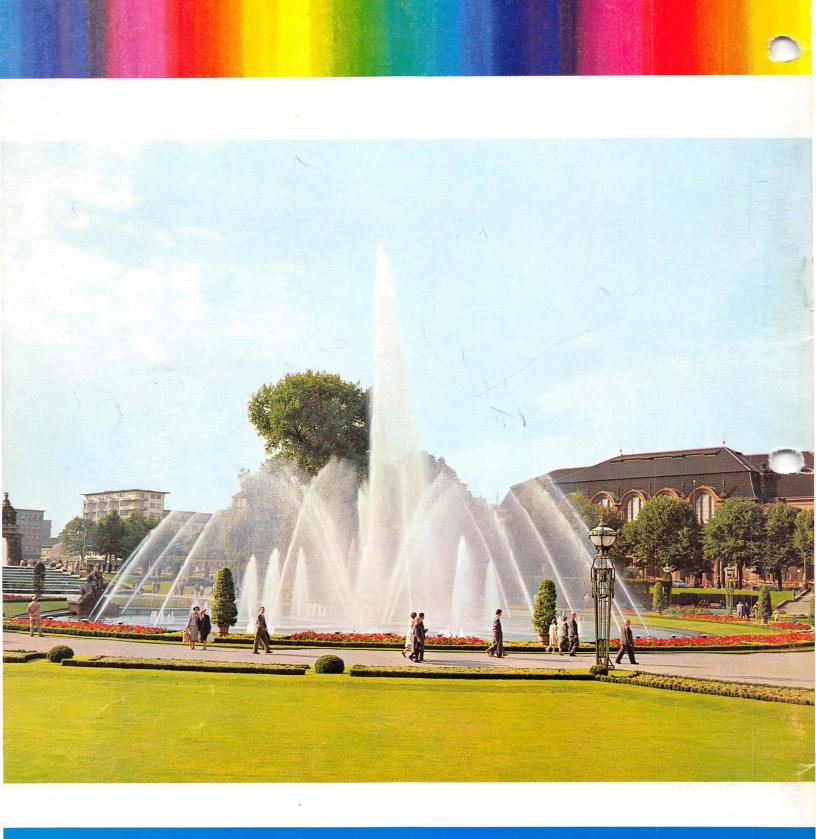
Information contained in the catalog is accurate at time of printing, however, it is the policy of the Company to engage continuously in research and development for the improvement of its products and the Company therefore reserves the right to discontinue or modify designs or specifications without incurring any obligation.

#### **ADDITIONAL HYDREL PRODUCTS**



HYDREL

9415 TELFAIR AVENUE • POST OFFICE BOX 1041 SUN VALLEY, CALIFORNIA • PHONE: (213) 875-0131 ZIP CODE 91352



## CORPORATION 9415 TELFAIR AVENUE • POST OFFICE BOX 1041 SUN VALLEY, CALIFORNIA • PHONE: (213) 875-0131 ZIP CODE 91352