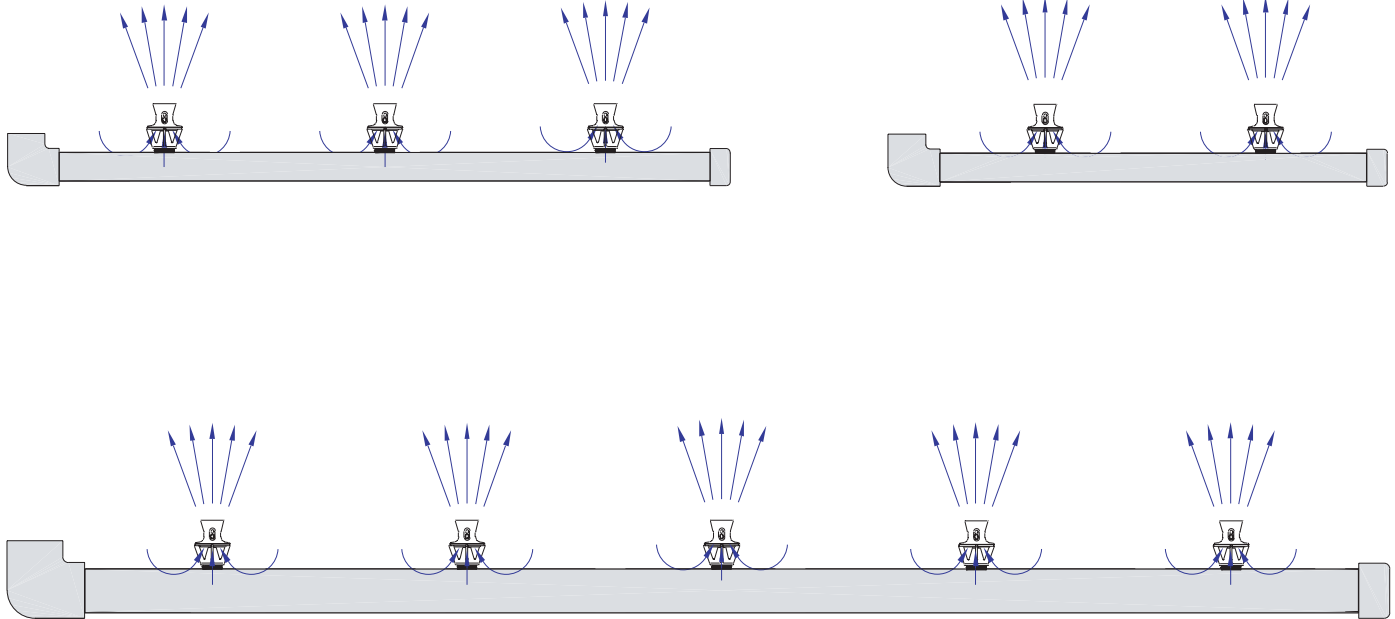


# Series PES

## *Penguin Penductor™ Systems*



### Features:

- Available as systems with pumps, kits, or Penductors™ sold separately
- Deluxe model includes adjustable nozzles
- Non-metallic contact with solution
- Perfect for large tank usage
- Induces four extra gallons of flow for every gallon pumped through nozzle
- Used to enhance circulation in a wide variety of recirculating process tanks.

#### Ideal for:

- Vigorous and constant agitation
- Dispersing and mixing chemicals more uniformly
- Eliminating hot spots/temperature stratification
- “Sweeping” debris or sludge toward a filter intake
- Keeping solids in suspension
- Mixing immiscible liquids
- Allowing for increased density causing faster plating rates
- Eliminating aeration and gas pitting problems

- Creating more uniform plating distribution
- Permitting considerable improvements in plating throw and deposit in blind holes and recesses

### Recommended Applications:

- Eductors are currently installed in the following types of re-circulating process tanks:

- Cleaners
- E-coat paints and paint strippers
- Chemicals, fertilizers, caustics, and permanganates
- PCB plating sludge
- Cooling towers
- Slurries
- Plating tanks:
  - Chromium
  - Etching
  - Acid Zinc
  - Anodizing
  - Phosphate
  - Gold
  - Phosphate
  - Acid Copper
  - Silver
  - Bright Nickel
  - Tin
  - Alloys
  - Electroless Nickel/Copper

# Series PES

## Penguin Penductor™ Systems

### Specifications

Eductor System Model	Pipe Size & Connection	No. of Penductors™ per Manifold	Manifold Length (A)
PES-1 1/2-2	1 1/2"	2	19.5"
PES-1 1/2-3	1 1/2"	3	31.5"
PES-1 1/2-4	1 1/2"	4	43.5"
PES-1 1/2-5	1 1/2"	5	55.5"
PES-2-2	2"	2	19.5"
PES-2-3	2"	3	31.5"
PES-2-4	2"	4	43.5"
PES-2-5	2"	5	55.5"
PES-2-6	2"	6	68.5"

### Configurations

Possible Configurations		Simplex		Duplex	
Eductor System Model	Recommended Pump Model	Manifold Pressure (PSI) ••	Total Flow (GPM)	Manifold Pressure (PSI) ••	Total Flow (GPM)
PES-1 1/2-2	P-1/2	14	87	•	•
PES-1 1/2-3	P-3/4	16	139	14	304
PES-1 1/2-4	P-3/4	15	180	•	•
PES-1 1/2-5	P-1	16	237	•	•
PES-2-2	P-1 1/2	26	118	22	218
PES-2-3	P-1 1/2	24	170	19	304
PES-2-4	P-1 1/2	22	218	15	360
PES-2-5	P-2	25	290	17	478
PES-2-6	P-2	23	337	13	502

Data based on ambient water, specific gravity 1.0 with 1" NPT Penductor™

- Not recommended for duplex systems
- More vigorous mixing occurs with higher manifold pressures

### Manifold Widths

Tank Width (D)	2'	3'	4'	5'
Manifold Width (C)	22"	34"	46"	58"

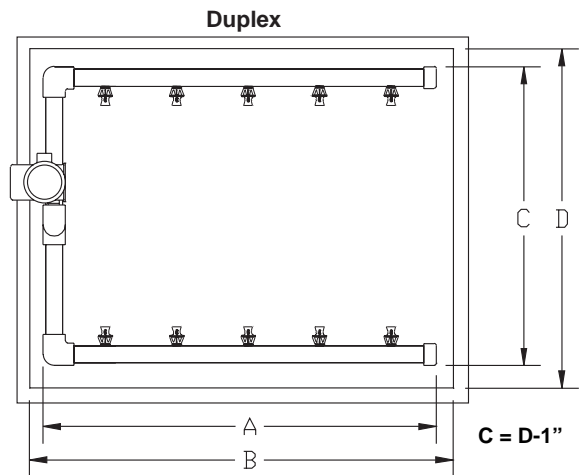
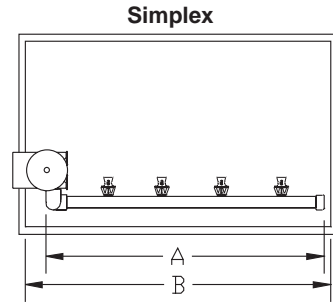
### Nomenclature

PES	1 1/2	4	x	4
Penductor™ Systems	Manifold Size 1 1/2 = 1 1/2" 2 = 2"	Tank Length (B) 2 = 2' 3 = 3' 4 = 4' 5 = 5' • 6 = 6'		Tank Width Duplex Sys Only (D) 2 = 2' 3 = 3' 4 = 4' 5 = 5' 6 = 6'

• = 2" Manifolds Only

A Division of Penguin Pumps Inc.

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**Introduction:** Eductors utilize a unique venturi design which enables smaller pumps to circulate larger volumes of tank solution. The eductor can circulate four to five gallons of solution for each gallon pumped.

#### Kits consist of:

**Simplex:** Penductors™, manifold, hose barb, hose clamp, and 10' of PVC hose.

**Duplex:** Penductors™, 2 manifolds, 2 threaded nipples, threaded tee, hose barb, hose clamp, and 10' of PVC hose.

**NOTE:** 1) For proper operation manifold pressure should be at least 10 psi, which produces 37 gpm per Penductor™.

2) Manifold should be secured to bottom or side of tank to prevent shaking, rattling, or breaking of rigid plumbing accessories.

Consult factory for pricing and availability of custom units.