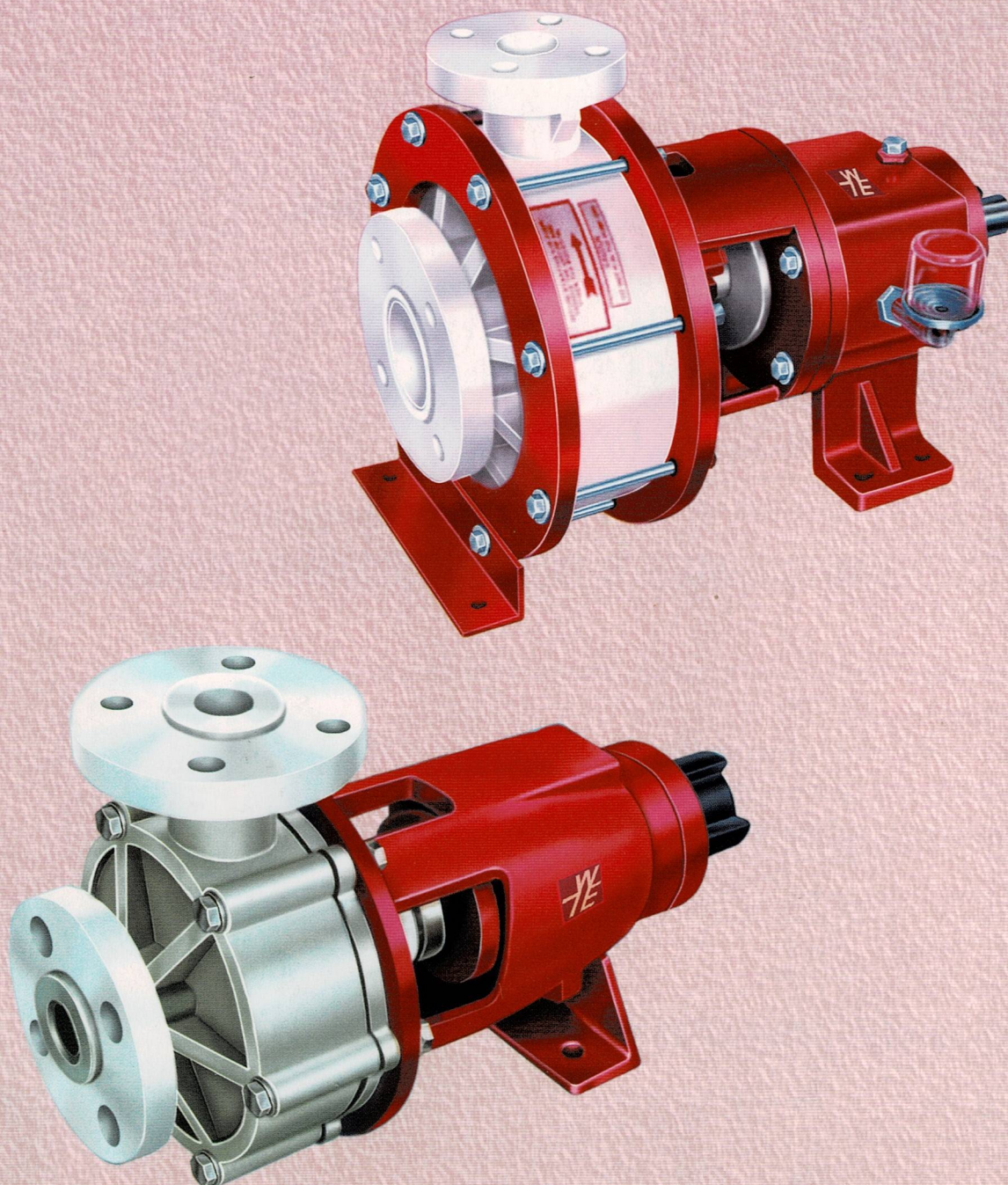




WEL-TECH Polypropylene Pumps
The Range of Moulded Polypropylene Pumps
for Handling Corrosive and Aggressive



Whatever your pumping need "WELTECH" has an answer

"ECHO" Series pumps are designed and manufactured by Weltech Equipments to meet customer specific requirement with optimum standardization. The company's wealth of the experience goes in to the design and manufacture of moulded polypropylene corrosion resistant pumps.

"ECHO" series pumps designed philosophy is to design pumps that are simple, rugged and reliable, using most appropriate material with economical moulding technique with all aspects of quality performance. High degree of manual interchangeability of components within all models by grouping system

GROUP-1 : PROCESS PUMPS Models : ECHO-100, ECHO-130, ECHO-140, ECHO-160, ECHO-170

Application :

- ✧ Used in continuous processing acid pickling line in steel industries.
- ✧ For filtration and pressurise feeding in dyes and intermediate industries.
- ✧ Excellant for vacuum ejectors.
- ✧ Scrubbing of corrosive gases like Cl₂, Br, I, So₂
- ✧ For descaling of tubes

These pumps are high head (up to 35 mtrs.) with different capacity coupled to **2900 rpm** motors.

Model	Suction in mm	Delivery in mm	Impeller DIA in mm	HP	RPM	Head in m. Capacity in m ³ / hr					
						7	8	10	11	12	m. m ³ /hr
ECHO-100	25	25	100	1	2900	7 11	8 9	10 6	11 5	12 3	13 00
ECHO-130	40	40	130	2	2900	20 00	17 3	14 6	10 10	8 14	4 13
ECHO-150	40	40	150	3	2900	24 00	22 3	20 5	18 10	15 20	10 26
ECHO-160	75	40	160	5	2900	31 00	26 12	25 15	20 25	15 30	10 35
ECHO-170	75	50	170	7.5	2900	35 00	32 15	30 25	25 32	20 38	12 50

GROUP - 2 TRANSFER PUMPS Models : ECHO-50 and ECHO-55

Application :

- ✧ These pumps are normally used for transferring acids / alkalies and also for loading-unloading of acid - alkalies road tankers.
- ✧ Used for effluent treatment plants for maximum 3 mtrs. negative suction with foot valve.
- ✧ Used for recirculation of chemicals in electro plating plants.
- ✧ Transferring for HCL, H₂SO₄ (DIL) HNO₃, NaOH.

Low Head (up to 15 mtrs.) medium capacity pumps coupled to **1440 rpm** motor

Model	Suction in mm	Delivery in mm	Impeller DIA in mm	HP	RPM	Head in m. Capacity in m ³ / hr					
						15	13	12	10	8	m. m ³ /hr
ECHO-50	75	40	210	3	1440	15 00	13 10	12 15	10 23	8 30	6 40
ECHO-40	40	40	205	2	1440	12 00	11 02	10 06	8 12	5 25	
ECHO-55	75	50	210	5	1400	18 00	17 06	15 10	14 20	12 28	10 37

Volute Casing

Top centreline discharge, self venting volute casing formed out of injection moulded polypropylene

Adopter

Cast Iron Adopter for bearing block-3 piece design. The corroded adopter can be replaced without disturbing the bearing block and the shaft.

Backplate

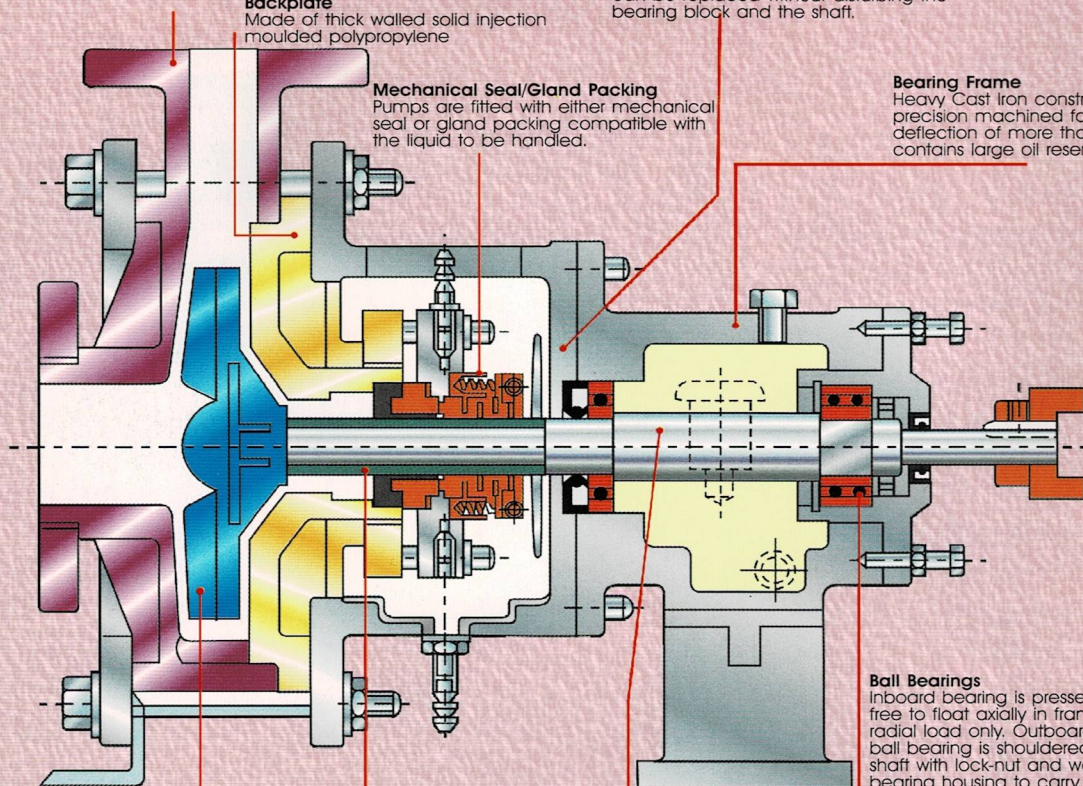
Made of thick walled solid injection moulded polypropylene

Mechanical Seal/Gland Packing

Pumps are fitted with either mechanical seal or gland packing compatible with the liquid to be handled.

Bearing Frame

Heavy Cast Iron construction, precision machined for no shaft deflection of more than 0.05 mm contains large oil reservoir



Impeller

All impeller are precision moulded light in weight, semi open construction with large, contoured flow passages for maximum handling of the liquid and will meet NPSH requirements.

Sleeve

Shaft sleeve of different material depending on the compatibility of the liquid to be handled

Shaft

The shaft is made of EN STEEL Protected by shaft sleeve of different material competent to handle different liquids. The shaft is design for 0.05 mm maximum deflection at mechanical seal.

Ball Bearings

Inboard bearing is pressed on shaft and free to float axially in frame-carries radial load only. Outboard double row ball bearing is shouldered and locked on shaft with lock-nut and washer, and in bearing housing to carry radial and any unbalanced thrust load. All bearing fits are precision bored.

SHAFT SLEEVE OPTIONS

1) F.R.B. (BISPHENOL RESIN)	Used for mechanical seal arrangement only for handling HCl 33% Conc. service Also used for dilute H ₂ SO ₄ (not recommended for gland packing arrangement & for HCL containing solvents.)
2) CERAMIC	HCL (ACID) + Solvents (Acids & solvents) and generally for all liquids
3) HASTELLOY 'B'	For effluents.
4) ALLOY-20	Dilute Sulphuric Acid (H ₂ SO ₄) concentration less than 70% NaOH upto 48%, HNO ₃ upto 60%
5) TITANIUM	BRINE
6) MONEL	HF (40%)

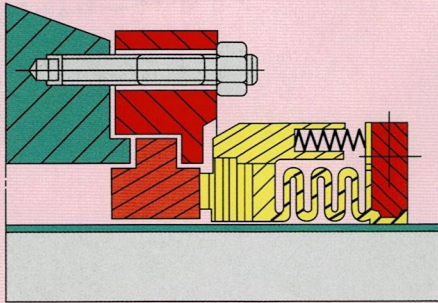
ECHO pumps are widely used for the following applications

- ✦ Conc. HCl Loading and Unloading of Road Tanker.
- ✦ Filter Press for Dyes.
- ✦ Descaling.
- ✦ Water Treatment.
- ✦ Effluent Treatment
- ✦ Electro Plating
- ✦ Picking of Steel in Cold Rolling Mills.
- ✦ Scrubbing of Corrosive Gases like Cl₂, Br₂, F₂, I₂, SO₂, SO₃, CO₂, NH₃

ECHO pumps are serving the following industries

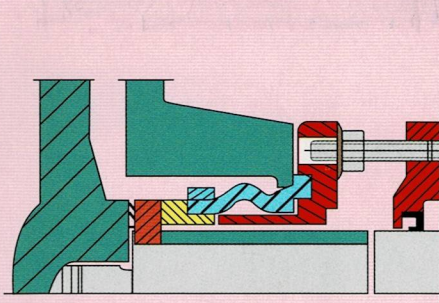
- ✦ Caustic Soda Plants (Chlor Alkali Industries)
- ✦ Dyes and Chemicals
- ✦ Drugs and Pharmaceuticals
- ✦ Fertiliser Plants
- ✦ Thermal and Atomic Power Plants
- ✦ Steel Plants.
- ✦ Paper and Pulp Industries. (for alum & NaOCl)
- ✦ Electronic Industries
- ✦ Sea Water Treatment
- ✦ Rayon and Staple Fibre Plant (Bleach Liquor)
- ✦ Copper, Zinc Smelter
- ✦ TiO₂ Plant
- ✦ Glass Industries
- ✦ Textile Industries

SEALING OPTIONS



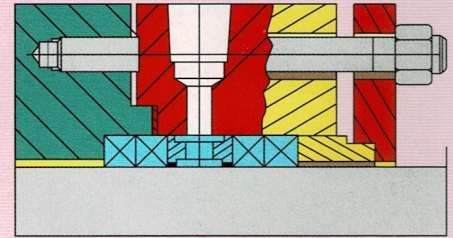
Teflon Bellows

(GFT V/S Ceramic) externally mounted mechanical seal



Internal Mechanical seal

with Elastomer bellows (Neoprene/Hypelon) with carbon v/s carbon face combination



Gland Packing

T.I.B.A. (Teflon impregnated blue asbestos)

Teflon bellows mechanical seals

These seals have ceramic as stationary unit and teflon bellows as rotary unit. These are recommended for clear and corrosive chemicals like HCl, H₂SO₄ (DIL), HNO₃, NaOH, H₂O₂, etc.

These seals are not recommended for :

- ❖ Liquid containing solids or slurry or abrasive particles.
- ❖ Liquids which get crystallised on cooling e.g. NaOH, CuSO₄, NiSO₄, etc.

NB : For this seal, external water cooling is necessary for better service & longer life.

Internal Mechanical seal

This seal is developed by **ECHO** for handling liquids containing slurry upto 20% (not abrasive slurry). This seal consists of carbon as stationary ring fixed in a neoprene/hypelon rubber bellows and carbon as rotary ring. The stationary ring and bellows are held by a non metallic bellows holder.

- ❖ Seal recommended for flooded suction
- ❖ Excellent for HF upto 40 % concentration.
- ❖ Can be used for liquids getting crystallised on cooling like NaOH, Electroplating solution, etc.
- ❖ Not recommended for liquids containing organic compound or solvents due to rubber bellows.

Gland Packing

Teflon impregnated blue asbestos (TIBA) 10 mm & 12.5 mm square gland packings are put in **ECHO** series, respectively.

- ❖ Gland packed pumps are normally recommended for transfer of caustic 40% concentration and primary effluents.
- ❖ Liquid contains Slurry and Solid particals

For further information Contact to :

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