



MODEL: CPS50

CHEMICAL PUMP

Gasoline Powered Specification

4.8HP – 3.6kW Honda Engine

550 l/min

TECHNICAL DATA SHEET

FOR USE IN NON-REGULATED TERRITORIES ASIA MIDDLE EAST AND AFRICA

TECHNICAL INFORMATION

MODEL	
CPS50-M-SF	Manual Recoil Start with Steel Frame
APPLICATIONS	
Industrial	Chemical Manufacturing & Processing: Transferring raw chemicals (acids, caustics, solvents, alcohols, etc) between storage tanks, reactors and mixing vessels. Circulating chemicals in process loops where corrosion resistance is critical.
	Petrochemical & Refinery Operations: Handling corrosive by-products, additives or cleaning chemicals. Transferring solvents, degreasers or neutralizing agents in maintenance and cleaning operations.
	Food & Beverage Industry (non-edible chemicals only): Pumping cleaning and sanitation chemicals like caustic soda nitric acid or peracetic acid used in CIP systems. Dosing acids/alkalis in freshwater pretreatment before discharge.
	Water & Wastewater Treatment Plants: Transferring liquid chlorine, sodium hypochlorite, alum, ferric chloride or lime solutions for water purification. Pumping polymers and flocculants in wastewater clarification processes.
Agricultural	Fertilizer Handling: Transferring liquid fertilizers (urea solutions, ammonium nitrate, phosphates, etc) from bulk storage tanks to sprayers or mixing systems. Injecting fertilizers into centre pivots or drip irrigation systems.
	Pesticides & Herbicides: Moving herbicide and pesticide concentrates from containers to spray rigs. Mixing/diluting agrochemicals for field spraying.
	Irrigation Support: Pumping chemical additives into irrigation water for pH control, nutrient dosing or disinfection. Handling acid solutions (sulfuric or phosphoric acid) for soil treatment and alkalinity correction in irrigation systems.
	Livestock & Aquaculture: Transferring disinfectants and sanitizers for barns, pens and water systems. Handling medications or water treatments in aquaculture tanks or ponds.

APPLICATIONS:

Industrial
Agricultural

HONDA

GASOLINE ENGINE

MD

MEDIUM DUTY

TECHNICAL INFORMATION


Engine

Make	Honda
Model	GP 160
Power	4.8HP – 3.6kW / 3600 RPM
Type	Single-cylinder Four Stroke Air cooled
Displacement	163cc / 0.163l
Fuel Type	Gasoline
Starter	Recoil Start
Consumption	280 g/kwh / 1.4 l/h
Noise	80dB at 7m
Fuel Tank Size	3.1l
Oil Tank Size	0.6l


Pump

Make	Energie
Model	CP50
Inlet and Outlet (inch)	2" 50mm / 2" 50mm
Delivery Volume	550 l/m
Max head	35m
Suction lift	8m
Driving Power	4.1kW
Pump Body	PA66 Plastic
Impeller	PA66 Plastic
Mechanical Seal	Viton
Working Speed	3600 RPM
O-rings and Washers Material	Viton
Bolts used	Stainless Steel

Accessories Included

	Pipe Connector Fittings 2 x 2 Inch Pipe Connecting Wrench Rubber Gaskets
	Suction Strainer Inlet Size: 50mm / 2" Material: Galvanized steel
	Hose Clamps x 3

Recommended Piping

	Inlet Hose Material: Tiger flex K-Chem series Type: PVC hose with rigid helix Thickness: 3-6mm
	Outlet Hose Material: EPDM Type: Reinforced synthetic rubber Thickness: 3-6mm

Permissible Pumping

Allowable Liquids	Sea water, Weak acids, alkalis and clean chemical solutions
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Solid Handling

Pump	3mm
Restricted by Strainer	5mm

Fuels & Lubricants (Recommended)

Gasoline	95ppm or better
Oils	15W/40

Consumables (Service parts)

Engine Air Filter	Contact Dealer Directly
Engine Oil Filter	Contact Dealer Directly
Engine Fuel Filter	Contact Dealer Directly

Dimensions & Weights

Length	530 mm
Width	425 mm
Height	420 mm
Dry & Wet Weight	18.3 kg / 23 kg

Policies

Warranty	1 Year Limited Warranty
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TECHNICAL INFORMATION

Viton Seal Recommended Pumping Application

Synthetic and mineral oils

Hydraulic fluids (including phosphate ester blends, some Skydrol types), Engine oils, Transmission fluids, Silicone oils and greases

Acids

Dilute Sulfuric acid (<70%), Hydrochloric acid (dilute solutions), Nitric acid (<30%), Acetic acid (dilute and moderate concentration)
Phosphoric acid

Alkalis (Mild to Moderate)

Sodium hydroxide (low to moderate concentration), Potassium hydroxide (low to moderate concentration), Ammonium salts (aqueous solutions, not anhydrous ammonia gas)

Hydrocarbons (Aliphatic & Aromatic)

Gasoline (with or without ethanol blends), Diesel fuel, Kerosene, Jet fuels (JP-4, JP-5, Jet-A, etc.), Propane, Butane, LPG, Mineral oils, Crude oil, Aromatics (Benzene, Toluene, Xylene)

Solvents

Alcohols (Methanol, Ethanol, Isopropanol, Butanol), Aromatic solvents (Toluene, Xylene), Halogenated solvents (Carbon tetrachloride, Freon, some chlorinated hydrocarbons — within limits), Ketones (Acetone, MEK, MIBK) → short-term/controlled use

Other Resistant Chemicals

Glycols (ethylene glycol, propylene glycol – antifreeze solutions), Diluted cleaning agents and detergents, Ozone, UV, and weather exposure (Viton is very ozone/oxidation resistant)

Viton Seal Not Recommended Pumping Application

Amines & Ammonia

Anhydrous ammonia, Amines (methylamine, ethylenediamine, morpholine, etc.), Alkylamines and alkanolamines
These attack Viton, causing swelling, softening, and rapid degradation.

Strong Bases (Alkalis)

Sodium hydroxide (>30%), Potassium hydroxide (>30%), Lithium hydroxide, Other strong caustics at elevated temp
Prolonged exposure = hardening and cracking.

Strong Oxidizing Agents

Fuming nitric acid (>70%), Aqua regia, Hydrogen peroxide (high conc.), Peracetic acid (strong concentrations), Halogens (free chlorine, fluorine, bromine at high temps/pressures)
Viton breaks down under oxidative attack.

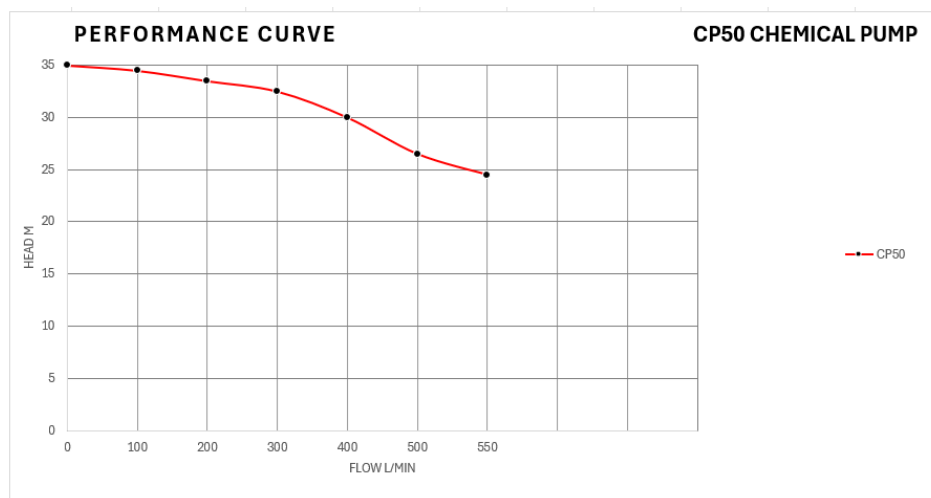
Low-Molecular Weight Esters & Ethers

Ethyl acetate, Butyl acetate, Methyl tert-butyl ether (MTBE), Glycol ethers (e.g., Cello solves)
Cause swelling and loss of strength

Hot Organic Acids

Formic acid, Acetic acid (>50% at high temps), Oxalic acid (concentrated)
Severe chemical attack if hot/concentrated.

PUMP CURVE



Flow (L/min)	Head (M)
0	35
100	34,5
200	33,5
300	32,5
400	30
500	26,5
550	24,5

PRODUCT VIEWS

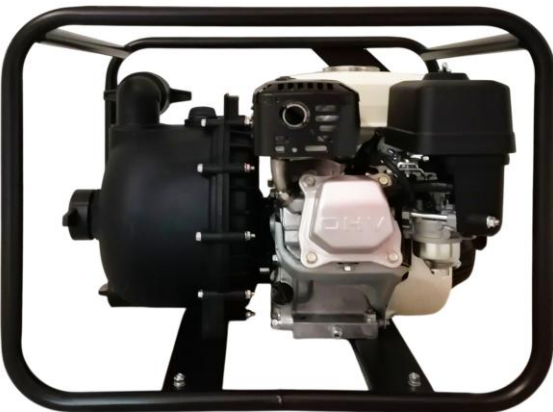
SIDE VIEW



BACK VIEW



SIDE VIEW



FRONT VIEW



APPROVED DISTRIBUTOR

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