



JUMA FARM TECH LTD

Hydraulic Ram Pump Sizes, Costs & Performance Guide

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Juma Farm Tech Ltd specializes in the design, fabrication, installation, and commissioning of high-quality hydraulic ram pumps manufactured using heavy-gauge galvanized GI pipes and durable cast-iron components. Our systems provide reliable, eco-friendly water pumping solutions without electricity or fuel.

Item	Description	Amount (KES)			
Feasibility Study	Site visit, measurements, flow testing & reporting	10,000			
Pump Size	Cost (KES)	Outlet Pipe	Daily Output	Distance	Elevation
1-Inch	50,000–120,000	½"–1"	5,000–20,000 L	0.5–2 km	20–80 m
2-Inch	120,000–250,000	1"–1½"	20,000–80,000 L	1–3 km	30–120 m
3-Inch	250,000–400,000	1½"–2"	50,000–150,000 L	1–5 km	50–150 m
4-Inch	400,000–650,000	2"–3"	100,000–300,000 L	2–8 km	80–200 m
6-Inch	650,000–900,000	2"–4"	150,000–500,000 L	2–10 km	100–250 m
8-Inch	750,000–1.2M	3"–4"	250,000–650,000 L	3–10 km	100–250 m
10-Inch	850,000–1.3M	3"–4"	300,000–800,000 L	3–10 km	100–250 m
12-Inch	1.2M–1.8M	4"–6"	800,000–1.5M L	5–15 km	150–350 m
24-Inch	4.5M–8M+	8"–12"	2M–6M L	10–30 km	200–500 m+

Drive Pipe Requirements

Pump Size	Drive Pipe Diameter	Recommended Length
1-Inch	1"	5–30 m
2-Inch	2"	10–50 m
3-Inch	3"	15–80 m
4-Inch	4"	20–100 m
6-Inch	6"	25–120 m
8-Inch	8"	25–140 m

10-Inch	10"	30–150 m
12-Inch	12"	40–200 m
24-Inch	24"	50–300 m

Head Ratio Guide

Available Fall	Possible Lift
5 m	35–75 m
10 m	70–150 m
20 m	140–300 m
30 m	210–450 m

Professional Recommendations

- Always conduct a feasibility study before sizing or quoting a hydraulic ram pump system.
- Use heavy-gauge galvanized GI drive pipes to withstand water hammer forces.
- Construct intake weirs on stable foundations to ensure year-round performance.
- Install proper filtration and scour arrangements to minimize maintenance.
- Design delivery pipelines to minimize friction losses over long distances.
- Select pump size based on available flow, drive head, delivery head, and daily water demand.
- Provide storage tanks at delivery points to ensure continuous water availability.

Advantages of Juma Farm Tech Hydraulic Ram Pumps

- ✓ No electricity or fuel required
- ✓ Environmentally friendly and sustainable
- ✓ Low operating and maintenance costs
- ✓ Long service life (15–30+ years)
- ✓ Suitable for farms, hotels, institutions, orchards, livestock projects, and community water schemes
- ✓ Capable of pumping water over long distances and high elevations

Disclaimer: Performance figures are estimates and may vary depending on river flow, available head, pipeline characteristics, and site conditions. Juma Farm Tech Ltd recommends a detailed feasibility study for accurate sizing and costing.