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International Reference Centre
for
Community Water Supply and Sanitation

HANDPUMP CATALOGUE

REVISED DRAFT
EDITION

September 1981

Postal Address:

P.O. Box 5500
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The Netherlands

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AFRICA

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FOREWORD

Since 1977, the IRC has been collecting technical documentation of handpump models from manufacturers and suppliers of handpumps around the world. The documentation compiled by IRC includes product sheets, manufacturers' pamphlets, specifications, and drawings.

The present catalogue has been produced from this documentation, using a standard format with each individual handpump model presented in a separate sheet. The catalogue contains over 70 handpump models of more than 35 manufacturers from 24 countries. The pump model sheets are arranged by region and country. Another entry to the catalogue is through a table listing the various pump models by key characteristic. This is designed to guide the user of the catalogue directly to those handpump models that are of particular interest to him.

It is conceded that the present catalogue is neither complete nor final. Inclusion of any handpump model in this catalogue does not constitute an endorsement, nor a recommendation of any listed manufacturer or his product(s). Also, omission from the catalogue of any handpump model does not imply rejection. Certain manufacturers may have missed the request to supply their documentation. It is hoped that more handpump models may be included in the revised edition of the catalogue which is planned to be produced as soon as appropriate.

All manufacturers reserve the right to make changes to their products and specifications.

E.H. Hofkes

September 1981

ACKNOWLEDGEMENT

Appreciation is expressed to Mr. A.J.H. Negenman who produced, from the extensive and very diverse source materials, the present uniformly organised catalogue. We are indebted to Mr. Negenman for the considerable amount of work he did in processing the source documentation, and preparing all the sheets complete with graphic material.

CATALOGUE ENTRY
BY CHARACTERISTICS
OF HANDPUMPS

REGION Country	Characteristics of handpump	Brand	Model	depth range of application						pre duty	1 pivot	2 pivot	3 pivot	stuffing box	guide pillar(s)	pump element	operation ²	Region NO
				shallow	deep	0-7	7-15	15-20	20-50									
ASIA																		
China		Golden Harvest	SB 40-1	X		↕			X			X			X	X		1
		Golden Harvest	SB 30-1	X		↕				X					X	X		2
India		Nahargar	Type I/II		X		↕	↕	X			X	X	X	X	X		3
		Jal Javahar			X		↕	↕	X			X	X	X	X	X		4
		India	Mark II		X		↕	↕		X					X	X		5
		Lifetime	AH-114		X		↕	↕			X		X	X	X	X		6
		Lifetime			X		↕	↕		X			X	X	X	X		7
		Lathil			X					X					X	X		8
Indonesia		Bandung		X		↕					X			X	X	X		9
Japan		Dragon	NO 2C	X		↕			X		X	X	X	X	X	X		10
		Dragon	NO 2D		X		↕		X		X	X	X	X	X	X		11
																		12

[1] x cylinder
 ⊗ diaphragmatic base
 • rotor vibrator
 [2] lever handwheel
 ⊕ crank
 f foot operated
 d-direct

REGION country	Characteristics of handpump	Brand	Model			depth range of application					force duty	stuffing box	guide pillar(s)	pumping element ¹	operation ²	Region no
				shallow	deep	0-7	7-15	15-20	20-50	50-100						
EUROPE																
Austria		Vogel	7/7S/7T/7ST	X		↔						X		X	X	1
		Vogel	7W	X		↔				X		X	X	X	X	2
Belgium		Duba	Tropic I	X		↔				X		X	X	X	X	3
		Duba	Tropic II		X		↔			X		X	X	⊕		4
		Duba	Tropic III		X		↔			X		X	X	⊕		5
		Deplechin	type I		X		↔						X	⊕		6
		Deplechin	type II M		X		↔			X		X	X	⊕		7
Czechoslovakia		Intersigma	NP 75/90	X		↔						X	X	X	X	8
Finland		NIRA	AF-76		X		↔					X	X	X	X	9
France		André Bodin	Solo No 3		X		↔			X		X	X	X	X	10
		Bricau	Tracta		X		↔			X		X	X	d		11
		Bricau	Nepta C		X		↔			X		X	X	X	X	12
		Bricau	Royale		X		↔			X		X	X	X	X	13
		Bricau	Africa		X		↔			X		X	X	⊕		14
		Vergnet	Type A/C		X		↔			X		⊕	X	X	X	15
Germany		Allweiler	471-473	X	X	↔						X	X	X	X	16
		allweiler	201-209	X	X	↔				X		X	X	X	X	17
		Kardia			X		↔					X	X	X	X	18

⊕ d-direct
 ⊕ lever handwheel
 ⊕ crank
 ⊕ foot operated
 ⊕ cylinder
 ⊕ diaphragmatic base
 • roller slater

REGION country	characteristics of handpump	Brand	Model	depth range of application					price	1 piece	2 piece	3 piece	stuffing box	guide pillar(s)	pumping element ¹	operation ²	Region no
				shallow	deep	0-7	7-15	15-20									
Europe (cont.)																	
Netherlands		Volanta			X		↔							X	⊕		15
		Kangaroo		X	X	↔								X	⊕		20
Sweden		Petropump	Type 95/48	X			↔							⊗	X		21
United Kingdom		Climax		X			↔	X				X		X	⊕		22
		Cansallen	LD 4-5-6	X			↔		X					X	X		23
		Edeco		X			↔			X		X		X	X		24
		Godwin	HLS	X	X	↔		X		X	X	X		X	X		25
		Godwin	HLD	X		↔		X		X	X	X		X	X		26
		Godwin	WH 51	X			↔	X			X	X		X	⊕		27
		Godwin	X1	X			↔	X			X	X		X	⊕		28
		Lee, Howel	Omnia	X			↔	X			X	X		X	⊕		29
		Lee, Howel								X	X			X	X		30
		Monolift	ES 30	X	X		↔						●	X	⊕		31
			Pitcher pump	X			↔			X				X	X		32

¹ ⊗ cylinder
 ⊕ diaphragmatic
 ● rotor
 ⊕ lever handpump
 ⊕ crank
 ⊕ foot operated
 ⊕ direct

REGION country	Characteristics of hand pump	Brand	Model	depth range of application		force	1 part	2 part	3 part	stuffing box	guide pillar(s)	pumping element ①	operation ②	Region no
				shallow	deep									
LATIN AMERICA														
Argentina		Aermotor	201 H/B	X	↔	X		X	X	X		X	X	1
		Aermotor	3-8	X	↔			X				X	X	2
		Aermotor	203		X	↔↔	X		X	X	X	X	X	X
Bolivia		Aeroviana		X	↔↔			X				X	X	4
		Aeroviana		X	↔↔			X				X	X	5
Brazil		Americana	171400	X	↔	X		X	X	X		X	X	6
		Americana	171500		X	↔	X		X	X		X	X	7
Paraguay		Gera	H		X	X		X	X	X		X	X	8
		Gera	G-60	X	↔	X		X	X	X		X	X	9

□ cylinder
 ⊕ diaphragmatic
 ● reverse stroke
 x lever handwheel
 ⊕ crank
 f foot operated
 d-direct
 ①
 ②

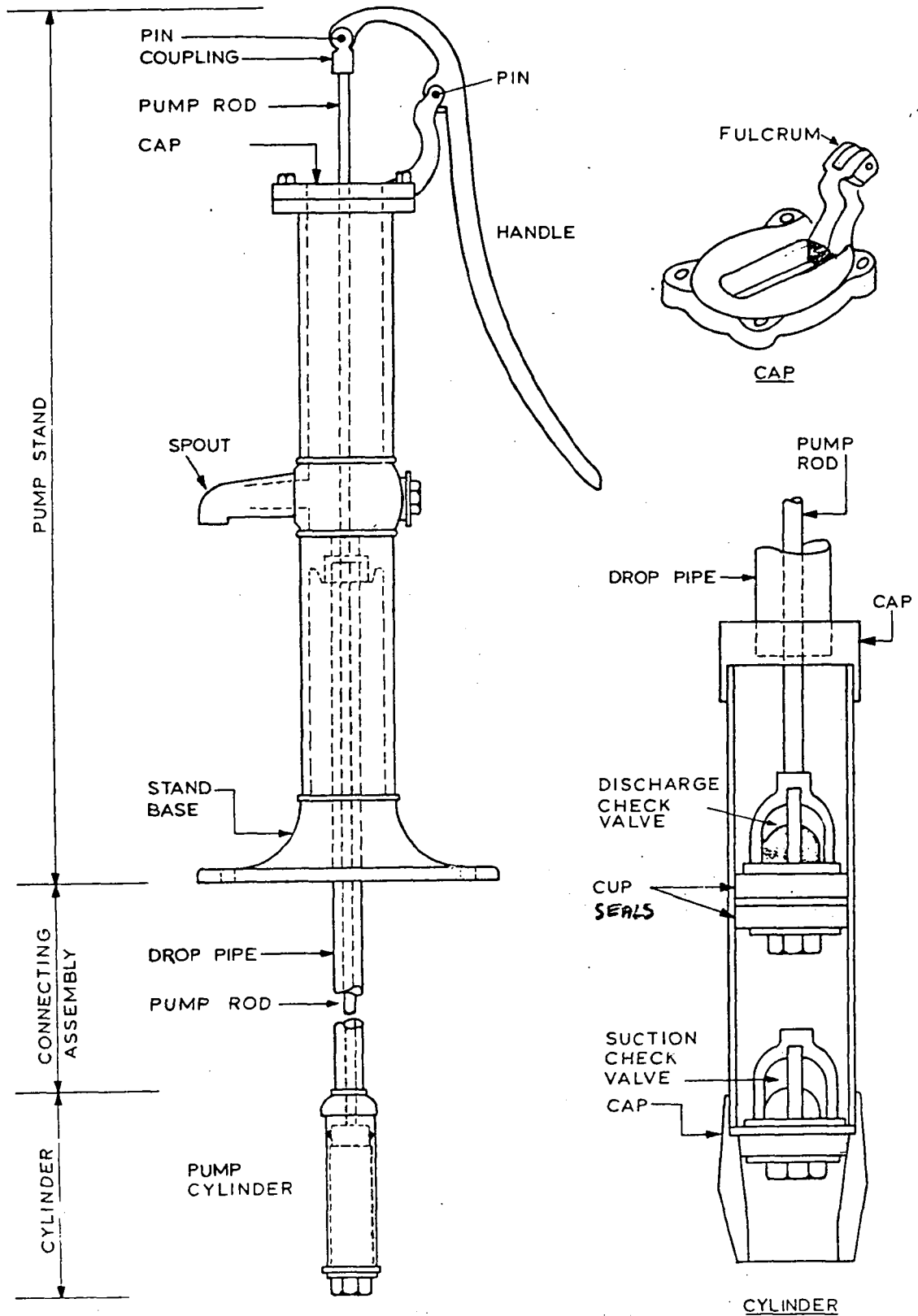
6 REGION country	characteristics of hand pump	Brand	Model	depth range of application		price	1. pump	2. pump	3. pump	stuffing box	guide pillar(s)	pumping element	operation ²	Region no
				shallow	deep									
NORTH AMERICA Canada		GSW	prototype		X		X					X	X	1
		GSW	Ghana (1105)		X				X		X	X	X	2
United States		Research	P3		X				X	X	X	X	X	3
		Nautilus	11HA	X	X			X				X	X	4
		Nautilus	11HD/12HD		X			X			X	X	X	5
		Columbiana	fig 121	X	X			X				X	X	6
		Columbiana	fig 80		X			X		X		X	X	7
		Dempster	23 F		X			X		X		X	X	8
		Heller-Alber	fig 50 ASB		X		X		X	X	X	X	X	9
		Clayton Park			X		X		X	X		X	X	10
		Robbins+Myers	11/12-2V/12		X		X					●	X	11
			Pelche sprout	X	X			X				X	X	12

□ cylinder
 ⊗ diaphragmatic base
 ● rotor vibrator
 ⊕ lever handwheel
 ⊕ crank
 ⊕ foot operated
 □ d-direct

HANDPUMP NOMENCLATURE

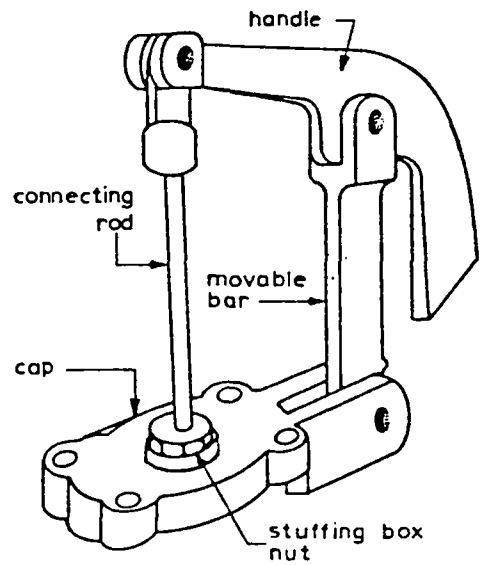
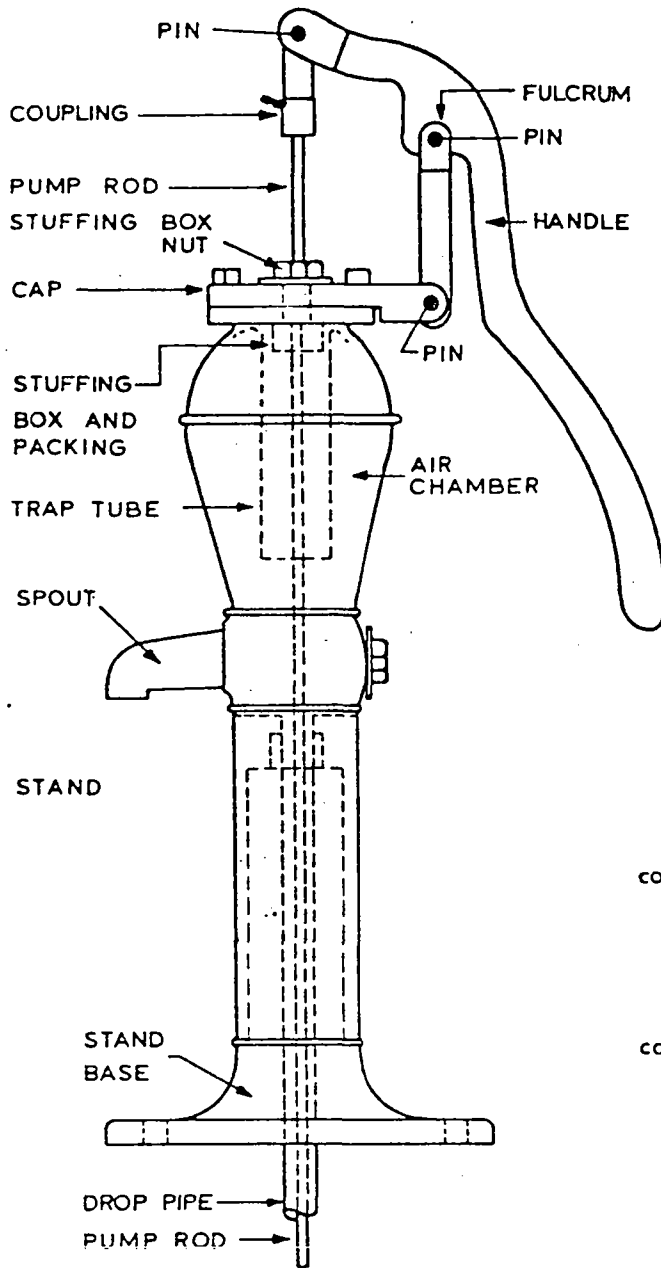
HANDPUMP NOMENCLATURE

GENERAL



HANDPUMP NOMENCLATURE

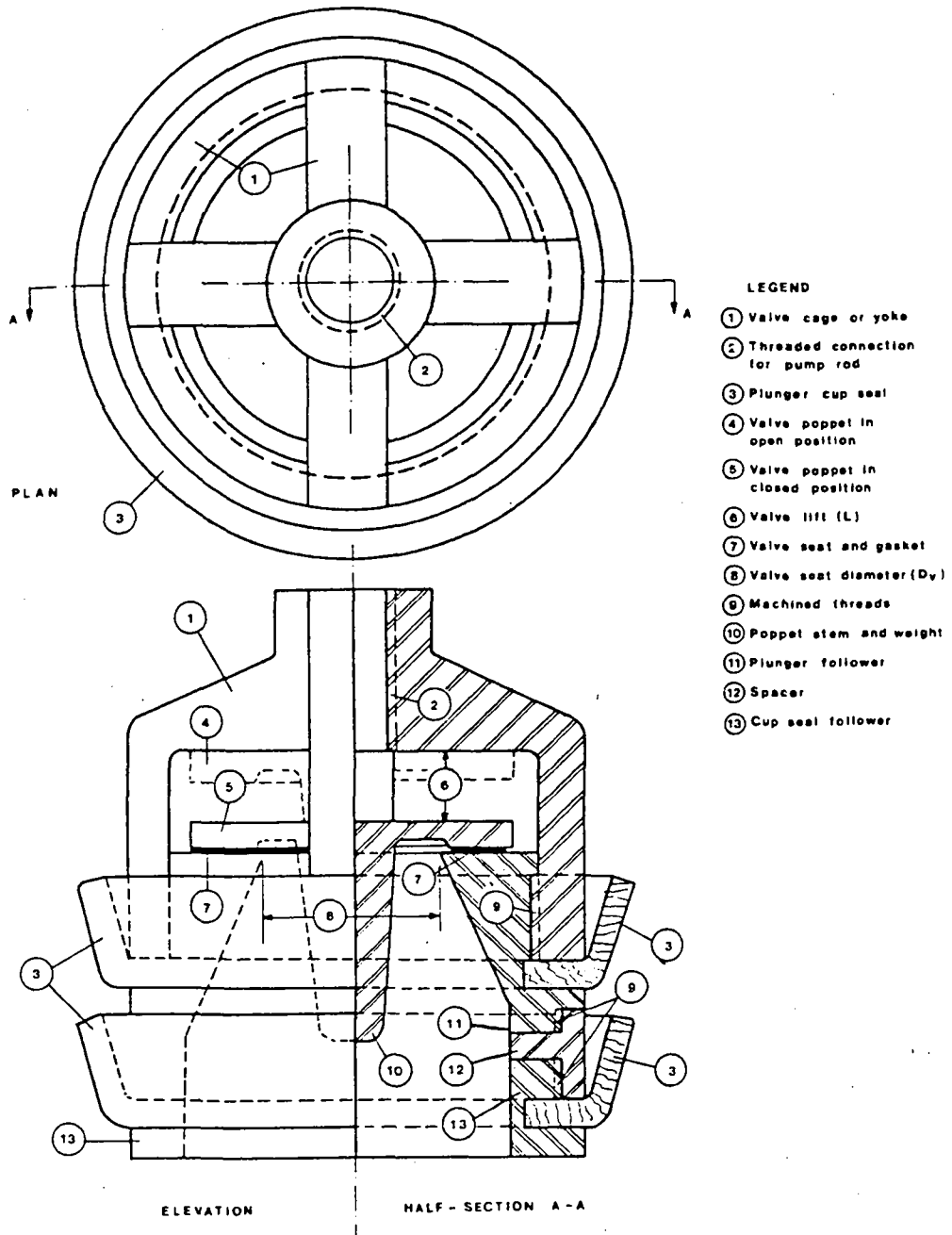
FORCE PUMP



FULCRUM ASSEMBLY

HANDPUMP NOMENCLATURE

PLUNGER



HANDPUMP MODEL
INFORMATION
SHEETS

Abidjan Industrie
01 BP 343 Abidjan
Ivory Coast

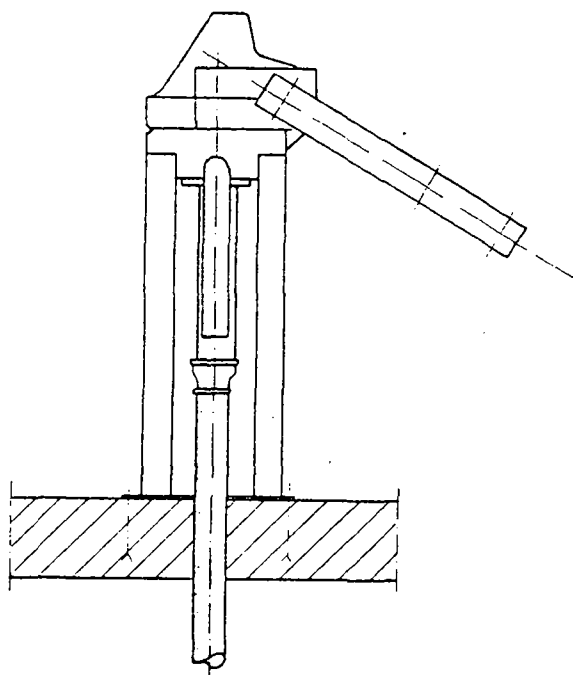
Phone: 354560
Telex: 2377 or 3994 (Shell ci)
Grams:

ABI

DW

Africa

L



Description:

The stand of the ABI Type M handpump consists of a top section made of two castings, connected to a frame made of steel angle sections. The sections are welded to a simple base plate with a hole in the centre through which the drop pipe fits. The handle is made of a welded steel framework and is fitted with two large sealed ball races, for the main fulcrum, on a simple plain bearing to give direct connection to the pump rod. No correction for the pump rod alignment variation, due to handle movement, is thus provided. The handle main bearings are clamped between the two top castings of the stand. Metal-to-metal handle stops are provided inside the castings.

The cylinder diameter 60, 70 or 80 mm, is made from thick walled brass extruded tube and has fittings. The single leather plunger is fitted with plastic (nylon?) winged valves, which have rubber sealing rings.

40 mm (1½") ID galvanised steel pipe is used for the drop pipe and 14 mm diameter zinc painted steel for the pump rod. The sprout is a piece of bent steel pipe. A grey painted finish is used. The pump stand has to be installed on the concrete well head by four 20 mm anchor bolts on a 297.5 mm square.

Specifications (output ratings)

For agents: see next page

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
Type M	80		100		0.50	30	0-12	
	70		100		0.38	23	13-30	
	60		100		0.28	17	31	

Applications

at 60 str/min.

Countries where used:

Ivory Coast	6500 pcs	Liberia	100 pcs
Upper Volta	1000 "	Togo	100 "
Niger	100 "	Senegal/Cameroun	40 "
Mali	80 "	Central Africa	(some)

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation; two-pivot system; variable stroke length.
- . pins, bearings, fasteners
Two main handle ball races (80.0 mm OD x 40.2 mm ID) and a plain bearing for linkage to the rod (30.0 mm OD x 72.0 mm long); the pump rod is fastened to the shaft by two bolts (with nuts and counter-nuts)
- . materials
Mainly cast iron; partly fabricated steel plate sections; painted.
- . weight: 74 kg

Connecting Assembly

- | | material | weight | size | length |
|--------------|-------------------------------------|----------|---------|--------|
| . pumprod: | steel painted with zinc-rich primer | 120 kg/m | 14 mm | |
| . drop pipe: | galvanised steel or PVC | 4.4 kg/m | 1½ inch | |

Cylinder

- . type : closed type
- . material : gauged brass tube
- . plunger : brass
- . cup seals : 1 leather
- . discharge valve type : special winged
- . suction valve type : special winged (+ strainer valve/foot valve fixed at the lower end of the suction pipe)
- . weight : 4.7 kg
- . min. well casing diam: 4" (100 mm)

ABI

Local Dealers ABI Type M

Upper Volta:

Timex

B.P. 1603

Ouagadougou

Mali:

Somea

B.P. 724

Bamako

Atlas Copco Kenya Ltd.
P.O. Box 40090
Nairobi
Kenya

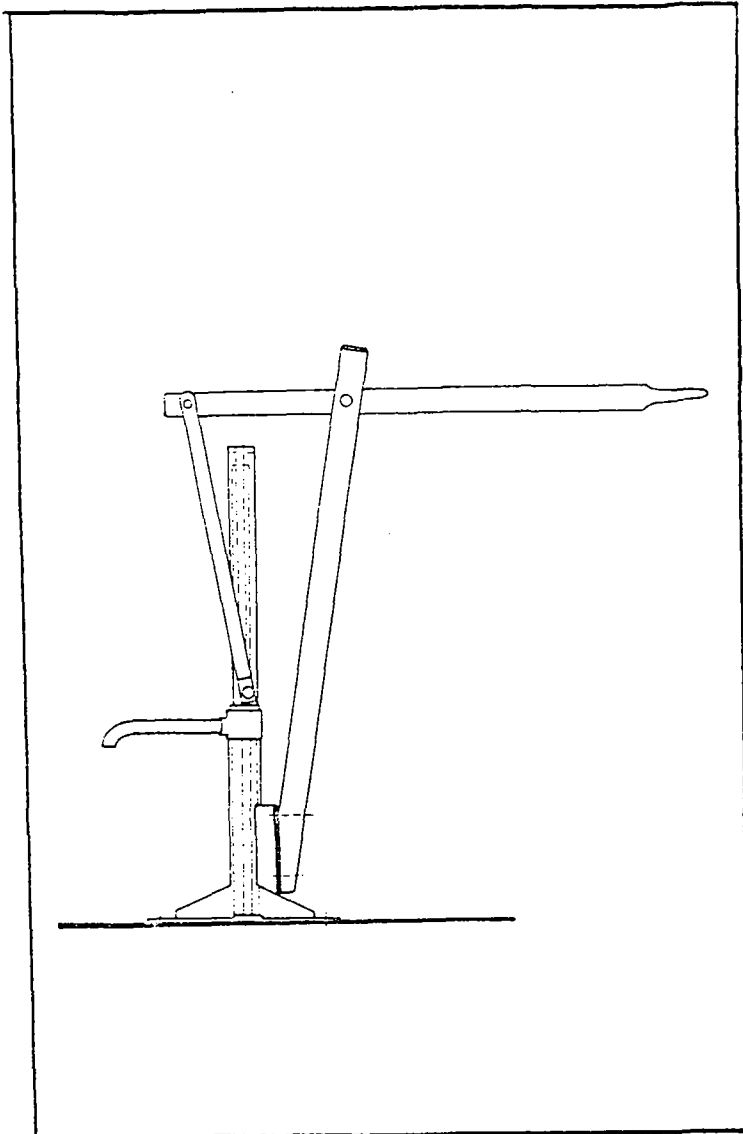
Phone: 557120/558128
Telex: 22341 atcoken
Cables: atcoken

KENYA HANDPUMP

SW

Africa

2



Description:

The Kenya handpump has a deep and shallow well design which differ only in the means of fixing the pump to the well. The shallow well model is usually fitted on to cement or wood covers of dug wells. For this, the pump is provided with a foot plate, reinforced by flanges.

The pumhandle is linked with two connecting rods to the pumprod. The upper part of the pump rod fits in a guidepipe, to limit lateral movement. Pump handle and upright are made of hard wood.

The cylinder is available in different sizes; extractable type. The cylinder is entirely made of brass, with ball valves.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
	100	4	178	7	1.27	28	15	50
	(and several other sizes)					(22 strokes /min.)		

Applications

Countries where used:

Kenya, Tanzania, Uganda, Sudan, Zambia, Mozambique, Ghane, Malawi, Upper Volta, Ethiopia, Pakistan and Guatemala

Pump Head

- . rod linkage
 Pump rod vertical reciprocating operation; three-pivot handle system.
 Variable stroke length. Guide pipe accommodates sliding rod pipe.
 - . pins, bearings, fasteners
 plain bearings
 - . materials
 steel, plate and wood
-

Connecting Assembly

- | | pumprod | material | weight | size | length |
|-------------|---------|----------|--------|------|--------|
| . drop pipe | | | | | |
-

Cylinder

- | | |
|--------------------------|-------------|
| . type | closed (4") |
| . material | brass |
| . plunger | |
| . cup seals | 3 leathers |
| . discharge valve type | ball |
| . suction valve type | ball |
| . weight | |
| . min. well casing diam. | 4" - 10" |

Atlas Copco Kenya Ltd.
P.O. Box 40090
Nairobi
Kenya

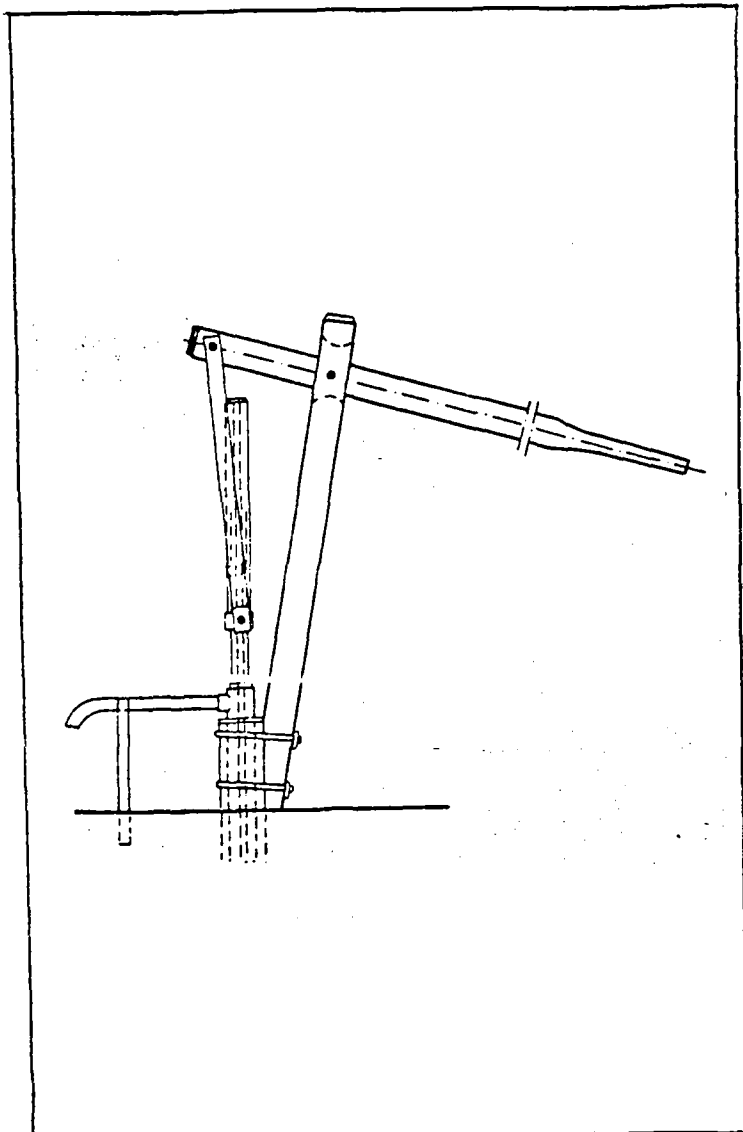
Phone: 557120/558128
Telex: 22431 atcoken
Grams: atcoken

Kenya

DW

Africa

3



Description:

The Kenya handpump has a deep and a shallow well design which differ only in the means of fixing the pump to the well.

The deepwell model is to be fitted directly on to the well casing of a borehole. The pump can be fitted to a 4"x10" casing with double U-bolts and nuts. The discharge pipe is secured with two supporting irons. The pump handle is linked with two connecting rods to the pumprod. The upper part of the pump rod fits in a guide pipe, to limit lateral movement. Pump handle and upright are made of hard wood.

The cylinder is available in different sizes, entirely made of brass with ball valves. All cylinders except the 100 mm (4") size are of the extractable type.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
	46	1½	178	7	0.32	7	60	200
	57	2¼	178	7	0.46	10	50	165
	70	2¾	178	7	0.68	15	25	80
	100	4	178	7	1.27	28	15	50

Applications

22 str/min.

Countries where used:

Kenya, Tanzania, Uganda, Sudan, Zambia, Mozambique, Ghana, Malawi, Upper Volta, Ethiopia, Pakistan and Guatemala

Pump Head

- . rod linkage
Hand-operated vertical reciprocating operation; three-pivot handle system;
Variable stroke length; guide pipe for pump rod.
- . pins, bearings, fasteners
plain bearings
- . materials
steel plate; wood

Connecting Assembly

- | | pumprod | material | weight | size | length |
|-------------|---------|----------|--------|------|--------|
| . drop pipe | | | | | |

Cylinder

- . type
open 1½" - 2¼" - 2½"
closed 4"
- . material
brass
- . plunger
- . cup seals
leathers (3)
- . discharge valve type; ball
- . suction valve type; ball
- . weight
- . min. well casing diam. 4" - 10"

Brown & Clapperton Ltd. (B & C)
P.O. Box 1582
Blantyre
Malawi

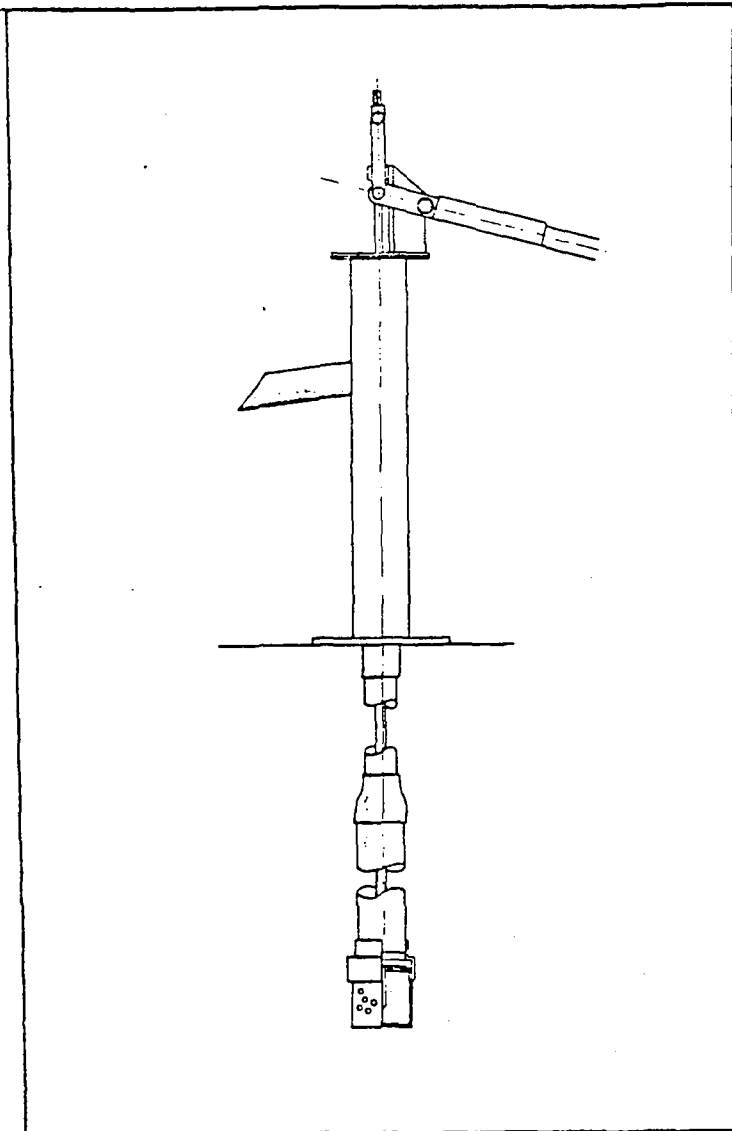
phone: 634677
telex: 4243
grams: 'BEANCE'

B and C Model I

DW

Africa

4



Description:

The B and C Model 1 is made from steel plate with individual sections welded together. The pumpbody is painted after fabrication. It has a three-pivot handle of the yoke type. Pump rod guide for maintaining operating alignment of pump rod. The handle is made of wood.

The pump head base has a foundation plate with a welded socket. The plate can be bolted onto the concrete well apron.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
Model 1	77	3	102	4	0.26	7	45-60	150-200

Applications

Countries where used:

Malawi

Pump Head

- rod linkage

Hand-operated vertical reciprocating operation; three-pivot system; rod guide for maintaining pump rod alignment; fixed stroke length

- pins, bearings, fasteners

- materials

fabricated from steel sections and plate; all parts except galvanised parts painted with red oxide

Connecting Assembly

		material	weight	size	length
• pumprod		bright mild steel	1.58 kg/m	166 mm Dia	3 m
• drop pipe		class 2 Gal BSP	1.03 Lbs/Ft	5/8" Dia	10 Ft
			5.05 kg/m	50 mm Bore	3 m
			3.39 Lbs/Ft	2" BSP	10 Ft

Cylinder

- type closed
- material brass
- plunger brass
- cup seals Neoprene
- discharge valve type Check
- suction valve type Check
- weight 7.9 kg, 17.38 Lbs
- min. well casing diam. 150 mm, 6 inches

Brown & Clapperton Ltd. (B & C)
 P.O. Box 1582
 Blantyre
 Malawi

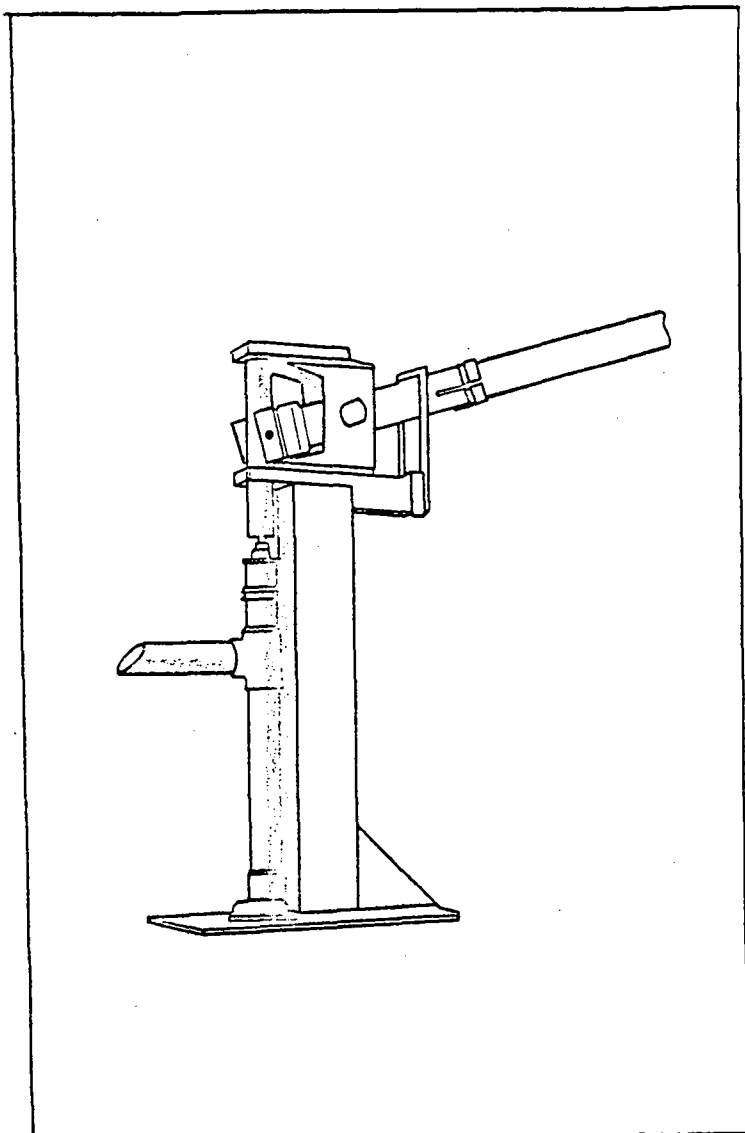
phone: 634677
 telex: 4243
 grams: 'BEANCE'

B and C Model II

DW

Africa

5



Description:

The B and C Model II is made from steel plate with all sections welded together. The pump body is painted after fabrication.

This pump model has a pivot handle of the guide- and - roller type. The rollers are attached to the vertical cast iron slide block.

The handle is made of wood. The pumpstand base has a foundation plate which can be bolted on to the concrete well apron.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
Model II	77	3	102	4	0.27	7	60-75	200-250

Applications

Countries where used:

Malawi

Pump Head

- . rod linkage
Hand operated; vertical reciprocating operation; one pivot,
guide and roller arrangement; fixed stroke length
- . pins, bearings, fasteners
heavy duty roller bearings at pivot point
- . materials
Mild steel, cast iron and stainless steel
fabricated from steel sections and plate;
all parts except galvanized parts painted with red oxide.

Connecting Assembly

. pumprod	material	weight	size	length
	bright mild steel	1.58 kg/m	16 mm Dia	3 m
. drop pipe	class 2 gal B.S.P.	1.04 lbs/ft	5/8" Dia	10 ft
		5.05 kg/m	50 mm bore	3 m
		3.39 lbs/ft	2" B.S.P.	10 ft

Cylinder

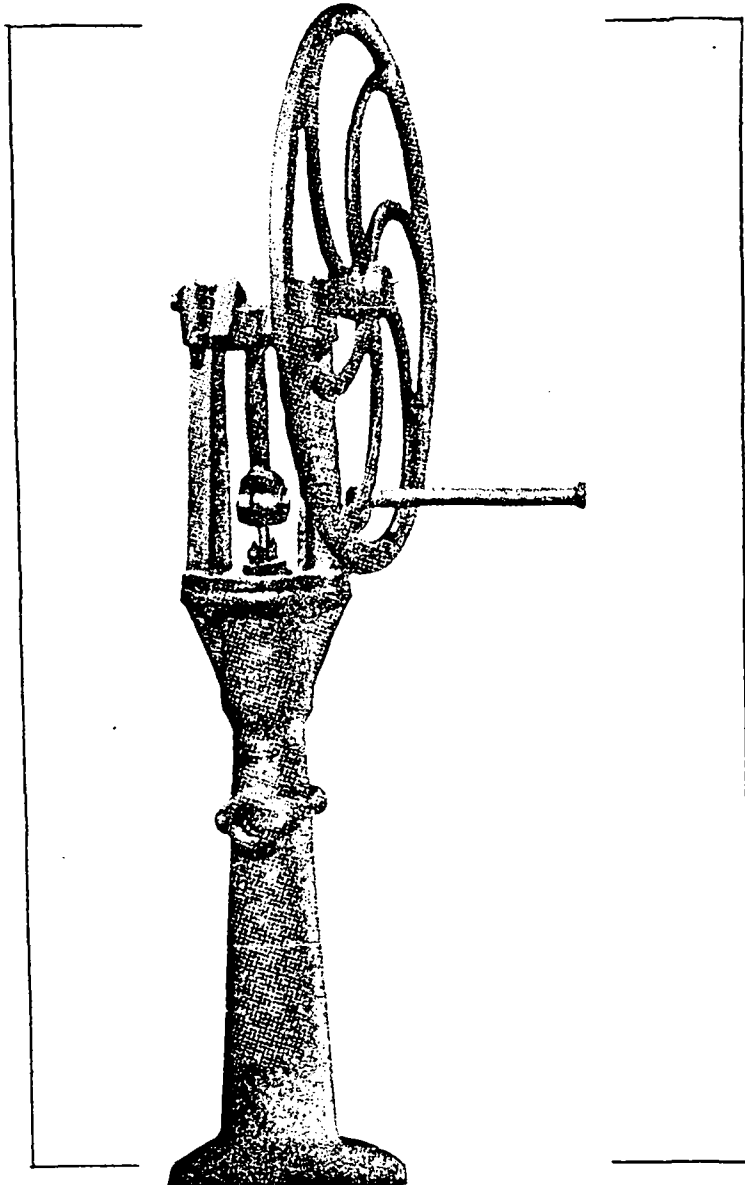
- . type closed
- . material brass
- . plunger brass
- . cup seals Neoprene
- . discharge valve type Check
- . suction valve type Check
- . weight 7.9 kg, 17.38 lbs
- . min. well casing diam. 150 mm, 6 inches

Ets. Louis Guillaud et Cie.
 31, rue Pierre Parent
 Casablanca
 Maroc

phone: 305971
 telex: 24793 Casablanca
 grams: Guillauder-Casablanca

Guillaud

DW	Africa	6
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Description:

The pump stand is of cast iron, and supports a flywheel with handle. The flywheel drives the pump rod through a connecting rod and crank. The pump rod is guided by a stuffing box.

The crank rotates in two ball races. Both lift and force application. The pump can be fitted with two flywheels to enable pumping water from greater depths.

Cylinder diameter selection is roughly as follows: for wells of 4 to 10 metres depth: 4"; 10 to 15 metres: 3½"; 15 to 20 metres: 3"; and 20 to 30 metres: 2½".

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
		4"	100		1.80	33	25-45	
		3½"						
		3						
		2½"						

Countries where used:

Pump Head

- . rod linkage

Hand-operated; rotating flywheel; fixed stroke length

- . pins, bearings, fasteners

two ball races in crank stand

- . materials

cast iron

steel fittings

- . weight: (approx.) 95 kg

Connecting Assembly

- | . pumprod | material | weight | size | length |
|-------------|------------------|--------|------|--------|
| . drop pipe | galvanised steel | | | |

Cylinder

- . type
- . material cast iron
- . plunger
- . cup seals
- . discharge valve type
- . suction valve type
- . weight
- . min. well casing diam.

Siscoma
P.O. Box 3214
Dakar
Senegal

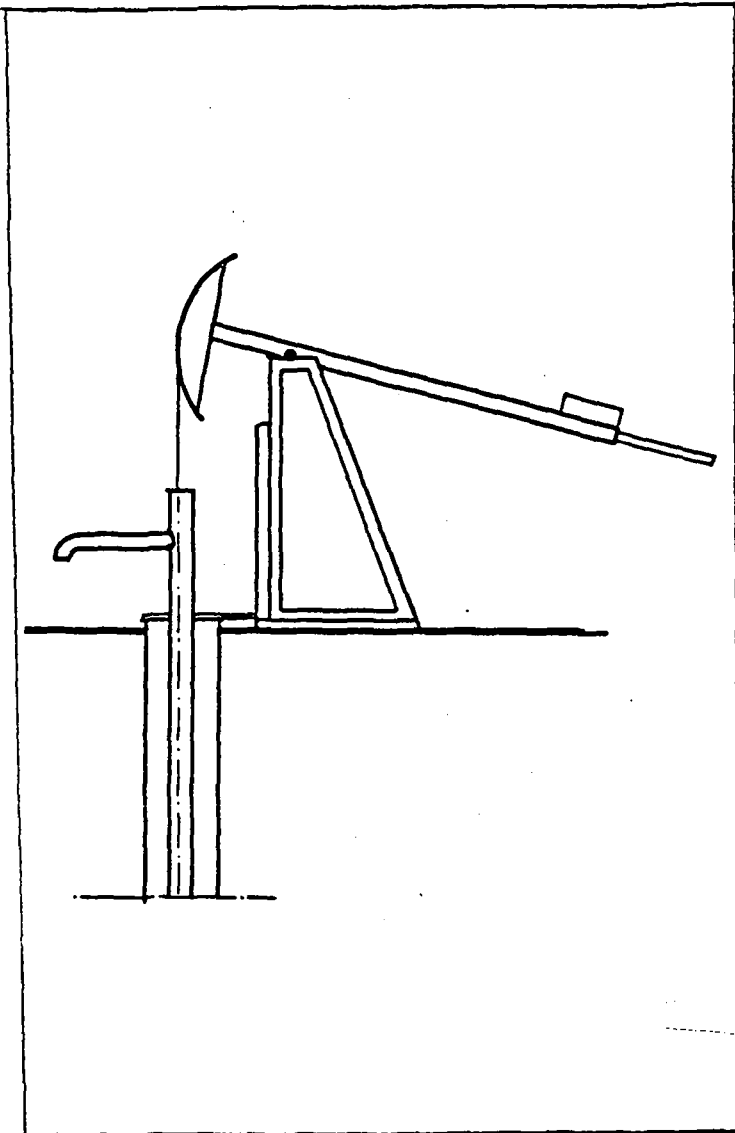
phone: 511036
telex: 7781 SG SISCOMA POUT
grams: SISCOMA DAKAR

Siscoma

DW

Africa

7



Description:

The Siscoma handpump is manufactured from steel and plate. A cable on a quadrant is connected to the plunger in the cylinder. The cylinder is of the extractable (open) type. The pump has one pivot, the handle is of heavy construction in order to counterbalance the cable's weight. The pumphead is to be placed not on top of the well casing, but beside it. The pump can be operated by up to 4 persons jointly.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
		2				25	70	
		3				58	30	

Applications

Countries where used:

Senegal, Somalia, Gambia, Guinea Bissau, Mauritania, Mali

Pump Head

- . rod linkage

Hand-operated; vertical reciprocating movement;
Variable stroke length

- . pins, bearings, fasteners

- . materials

Connecting Assembly

- | | material | weight | size | length |
|--------------------|----------|--------|------|--------|
| . pumprod
cable | | | | |
| . drop pipe | | | | |

Cylinder

- . type open
- . material
- . plunger
- . cup seals
- . discharge valve type
- . suction valve type
- . weight
- . min. well casing diam. 10"

National Pump and Engineering Works
 8 Garland Street Ophinton
 P.O. Box 70, Booyens, Tvl.
 Johannesburg, South Africa

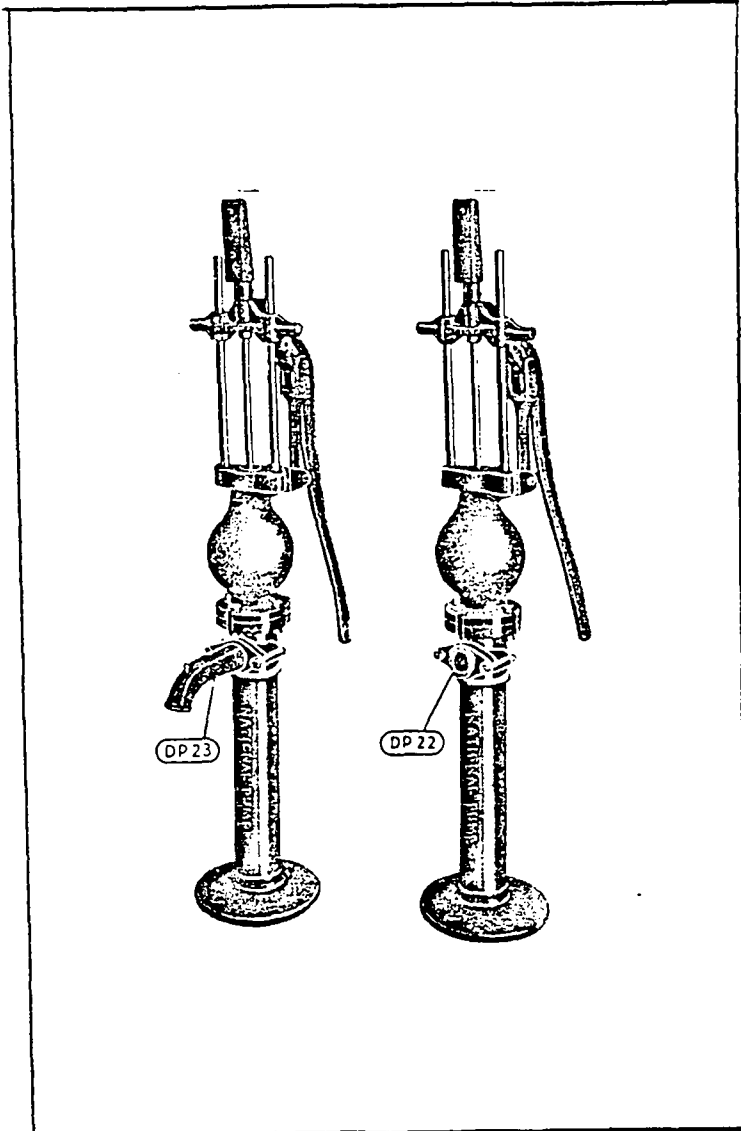
phone: 834-4561/5
 telex:
 grams: NATPUMP Booyens

National Pump

DW

Africa

8



Description:

The National Pump models DP 22 and DP 23 are of cast iron. These pumps use a three-pivot type of handle. The pump rod reciprocates guided by a yoke which slides on two guide pillars. The handle pivot allows a choice of three positions (holes), so that the mechanical advantage can be varied.

Various cylinder sizes are available. Model DP 23 is suitable for water delivery through the spout, model DP 22 is suitable for force duty to deliver water at an elevation higher than the pump.

The pumpbase 10^{1/4}" diameter has 4^{3/8}" ϕ holes on 8^{3/4}" circle

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
DP 22 and DP 23		1 ^{3/4}		6/8/10		11		130
		2			14		100	
		2 ^{1/2}			23		70	
		3			33		45	
		3 ^{1/2}			45		35	
	4			59		25		

Applications

30 str/min.

Countries where used:

South Africa

Pump Head

- . rod linkage

Hand-operated; vertical reciprocating operation; three-pivot system;
double guides for pumprod alignment; variable stroke length; variable handle
pivot positions for adjustment of mechanical advantage.
pins, bearings, fasteners

- . materials

Connecting Assembly

- | . pumprod | material | weight | size | length |
|-------------|----------|--------|------|--------|
| . drop pipe | | | 5/8" | |

Cylinder

- . type
- . material
- . plunger
- . cup seals
- . discharge valve type
- . suction valve type
- . weight
- . min. well casing diam.

National Pump and Engineering Works
 8 Garland Street Ophirton
 P.O. Box 70, Booyens, Tvl.
 Johannesburg, South Africa

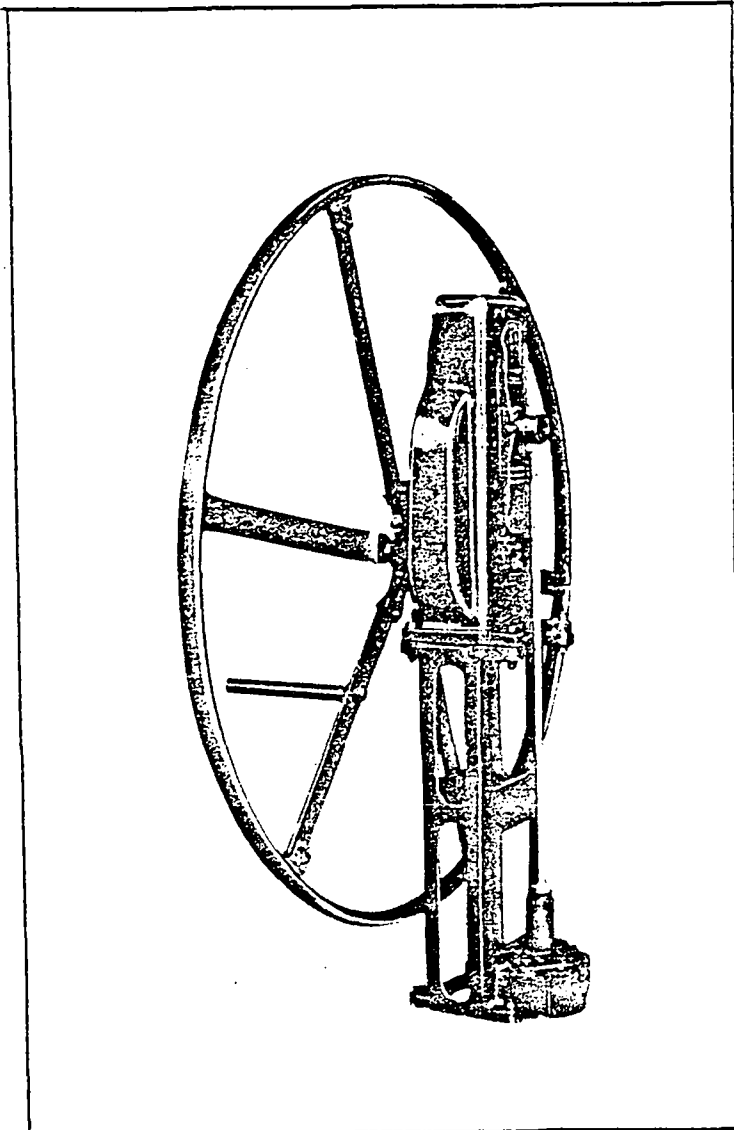
Phone: 823-4561/5
 Telex:
 Grams: NATPUMP Booyens

National Pump

DW

Africa

9



Description:

The National Pump rotary model has an externally placed gearing which allows removal of pump rod and cylinder assembly without removing the drive mechanism.

The plunger in the cylinder is fitted with two cup leathers and rubber expander rings.

The pump head is of cast iron; it supports the flywheel which drives the pump rod via a connecting rod and crank.

The moving components are all oil-bath lubricated from an internal reservoir. A sliding pumprod seal in a cylinder under the crankcase is provided for double acting.

The pump head is bolted to a concrete apron covering the well head.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
rotary		1 3/4		6		8		375
		2		6		10		300
		3		6		22		160
		4		6		39		100
		5		6		61		65

Applications

Countries where used:

Pump Head

- . rod linkage
 - Hand-operated; rotating flywheel operation; fixed stroke length
- . pins, bearings, fasteners
 - two ball races fitted in the crankcase
 - lubrication from internal oil reservoir
- . materials
 - cast iron with forged steel crankshaft and other steel fittings.

Connecting Assembly

- | | pumprod | material | weight | size | length |
|-------------|---------|----------|--------|------|--------|
| . drop pipe | | | | | |

Cylinder

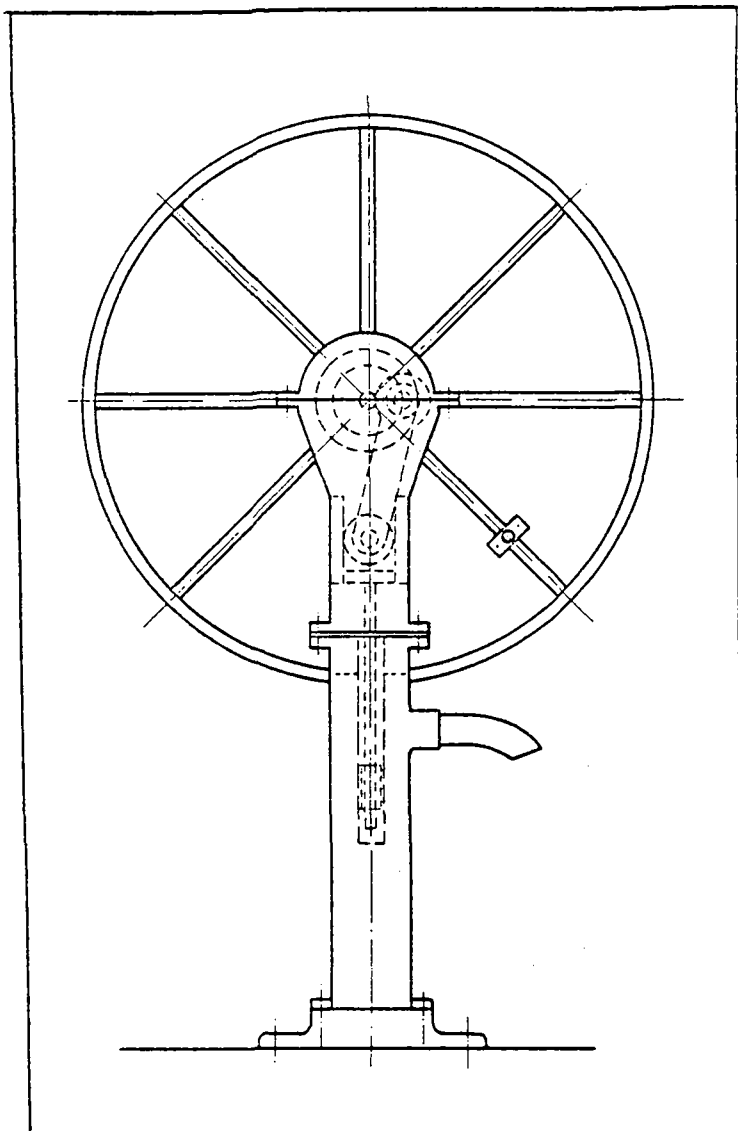
- . type different sizes
- . material
- . plunger
- . cup seals two leathers
- . discharge valve type
- . suction valve type
- . weight
- . min. well casing diam.

Stewart and Lloyds
 Windmill Division
 P.O. Box 74, Vereniging 1930
 South Africa

phone: 4-5133
 telex: 8-0480
 grams: Tubes

Stewart and Lloyds

DW	Africa	10
----	--------	----



Description:

The Stewarts and Lloyds pump model F104 has a flywheel drive; stroke length is 100 mm (4"). All the rotating parts are fitted in 'sealed for life' casings with ballbearings. All the oscillating parts work in dry bearing bushes (P.T.T.E.). No lubrication is required. The main pump stand is of steel, and the crankcase is a high duty iron casting with an inspection hole and cover. All setscrews on the crankcase are of the balton-head 'Allen' type; they can only be removed by using the appropriate Allen key. The rollers are of J.G. iron and run on replacable steel guides. The box is 13" diameter tapped 2" BSP for the rising main; the model has 3/4" diameter foundation bolt holes on 11" PCD. The delivery outlet is 1 1/2" (40 mm) diameter. A sliding pump rod seal in a cylinder housing below the crank is provided for double-acting pumping.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
F 104	65					9	37	
	76					13	26	
	98					17	19	
	102					22	14	
	115					28	11	
	125					35	9	

Applications

Countries where used:

South Africa

Pump Head

- . rod linkage
Hand-operated; rotating flywheel; fixed stroke length

- . pins, bearings, fasteners
two ball races mounted in the crank case sealed for life.
All the oscillating parts work in dry bearing *bushes*

- . materials
Cast iron with forged steel crankshaft and other steel fittings

Connecting Assembly

- | . pumprod | material | weight | size | length |
|-------------|----------|--------|------|--------|
| . drop pipe | | | | |

Cylinder

- . type

- . material

- . plunger

- . cup seals

- . discharge valve type

- . suction valve type

- . weight

- . min. well casing diam.

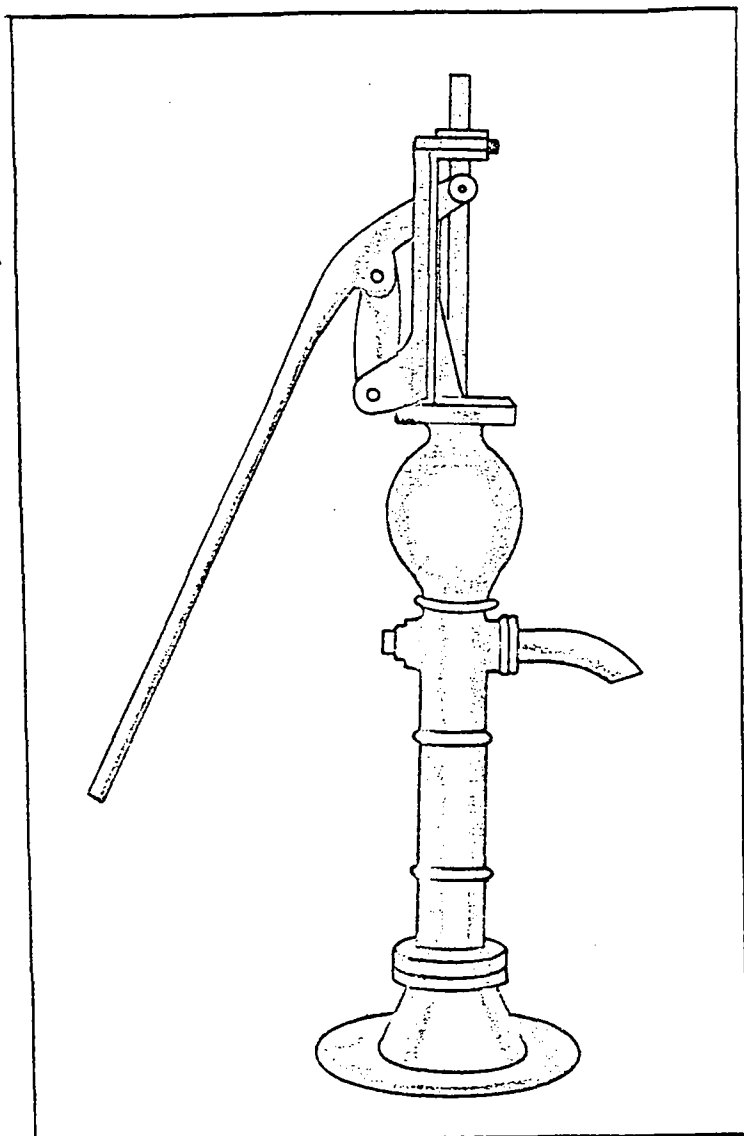
Stewarts and Lloyds
 Windmill Division
 P.O. Box 74; Vereeniging 1930
 South Africa

phone: 4-5133
 telex: 8-0480
 grams: 'Tubes'

DW

Africa

11



Description:

The S and L F100 is mainly of cast iron components.

This pump uses a three-pivot handle arrangement. It has a rod guide for alignment of the pump rod.

The cylinder is available in different sizes. The pumpstand base is bolted to a concrete well apron.

The pump can be used for lift and force duty. An air chamber is provided to smooth out the water delivery rate.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
F 100	51					14	30	
	65					23	21	
	76					33	14	
	90					45	11	
	100					59	8	

Applications

Countries where used:

South Africa

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation; three-pivot handle system;
rod guide for pumprod alignment; variable stroke-length.

- . pins, bearings, fasteners

plain bearings

- . materials

mainly cast iron

Connecting Assembly

- | | material | weight | size | length |
|-------------|----------|--------|------|--------|
| . pumprod | | | | |
| . drop pipe | | | | |

Cylinder

- . type

- . material

- . plunger

- . cup seals

- . discharge valve type

- . suction valve type

- . weight

- . min. well casing diam.

China National Machinery Import
and Export Corporation, Kwangtong Branch
61, Yanjiang, Kwangchow
China •

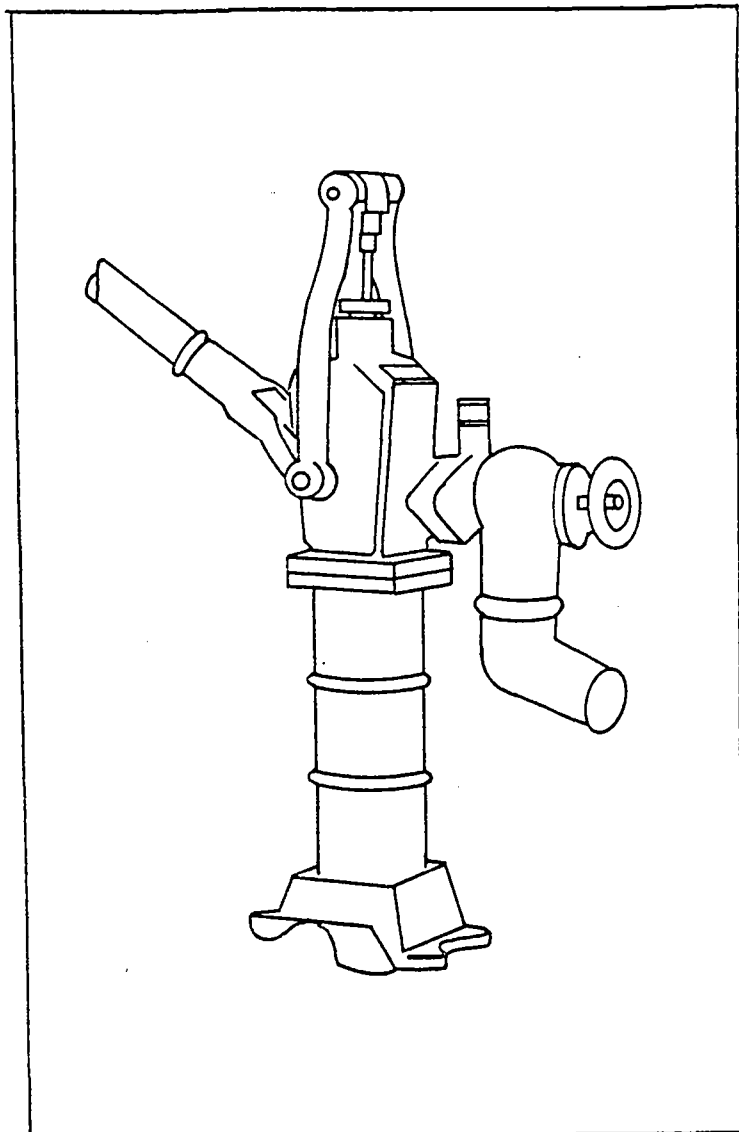
Golden Harvest

grams: 'MACHIMPEX' Kwangchow

SW

Asia

1



Description:

The Golden Harvest SB 40-1 is mainly of cast iron components. The pump has a three-pivot handle system (yoke type) with a rod guide stuffing box.

The pump rod is chromium plated, the cylinder has a porcelain enameled lining.

The pump is suitable for both lift and force duty. The pump is mounted on a pillar constructed separately, to the desired height for the pump users. Special deepwell configurations of the pump can be provided.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
SB 40-1	84	3.3	150	6	0.8	32 (at 40str/ min.)	9	30

Applications

Countries where used:

China

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation;
three-pivot handle drive system; stuffing box/rod guide arrangement
- . pins, bearings, fasteners
6 plain bearings
- . materials
mainly cast iron; stuffing box/rod guide of brass
Pump rod chromium plated
- . weight 17.5 kg

Connecting Assembly

- | . pumprod | material | weight | size | length |
|-------------|-----------------------------------|--------|------|--------|
| . drop pipe | not supplied by pump manufacturer | | | |

Cylinder

- . type housed in pumpstand
- . material cast iron with porcelain enameled cylinder lining
- . plunger cast iron
- . cup seals rubber (1 No)
- . discharge valve type flapper
- . suction valve type flapper
- . weight
- . min. well casing diam.

China National Machinery Import
and Export Corporation, Kwantong Branch
61, Yanjiang, Kwangchow
China

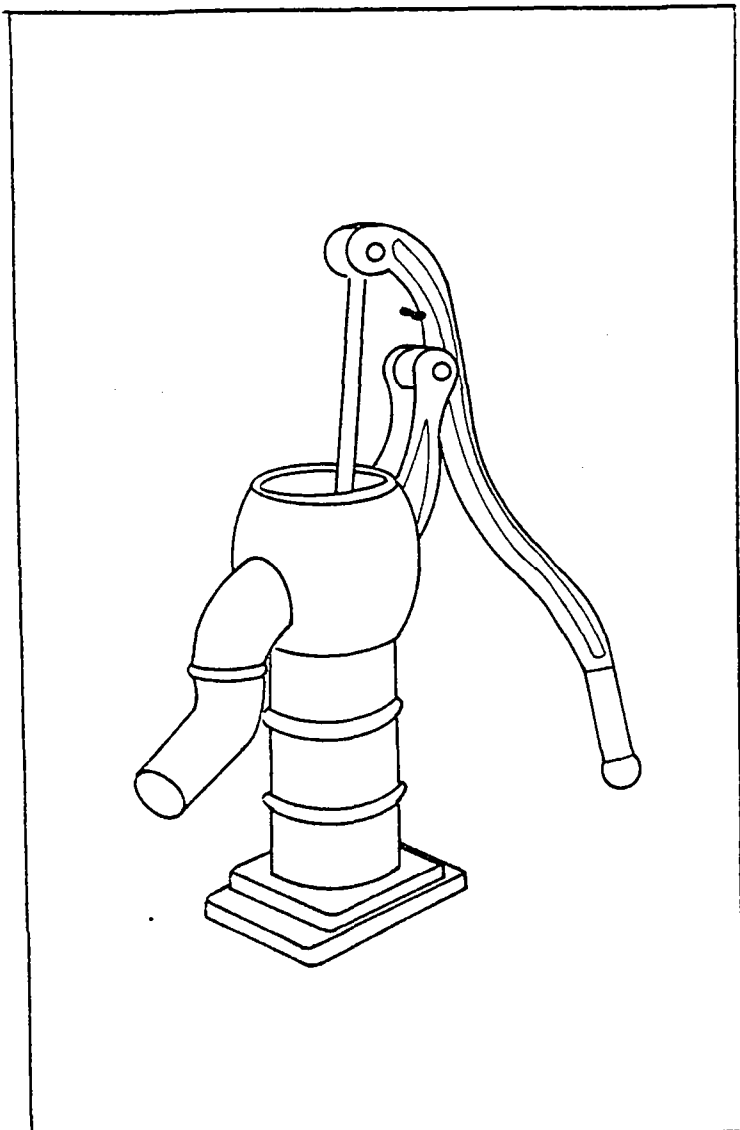
Grams: 'MACHIMPEX'
Kwangchow

Golden Harvest

SW

Asia

2



Description:

The Golden Harvest SB 38-1 is mainly of cast iron. The pump uses a two pivot system, with no special provision for the pump rod alignment.

The pump is suitable for shallow wells up to 6 m depth only. It is mounted on a brick or wooden stand, or a concrete pillar constructed separately.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
SB 38-1	100	4	160		1.1	50 (at 45 str /min.)	8	26

Applications

Countries where used:

China

Pump Head

- . rod linkage
Hand operated; vertical reciprocating operation; two-pivot handle system;
variable stroke length.
- . pins, bearings, fasteners
plain bearings
- . materials
cast iron
- . weight: 18 kg

Connecting Assembly

- | . pumprod | material | weight | size | length |
|-------------|--|--------|------|--------|
| . drop pipe | suction pipe not supplied by pump manufacturer | | | |

Cylinder

- . type in pump stand
- . material cast iron; porcelain enameled lining
- . plunger cast iron
- . cup seals rubber (1)
- . discharge valve type flapper
- . suction valve type flapper
- . weight
- . min. well casing diam.

The Charotar Iron Factory
 Mahatma Gandhi Road
 Opp. New Ramji, Gujarat Mandir
 India 388001

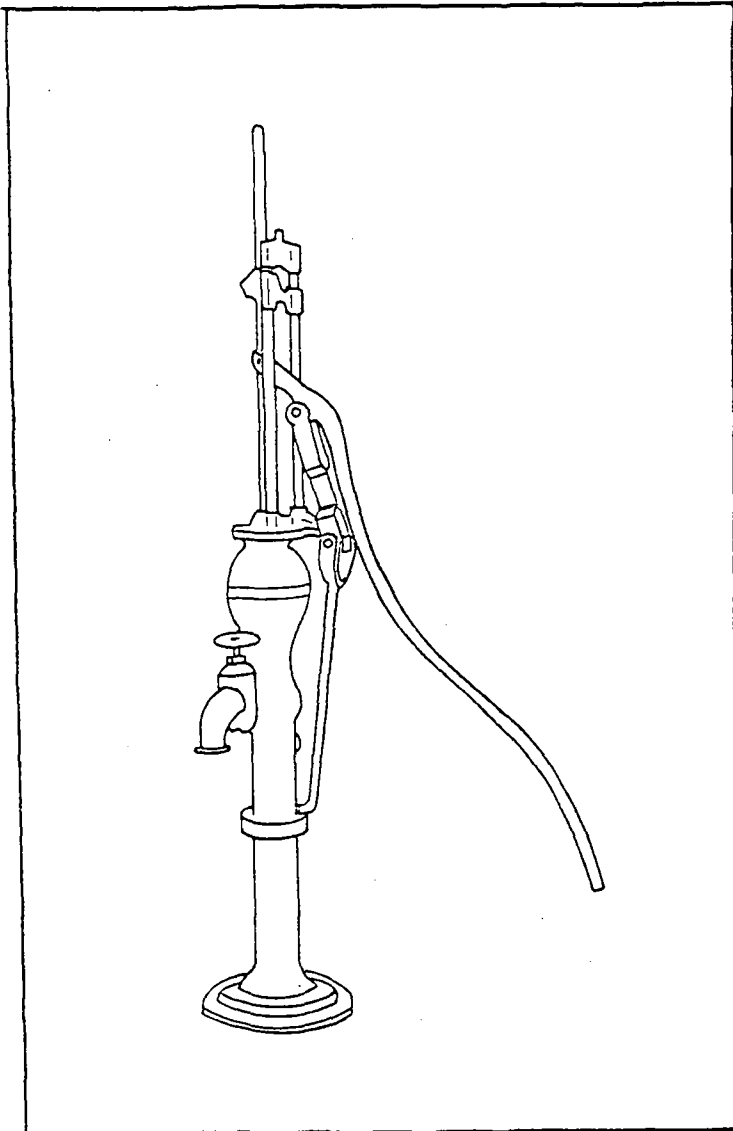
phone: 172-3172 & 3079
 telex:
 grams: MAHASAGAR

Mahasagar

DW

Asia

3



Description:

The Mahasagar handpump is mainly of cast iron; it is suitable for both lift and force duty; an air chamber is provided to even out the discharge of water.

The pump rod is guided by a yoke sliding on two guide pillars. The handle has a three-pivot arrangement.

The type I pump has a handle and bracket made of mild steel; the flange has an additional support which is not provided in type II.

The cylinder is of brass, and is available in various sizes. The pumpstand is bolted to the platform.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
Type I	65	2½		8		30	60	
Type II	76	3				42	45	
	89	3½				57	30	
	100	4				74	15	

Applications

(at 50 str/min)

Countries where used:

India

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation;
three-pivot system; double guide rods for pump rod alignment;
stuffing box is provided; variable stroke length
- . pins, bearings, fasteners
- . materials
cast iron

Connecting Assembly

- | | material | weight | size | length |
|-------------|----------|--------|------|--------|
| . pumprod | | | | |
| . drop pipe | | | | |

Cylinder

- . type
- . material brass
- . plunger
- . cup seals
- . discharge valve type
- . suction valve type
- . weight
- . min. well casing diam.

100 mm (4") for 3" ID
150 mm (6") for 4" ID

Dandekar Brothers
 Shivajenagar, Sangli
 Maharashtra
 India

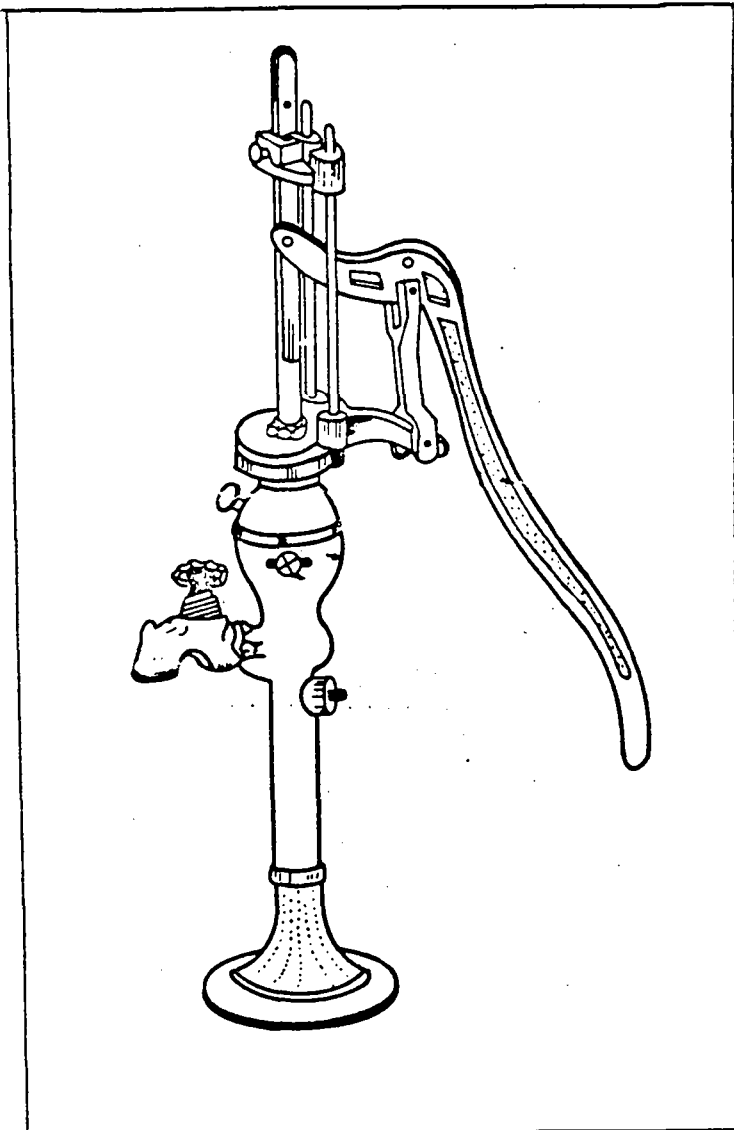
phone: 99-118
 telex:
 grams: 'DANDEKAR BROS'

Jal Javahar

DW

Asia

4



Description:

The Jal Javahar pump is mainly of cast iron. It is a lift and *force* pump; an air chamber is provided to even out the discharge of water.

The pump rod is guided by a yoke sliding on two guide pillars.

The handle arrangement is of the three-pivot system. The normal stroke length is 6" but can be adapted by selecting another position for the handle pin.

The pumpstand is bolted to the well platform. The pumpstand base is tapered to fit over 1½" suction pipe.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
		3		6				150

Applications

Countries where used:

India

Pump Head

- . rod linkage
 - Hand-operated; vertical reciprocating movement; 3 pivot system;
 - Double guide rods for maintaining pump rod alignment;
 - stuffing box rod guide; variable stroke length
- . pins, bearings, fasteners

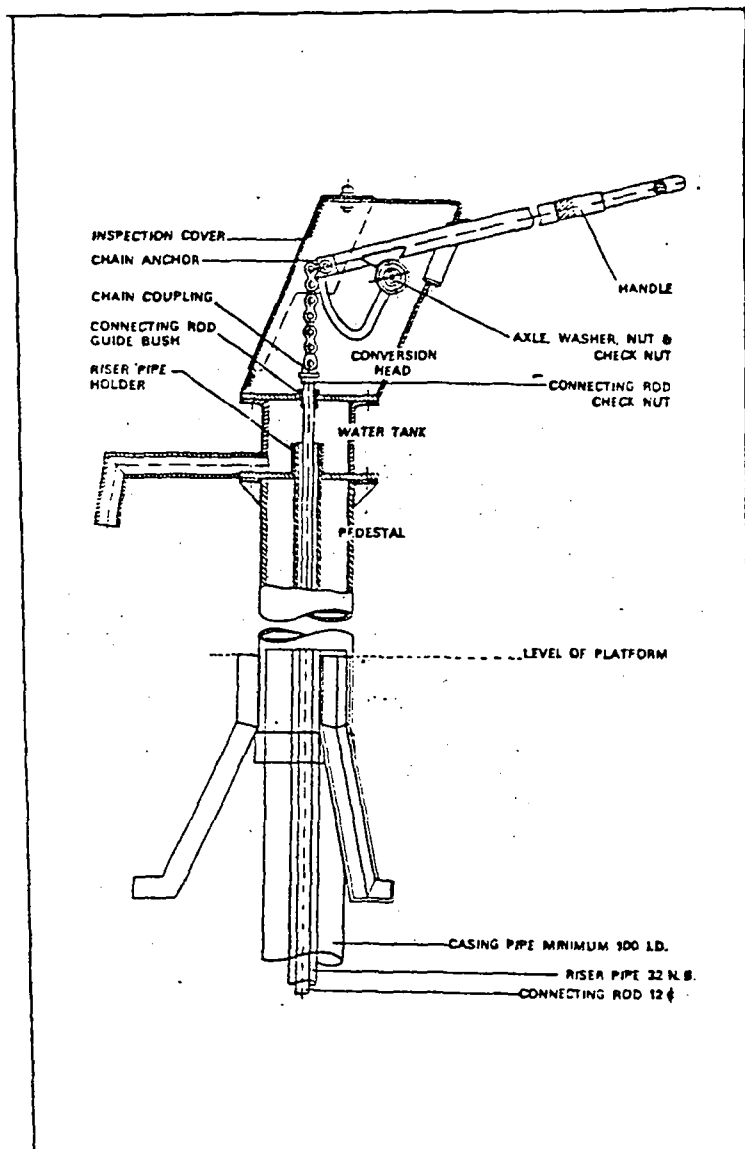
- . materials

Connecting Assembly

- | pumprod | material | weight | size | length |
|-------------|----------|--------|------|--------|
| . drop pipe | | | 1½" | |

Cylinder

- . type
- . material
- . plunger
- . cup seals
- . discharge valve type
- . suction valve type
- . weight
- . min. well casing diam.



Description:

The India Mark-II Pump Head Assembly is fabricated from steel plate sections that are bolted together. Additional lock nuts are provided. The chain-and-quadrant system is used to provide pumprod alignment avoiding lateral movements. The main pivot housing is filled with grease and fitted with single side shielded ball bearings.

The handle is of heavy and sturdy construction. It is designed to give a mechanical advantage of 8:1. It will counter-balance the pump rod weight for a cylinder depth of about 25 metres.

The cylinder has a cast iron body fitted with a brass liner and painted outside with red enamel paint. The inside cylinder assembly components are manufactured from gun metal and naval brass. The cup washers are of chrome tanned leather. The valve seatings are made of acrylic rubber.

The pump stand base is to be grouted in 1:2:4 cement concrete up to the level of platform indicated in the diagram.

The Mark II-75 model has a 1 1/2" dia N.B. spout fitted to the water tank.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
Mark II	63.5	2 1/2"	100	4"	0.32	13	60	200
Mark II-75	75		100		0.50	20 40 str/min	40	

Countries where used:

India, Burma, Bangladesh, Philippines; Haiti, West Indies; Sudan, Zaire, Ghana, Upper Volta, Togo, Benin, Central African Republic, Niger, Guinee, Gambia, Mali; Ethiopia, Uganda, Kenya, Nigeria, Sierra Leone, Botswana

Pump Head Assembly

. rod linkage

Hand-operated; vertical reciprocating operation; variable stroke length; mechanical advantage approx. 8:1. (handle can be supplied with differential weight on the two sides of the fulcrum point)

. pins, bearings, fasteners

Uses only one main handle pivot with a chain and quadrant for linkage to the pump rod; pivot has two sealed ball bearings each 47.0 mm OD x 20.1 mm ID; lubrication of chain required at generous intervals.

. materials

Fabricated from steel plate sections. Pump head can be supplied fully hot dip galvanised or painted as per customer's requirement. In the painted pumps, water tank is hot dip galvanised and other parts coming in contact with water are coated with epoxy paint.

Connecting Rod Assembly

pumprod	material	weight	size	length
	steel, electro-galvanised, zinc passivated	0.93 kg/m	12 mm dia	3.0 m
drop pipe	steel, hot dip galvanised or B-Class GI-pipe	3.2 kg/m	1½" (32 mm N.B.)	3.0 m

Cylinder

. type closed

. material Cast iron sleeve fitted inside with seamless solid drawn brass liner having excellent inner surface finish. Ends of Brass liner flared.

. plunger gun metal/naval brass

. cup seals leathers chrome-tanned (2 Nos.)

. discharge valve type puppet type (winged)

. suction valve type puppet (winged)

. weight Mark-II 6.4 kg; Mark-II-75 8.8 kg

. min. well casing diam. Mark II 100 mm (4"); Mark II 75 115 mm (4½")

Balaji Industrial Agricultural Castings
4-3-140, Hill Street, Ghasmandi
P.O. Box No. 1634
Secunderabad-3
India

phone: 73210
telex:
grams: 'BOREPUMPS'

Central India Engineering Co.
2153/5 Hill Street
Ranigunj
Secunderabad-500.003 A.P.
India

phone: 76831
telex:
grams: 'CIECO'

Inalsa
19 Kasturba Ghandi Marg
P.O. Box 206
New Delhi - 110001
India

phone: 352317
telex: 31-3536
INAL IN
grams: 'INALSA'

Meera Industries
1-7-1056/B
Industrial Area, Azamabad
Hyderabad - 500020
India

phone: 63 252
telex:
grams: 'CIECO'

Charotar Iron Factory
Anand Sojitra Road
Anand - 388001 Gujanat
India

phone: 172 1679
telex:
grams: 'MAHASAGAR'

M/s Richardson & Crudass (1972) Ltd.
(A Government of India Undertaking)
First Line Beach
P.O. Box No. 1276
Madras - 600 001
India

phone: 22401
telex: 041-7128
grams: 'IRONWORKS'

Sholapur Well Service
560/59 South Sadar Bazaar
Civil Lines
Sholapur - 413003 Maharashtra
India

phone: 2583
telex:
grams: WELLSERV
413003

Lifetime Products Corporation
 Industrial Area
 P. O. Box 102
 Jodhpur, India

phone: 21130, 22574

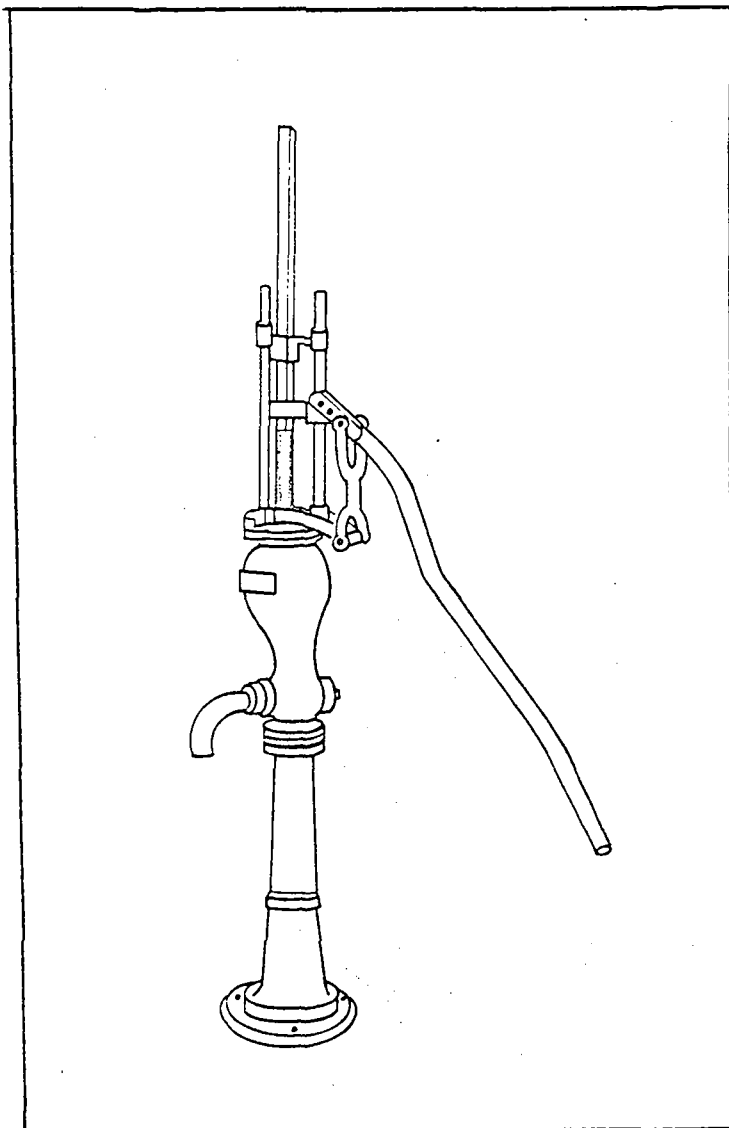
gram: LIFETIME

Lifetime

DN

Asia

6



Description:

The Lifetime AH pump model is of cast iron, with the cylinder of extruded brass.

The pump is suitable for lifting water from depths up to 60 m; also for force pumping to a height of 7.5 m. The pump has an air chamber for evening out the discharge of water.

The pump rod is guided by a yoke sliding on two guide pillars.

The handle operates on a three-pivot system with adjustable setting for mechanical advantage.

Electro-galvanised pump rod sections are supplied (12 mm dia) to a length of 9 feet or 10 feet complete with couplings. The pump stand is bolted to the well platform.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
AH-1	63.5	2½		8		30		200
AH-4	76	3		8		43		125

Applications

40 str/min

Countries where used:

India (Rajasthan)

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation;
three pivot system; double guide rods for pump rod alignment

- . pins, bearings, fasteners

- . materials
Cast iron

Connecting Assembly

- | | material | weight | size | length |
|-------------|------------|--------|-------|-----------|
| . pumprod | galvanized | | 12 mm | 9-10 feet |
| . drop pipe | steel | | | |

Cylinder

- . type closed

- . material brass

- . plunger brass

- . cup seals 2 leathers

- . discharge valve type poppet

- . suction valve type poppet

- . weight

- . min. well casing diam. 4" (100mm)

Lifetime Products Corporation
 Industrial Area
 P. O. Box 102
 Jodhpur, India

phone: 21130, 22574

gram: LIFETIME

Lifetime

DW

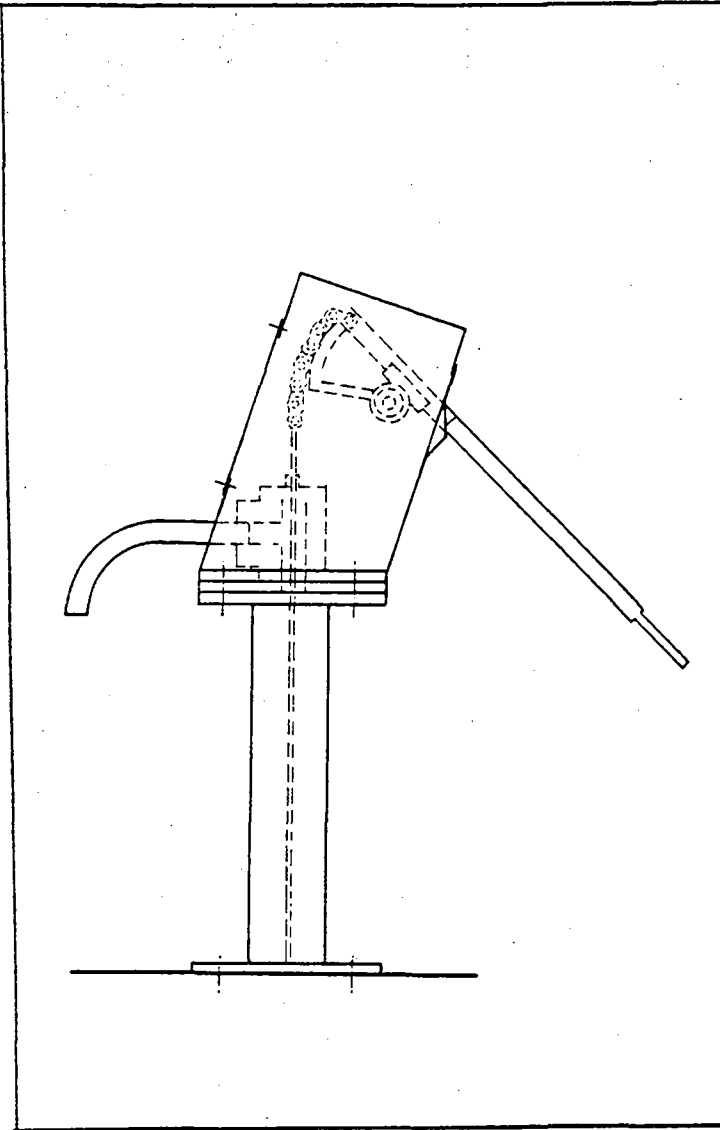
Asia

7

Description:

The Lifetime deepwell pump is fabricated from steel plate. A chain and quadrant system is used to provide pump rod alignment; sealed ball races are used for the main pivot. A stuffing box is provided; the pump is suitable for lift and force duty. The cylinder is of extruded brass.

The pumpstand base is bolted to the well apron.



Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
deepwell						30		200

Applications

40 str/min

Countries where used:

India (Rajasthan)

Pump Head

- . rod linkage
Hand operated; vertical reciprocating operation;
variable stroke length;
stuffing box/rod guide arrangement
- . pins, bearings, fasteners
One main handle pivot with a chain-and-quadrant linkage;
pivot has two sealed ball races
- . materials
Fabricated from steel sections

Connecting Assembly

- | . pumprod | material | weight | size | length |
|-------------|------------|--------|------|--------|
| | galvanized | | | |
| . drop pipe | steel | | | |

Cylinder

- . type closed
- . material brass
- . plunger brass
- . cup seals 2 leathers
- . discharge valve type poppet
- . suction valve type poppet
- . weight
- . min. well casing diam. 4" (100mm)

Senthil Engineering Co.
 49 A/21 Kamaraja Road
 Tiruppar - 4 Coimbatore
 India

phone:
 telex:
 grams:

Senthil

DW

Asia

8

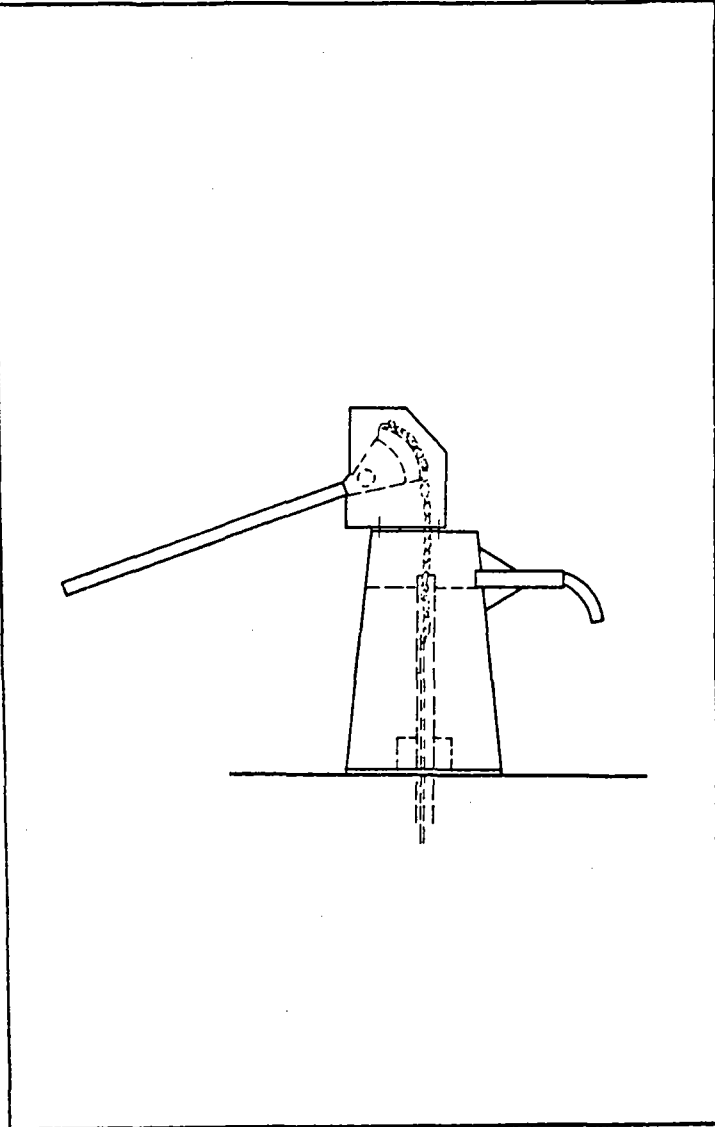
Description:

The Senthil pump is fabricated from steel plate sections bolted together.

A chain and quadrant system is used for pumprod alignment. Sealed ball races serves for the main pivot.

The cylinder is cast iron with a brass lining.

$\frac{1}{2}$ " diameter pumprod and $1\frac{1}{4}$ " drop pipe (both galvanised) are used to operate the $2\frac{1}{2}$ " diameter cylinder.



Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
		2½						

Applications

Countries where used:

India

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation;
variable stroke length
- . pins, bearings, fasteners
Main handle pivot with a chain-and-quadrant linkage;
pivot has two sealed ball bearings
- . materials
Steel plate sections

Connecting Assembly

	pumprod	material	weight	size	length
.		galvanised		1½"	
.	drop pipe	steel			
		galvanised		1½"	
		steel			

Cylinder

- . type closed
- . material cast iron with brass lining
- . plunger brass
- . cup seals two leathers
- . discharge valve type poppet (T)
- . suction valve type poppet (T)
brass foot valve (poppet T)
- . weight
- . min. well casing diam. 4" (100 mm)

Bandung Pump

Description:

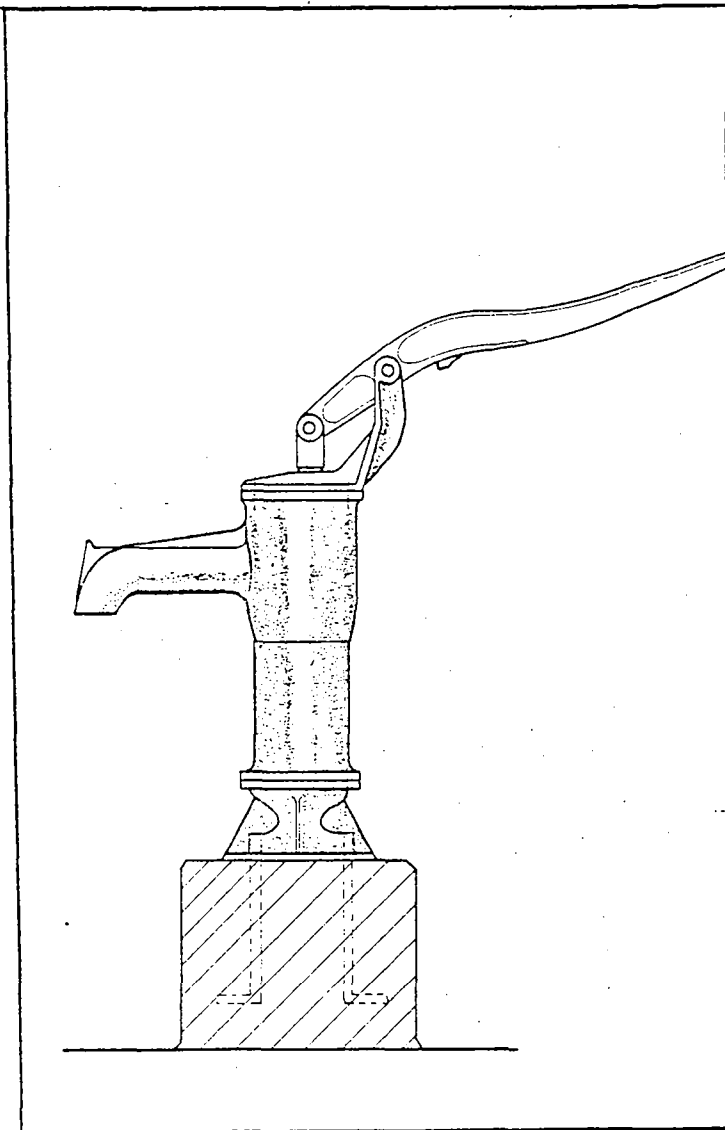
The Bandung handpump is a shallow well pump which has been developed for local manufacture in Indonesia. It is mainly made of grey cast iron components.

A two-pivot handle arrangement is used *with no special provision* for the pumprod alignment. Two steel pins serve as pivots.

The handle is of mild steel. The pump rod is 5/8" dia steel; drop pipe is 1 1/2" galvanised iron.

The cup seal is a single natural rubber cup. The cylinder is lined with porcelain enamel.

The pumpstand is painted with a two layer composite. It is bolted with four anchor bolts to the concrete pillar or well cover placing the pump at a sufficient height for the pump users.



Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
	96		100		0.7	28 (40 str/mm)	7	

Applications

Countries where used:

Indonesia

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation;
two-pivot system; variable stroke length.
mechanical advantage 5:1
- . pins, bearings, fasteners
Two-pivot handle; two plain bearings; stainless steel pins;
lubrication holes provided
- . materials
grey cast iron

Weight: 23 kg

Connecting Assembly

	pumprod	material	weight	size	length
		steel		5/8"	
	drop pipe	galvanised iron		1 1/4"	6 m

Cylinder

- . type shallow well
- . material steel cylinder lining porcelain enameled
- . plunger cast iron
- . cup seals natural rubber (1)
- . discharge valve type disc valve
- . suction valve type disc valve with plastic valve cover
- . weight
- . min. well casing diam. 2"

Bandung pump Manufactures

Batur-Jaya
Batur Ceper - Klalen
Central - Jaya
Indonesia

C. V. Malabar
Jalal Halteu Andir 30
Bandung - Jabar

Kawamoto Pump Mfg. Co., Ltd.
P.O.Box Nagoya Naka No.25
Nagoya
Japan

phone : 251-7171 (Nagoya)
telex : 4422321 KAWA J
grams : KAWAMOTOPUMPAGOYA

Dragon

SW

Asia

9

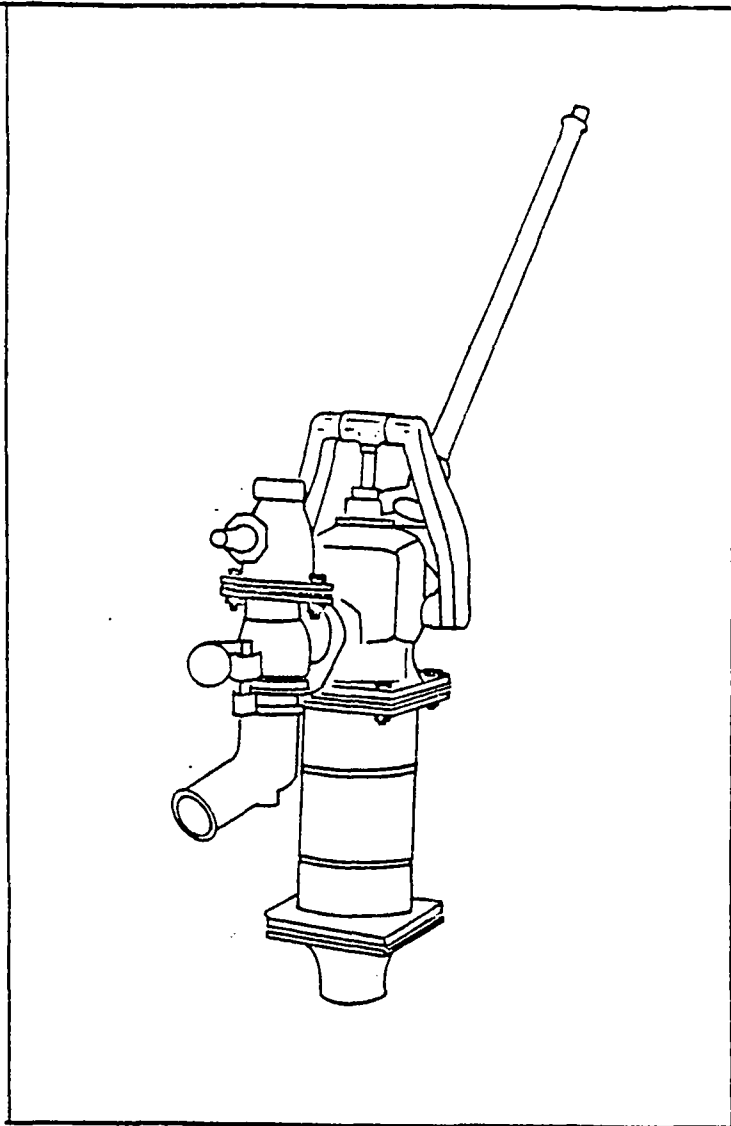
Description :

The Dragon No.2C is a shallow well pump;

The cylinder is housed in the pump stand which is made of cast iron. The pump has a three-pivot system of the yoke type with a stuffing box rod guide. The pump is suitable for both lift and force duty. When the valve in a specially designed three-way spout is closed, the pump is ready for force duty.

The cylinder has a porcelain enamel lining. The plunger rod is chromium plated.

The pump stand is directly connected with suction pipe of $1\frac{1}{4}$ inch.



Specifications (output ratings)

Model	Cylinder I.D. (mm)	I.D. (in)	Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
			(mm)	(in)			(m)	(ft)
No.2 C	96	$3\frac{4}{5}$	100	4	0.7	28 (40 str/min)	8	26

Applications

Countries where used:

Japan, Indonesia, Philippines

Pump Head

rod linkege

Hand-operated; vertical reciprocating operation;
three-pivot system; stuffing box/guide for pump rod alignment;
variable stroke length

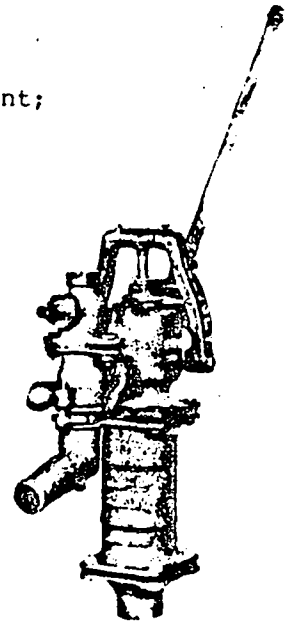
pins, bearings, fasteners

plain bearings (6)

materials

cast iron; brass stuffing box/guide of brass
painted green

Weight : 21kg

Connecting Assembly

	material	weight	size	length
pumprod	SS41B (chormium plated)	600g	$\frac{4}{8}$ "	$16\frac{1}{5}$ "
drop pipe	Not supplied by pump manufacturer			

Cylinder

type : housed in pumpstand

material : cast iron; porcelain enameled lining

plunger : cast iron

cup seals : rubber (1 No.)

discharge valve type : flapper

suction valve type : flapper

weight : 4kg

min. well casing diam. : $1\frac{1}{4}$ " (suction pipe)

Kawamoto Pump Mfg. Co., Ltd.
P.O.Box Nagoya Naka No.25
Nagoya
Japan

phone : 251-7171 (Nagoya)
telex : 4422321 KAWA J
grams : KAWAMOTOPUMPNAGOYA

Dragon

DW

Asia

10

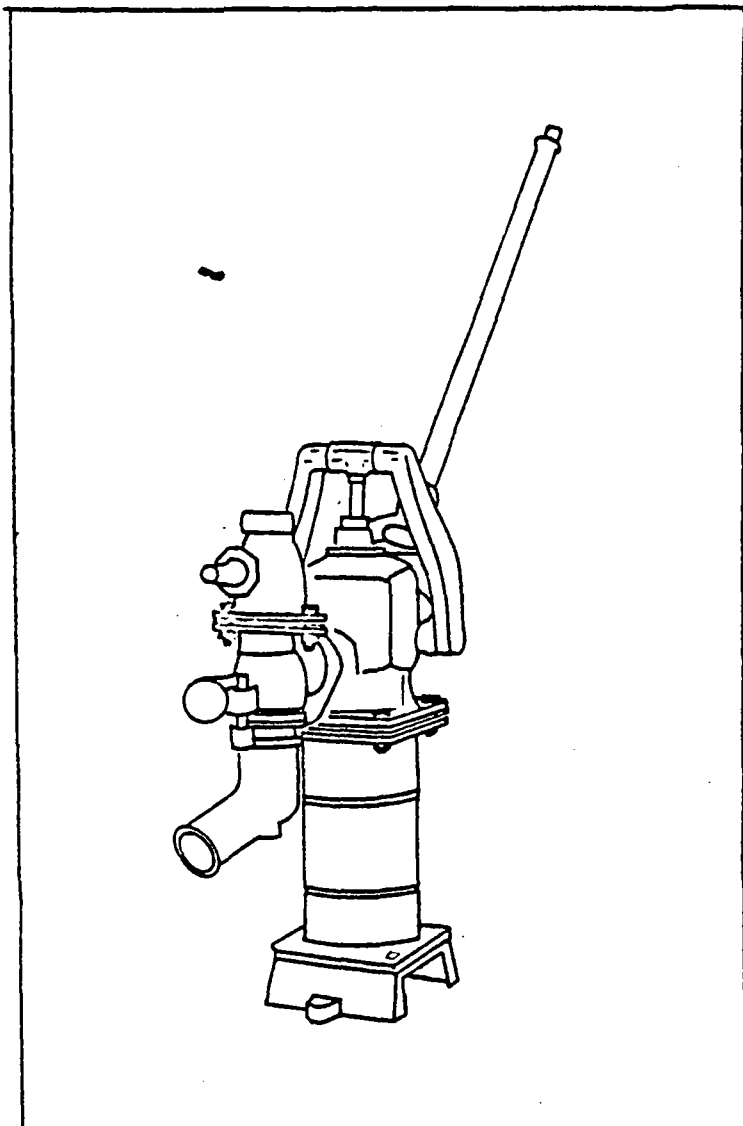
Description:

The Dragon No.2(D) is a shallow well pump, but can be used as a deep well pump with special accessories such as cylinder drop pipes, etc.

(see Fig-1. Deep well version of Model NO.2(D))

Chromium plated pump rod and porcelain enamelled cylinder lining. The pump can be used for both lift and force duty; it has a special designed spout allowing force duty by closing a valve.

The baseplate is designed for mounting on a solid stand (e.g. concrete pillar) separately constructed, to a suitable height for the pump users.



Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
No.2 D	96	3 4/5	100	4	0.7	14 (20 str/min.)	18	59

Applications

Countries where used;

Indonesia, Philippines, Japan

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation;
three-pivot system; stuffing box/guide for pump rod alignment;
variable stroke length
- . pins, bearings, fasteners
plain bearings
- . materials
cast iron; brass stuffing box

Weight : 21kg

Connecting Assembly

	material	weight	size	length
pumprod	SS41B (chromium plated)	600g	$\frac{4}{8}$ "	$16\frac{1}{5}$ "
drop pipe	Not supplied by pump manufacturer			

Cylinder

- . type : closed
- . material : cast iron with porcelain enamelled lining
- . plunger : cast iron
- . cup seals : 1 rubber
- . discharge valve type : flapper
- . suction valve type : flapper
- . weight : 4kg
- . min. well casing diam. : 8"

Kawamoto Pump Mfg. Co., Ltd.
P.O.Box Nagoya Naka No.25
Nagoya
Japan

phone : 251-7171 (Nagoya)
telex : 4422321 KAWA J
grams : KAWAMOTOPUMPNAGOYA

Tomoe

SW

Asia

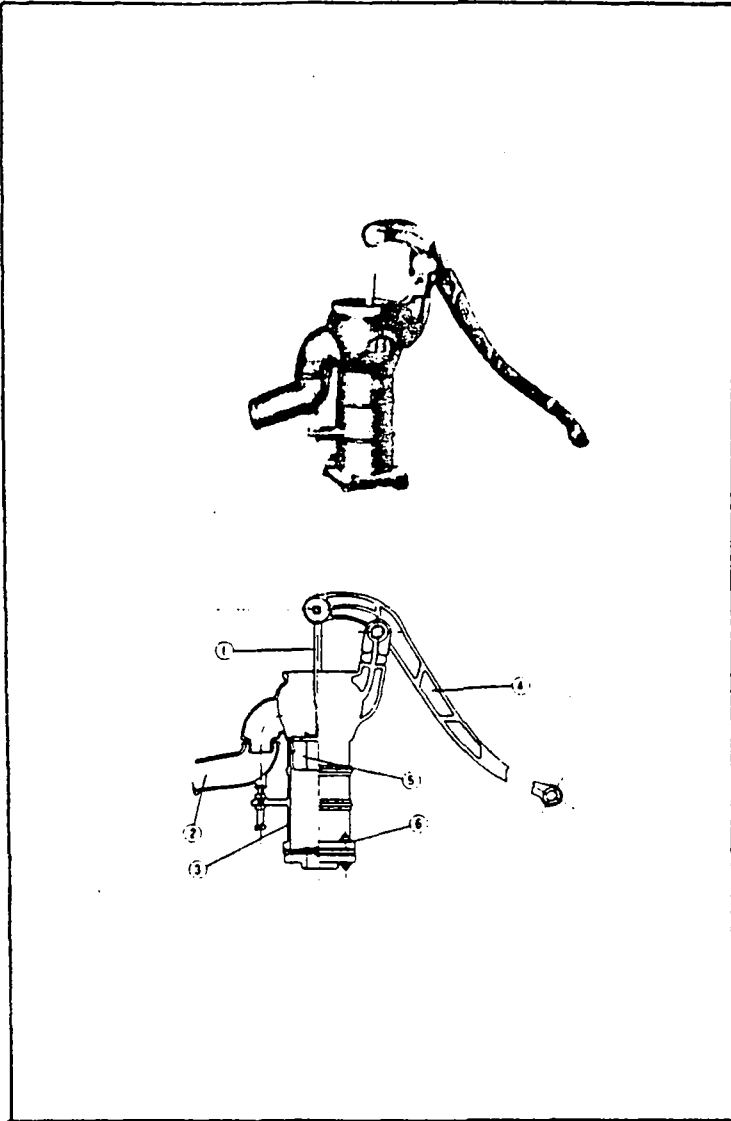
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For agents and licensee : see next page

Description:

The tomoe pump is a simple handpump for shallow well application (up to 8m. The pump is mainly of cast iron.

The pump is mounted on a stand (e.g. concrete pillar) constructed on the well cover.



Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft.)
No.5 (N)	96	3 ⁴ / ₅	160	6 ³ / ₈	1.1	50 (45 str./min.)	8	26

Applications

Countries where used:

Japan, Indonesia

Pump Head

- . rod linkage
Hand operated; vertical reciprocating operation;
two-pivot system; variable stroke length
- . pins, bearings, fasteners
plain bearing
- . materials
cast iron

Weight : 9.5kg

Connecting Assembly

	material	weight	size	length
pumprod	SS41B (Zinked)	450g	$\frac{3}{8}$ "	320m
drop pipe	Not supplied by pump manufacturer			

Cylinder

- . type : open
- . material : cast iron
- . plunger : wood
- . cup seals : leather
- . discharge valve type : flapper
- . suction valve type : flapper
- . weight : 9.5kg
- . min. well casing diam. : $1\frac{1}{4}$ " (suction pipe)

Kawamoto

SW Asia 11

Agent Indonesia

C. V. Lumber dir.
Jalan Pinangsia Raya
80 Jakarta, Indonesia

Agent Philippines

Sea Commercial Co., Inc.
3085 R. Magsaysay Blvd.
Cor. V. V. Cruz St.
P. O. Box 1489
Manila, Philippines

phone: 616521
603026
telex: ITT 7420178
grams: 'SEACOM'

Licensee

Philippines: Seacom Industrial Corp.
30 Scout Tuason
St. Cor. Dr. Lazcano, Diliman
Quezon City, Philippines

Manufacturer

Kashima Trading Co., Ltd.
P. O. Box No. 110 Higashi
No. 32 Nonoike-cho, Higashi-ku
Nagoya
Japan

phone: 935-4601
telex: No. KASHIMA J
J59943
grams: 'KASHIMA' NAGOYA

Industrial & Allied Sales Private Ltd.
 Suryakiran Building, 19-Kasturba
 Gandhi Marg, New Delhi-1100001
 P.O. Box 206
 India

phone: 352317
 telex: 31 3536 Inal in
 grams: inalsa

Inalsa

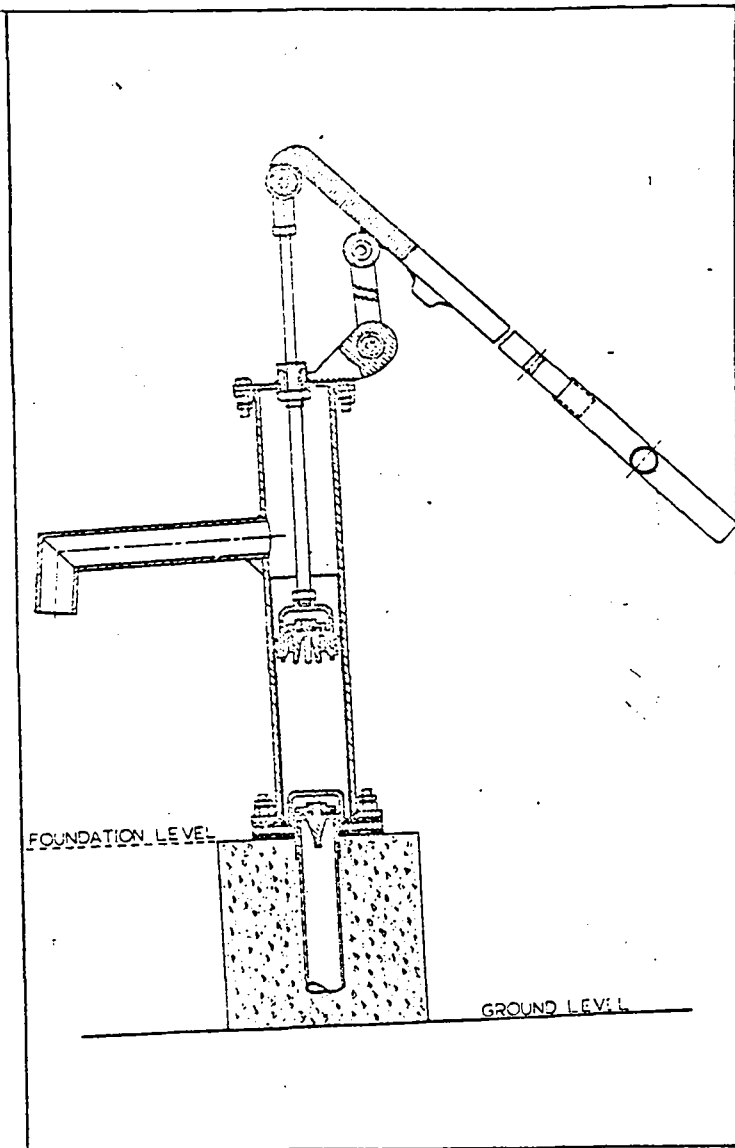
SW

Asia

12

Description:

The Inalsa Shallow Well Handpump is a newly developed pump which ~~uses~~^{uses} bases components of the India Mark-II deepwell pump.



Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
SW-1	77		135		0.60			
SW-2	101.5		135		1.0			

40-50 str/min.

Countries where used:

Ernst Vogel
 Prager Strasse 6
 P.O. Box 42, A 2000 Stockerau
 Austria

phone: (02266)2561
 telex: 7424122
 grams: Pumpen Vogel Stockerau

Vogel

SW

Europe

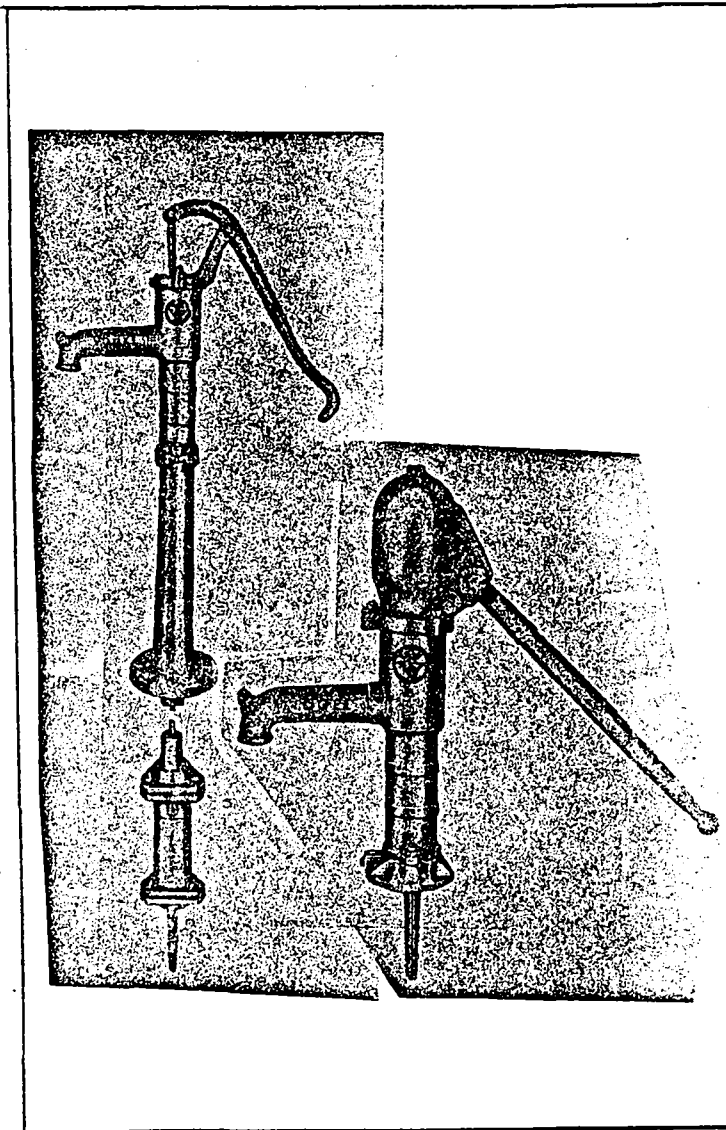
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Description:

The Vogel Type 7 pump is mainly made of cast iron.

There are four different modes of installation; with or without a base column, and with or without a separate cylinder (brass lining).

The pump uses a two-pivot handle system. The cylinder foot valve is of the spear-suction type.



Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
Type 7					0.8	36	7.5	25
7 S								
7 T								
7 ST								

Applications

45 str/min.

Countries where used:

Austria

Pump Head

- . rod linkage .
Hand-operated; vertical reciprocating operation; two-pivot system;
variable stroke length.
- . pins, bearings, fasteners
plain bearings
- . materials
cast iron

Connecting Assembly

- | . pumprod | material | weight | size | length |
|-------------|----------|--------|------|--------|
| . drop pipe | | | 1½" | |

Cylinder

- . type closed
- . material cast iron with brass lining
- . plunger brass
- . cup seals leather (1)
- . discharge valve type poppet (T)
- . suction valve type spear
- . weight
- . min. well casing diam.

Ernst Vogel
 Prager Strasse 6
 P.O. Box 42, A 2000 Stockerau
 Austria

phone: (02266)2561
 telex: 7424122
 grams: Pumpen Vogel Stockerau

Vogel

SW

Europe

2

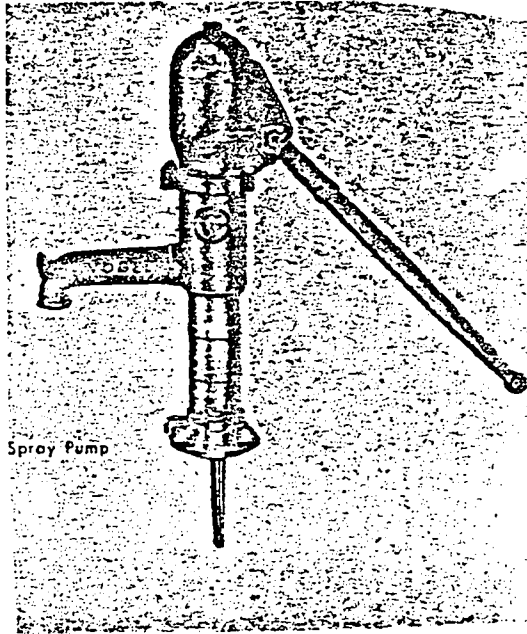
Description:

The Vogel Type 7W is a lift and force pump. It is made mainly of cast iron.

A three-pivot handle system is used with a stuffing box and pump rod guide.

The pump has an air chamber for smoothing out the water discharge.

There are four different installation arrangements: with or without pump column, and either with or without a separate cylinder.



Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
Type 7W					0.8	36	7.5	25

Applications

45 str/min.

Countries where used:

Austria

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation; three-pivot system;
stuffing box; pump rod alignment; variable stroke length.
- . pins, bearings, fasteners
plain bearings
- . materials
cast iron

Connecting Assembly

- | | pumprod | material | weight | size | length |
|-------------|---------|----------|--------|------|--------|
| . drop pipe | | | | 1½" | |

Cylinder

- . type closed
- . material cast iron with brass lining
- . plunger brass
- . cup seals leather (1)
- . discharge valve type poppet T
- . suction valve type spear
- . weight
- . min. well casing diam.

Duba S.A.
 Nieuwstraat 31
 B-9200 Wetteren
 Belgium

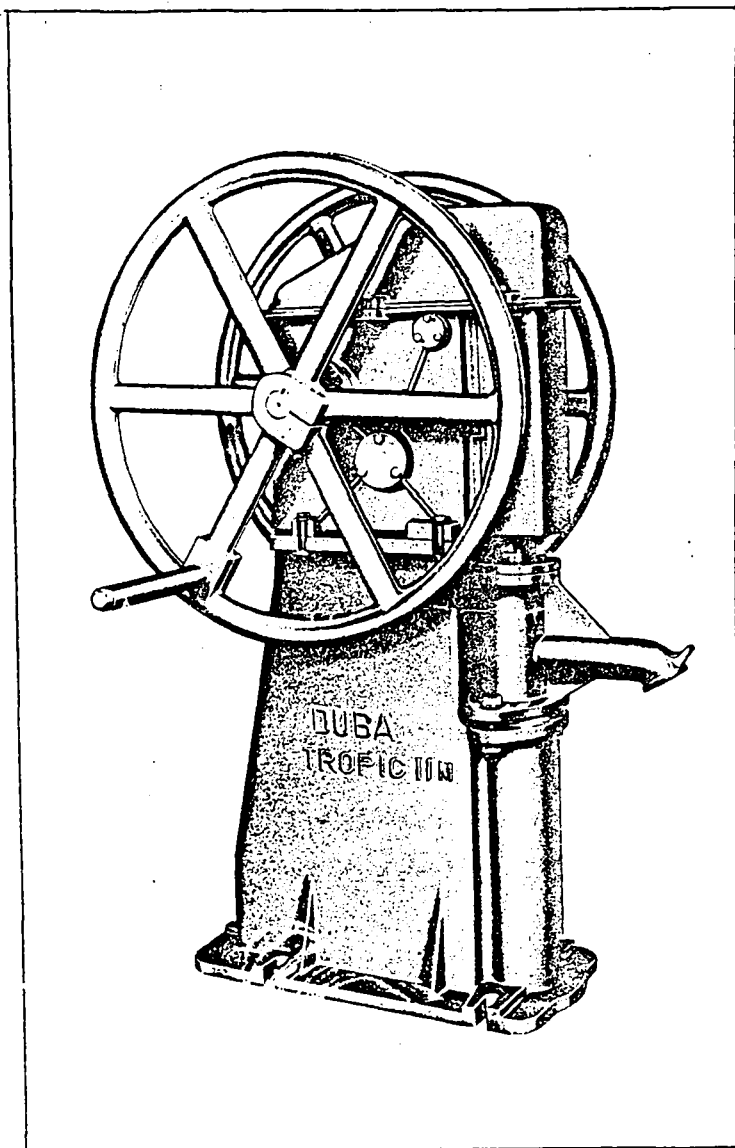
phone: (091) 693496
 telex: 11133
 grams: Duba Wetteren

Duba

DW

Europe

3



Description:

The Tropic II pump has:

Two flywheels with 1/2 reduction gear to the mechanism. No reciprocating movements in the mechanism. All moving parts are rotating and have roller bearings with antidust gaskets.

Operating components are lubricated from a large oil sump reducing maintenance.

Pumpstand is made of massy cast iron, no welded parts are used. Bolted to the well apron.

Pump rods and plunger can be removed without moving the pumpstand. Able to discharge against positive head.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
Tropic II	50		200		0.39	13	95	310
	60		200		0.56	19	65	210
	75		200		0.88	29	45	150
	90		200		1.27	42	30	100
	100		200		1.57	52	20	65

35 strokes/minute

Countries where used:

Benin, Burundi, Liberia, Niger, Rwanda, Sudan, Tanzania, Upper Volta, Zaire

Pump Head

. rod linkage

Hand, motor or animal operated, by means of two or one flywheel and pulley, equipped with ball races, fixed stroke length, lubrication from sealed internal oil reservoir.

. pins, bearings, fasteners

Pins: silver steel; Bearings: Ball bearings sealed and permanently greased; Fasteners: Selflocking and/or counternuts.

. materials

Pumpstand and flywheels: cast iron.

Mechanism: steel and cast iron.

	<u>Connecting Assembly</u>	Material	Cyl. Ø	weight	size	length
According to local situations	. pumprod	wood or stain-		0,8 kg/m	3 to 5 cm	5 m
		less steel		1 kg/m	Ø 12 mm	3 m
	. drop pipe	steel or	50	6,6 kg/m	2½"	3 m
		galvanized steel	60	6,6 kg/m	2½"	3 m
			75	8,6 kg/m	3"	3 m
			90	12,3 kg/m	4"	3 m
			100	12,3 kg/m	4"	3 m

Cylinder

. type open

. material brass and gun metal

. plunger gun metal (bronze)

. cup seals 2 leathers

. discharge valve type poppet; diabolo shaped (can be made springloaded)

. suction valve type poppet; diabolo shaped (can be made springloaded)

. weight Ø 50 - 12 kg; Ø 60 - 13 kg; Ø 75 - 15 kg; Ø 90 - 20 kg; Ø 100 - 23 kg.

. min. well casing diam. 70 (3"); 90 (3½"); 100 (4"); 130 (6"); 130 (6").

Pompes Deplechin
 Dept. des Ateliers Deplechin
 Avenue de Maire 28
 B-7500 Tournai, Belgium

Phone: (069) 22.81.52
 Telex: 57.399 depomp b
 Grams: DEPLECHIN-TOURNAI

Deplechin

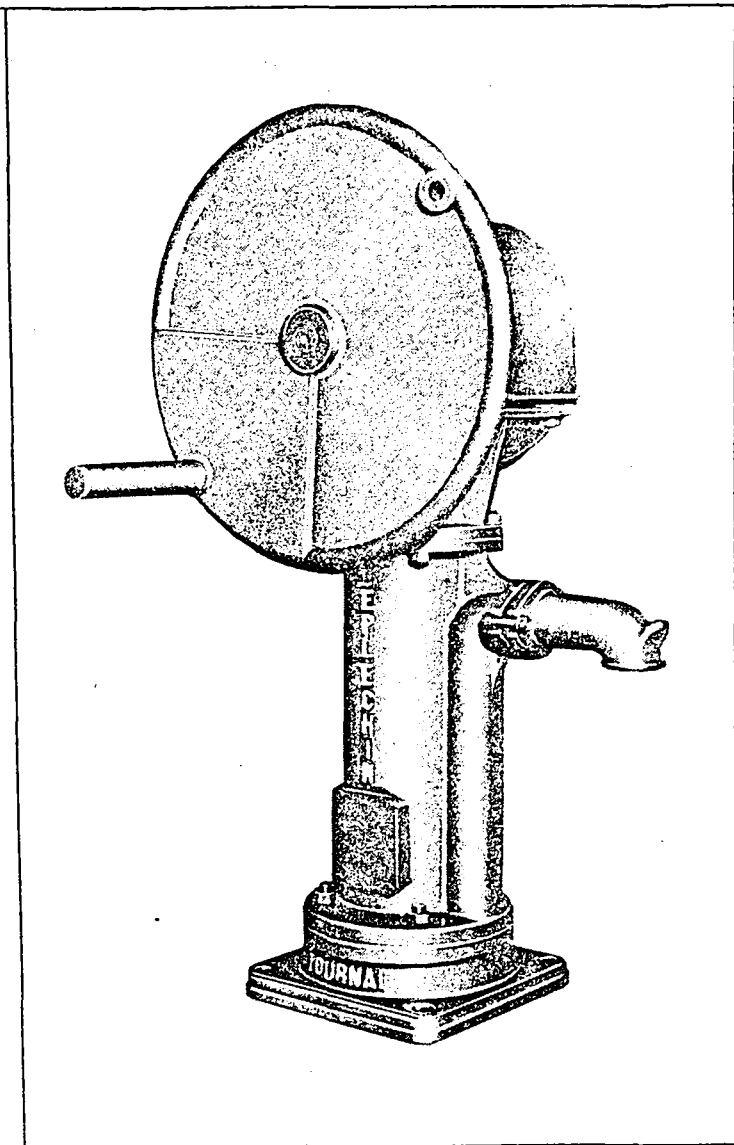
DW	Europe	4
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Description:

Tropic III model.

Heavy construction to withstand rough handling. Pumpstand in cast iron, bolted to the well apron. Fitted with single flywheel that drives the pump rod via a connecting rod and crank. No oiling or greasing required. Easy drive, even by children. Both the suction valve and the plunger valve can be removed from the well while leaving the cylinder in place. Tight ball bearings and self lubricating bushings. Can discharge against positive head. No welded part is used. Totally enclosed construction.

The flywheel can be replaced by a pulley receiving the drive belt of an electrical or petrol/diesel motor.



Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
Tropic III (with single fly- wheel)	50	}	150			16	60	200
	60					24	40	130
Tropic VIII (singly fly- wheel)	75	}				37	30	100
	90					54	20	65

at 60 strokes/minute

Countries where used:

Zaire, Rwanda, Burundi

Pump Head

- . rod linkage
Hand, animal or motor operated; rotary; single flywheel; fixed stroke length.

- . pins, bearings, fasteners
ball bearings (sealed & self-lubricated)

- . materials
pump stand: cast iron
driving mechanism: steel and cast iron

<u>Connecting Assembly</u>	material	weight	size	length
. pumprod	galvanized steel	1,3 kg/m	1/2" Ø	3 m
	or stainless steel	0,89 kg/m	12 mm Ø	3 m
. drop pipe for cylinder	galvanized steel			
	50, 60 mm	6,6 kg/m	2" 1/2	3 m
	75 mm	8,6 kg/m	3"	3 m
	90 mm	12,3 kg/m	4"	3 m

Cylinder

- . type open

- . material red copper

- . plunger bronze

- . cup seals leather (2)

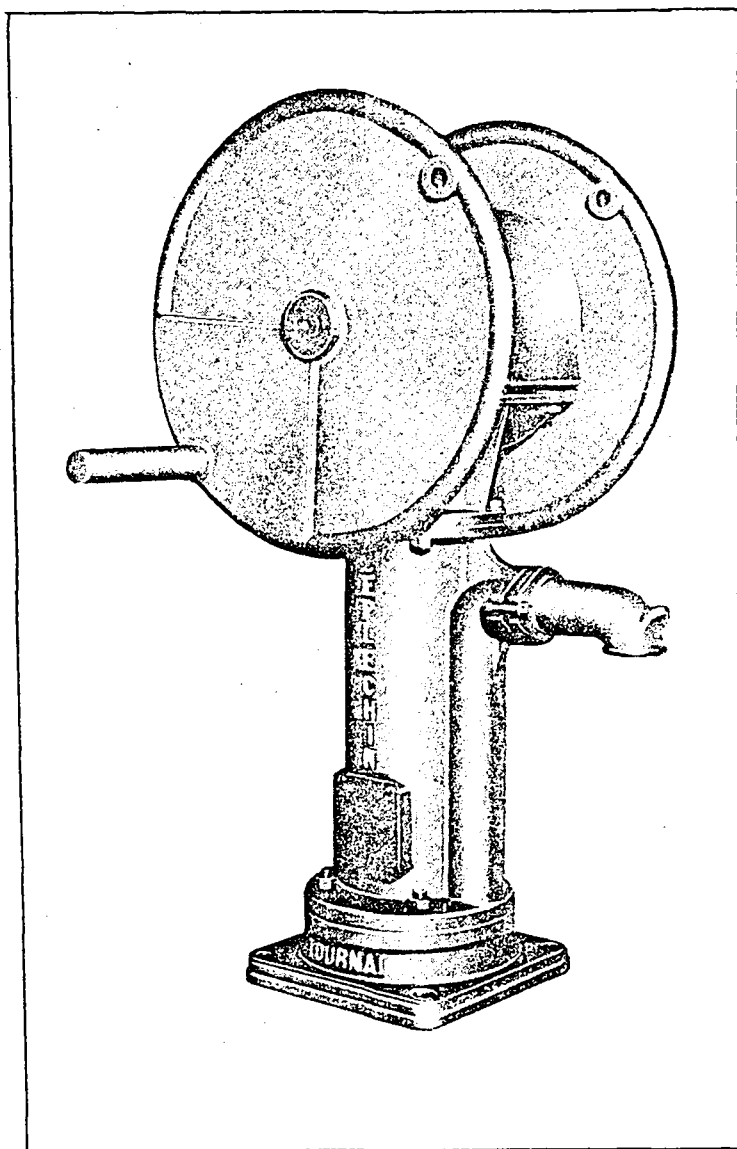
- . discharge valve type poppet T (diabolo-shaped)

- . suction valve type poppet T (diabolo-shaped)

- . weight 50 mm Ø: 12 kg; 60 mm Ø: 13 kg; 75 mm Ø: 15 kg; 90 mm Ø: 20 kg.

- . min. well casing diam. for a cylinder 50 mm: 70 mm (3"); 60 mm: 90 mm (3" 1/2);
75 mm: 100 mm (4"); 90 mm: 130 mm (6")

Pompes Deplechin Dept. des Ateliers Deplechin Avenue de Maire 28 B-7500 Tournai, Belgium	Phone: (069) 22.81.52 Telex: 57.399 depomp b Grams: DEPLECHIN-TOURNAI	Deplechin		
		DW	Europe	5



Description:

Tropic IV model

Heavy construction to withstand rough handling. Pumpstand in cast iron, bolted to the well apron. Fitted with one flywheel that drives the pump rod via a connecting rod and crank. No welded part is used. Totally enclosed construction. No oiling or greasing required. Both the suction valve and the plunger valve can be removed from the well while leaving the cylinder in place. Tight ball bearings and self lubricating bushings. Can discharge against positive head.

The flywheel can be replaced by a pulley receiving the drive belt of electrical or petrol/diesel motor.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
Tropic IV (double flywheel)	50		150			16	60	200
	60					24	40	130
	75					37	30	100
	90					54	20	65

at 60 strokes/minute

Countries where used:

Congo, Zaire, Rwanda, Burundi

Pump Head

- . rod linkage
Hand, motor or animal drive; rotary; double flywheel; fixed stroke length
- . pins, bearings, fasteners
ball bearings (sealed and self-greased)
fasteners: self-locking and/or counterants
- . materials
pump stand: cast iron
drive mechanism: steel and cast iron components

<u>Connecting Assembly</u>	material	weight	size	length
. pumprod	galvanized steel or stainless steel	1,3 kg/m 0,89 kg/m	1/2" Ø 12 mm Ø	3 m 3 m
. drop pipe for cylinder	galvanized steel 50, 60 mm 75 mm 90 mm	6,6 kg/m 8,6 kg/m 12,3 kg/m	2" 1/2 3" 4"	3 m 3 m 3 m

Cylinder

- . type open
- . material red copper
- . plunger bronze
- . cup seals leathers (2 No.)
- . discharge valve type poppet (diabolo-shaped)
- . suction valve type poppet (diabolo-shaped)
- . weight 50 mm Ø: 12 kg; 60 mm Ø: 13 kg; 75 mm Ø: 15 kg; 90 mm Ø: 20 kg
- . min. well casing diam. 50 mm: 70 mm (3"); 60 mm: 90 mm (3" 1/2);
75 mm: 100 mm (4"); 90 mm: 130 mm (6").

Pompes Deplechin

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DW

Europe

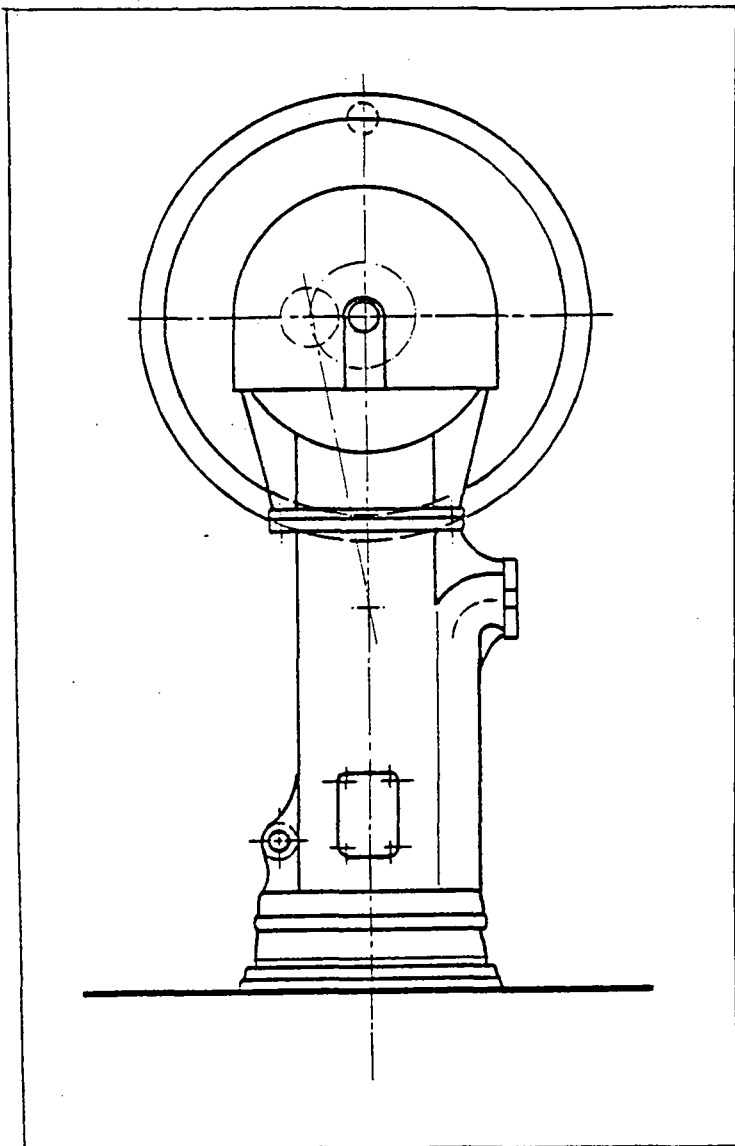
6

Description:

The Tropic Model VII pump has a double flywheel driving the pumprod via a connecting rod and crank. The pump is suitable for both lift and force duty.

Heavy construction to withstand rough handling. Pumpstand in cast iron, bolted to the well apron. No welded part is used. Totally enclosed construction. No oiling or greasing required. Both the suction valve and the plunger valve can be removed from the well while leaving the cylinder in place. Tight ball bearings and self lubricating bushings.

The flywheel can be replaced by a pulley receiving the drive belt of an electrical or petrol/diesel motor.



Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
Tropic VII (double flywheel)	50		150			16	60	200
	60					24	40	130
	75					37	30	100
	90					54	20	65

at 60 strokes/min.

Countries where used:

Zaire

Pump Head

- . rod linkage
Hand, motor or animal driven; rotary; two flywheels; fixed stroke length.
- . pins, bearings, fasteners
ball bearings (sealed and self-greased)
fasteners: self-locking and/or conternuts
- . materials
pumpstand: cast iron
drive mechanism: steel and cast iron components

<u>Connecting Assembly</u>	material	weight	size	length
. pumprod	galvanized steel	1,3 kg/m	1/2" Ø	3 m
	or stainless steel	0,89 kg/m	12 mm Ø	3 m
. drop pipe for cylinder	galvanized steel			
	50, 60 mm	6,6 kg/m	2" 1/2	3 m
	75 mm	8,6 kg/m	3"	3 m
	90 mm	12,3 kg/m	4"	3 m

Cylinder

- . type open
- . material red copper
- . plunger bronze
- . cup seals leathers (2 No.)
- . discharge valve type poppet (diabolo-shaped)
- . suction valve type - do -
- . weight 50 mm Ø 12 kg; 60 mm Ø: 13 kg; 75 mm Ø: 15 kg; 90 mm Ø: 20 kg.
- . min. well casing diam. for cylinders 50 mm : 70 mm (3"); 60 mm : 90 mm (3 1/2");
75 mm : 100 mm (4"); 90 mm : 130 mm (6")

Pompes Deplechin
 Dept. des Ateliers Deplechin
 Avenue de Maire, 28
 B-7500 Tournai, Belgium

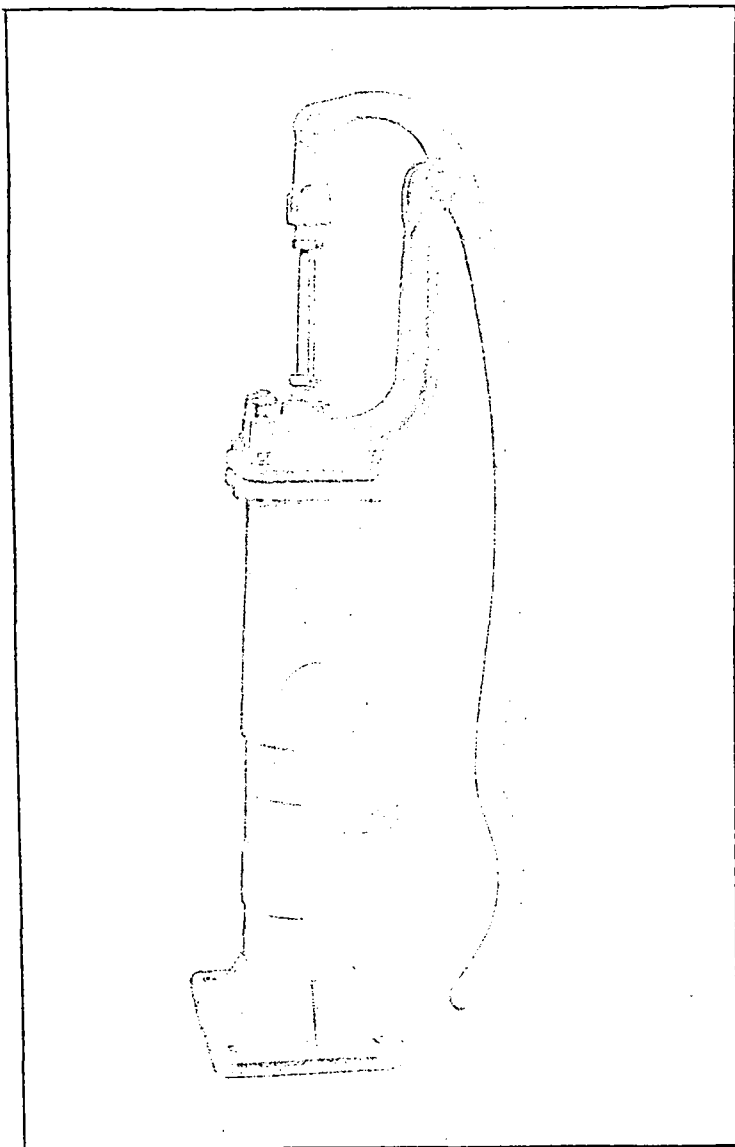
Phone: (069) 22.81.52
 Telex: 57.399
 Grams: DEPLECHIN-TOURNAI

Deplechin

SW/DW

Europe

7



Description:

The Tropic VI uses a three-pivot handle system. The plunger operates either in the pumpbody (for a depth up to 7.5 m) or in the cylinder (up to 30 m depth). Stuffing box and rod guide provided.

The pump is made of cast iron, and of sturdy design.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min. ± 5%	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
Tropic VI/2 (deep well)	50		170			12	30	98
	60					17	20	66
	75					27	15	59
Tropic VI/1 (shallow well)	90					39	± 7,5	± 24

at 40 strokes/min

Countries where used:

Congo, Zaire, Rwanda, Burundi

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation; three-pivot system;
stuffing box; pump rod alignment.
- . pins, bearings, fasteners
plain bearings Tropic VI/1: cylinder in the pump body
 Tropic VI/2: cylinder in the well
- . materials
cast iron (pump body); steel (pump rod, pins, etc.)

<u>Connecting Assembly</u>	material	weight	size	length
. pumprod	galvanized steel	1,3 kg/m	1/2" Ø	3 m
	stainless steel	0,9 kg/m	12 mm Ø	3 m
. drop pipe	Ø 50 mm galvanized steel	6,6 kg/m	2 1/2"	3 m
	Ø 75 mm galvanized steel	8,6 kg/m	3"	3 m

Cylinder

- . type open
- . material red copper
- . plunger bronze
- . cup seals leather (2 No.)
- . discharge valve type poppet (diabolo-shaped)
- . suction valve type - do -
- . weight 50 mm Ø : 12 kg; 60 mm Ø : 13 kg; 75 mm Ø : 15 kg
- . min. well casing diam. for 50 mm Ø cylinder : 70 mm (3")
 for 60 mm Ø cylinder : 90 mm (3 1/2")
 for 75 mm Ø cylinder : 100 mm (4")

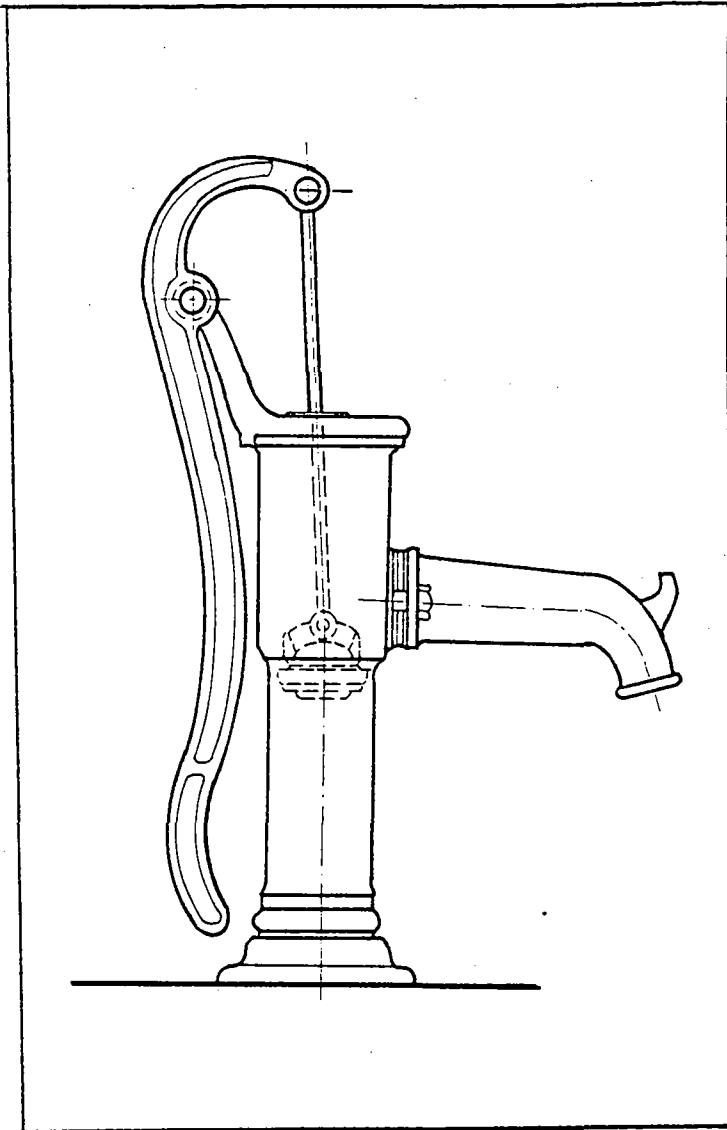
Sigma Pumping Equipment and
valves manufacturing works
Václavské nám 60
P.O. Box 1111, 1187 Praha , Czechoslovakia

Intersigma

SW

Europe

8



Description:

The Intersigma handpump is a shallow well or cistern handpump designed for light duties. It uses a two-pivot system. It has to be mounted at a height suitable for the user.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
N-P	75		160			28	7	
N-P	90		160			40	7	

Applications

40 str/min.

Countries where used:

Europe, Asia, Africa, South America

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation;
two-pivot system
- . pins, bearings, fasteners

plain bearings; main pivot fastened with cotter pins.

- . materials
cast iron
- . weight : 17 kg all-in

Connecting Assembly

- | | pumprod | material | weight | size | length |
|-------------|---------|----------|--------|------|--------|
| . drop pipe | | | | | |

Cylinder

- . type situated in pumpstand
- . material bronze
- . plunger cast iron
- . cup seals 1 leather
- . discharge valve type poppet T
- . suction valve type poppet T
- . weight
- . min. well casing diam.

Vammalan Konepaja OY
 38200 Vammala
 Finland

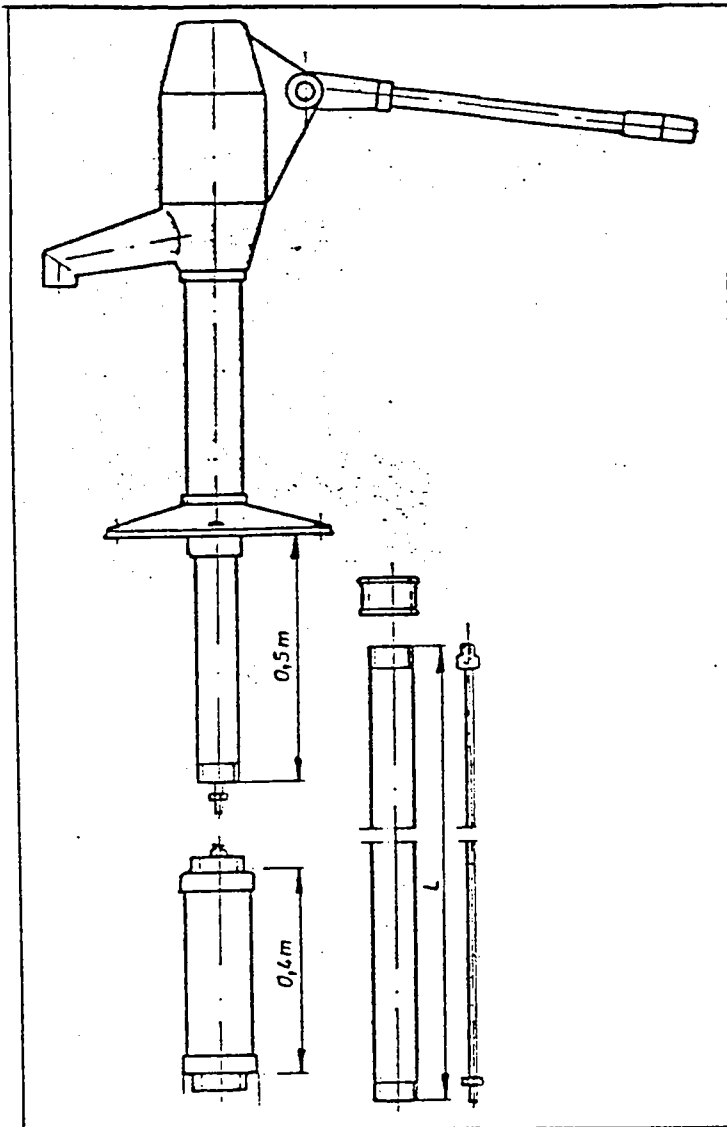
phone: 35832/2667
 telex: 22-04 nira sp
 grams: Vammalan Konepaja 07

NIRA

DW

Europe

9



Description:

The Nira AF-76 handpump is made of GRS pig iron, castings coated with polyamid pulver paint.

The handle is made of steel and special bronze, with the fulcrum pin running in dry lubricated bearings. A two-pivot handle is used, with special pump rod alignment.

The pump uses stainless steel pumprod with brass connectors. The drop pipe is 2" galvanized steel. The cylinder with reinforced-thread fillets and the plunger are made of brass; the valves (flapper-type) are made of rubber apart from the cup seal which is of nitril rubber.

The pumpstand is bolted directly to the well head concrete apron.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
AF-76	76		150		0.7	50	36	

Applications

Countries where used:

Tanzania, Senegal, Finland

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation;
two-pivot system; variable stroke length.
- . pins, bearings, fasteners
two-pivot handle; stainless steel pins (complete with cotter pin and with fastener)
- . materials
cast iron
- . weight: 42 kg

Connecting Assembly

- | . pumprod | material | weight | size | length |
|-------------|------------------|--------|------|--------|
| . drop pipe | stainless steel | | | |
| | galvanized steel | | 2" | 6 m |

Cylinder

- . type closed
- . material brass
- . plunger brass
- . cup seals 1 nitril rubber
- . discharge valve type flapper
- . suction valve type flapper
- . weight 41 kg
- . min. well casing diam. 4" (100 mm)

Ets. André Bodin
 Usine des Regains 37150 Blère
 P.O. Box no. 29
 France

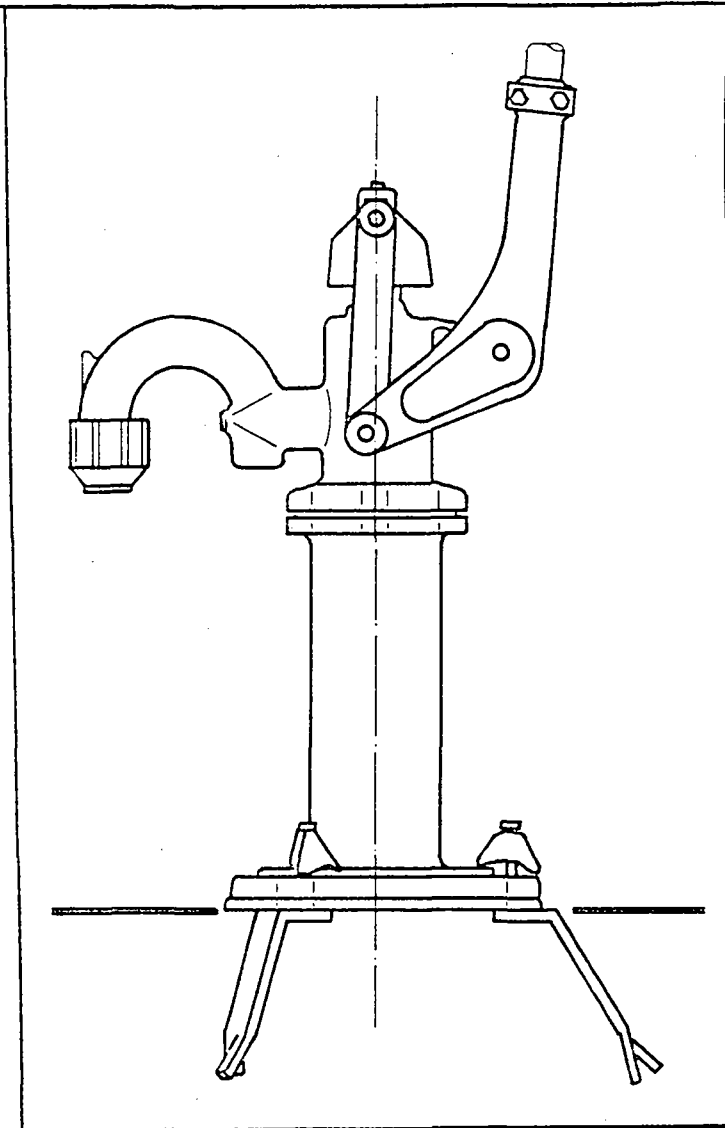
phone: (47) 578986
 telex: pompa 6751105F
 grams:

André Bodin

DW

Europe

10



Description:

The Solo No. 3 is a special pump design for use in developing countries. It is made mainly of cast iron components.

The pump uses a three-pivot handle system (yoke type) with adjustable fulcrum position; stuffing box; pump rod alignment.

The cylinder is available in two models; it is made of galvanised iron with brass lining or PVC lining.

The pumprod diameter is 2 mm and the pipe size 1½" or 1¼". The pumpstand has a base plate with built-in anchor bolts and stainless steel bolts.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
Solo No.3	40					11	60	

Applications

60 str/min

Countries where used:

Mali, Cape Verde, Benin, Upper Volta, Niger, Ivory Coast, Mauretania, Senegal

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation;
three-pivot system; stuffing box; pumprod alignment; variable stroke length;
variable fulcrum position.
- . pins, bearings, fasteners
plain bearings (stainless steel; self-lubricating)
- . materials
cast iron
- . weight: 40 kg

Connecting Assembly

	pumprod	material	weight	size	length
.		galvanised iron		12 mm	3 m
.	drop pipe	galvanised iron		1½" or 1¾"	3 m

Cylinder

- . type closed type; two models, various diameters available
- . material galvanised iron with brass or PVC lining
- . plunger cast iron
- . cup seals leather (1)
- . discharge valve type poppet
- . suction valve type spear or spring activated poppet valve
- . weight 5 à 6 kg
- . min. well casing diam. 4" (100 mm)

Briau S.A.

P.O. Box 0903
37009 Tours Cedex
France

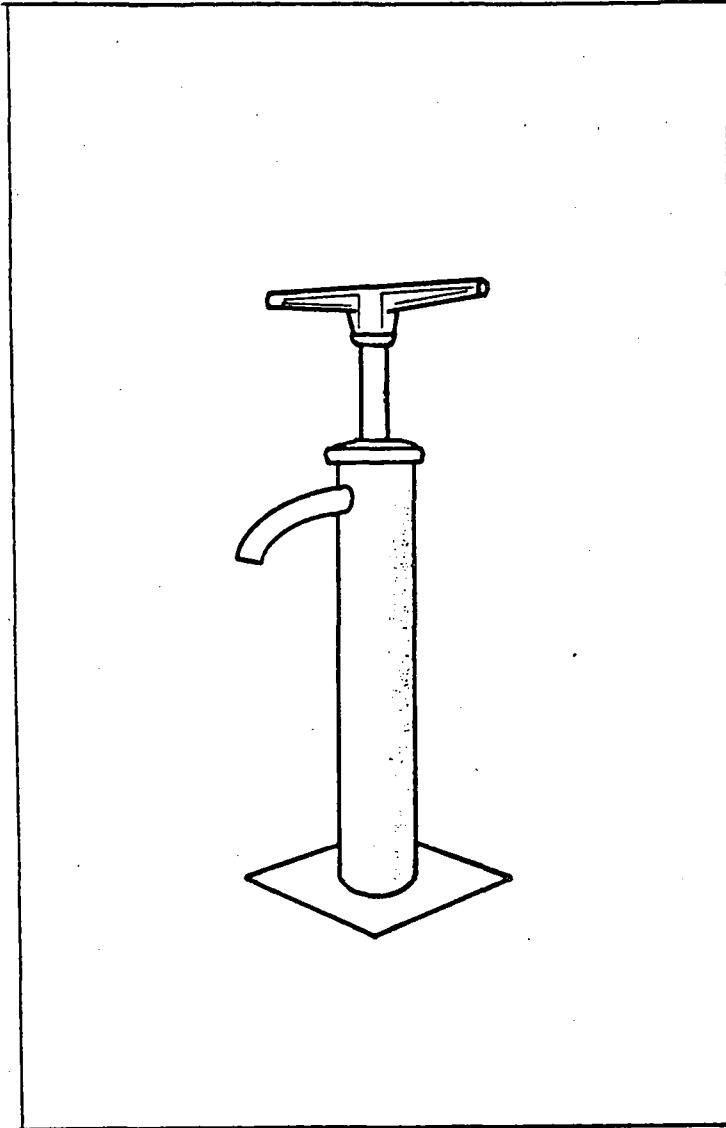
phone: (47) 613817
telex: 750729F
grams:

Briau

SW

Europe

11



Description:

The Tracta handpump has a cylindrical pumpstand made of heavy gauged plasticized plate. The handle operates the cylinder directly.

Inside the pumpstand a stainless steel spring is fitted for easy operation. The upper rod section is a stainless steel tube sliding in a bearing which is self lubricating with water.

The cylinder is of the retractable type which enables it to be fitted or lifted, without dismantling or removing the drop pipe or the pump head. The cup seals consist of a special braid supplied as a ring coil. This makes it possible to replace the packings without difficulty. The plunger is operated by a PVC pumprod. The pumprod is bolted directly to the concrete well head.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
Tracta	40 mm	(1½")	400 mm	16"		20	15	

Applications

Countries where used:

Senegal, Upper Volta, Mali, Cameroun, Tchad, Algiers

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation; direct drive;
variable stroke length
- . pins, bearings, fasteners
water lubricated bearing of the operating rod
- . materials
plate steel, plasticized

Connecting Assembly

	pumprod	material	weight	size	length
.		PVC	1.8 kg	40 mm	3 m
.	drop pipe	galvanised steel	17.0 kg	2"	3 m

Cylinder

- . type open
- . material brass
- . plunger bronze
- . cup seals special braid supplied in a ring coil
- . discharge valve type poppet (T)
- . suction valve type poppet (T) double
- . weight 11 kg
- . min. well casing diam. 2½"

Briau S.A.
P.O. Box 0903
37009 Tours Cedex
France

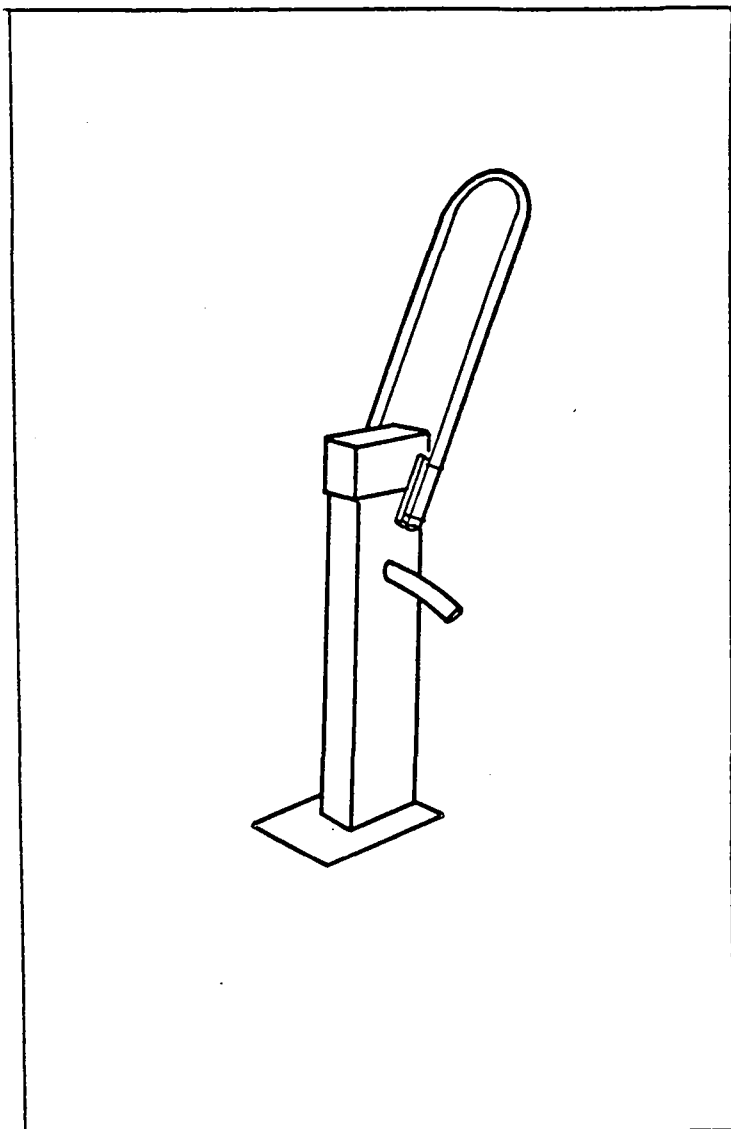
phone: (47) 613817
telex: 750729 F
grams:

Briau

DW

Europe

12



Description:

The operating principle of the Briau Nepta T is that of a conventional rod operated pump: cylinder with reciprocating piston in the well, activated by a handle. The plunger is linked to the handle by a stainless steel rod.

The pumpstand is a plasticized watertight steel body.

The handle is of adjustable length, and is fixed on a shaft supported by two sealed bearings.

The drop pipe is normally of galvanised steel tube (if desired with corrosion proof coating or PVC).

Extractable or non-extractable cylinder can be applied. A spring is fitted to push the plunger back in the lower position. The plunger has rings of a special braid supplied as a ring coil.

The pump base is bolted directly to the well head concrete apron.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
Nepta T	120		200 mm	(8")		75	10	
	100		"			50	15	
	80		"			33	25	
	60		"			20	45	
	50		"			13	65	
	40		"			8	100	

Applications

40 str/min.

Countries where used:

Senegal, Upper Volta, Mali, Cameroun, Tchad, Algiers

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation;
one-pivot, rod operated; variable stroke length.
- . pins, bearings, fasteners
sealed ball bearings (2)
- . materials
plate steel, plasticised
- . weight: 70 kg (total)

Connecting Assembly

		material	weight	size	length
. pumprod		stainless steel rod	2 kg	10 mm	3 m
. drop pipe		galvanised steel or PVC		1½ to 2"	3 m

Cylinder

- . type open or closed
- . material brass
- . plunger bronze
- . cup seals special braid supplied as a ring coil
- . discharge valve type poppet (T)
- . suction valve type poppet (T) double
- . weight 23 kg
- . min. well casing diam. 4" (100 mm)

Briau S.A.
P.O. Box 0903
37009 Tours Cedex
France

phone: (47) 613817
telex: 750729 F
grams:

Briau

DW

Europe

13

Description:

The Briau pump Royale is mainly of cast iron. It uses a three-pivot handle system with two adjustable pivots for varying the mechanical advantage and stroke length. The pump has a guide for alignment of the pump rod; stuffing box and packing tube are provided for force duties.

Various cylinder sizes of different materials available.

The pumpstand is bolted on a flange which is fixed on the well head apron.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
Royale	50		200			3	48	
	60					17	33	
	80					30	19	
	100					47	12	

Applications

Countries where used:

Senegal, Upper Volta, Mali, Cameroun, Tchad, Algeria

Pump Head

- . rod linkage
 - Hand-operated; vertical reciprocating operation; three-pivot handle system; adjustable mechanical advantage; variable stroke length. (from 100 to 200 mm); pump rod guide; stuffing box.
- . pins, bearings, fasteners
 - plain bearings; self lubricating
- . materials
 - cast iron
- . weight: 78 kg

Connecting Assembly

	pumprod	material	weight	size	length
.		galvanized steel	4.5 kg	14 mm	3 m
.	drop pipe	galvanized steel		1½ to 2"	3 m

Cylinder

- . type closed
- . material brass
- . plunger bronze
- . cup seals leather or special braid (on request)
- . discharge valve type
- . suction valve type
- . weight
- . min. well casing diam. 100 mm (4")

Briau S.A.
 P.O. Box 0903
 37009 Tours Cedex
 France

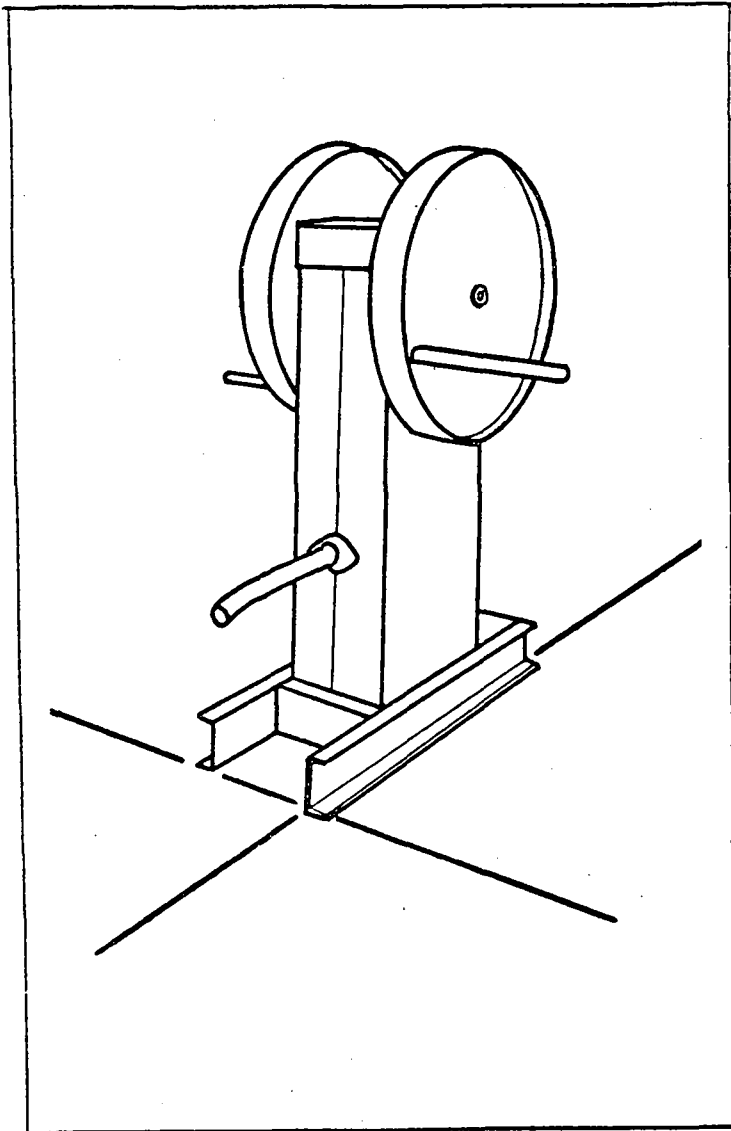
phone: (47) 613817
 telex: 750729 F

Briau

DW

Europe

14



Description:

The Briau Africa pump model is a fly-wheel operated pump.

It has a heavy metal sheet pump body. The pump mechanism consists of a direct or step-down drive.

Three connecting rod stroke length positions, and the different drive arrangements, provide six possible modes for operating.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
Africa	60		100			5 - 9	40-80	
	120		140			14 -18	40- 0	
	60		180			15 -28	50-30	
	120					46 -83	< 30	

Applications

45 str/min.

Countries where used:

Senegal, Upper Volta, Mali, Cameroun, Tchad, Algeria

Pump Head

- . rod linkage
 - Hand-operated; rotary; two flywheels. Variable stroke length (100-140-180 mm); step-down ratio 1/3 and 2 gives 6 possible operating modes: 1,0; 1,4; 1,8; 3,2; 4,5; 5,7.
- . pins, bearings, fasteners
 - ball bearings; self-lubricating
- . materials
 - steel, plate and cast iron housing (for the gearing)
- . weight: 116 kg

Connecting Assembly

	pumprod	material	weight	size	length
.		galvanized steel	5 kg	16 mm	3 m
.	drop pipe		17 kg	2 "	3 m

Cylinder

- . type closed
- . material brass
- . plunger bronze
- . cup seals leather or special braid (on request)
- . discharge valve type
- . suction valve type
- . weight 26 kg
- . min. well casing diam. 100 mm (4")

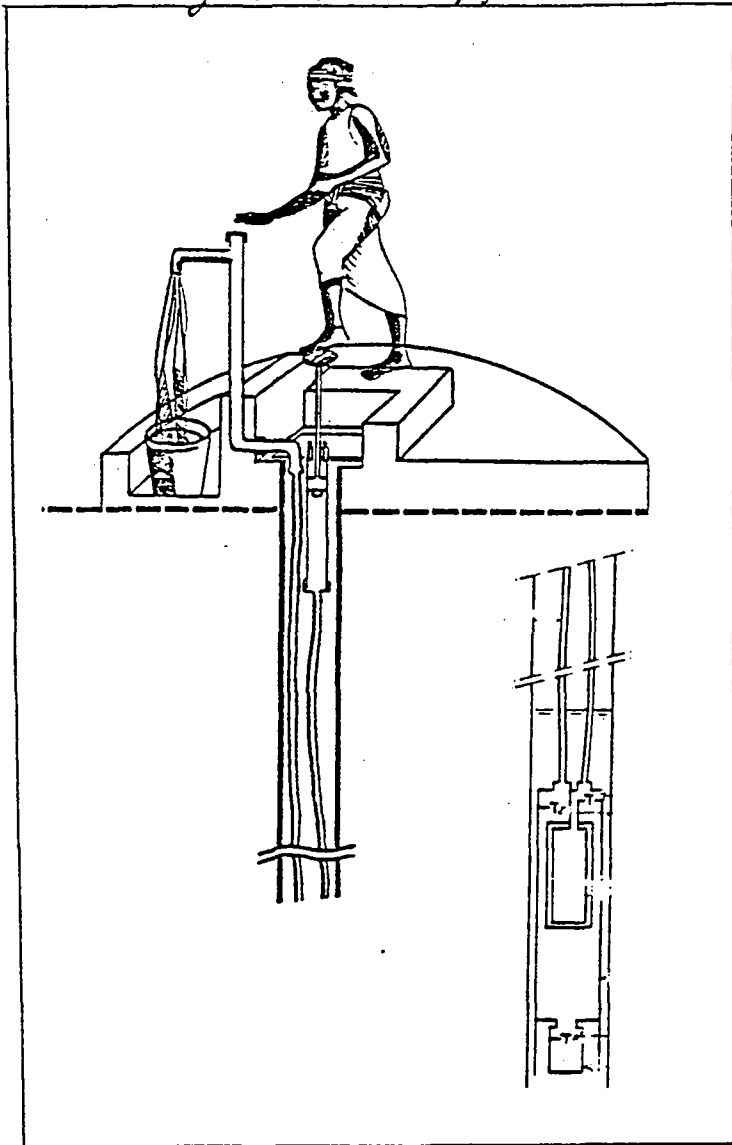
Sofretes/Mengin
 Zone Industrielle d'Amilly
 B.P. No. 1
 45209 Montargis Cedex
 FRANCE

phone: (38) 852542
 telex: 760523 F

Hydro Pompe Vergnet

DW Europe 15

For agents: see next page



Description:

The Vergnet pump is a diaphragm type pump, foot operated with a hydraulic drive system.

The pumping element consists of a rubber diaphragmatic hose inside a stainless steel cylinder, equipped with discharge and suction valves.

From the cylinder water is forced to the outlet through a 32 mm OD x 26 mm ID high-density polyethylene pipe.

The foot pedal is of stainless steel and a plunger in the hydraulic drive system. The drive cylinder is of stainless steel.

The pumpstand is of galvanised steel, fabricated construction. A support is provided for the user operating the pump.

A rubber gasket fits over the pumpstand pipe at the well platform to seal off the pumped water against contamination.

Specifications (output ratings)

For agents: see next page

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
Type C	30		320 or 250			27 - 9		80 - 250
Type 4C2	40		250					< 80

Countries where used:

Africa: Cameroun, Ivory Coast, Gabon, Upper Volta, Mali, Niger, Senegal, Togo, Tunis, Tchad.

Asia : Nemap

Vergnet pump type A taken out of production.

Pump Head

- . rod linkage
Foot-operated; vertical reciprocating operation; hydraulic drive system; variable stroke length.
- . pins, bearings, fasteners
none
- . materials
Welded plate and tubular steel; galvanized; foot pedal rod is stainless steel; rod guide and seals urethane; brass drive cylinder; stainless ball valves on brass seats (pumping unit).
- . Weight: 21 kg.

Connecting Assembly

pumprod	material	weight	size	length
n - a	high density	0.28 kg/m	26 x 32 mm	
drop pipe	polyethylene	0.39 kg/m	23 x 32 mm	

(Pumping Element)Cylinder

- . type rubber hose diaphragm
(nylon reinforced)
- . material rubber hose diaphragm in stainless steel cylinder
- . plunger n - a

(Drive Unit)Cylinder

- . stainless steel
- . cup seals in drive unit
piston rings of urethane
(4 No.)
- . discharge valve
ball valve
stainless steel ball
brass seat
- . suction valve
ball valve
stainless steel ball
brass seat
- . weight 8 kg (18 lbs)
- . min. well casing diam. 4" (100 mm)

LISTE EFFECTIVE AU 01/04/76 DES REPRESENTANTS EXCLUSIFS DE POMPES VERGNET

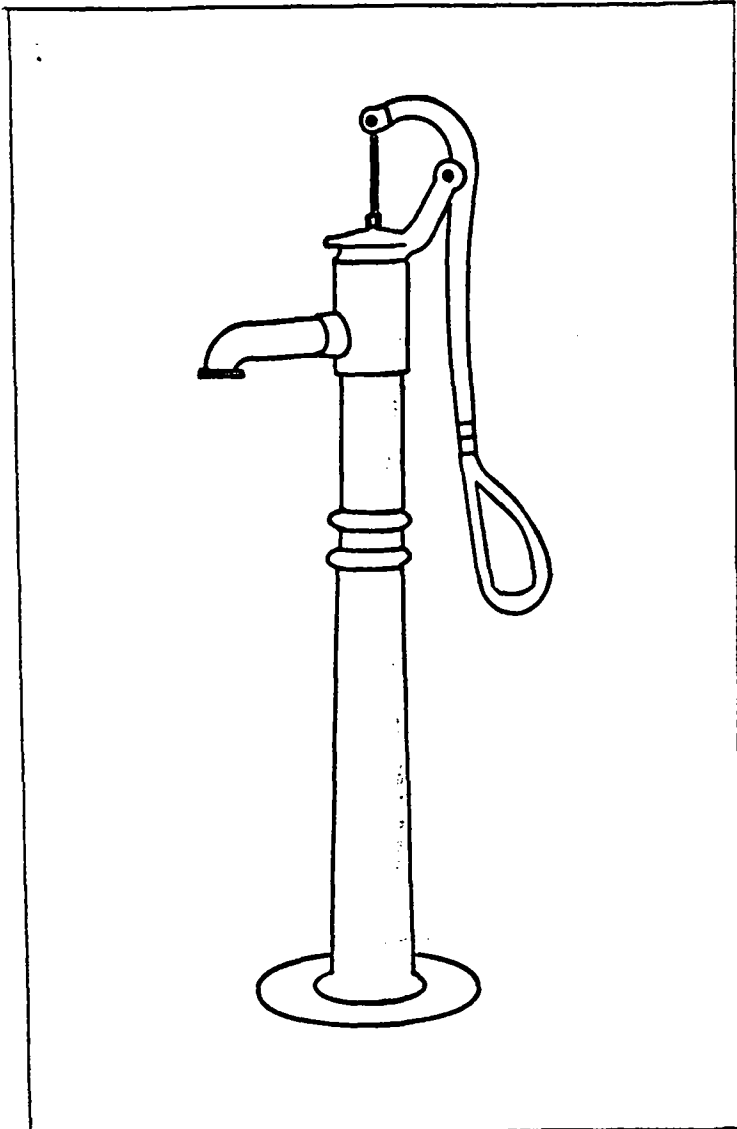
PAYS	SIEGE	NOM & ADRESSE DU CONCESSIONNAIRE
CAMEROUN	GEOMELEC Vieugy	SOCOPAO - B.P. 291 GAROUA (Cameroun)
COTE D'IVOIRE	FORACO Paris	FORACO CI - B.P. 11592 ABIDJAN (Cote Ivoire)
GABON	FORACO Paris	G.A.F.O.R - B.P. 3958 LIBREVILLE (Gabon)
HAUTE VOLTA	FORACO Paris	S. A. R. - B.P. 107 OUAGADOUGOU (Hte Volta)
MALI	Cie NIGER FRANCAIS	NOSOCO-SENEGAL - B.P. 791 DAKAR (Sénégal)
NEPAL	IMEX Népal	IMEX INTERNATIONAL - B.P. 334 KATHMANDU
NIGER	Cie NIGER FRANCAIS	NIGER-AFRIQUE - NIAMEY (Niger)
R.C.A.	GEOMELEC Vieugy	
SENEGAL	OPTORG Paris	PEYRISSAC-SENEGAL - B.P. 193 DAKAR (Sénégal)
TOGO	Cie NIGER FRANCAIS	U.A.C.-TOGO - LOME (Togo)
TUNISIE	CTINA Tunis	C.T.I.N.A. - 8, rue P. de Coubertin TUNIS (Tunisie)
TCHAD	GEOMELEC Tchad	SOCOPAO - B.P. 140 N, DJAMENA (Tchad)
FONDS DANOIS pr FORAGES AFRIQUE	FORACO Paris	DANISH CONSTRUCTION CORP. RODOVER (Danemark)

Allweiler AG
 7760 Radolfzell (Bodensee)
 West-Germany

phone: (07732)861
 telex: 0793437
 grams: Pumpenfabrik Radolfzell

Allweiler

SW	Europe	16
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Description:

The Allweiler 400 serie is mainly made of cast iron. The pumps are designed for mounting on a platform or column in a free-standing position.

A three-pivot system is used; stuffing box; pump rod alignment.

The pump is suitable for both lift and force duty (up to 20 m high).

The handle has a wooden grip. The pump can be supplied with a complete cylinder of cast iron with brass lining and Simrit rubber cupseal.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
471	75	3				35	7	
472								
473								

Applications

Countries where used:

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation;
three-pivot system; stuffing box; pump rod alignment; variable stroke length.
- . pins, bearings, fasteners
plain bearings
- . materials
cast iron

Connecting Assembly

- | | | material | weight | size | length |
|-------------|--|------------------|--------|------|--------|
| . pumprod | | galvanised steel | | | |
| . drop pipe | | galvanised steel | | | |

Cylinder

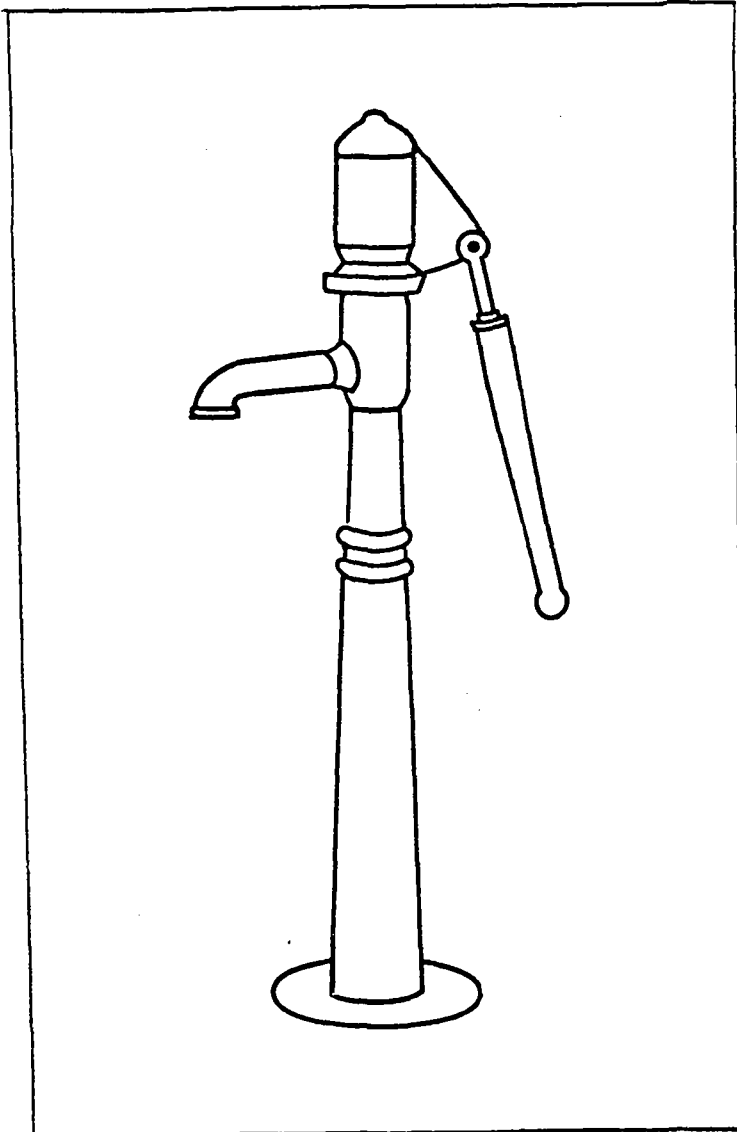
- . type closed
- . material cast iron; brass lining
- . plunger cast iron
- . cup seals Simrit rubber
- . discharge valve type poppet (T)
- . suction valve type poppet (T)
- . weight
- . min. well casing diam.

Allweiler A.G.
 7760 Radolfzell (Bodensee)
 West-Germany

phone: (07732)861
 telex: 0793437
 grams: Pumpenfabrik Radolfzell

Allweiler

SW	Europe	17
----	--------	----



Description:

The Allweiler 300 serie has a cast iron pumping house and pumpstand. The pump can be installed with or without the pumpstand base; it can also be used with a separate cylinder.

A two-pivot handle system is used.

The cylinder is of cast iron with brass lining. The pump rod is galvanised steel. The cupseal is of Simrit rubber.

Specifications (output ratings)
 For agents and affiliates: see next page

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
301 to 309	75	3				35	10	

Applications

Countries where used:

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation;
two-pivot handle system; variable stroke length.
- . pins, bearings, fasteners
plain bearings
- . materials
cast iron
- . weight: 30 kg

Connecting Assembly

	pumprod	material	weight	size	length
.		galvanised steel			
.	drop pipe	galvanised steel		32 or 40	1½" or 1½"

Cylinder

- . type in the models 301-302-309 the cylinder is placed in the above-ground pumphead; the models 306 and 311 have a closed-type cylinder underground.
- . material cast iron with brass lining
- . plunger cast iron
- . cup seals Simrit rubber (1)
- . discharge valve type poppet (T)
- . suction valve type poppet (T)
- . weight
- . min. well casing diam.

Preussag Aktiengesellschaft
 Kunststoffe und Armaturen
 Postfach 9, 3154 Stederdorf
 West-Germany

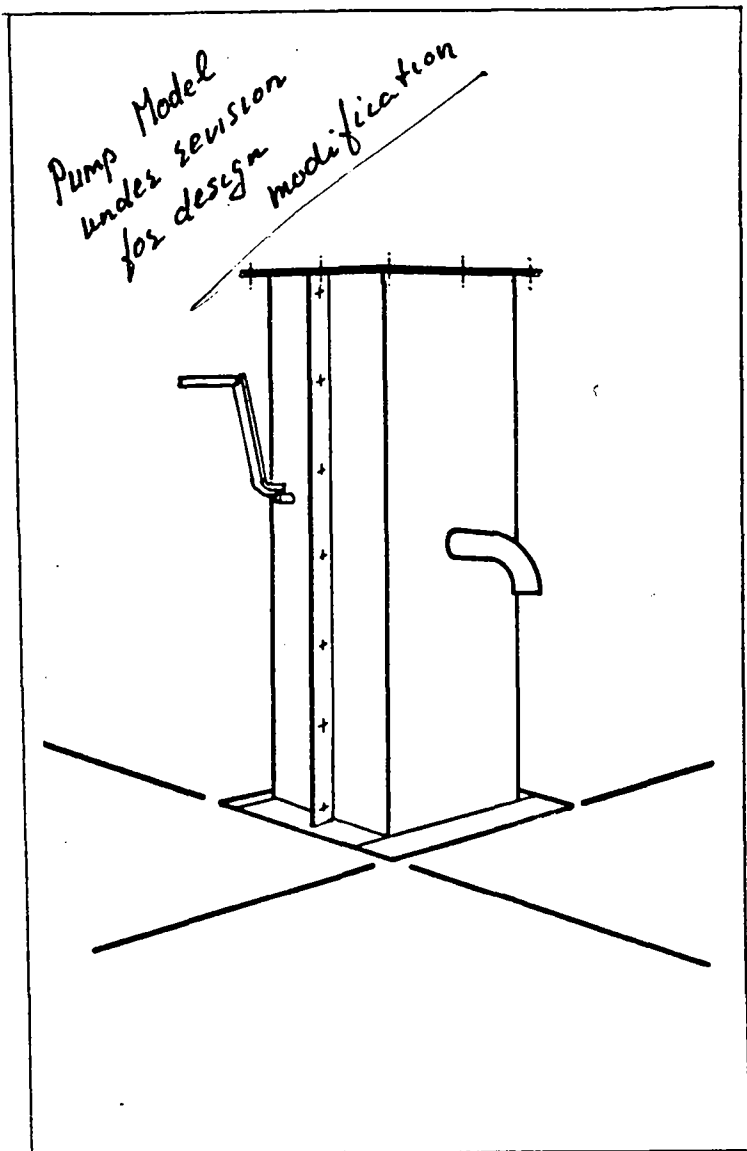
phone: (05171) 403-1
 telex: 09 2670
 grams:

Kardia

DW

Europe

18



Description:

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)

Countries where used:

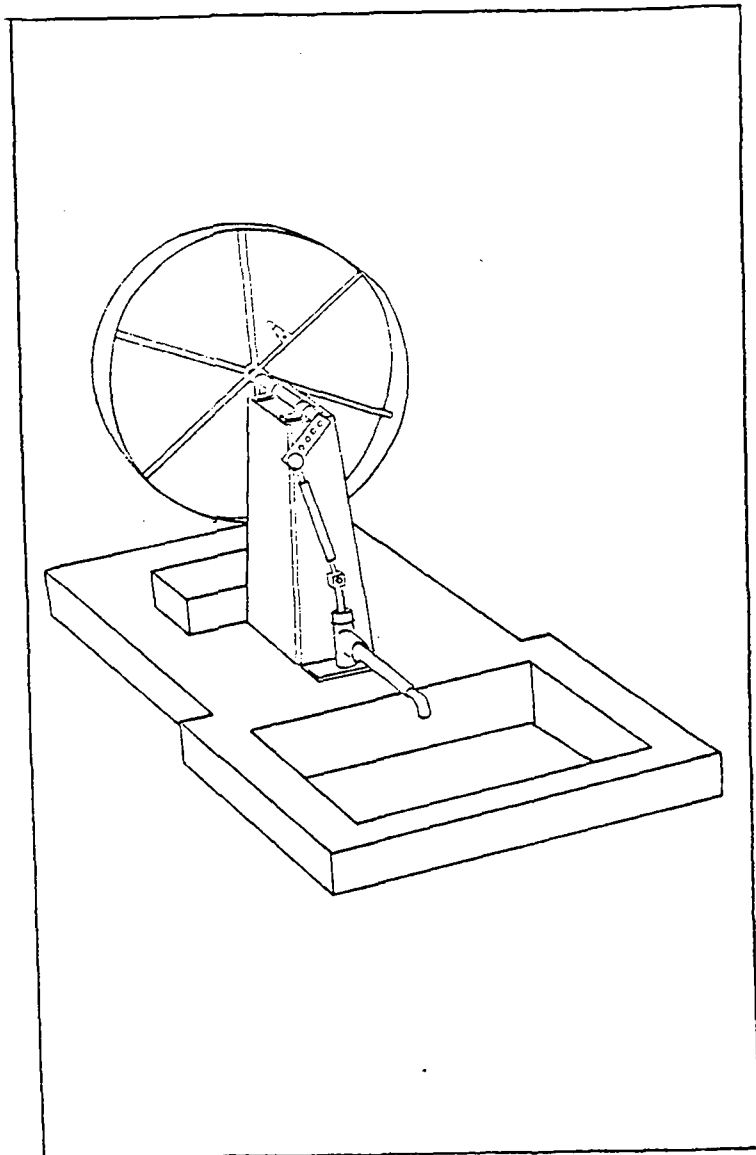
West Africa (model taken out of production)

Foundation INSTO
 37, Arkelstraat, B.P. 570
 4200 AN Gorinchem
 The Netherlands

phone: 01830-34088
 telex: 24055

Volanta

DW Europe 19



Description:

The Volanta pump uses a flywheel with a connecting rod and crank to provide reciprocating drive of the piston in the cylinder. The crank is adjustable for various depth settings. The axis rotates on two self-adjusting pre-lubricated roller bearings mounted on a concrete pedestal.

The pump rod is guided by a water-lubricated PTFE guide bush.

The cylinder is of the extractable type, and can be serviced without extracting and dismantling the drop pipe.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min. *	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
I	55		400		0.750	30	22	75
					0.425	17	40	135
					0.275	11	60	200
					0.210	8.5	80	270

* at 40 rpm

Countries where used:

Guinee Bissau, Upper Volta

Pump Head

- . . rod linkage
 - Hand-operated; rotary handwheel operation;
 - variable stroke length (adjustable crank)
- . pins, bearings, fasteners
 - two self-adjusting pre-lubricated roller bearings
 - two plain bearings
- . materials
 - cast iron flywheel; steel fittings

Connecting Assembly

- | | pumprod | material | weight | size | length |
|---|-----------|------------------|--------|------|--------|
| . | | steel cable | | | |
| . | drop pipe | galvanised steel | | | |

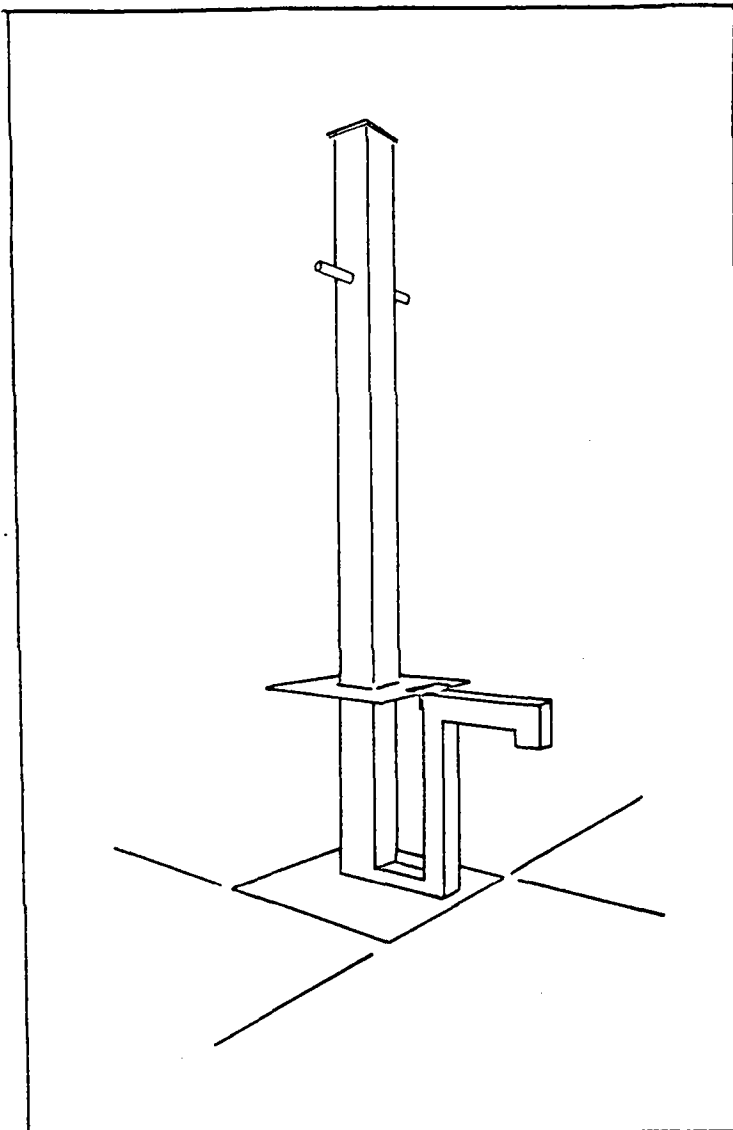
Cylinder

- . type open
- . material
- . plunger
- . cup seals
- . discharge valve type
- . suction valve type
- . weight
- . min. well casing diam.

Pijpers International
 Water Supply Engineering
 P.O. Box 138
 Nijkerk
 The Netherlands

Kangaroo

DW	Europe	20
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Description:

The Kangaroo pump has a steel tube which is mounted vertically on a baseplate with a stainless steel spring placed down in its centre. The spring rests on a stop near the baseplate and protrudes some distance above the tube. A second tube, slightly wider than the first, fits over it. To the top of the second tube a cap is welded with the pump rod attached at its centre. The pumprod is thus at a central position inside both tubes. The spring also rests against the inside of the cap. To the lower end of the outer tube, a circular platform is welded; this is held down, with the spring slightly under compression by a stop. A spout is attached to the inner tube at the baseplate level.

The cylinder is of the double-sided hydraulic seal type with ball valves. The pump is operated by pushing down the foot platform to compress the spring at the same time pushing down the plunger in the cylinder. Releasing the platform allows the spring to push it back. The plunger is lifted and water is pumped.

The pump is bolted with four bolts to the platform.

Specifications (output ratings)

For affiliate: see next page

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
		4				33	6	
		3				20	10	
		2				10	20	

Applications

Countries where used:

Tanzania: 900 pcs

Guinee Bissau: 60 pcs

Pump Head

- . rod linkage
Foot-operated; vertical spring loaded; reciprocating operation;
variable stroke length.
- . pins, bearings, fasteners
no bearings; sliding action between two concentric steel tubes;
no special lubrication.
- . materials
Fabricated from steel plate and sections; Painted.
- . Weight: 35 kg

Connecting Assembly

	material	weight	size	length
. pumprod	PVC (pipe)	0,47 kg/m	1"	
. drop pipe	PVC	0,99 kg/m	2"	

Cylinder

- . type closed
- . material PVC pipe
- . plunger
- . cup seals rubber
- . discharge valve type ball
- . suction valve type ball
- . weight
- . min. well casing diam. 4" (100 mm)

Well Drill Systems AB
 Box 8743
 S-40275 Gothenborg
 SWEDEN

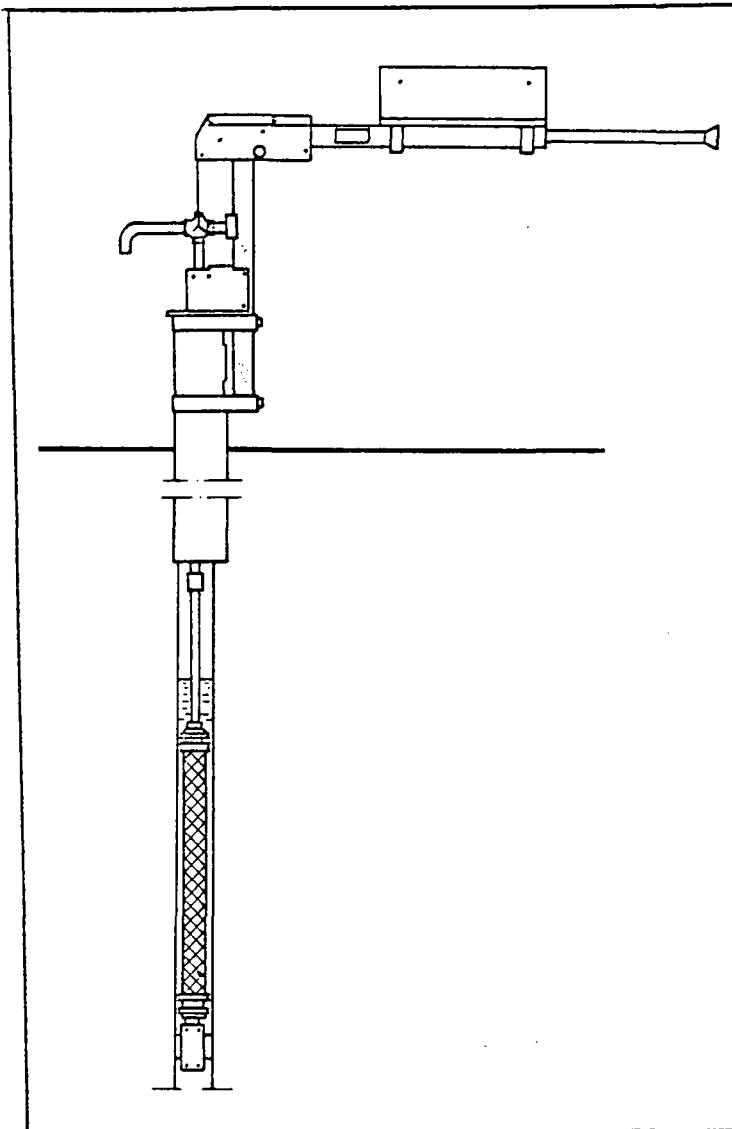
phone: (031) 500420

Petropump

DW

Europe

21



Description:

The Petro pump uses a novel pumping principle: a diaphragmatic hose acts as the pumping element. The pump has a 3/4" galvanized steel pipe which serves both to operate the pumping element and to deliver the water.

For fixing the pump requires a solid formation at the bottom of the well where the jaws underneath the hose can find a strong grip. Alternatively, the jaws can also have a sufficient grip in a 4" well casing. The drop pipe extends from the top of the hose.

By operating the handle, the delivery pipe is lifted thereby stretching the hose and reducing its internal volume; water is forced up the pipe. The water flow is controlled by valves at the top and foot of the hose.

The pump stand is of a simple design using only one handle pivot; the handle-drop pipe linkage is formed by a steel cable laid over the quadrant handle end.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
Type 95						20	25	
Type 48						10	50	

Applications

at 40 str/min.

Countries where used:

- Africa: Sudan, Nigeria, Ivory Coast, Liberia
- Asia: Papua New Guinea, Indonesia, Thailand, Bangladesh, India
- Europe: England, Norway and Sweden
- Latin America: Columbia, Costa Rica

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation; one-pivot system; variable stroke length. The handle is linked to the drop pipe with a steel cable resting over the quadrant handle end; counterweight balances the droppipe weight.
- . pins, bearings, fasteners
pump stand supports hollow journal bearing and self-lubricating teflon bushing 16 x 90 mm bearing; locked with bolt and nut
- . materials
Sheet and tubular steel, zinc plated; stainless steel lifting cable.
Plastic guide blocks for drop pipe.
- . weight: (Type 95): 28 kg
(Type 48): 29 kg

Connecting Assembly

	pumprod	material	weight	size	length
	not applicable	n - a			
	drop pipe	galvanised steel	16 kg/m	3/4"	1-3 m

Cylinder (pumping element)

- . type rubber hose diaphragm with helical wire insert
- . material natural rubber
- . plunger n - a
- . cup seals n - a
- . discharge valve type poppet (winged)
- . suction valve type poppet (winged)
- . weight Type 95: 6 kg
Type 48: 3 kg
- . min. well casing diam. Type 95: 95 mm
Type 48: 48 mm

Barnaby Climax Ltd.
 White Ladies Close Little London
 Worcester WR1 1PZ
 United Kingdom

phone: Worcester 22014
 (0905)

Climax

DW

Europe

22

Description:

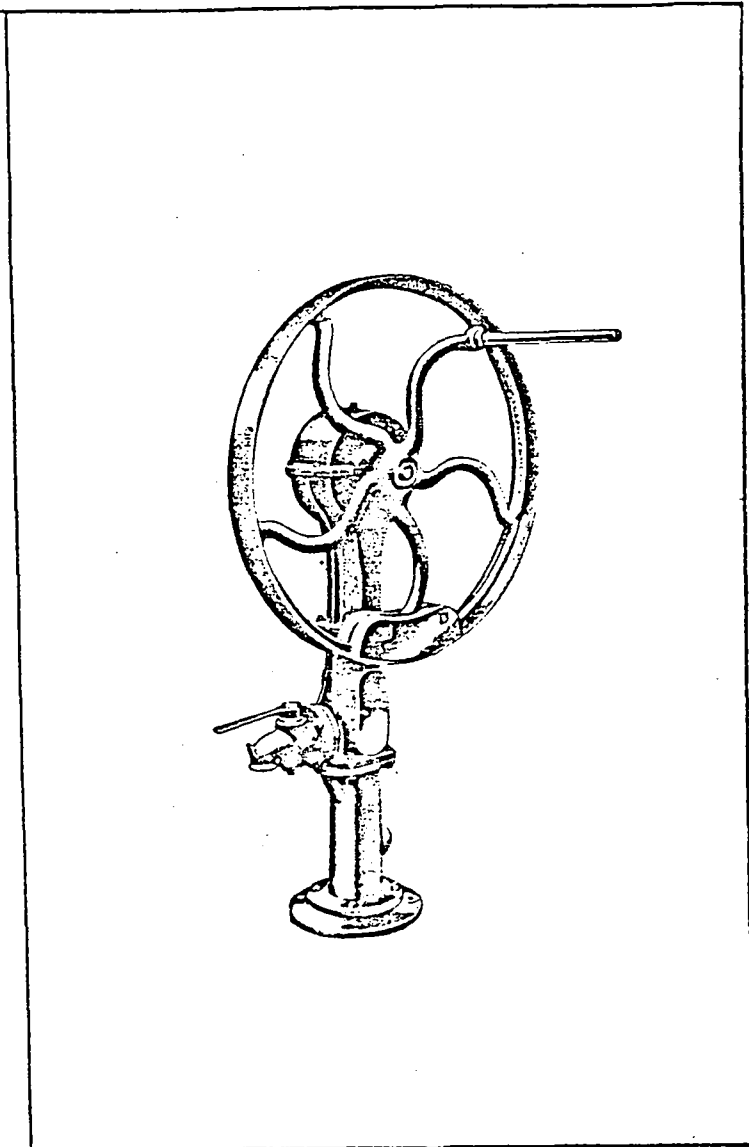
The Climax handpump uses a pumping cylinder made of extruded brass. The two-leather plunger of 2½" size is operated by a 5/8" diameter zinc-plated steel pumprod.

Drop pipe size is 2½" when used with an extractable type cylinder. Both the suction valve (a spear valve) and the plunger valve can be removed from the well while leaving the cylinder in place.

The pumpstand is mainly of cast iron. It supports a counterbalanced flywheel, which drives the pumprod via a connecting rod and crank.

All mechanical components are splash-lubricated from an oilbath. A moving pump-rod seal in a separate cylinder under the crank provides for double-acting pumping.

The pumpstand is bolted to the well apron.



Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
Fig. 9D		various sizes from 1 3/8" to 4"		5"	0.32	various outputs for different sizes of cylinder		180

Applications

Countries where used:

Africa: Malawi, Gambia and Ghana

Pump Head

- . rod linkage
Hand-operated; rotary, with heavy counterbalanced flywheel ;
fixed stroke length
- . pins, bearings, fasteners
ball races on crankshaft/flywheel (83.1 mm OD x 38.1 ID); double steel
backed shells; lubrication from internal oil reservoir.
- . materials
cast iron with forced steel crankshaft and steel fittings;
completely painted; cast iron flywheel
- . weight: 184.3 kg

Connecting Assembly

	pumprod	material	weight	size	length
.		zinc plated steel	1.64 kg/m	5/8"	
.	drop pipe	galvanised steel	8.0 kg/m	2 1/2"	

Cylinder

- . type extractable (open). Other types available
- . material brass
- . plunger brass
- . cup seals two leathers
- . discharge valve type poppet (T)
- . suction valve type spear (also poppet T footvalve)
- . weight 7.0 kg
- . min. well casing diam. 4" (100 mm)

Consallen Structures Ltd.
291 High Street
Epping, Essex CM16 4BY
United Kingdom

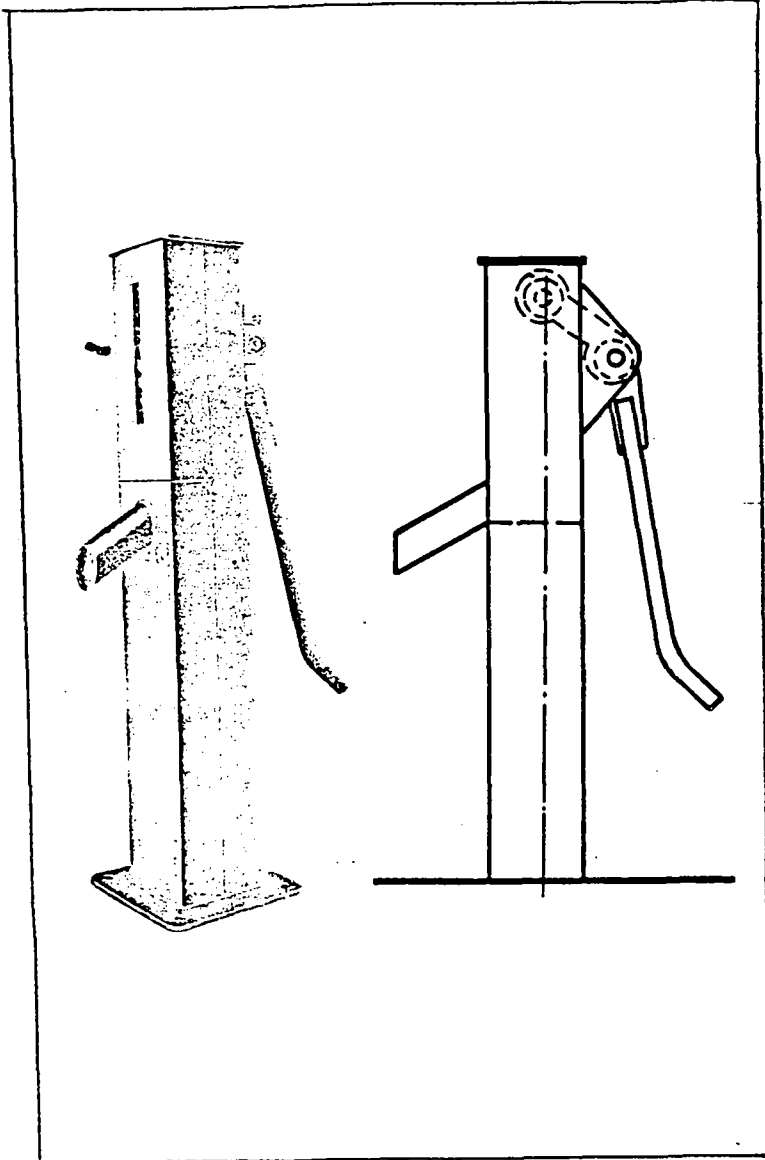
phone: 0378-74677
grams: Consallen, Epping,
England
telex: 817470

Consallen

DW

Europe

23



Description:

The Consallen pump stand is made from mild steel plate; sections are welded together. Some parts of the handle are flame cut with a profile cutter.

The pump body is hot dipped galvanised after fabrication.

A simple two-pivot handle is used, with no separate provision for pump rod alignment. Heavy duty sealed ball races are used in each pivot point.

3/8" dia. stainless steel pump rod with brass connectors and plastic guides are used; 1 1/2" ABS plastic pipe is used for drop pipe, or G.I. may also be used.

Cylinders are of stainless steel, with machined ABS end caps which are a press fit in the cylinder and retained by circlips. A single polymeric seal is used with a wear ring and a brass disc valve. The suction valve consists of a rubber diaphragm inside a perforated stainless steel strainer.

The pump stand may be bolted to the well apron, but a cast-in version is also offered as are alternative water outlets in the form of bent spouts and screwed nipples to take an extension pipe.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
LD. 4	50**	2"	150	6"	.30	13 2/3	60	200
LD. 5	63	2 1/2"	150	6"	.475	21	45	150
LD. 6	75	3"	150	6"	.68	31	30	100

(45 str/min)

Countries where used:

Liberia (199 pos), Ethiopia, Sri Lanka, Gambia, Indonesia, Seychelles, Somalia & Tanzania.

Agents in Ghana, Nigeria, India & Malawi.

** Standard cylinder

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation;
two-pivot system; variable stroke length; mechanical advantage 6:1 or 8:1
- . pins, bearings, fasteners
two-pivot handle; main pivot consists of two sealed ball races each 53 mm OD x 20 mm ID; the other pivot has one sealed ball race 53 mm OD x 20 mm ID. All bolts and fastenings are of stainless steel with SS nylock nuts.
- . materials
fabricated from steel plate; completely galvanised after fabrication.
- . weight: 30.5 kg

Connecting Assembly

pumprod	material	weight	size	length
	stainless steel	0.38 kg/m	3/8"	3 m
drop pipe	ABS plastic	0.69 kg/m	1 1/4"	3 m

(G.I. Pipe may also be used if required)

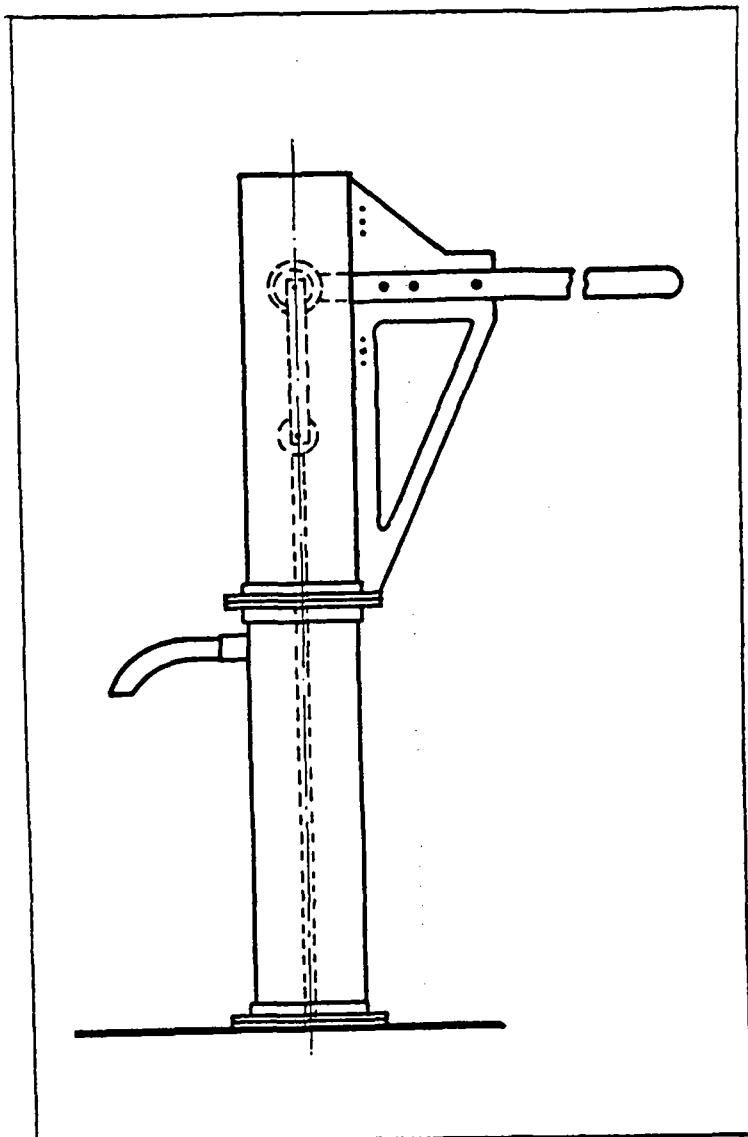
Cylinder

- . type closed
- . material stainless steel with SS circlips & ABS plastic end plugs
- . plunger brass but also thermoset plastic
- . cup seals 1 No. polymer seal together with artificial resin wear ring as a set.
- . discharge valve type disc of brass
- . suction valve type natural rubber (or polyurethane) diaphragm acting inside a perforated stainless steel strainer.
- . weight 2 - 3 kg depending on size.
- . min. well casing - 2 1/2" (65mm) Ø for 2" cyl; 3" Ø for 2 1/2" cyl; 3 1/2" Ø for 3" cyl.
(OD of cylinders is 0.25 inches (6mm) greater than nominal cylinder bore)

English Drilling Equipment Co. Ltd.
 Lindley Moor Road phone: Ellad 2843/6
 Huddersfield, teleex: 51687
 Yorkshire HD3 3RW, ENGLAND grams: Bullwheel Huddersfield

Edeco

DW Europe 24



Description:

The Edeco pump is made of tubular all-steel welded construction, flanged and bolted. Standard tapped 1½" BSP for fitting delivery pipe when the pump is used for lift and force duties. The spout can be replaced by a 1½" BSP plug.

The pump uses a three-pivot handle system; stuffing box and guide for pumprod alignment; adjustment can be made through side panel.

The handle is of all steel construction; it is counterbalanced. A three-position lever fulcrum gives a choice of 10:1, 6,5:1 or 4:1 ratios with corresponding selection of stroke and operating depth.

The pump cylinder is of the extractable type made from brass and gun metal; ball valves.

The pump rod is of wood with steel straps and fork ends. The pump stand has drilled holes allowing the pump to be mounted on concrete plinth or special stand.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
		3½		7"		32	43	140
		3½				24	56	185
		2½				17	79	260
		2½				11	119	390

Applications

25 str/min.

Countries where used:

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation; three-pivot system; stuffing box and guide for pumprod alignment; three-position lever fulcrum; mechanical advantage 10:1, 6,5:1 or 4:1; variable stroke length.
- . pins, bearings, fasteners
lever and linkage pivots are equipped with lubricated and completely sealed anti-friction bearings
- . materials
tubular all-steel welded construction; painted

Connecting Assembly

	pumprod	material	weight	size	length
.		wood		1½" x 1½"	
.	drop pipe	galvanized or hot bitumen coated steel		4"	

Cylinder

- . type closed (extractable) 3½" - 3½" - 2½" - 2½" ID
- . material gun metal with brass lining
- . plunger gun metal
- . cup seals 2 leathers
- . discharge valve type ball
- . suction valve type ball
- . weight
- . min. well casing diam. 5½"

Godwin Pumps
H.J. Godwin Ltd, Quenington, Cirencester
Gloucestershire GL7 5BX
United Kingdom

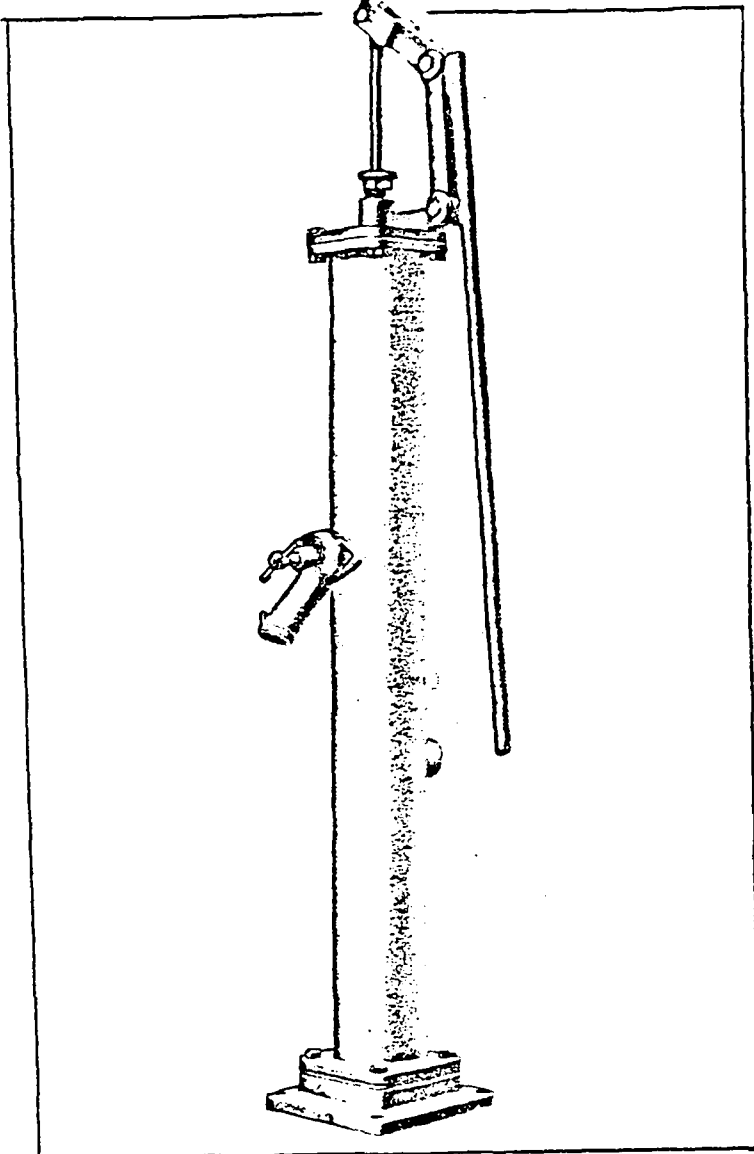
phone: 0285-75-271
telex: 43240
grams: Pumps Ciren

Godwin

SW

Europe

25



Description:

The Godwin model HLS has the cylinder situated in the pumpstand. Three pump models are available with cylinders of 3", 3½" and 4", made of fabricated steel with brass lining. The pump is operated with a round shaped handle of mild steel.

The pumpstand is of fabricated steel and supports the three-pivot handle system with a stuffing box rod guide.

Two types of spout are available. For lift and force duty, the spout is cast iron fitted with a tap.

The pump stand base of cast iron is secured with 4" bolts to the well platform.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
HLS 3		3		7		32		27
HLS 3½		3½		7		44		27
HLS 4		4		7		58		27

Applications

40 str/min.

Countries where used:

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation; three-pivot handle system; fixed stroke length; stuffing box/rod guide
- . pins, bearings, fasteners
hardened steel pins
- . materials
fabricated steel pumpstand with cast iron base; gunmetal stuffing box allowing pumps to be used for lift and force duty; when used for lift duty only, a brass guide is fitted.

Connecting Assembly

	material	weight	size	length
. pumprod	n - s	n - s	n - s	n - s
. drop pipe	galvanised steel	n - s	1½ - 2	n - s

Cylinder

- . type situated in pumpstand
- . material brass
- . plunger gunmetal
- . cup seals one leather
- . discharge valve type n - s
- . suction valve type poppet valve
- . weight n - s
- . min. well casing diam. 3"

Godwin Pumps H.J. Godwin Ltd.
 Quenington, Cirencester
 Gloucestershire GL 7 5BX
 United Kingdom

phone: 0285-75-271
 telex: 43240
 grams: Pumps Ciren

Godwin

DW

Europe

26

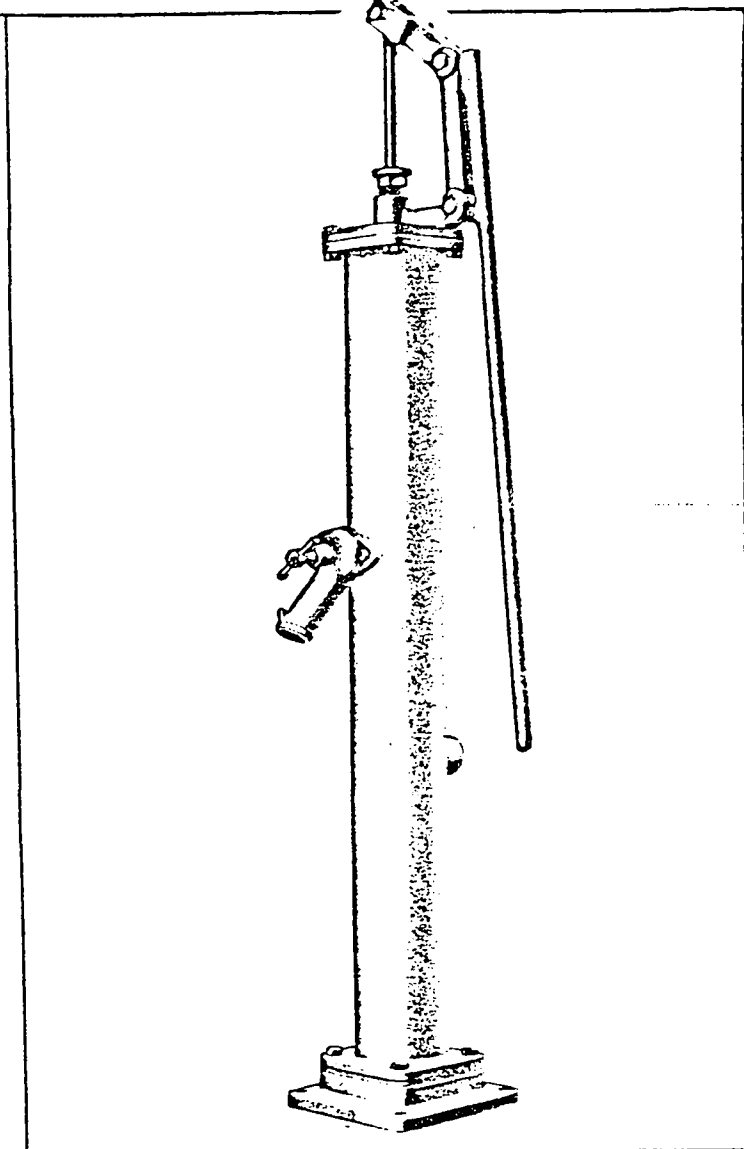
Description:

The Godwin model HLD has a cylinder which is largely ^{of} gunmetal. For the extractable type of cylinder, the pump rods are of pinewood fitted with steel fork ends and strap couplings. Steel rods are used with the non-extractable cylinder.

The fabricated steel pumpstand supports a three-pivot handle system with a stuffing box/rod guide.

Two spouts are available for lift and force duty. The spout is of cast iron fitted with a tap. A delivery tap is provided when the pump is required for lift and force duty.

The pumpstand has a base of cast iron, which is bolted to the well platform.



Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
HLD 2 (closed)		2		7		14	n - s	

Applications

40 str/min.

Countries where used:

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation; three-pivot handle system;
fixed stroke length; stuffing box/rod guide
- . pins, bearings, fasteners
hardened steel pins
- . materials
fabricated steel pumpstand with cast iron base; gunmetal stuffing box for
pumps used for lift and force duty; for lift duty only a brass guide is fitted.

Connecting Assembly

	pumprod	material	weight	size	length
		pinewood (extractable)			
	drop pipe	steel (non-extractable)			
		galvanised steel		depends on cylinder size	

Cylinder

- . type extractable cylinder pumps are available with cylinder sizes of 2½" - 2¾" - 3¼" and 3½". Non-extractable cylinder types have cylinder sizes of 2", 2½", 3" and 3½".
- . material largely brass and gunmetal; brass lining
- . plunger gun metal
- . cup seals leather
- . discharge valve type n - s
- . suction valve type n - s
ball foot valve
- . weight n - s
- . min. well casing diam. depends on cylinder size

Godwin Pumps H.J. Godwin Ltd
 Quenington, Cirencester
 Gloucestershire GL7 5BX
 United Kingdom

phone: 0285-75-271
 telex: 43240
 grams: Pumps Ciren

Godwin

DW

Europe

27

Description:

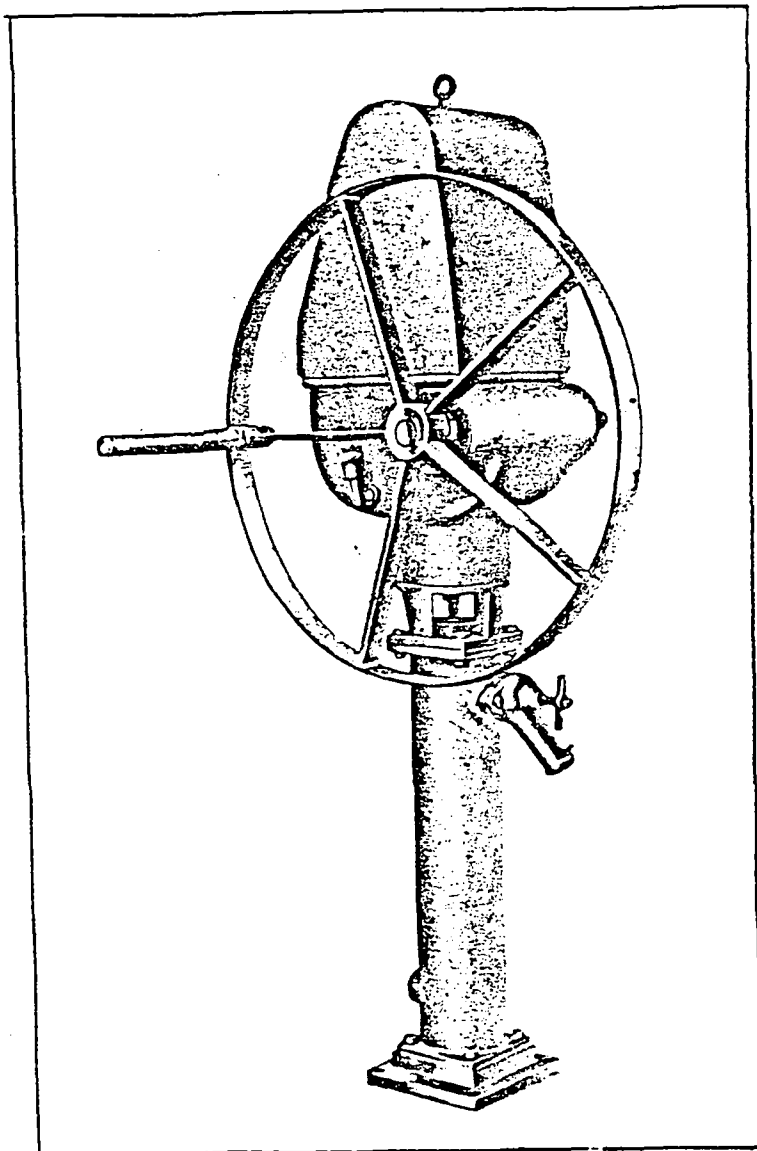
The Godwin WIH model uses a standard pumping cylinder made of extracted brass and gunmetal; stainless steel ball valves for the suction valve, the discharge valve and the foot valve. Extractable and non-extractable cylinders in various sizes are available.

A wooden pump rod is used which is assembled with plates, bolted to both wide faces of the rectangular section rod.

The pumpstand is partly fabricated steel and partly cast iron. The handle operates a light fly wheel; rotation speed is reduced in the ratio of 4:1 by gearing; conversion reciprocating action is by a connecting rod and crank. All internal components are lubricated from an oil bath.

The spout is cast iron, and has a tap for use when force pumping is required.

The pump stand base is cast iron; it is bolted to the well platform.



Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
WIH 51		2½		6		8		350 (2 men)

Applications

20 str/min

Countries where used:

Pump Head

- rod linkage

Hand-operated; rotary operation with light flywheel; fixed stroke length.

- pins, bearings, fasteners

ball races on handwheel shaft (69.1 mm OD x 31.8 mm ID)

plain bearings in other pivot points. Lubrication from internal oil reservoir.

- materials

base and pump are cast iron; painted; pump stand and handwheel are fabricated steel; topcover is fabricated sheet steel; other fittings are of steel.

Connecting Assembly

	pumprod	material	weight	size	length
		wood	0.79 kg/m	2" x 1½"	n - s
	drop pipe	galvanised steel	8 kg/m	2½"	n - s

Cylinder

- type extractable 2½ - 3½ - 3½ - 3½ ID
non-extractable 2½ - 3 - 3½ - 4 ID
- material brass and gun metal
- plunger gun metal
- cup seals leathers (2)
- discharge valve type ball
- suction valve type ball (also ball footvalve)
- weight 11.2 kg
- min. well casing diam. 4" (100 mm)

Godwin Pumps H.J. Godwin Ltd.
 Qunington, Cirencester
 Gloucestershire GL7 5BX
 United Kingdom

phone: 0285-75-271
 telex: 43240
 grams: Pumps Ciren

Godwin

DW

Europe

28

Description:

The Godwin X model has a standard pumping cylinder made in extruded brass and gun-metal. The pump uses stainless steel ball valves for the suction and discharge valves, as well as for the footvalve. Extractable and non-extractable cylinders in various sizes are available.

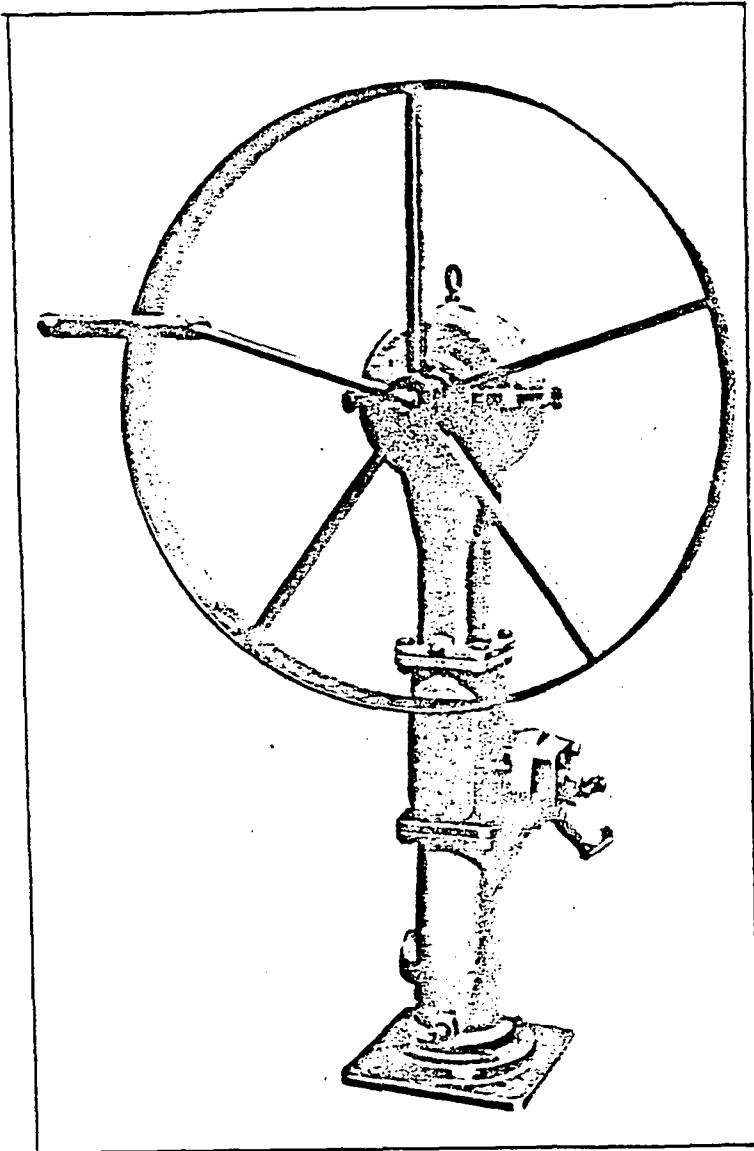
The pumprod is of wood joined together by plates bolted to both wide faces of the rectangular shaped rod.

The cast iron pumpstand supports a counter balanced flywheel driving the pump rod via a connecting rod and crank.

All moving components are splash-lubricated from an oil bath. A moving pump rod seal in a cylinder below the crank provides the effect of a double-acting pumping.

The spout is cast iron, of the flange type fitted with a tap.

The pump stand base of cast iron is bolted to the well platform.



Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
X 1		2½		5		13		175 (2 men)

Applications

at 40 str/min

Countries where used:

Pump Head

- . rod linkage
Hand-operated; rotary operation with counterbalanced flywheel;
fixed stroke length.
- . pins, bearings, fasteners
two ball races mounted in the crankcase; lubrication from internal oil
reservoir.
- . materials
Cast iron with forged steel crankshaft; other fittings are steel.

Connecting Assembly

- | . pumprod | material | weight | size | length |
|-------------|------------------|--------|------|--------|
| | wood | | | |
| . drop pipe | galvanised steel | | | |
| | galvanised steel | | | |

Cylinder

- . type extractable 2½" - 2¾" - 3¼" - 3½" ID
non-extractable 2½" - 3" - 3½" - 4" ID
- . material brass and gun metal
- . plunger gunmetal
- . cup seals leathers (2)
- . discharge valve type ball
- . suction valve type ball (also ball footvalves)
- . weight
- . min. well casing diam. 4" (100 mm)

Lee, Howl and Co. Ltd.
 Alexandra Road, Tipton
 West Midlands DY4 8TA
 United Kingdom

phone: (021) 5576161
 telex: 238945
 grams:

Oasis

DW

Europe

29

Description:

The Oasis handpump is mainly of cast iron. The pump has a counter balanced flywheel, driving the pumprod via a connecting rod and crank.

All mechanical components are splash-lubricated from an oil bath.

A moving pumprod seal in separate cylinders below the crank provides the effect of a double-acting pumping.

The spout is a simple bended pipe or a cast iron spout with a tap can be fitted for force pump duty.

The cylinder is of the extractable type and available in 4 sizes. The drop pipes are galvanised steel; the pump rod sections are of wood, joined together by galvanised langets and fish plates.

The foot valve is of brass, and is fitted with a strainer. The pump stand is bolted to the well apron.



Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
		1½				6	61	200
		2½				10	41	135
		2¾				15	29	95
		3½				20	20	65

Applications

30 245/min

Countries where used:

Pump Head

- . rod linkage
Hand-operated; rotary operation with heavy counterbalanced flywheel;
fixed stroke length.
- . pins, bearings, fasteners
ball races on crankshaft
lubrication from internal oil reservoir.
- . materials
cast iron with forged steel crankshaft; other fittings of steel;
cast iron fly wheel.

Connecting Assembly

	material	weight	size	length
. pumprod	wood (pitch pine)			
. drop pipe	galvanised steel		2½"	

Cylinder

- . type open (extractable type)
- . material brass
- . plunger brass
- . cup seals leathers (2)
- . discharge valve type poppet (T)
- . suction valve type spear (poppet T footvalve)
- . weight
- . min. well casing diam. 4" (100 mm)

Mono Pumps Ltd.
 Arnfield Works
 Martin Street, Audenshaw
 Manchester M34 5JA
 United Kingdom

phone: 061-3303031
 telex: 667733
 grams: mono audenshaw

Monolift

DW

Europe

30

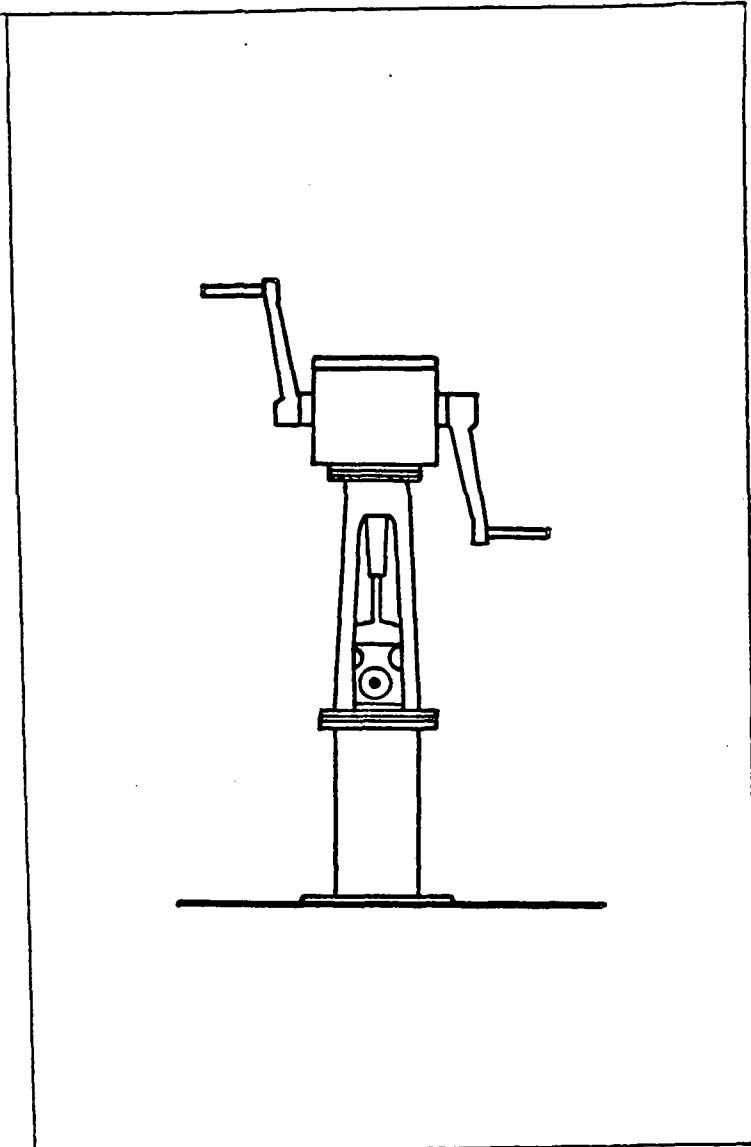
Description:

The Monolift handpump is a rotary pump, operated with one or two handles. Gearing transmits the drive to the plain steel shaft, the gearing is immersed in a special grease (and needs no further attention throughout its life).

The pumping element uses the helical rotary principle: "progressive cavity" pumping. A chromium-plated, double helical rotor rotates inside a triple-helical rubber stator. As the rotor turns, sealed cavities are formed which force the water up between the rotor and stator.

A suction valve is provided for keeping the pump primed when it is not being used.

The pumpstand is mainly of cast iron. It is designed for mounting on a concrete stand or pillar, at a height convenient to the users.



Specifications (output ratings)

For agens: see annex

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
ES 30						5 - 19	45	

Applications

Countries where used:

- Africa: Gambia, Ghana, Kenya, Morocco, Nigeria, Oman, Tanzania, Zambia, Southern Africa
- Asia: Ethiopia, India, Pakistan, Sri Lanka
- Europe: Holland
- North America: Canada

Pump Head

- . rod linkage
One or two-handle operation; rotary drive.
- . pins, bearings, fasteners
For handle: plain bearings (white metal) 31.7 mm dia, 32 mm length;
triple ball races on vertical pump shaft; 72 mm OD x 34.9 mm ID;
Lubrication from internal oil reservoir.
- . materials
cast iron; pointed steel fittings.
- . weight: 53.8 kg

Connecting Assembly

	pumprod	material	weight	size	length
.		steel	0.85 kg/m	12 mm	1,5 m
.	drop pipe	galvanised steel	4.4 kg/m	1½" (40 mm)	3 m

Cylinder

- . type helical rotor stator
- . material steel cylinder; rubber stator; painted rotor chromium-plated
- . plunger n - a
- . cup seals n - a
- . discharge valve type none
- . suction valve type Poppet (winged)
- . weight 9,5 kg
- . min. well casing diam. 4" (100 mm)

Mono Pumps Ltd. agents (Water Pump Division):

Ethiopia

Grous Electrical Engineering Company Limited
P.O. Box 142, Addis Ababa

Ghana

Holman Brothers (Ghana) Limited
P.O. Box 3309, Accra

Kenya

Warren Kenya Limited
Warren House, Loita Street, P.O. Box 30151, Nairobi.

Morocco

Les Equipments Industriels (Anciennement Jullien)
256 Boulevard Ba Hamad, Casablanca

Nigeria

Holman Brothers (Nigeria) Limited
P.O. Box 81, 26 Burma Road, Apapa

Zambia

A.F.E. Limited
P.O. Box 1505, Freedom Way, Lusaka

Individual sales arrangements in:

Canada, Ethiopia, Gambia, Ghana, Holland, Kenya, Morocco, Nigeria,
Oman, Sri Lanka, Tanzania, Zambia, Bangladesh, Thailand, Malaysia,
Somalia, Bahrain, Iraq, Qatar, Sudan.

Several Manufacturers Pitcher Handpump

Pitcher Spout

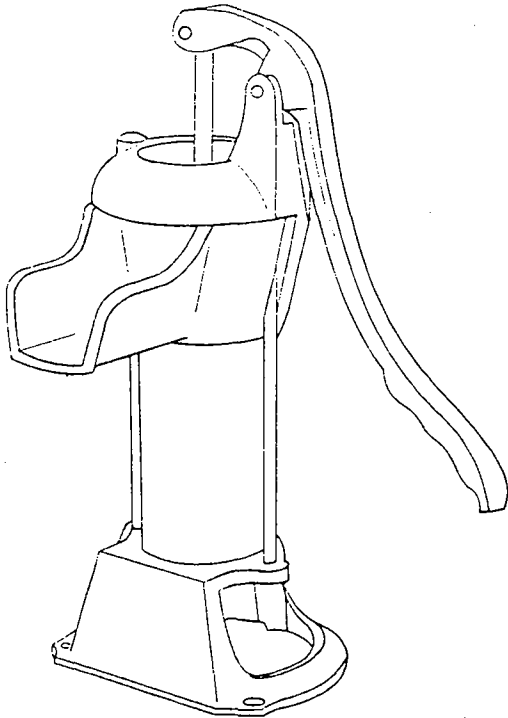
(see annexed sheet)

SW

Europe

31

Description:



Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)

Applications

Countries where used:

Sigma Pumping equipment and valves manufacturing works

Václavslá nám c 60

P.O. Box 1111

11187 Praha 1

Czecho Slowakia

"Intersigma"

"Orient"

phone: Praha 242951-9

telex: Praha 121205 insic

grams: Intersigma Praha

Bombas Borja S.L.

Calle Villa Madrid Parcela 168

Paterna, Valencia

Spain

phone: 96-1321200

telex:

grams:

Garlos Gens, S.L.

Bombas Geyda

Avenida de Burjasot 54

Valencia 9

Spain

phone: 96-3654200

telex:

grams: GEYDA

Fabrica de Implementos Agricolas (FIASA)
 Hortiguera 1882
 Buenos Aires

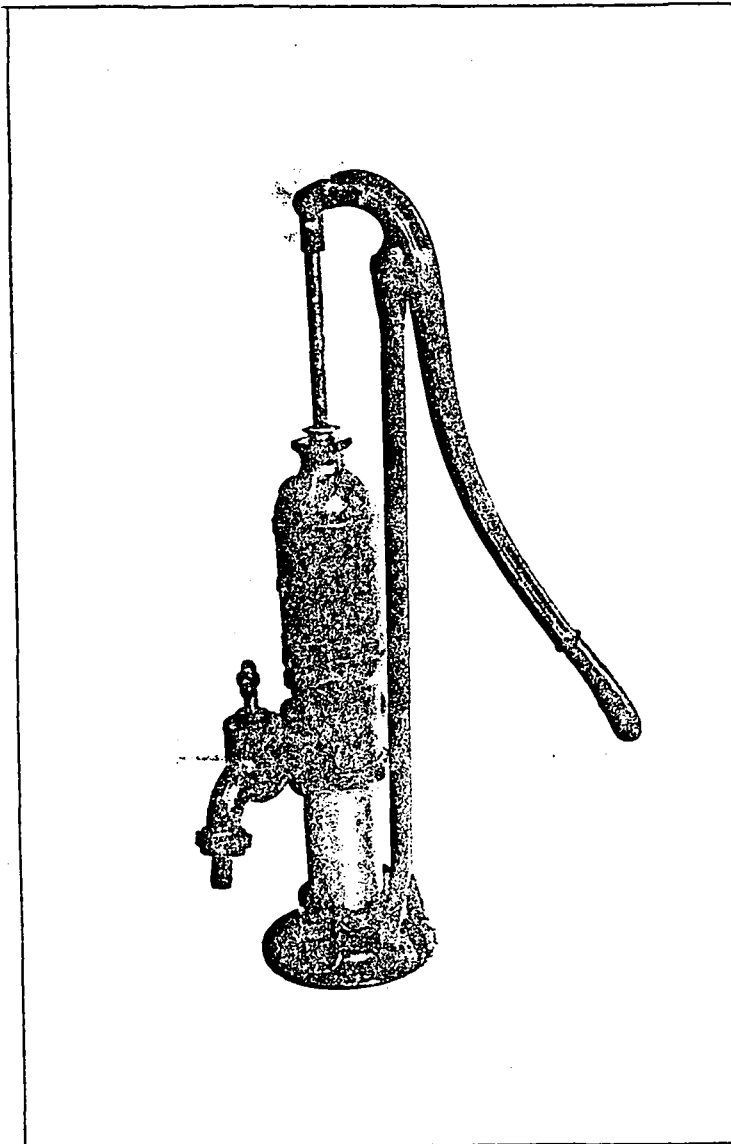
phone: 923-1081
 telex: 22910 Camex AR
 grams: Brisa BAIRES

Lago

SW

Latin
 America

1



Description:

The Lago models 201H and 201B are suitable for shallow wells up to 7 m of depth; the pumps can be used for force pumping to raise water to levels up to 12 m above the pump.

The type H pump is entirely fabricated of cast iron. Type B is also available with a brass barrel.

The pump uses a three-pivot handle system with a brass or iron stuffing box and rod guide. The spout has a tap which is closed for force pumping.

The pumpstand is bolted to the well apron.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
201 H or 201 B	76.2	3	139.7	5½		20	7	23

Countries where used:

Argentina, Bolivia, Costa Rica, Cuba, Colombia, Guatemala, El Salvador, Honduras, Dominican Republic, Nicaragua, Curacao, Chili, Venezuela, Paraguay, Peru, Panama

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation;
three-pivot system; stuffing box/rod guide; variable stroke length.
- . pins, bearings, fasteners

plain bearings
- . materials

cast iron; brass or iron stuffing box/rod guide
- . weight: 18 kg

Connecting Assembly

	pumprod	material	weight	size	length
.		galvanized steel			
.	drop pipe	galvanized steel		1½"	21 foot

Cylinder

- . type situated in pumpstand
- . material cast iron or brass
- . plunger cast iron
- . cup seals leather (1)
- . discharge valve type flapper
- . suction valve type flapper
- . min. well casing diam. 4" (100 mm)

Fabrica de Implementos Agricolas (FIASA)

Hortiguera 1882

Buenos Aires

Argentina

phone: 923-1081

telex: 22910 Camex Ar

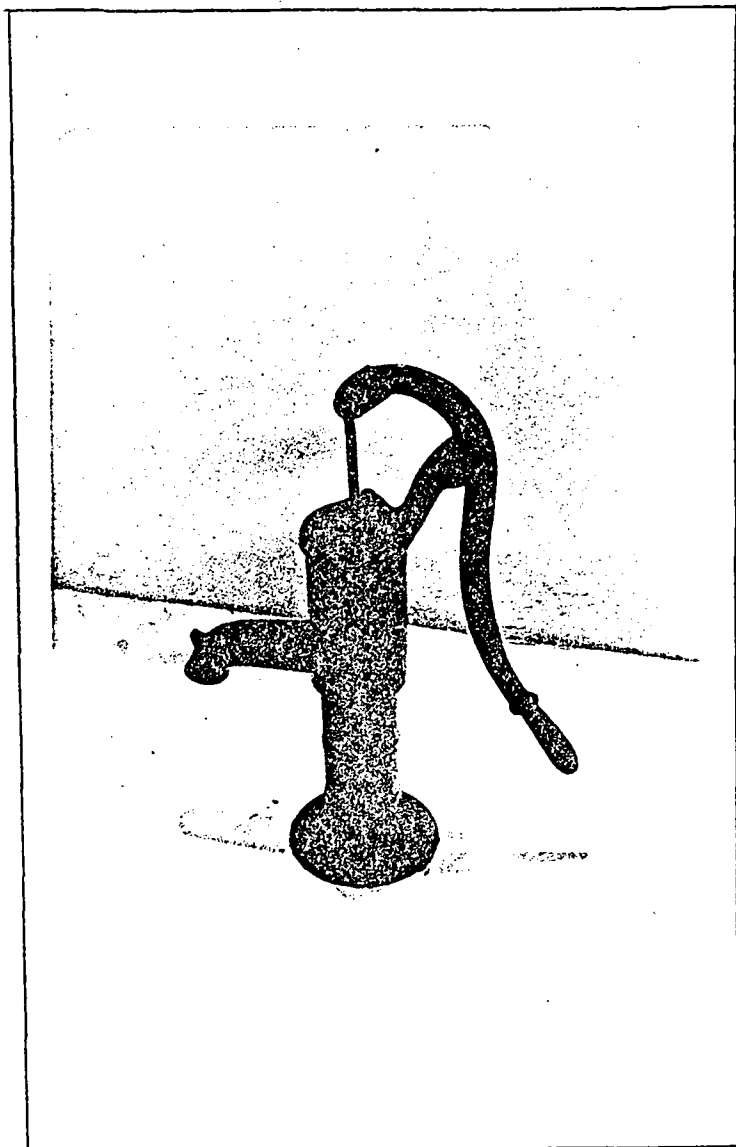
grams: Brisa Baires

Lago

SW

Latin
America

2



Description:

The Lago handpump models 3 to 8 are especially suitable for shallow wells up to 7 m where no provision for force pumping is desired.

The pump is made of cast iron. It has a one-leather cast iron plunger. The handle is of the two-pivot system.

The pumpstand is bolted to the well apron.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
3	70	2 $\frac{1}{2}$	152	6		17	7	23
4	76	3	178	7		20	7	23
5	82	3 $\frac{1}{4}$	178	7		23	7	23
6	89	3 $\frac{1}{2}$	203	8		27	7	23
8	102	4	203	8		33	7	23

Countries where used:

Argentina, Bolivia, Costa Rica, Cuba, Colombia, Panama, Nicaragua, Honduras, El Salvador, Guatemala, Belice, Dominican Republic, Peru, Venezuela; Nigeria, Algeria; Spain

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation;
two-pivot system; variable stroke length.
- . pins, bearings, fasteners
plain bearings
- . materials
cast iron
- . weight: 15-25 kg Nbr 3-11 kgs; Nbr 4-14 kgs; Nbr 4-15 kgs; Nbr 5-21 kgs, and
Nbr 8-25 kgs.

Connecting Assembly

- | pumprod | material | weight | size | length |
|-----------|------------------|--------|------|---------|
| | galvanized steel | | | |
| drop pipe | galvanized steel | | 1½ | 21 foot |

Cylinder

- . type situated in pumpstand
- . material cast iron
- . plunger cast iron
- . cup seals leather (1)
- . discharge valve type flapper
- . suction valve type flapper
- . weight
- . min. well casing diam. 4" (100 mm)

Fabrica de Implementos Agricolas (FIASA)
 Hortiguera 1882
 Buenos Aires
 Argentina

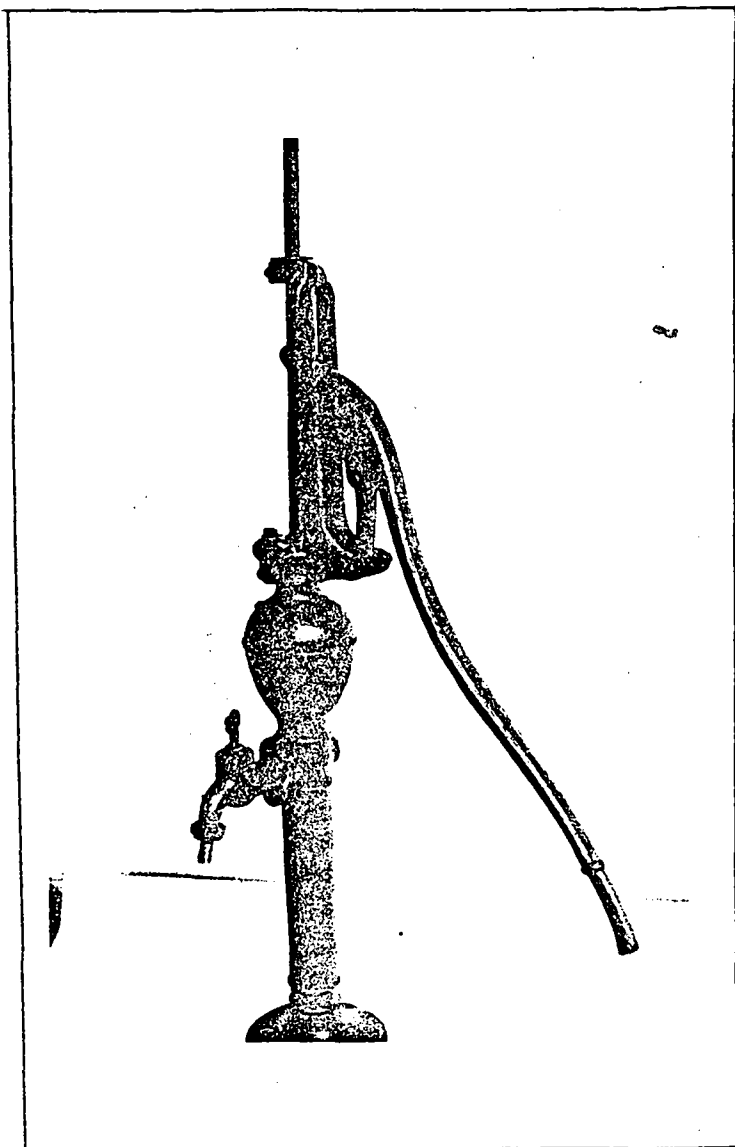
phone: 923-1081
 telex: 22910 Camex Ar-Prefix FIASA
 grams: Brisa Baires

Lago

DW

Latin
 America

3



Description:

The Lago pump model 203 for deep wells is made entirely of cast iron.

The pump uses a three-pivot handle system; it has a rod guide for alignment of the pump rod; the pump lever can be adjusted for different stroke lengths.

The cylinder is available in 2½" to 3" dia with brass lining and cast iron caps. The plunger is of cast iron and brass with two seats (leathers).

The pumpstand is bolted to the well apron.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
203	57	2½	305	12				120
	64	2½	356	14				120
	70	2¾	406	16				120
	76	3	457	18				120

Countries where used:

Argentina, Bolivia, Costa Rica, Cuba, Colombia, Chili, Nicaragua, El Salvador, Guatemala, Panama, Honduras, Dominican Republic, Peru, Paraguay, Curacao, Venezuela; Nigeria.

Pump Head

- rod linkage

Hand-operated; vertical reciprocating operation;
three-pivot system; rod guide for maintaining pump rod alignment;
variable stroke length.

- pins, bearings, fasteners

plain bearings

- materials

cast iron, brass or cast iron stuffing box

- weight: 26 kg

Connecting Assembly

	pumprod	material	weight	size	length
.		galvanised steel	0.8 kg/m	7/16"	3 m
.	drop pipe	galvanised steel		1½"	3 m

Cylinder

- type closed

- material brass barrel with iron caps

- plunger cast iron and brass

- cup seals leathers (2)

- discharge valve type flapper

- suction valve type flapper

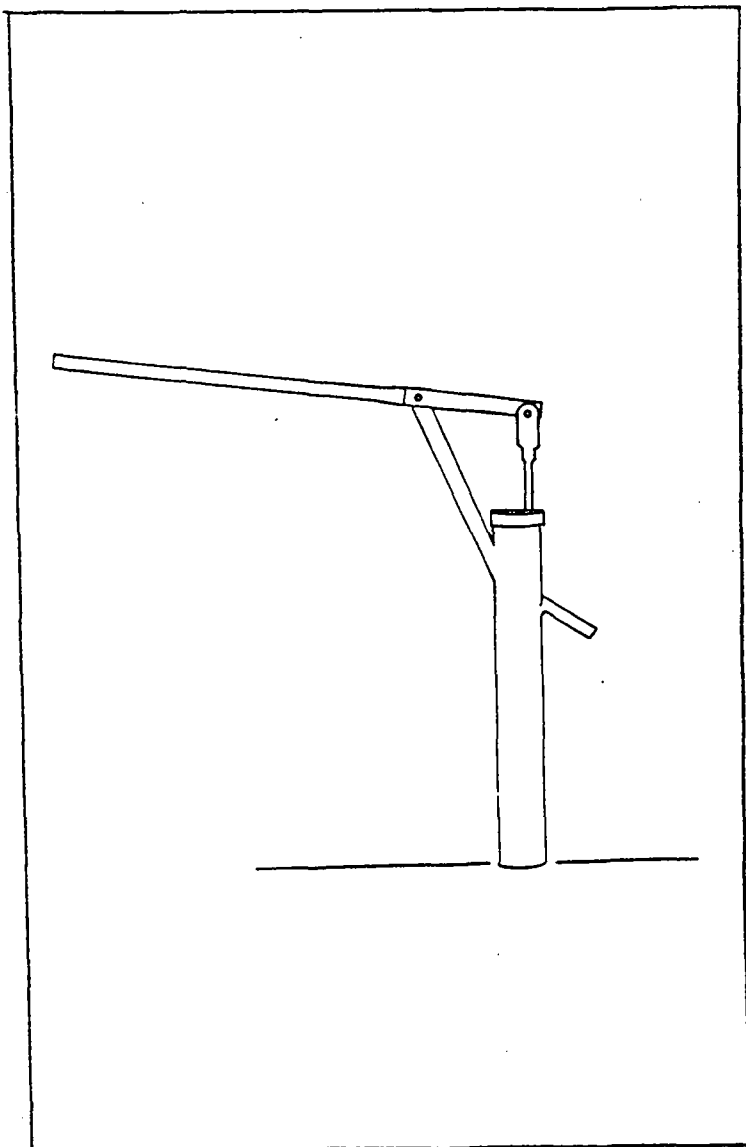
- weight

- min. well casing diam. 4" (100 mm)

Instituto del desarrollo rural del altiplano
 Edificio Esperanza 8° piso phone: 800110
 Casilla 8561 La Paz telex:
 Bolivia grams: IDRA

Boliviana

DW	Latin America	4
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Description:

The Boliviana handpump is a locally manufactured handpump; it is suitable for depths up to 14 m.

The pump uses a two-pivot handle system.

The pumpstand is made of tube steel on which a spoutpipe is welded.

The pumpstand base is bolted to a prefabricated concrete slab, using 4 anchor bolts.

The drop pipe is 2" PVC tube, which also serves as the cylinder lining.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
	50	2	100	4		8	14	

Applications

40 str/min

Countries where used:

Bolivia 1000 pcs

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation;
two-pivot system; variable stroke length
- . pins, bearings, fasteners
Plain bearings
- . materials
tube steel

Connecting Assembly

- | | pumprod | material | weight | size | length |
|-------------|---------|----------|--------|------|--------|
| . drop pipe | | PVC | | 2" | |

Cylinder

- . type open
- . material PVC
- . plunger cast iron
- . cup seals leather (1)
- . discharge valve type flapper
- . suction valve type flapper
- . weight
- . min. well casing diam. 4" (100 mm)

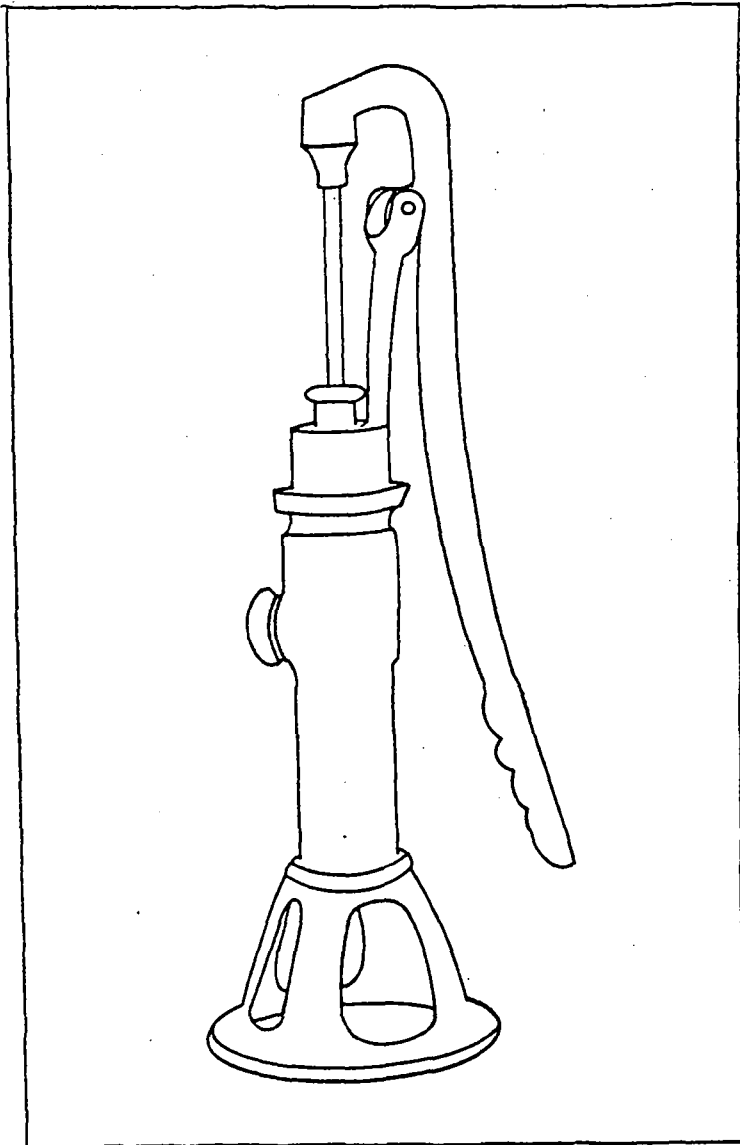
Bombas Americana Ltd.
 Av. Marginal de Via Anhanguera 480 phone: 260-0107
 Pg. Sao Domingas Sao Paulo
 Brazil

Americana

SW

Latin
 America

5



Description:

The Americana M 1400 handpump is fabricated of cast iron.

The pump uses a three-pivot handle system with a stuffing box/rod guide; it is suitable for both lift and force duty.

The pumpstand is bolted to the well platform

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
M 1400						17	8,5	

Applications

Countries where used:

Brazil

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation;
three-pivot system; stuffing box/rod guide; variable stroke length
 - . pins, bearings, fasteners
plain bearings
 - . materials
cast iron
-

Connecting Assembly

- | | pumprod | material | weight | size | length |
|-------------|---------|----------|--------|------|--------|
| . drop pipe | | | | | |
-

Cylinder

- . type closed
- . material
- . plunger
- . cup seals
- . discharge valve type
- . suction valve type
- . weight
- . min. well casing diam.

Bombas Americana Ltd.
 Av. Marginal de Via Anhanguera 580
 Pq. Sao Domingos Sao Paulo
 Brazil

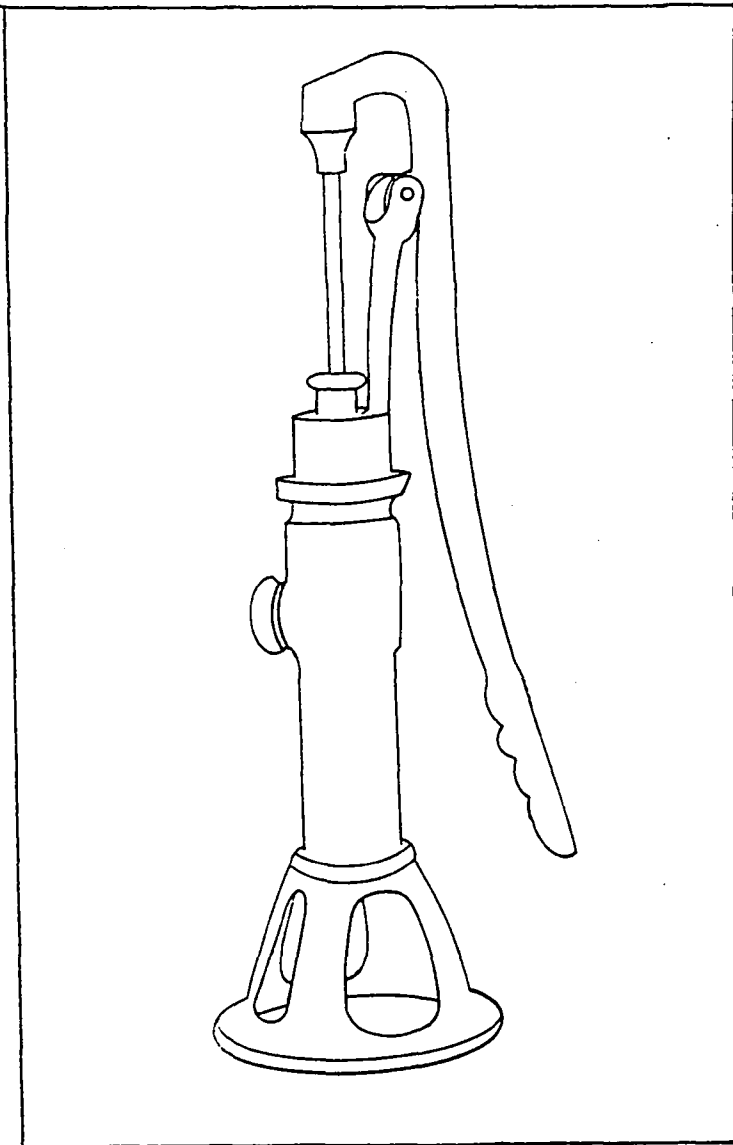
phone: 260-0107

Americana

DW

Latin
 America

6



Description:

The Americana M 1500 handpump is fabricated of cast iron.

The pump uses a three-pivot handle system with a stuffing box/rod guide; it is suitable for both lift and force duty.

This deepwell pump model has a non-extractable cylinder positioned at maximum depth of 30 m.

The pumpstand is bolted to the well-platform.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
M 1500								

Applications

Countries where used:

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation;
three-pivot system; stuffing box/rod guide; variable stroke length

 - . pins, bearings, fasteners
plain bearings

 - . materials
cast iron
-

Connecting Assembly

- | . pumprod | material | weight | size | length | |
|-------------|----------|--------|------|--------|--|
| . drop pipe | | | | | |
-

Cylinder

- . type situated in pumpstand

- . material

- . plunger

- . cup seals

- . discharge valve type

- . suction valve type

- . weight

- . min. well casing diam.

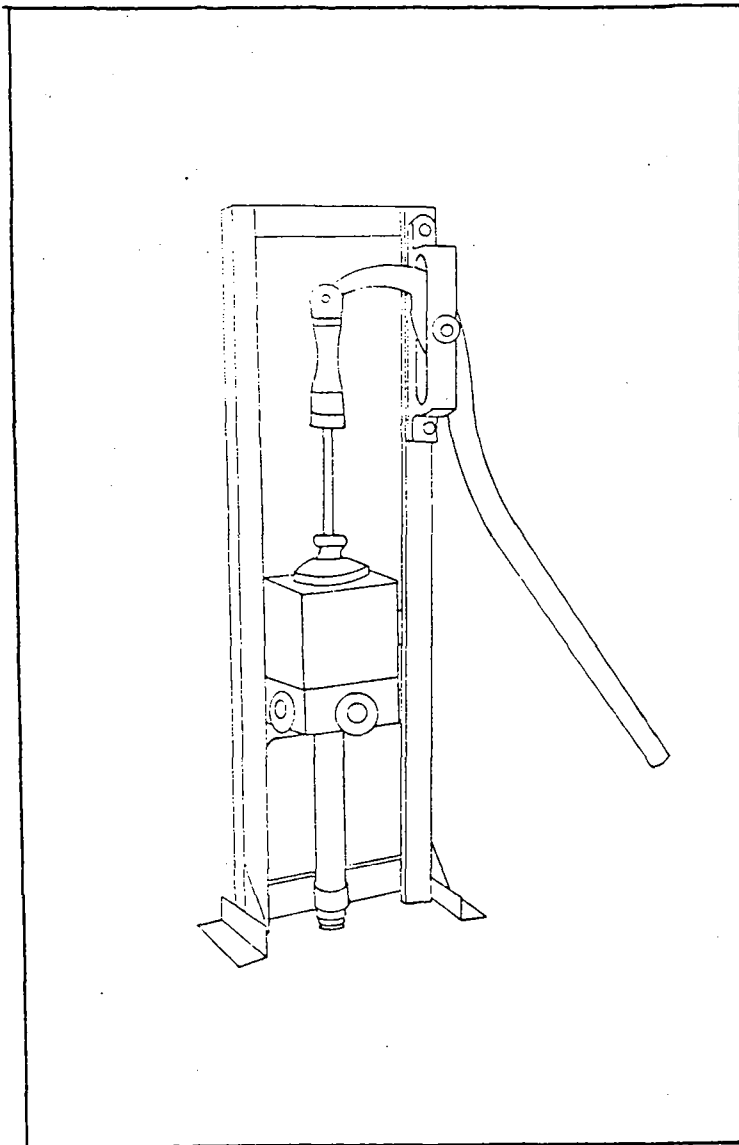
Kasamatsu S.A.
 Commercial and Industrial
 Chile 452 Piso 2° Edificio Victoria
 Casilla de Correo No. 52, Asuncion, Paraguay

Gera

DW

Latin
 America

7



Description:

The Gera H. Model has a special pumpstand design. A square waterchamber is fixed on a frame and connected to the drop pipe.

The pump has a three-pivot handle system with a stuffing box/rod guide.

The pumpframe is bolted to the well apron. The pump is suitable both for lift and force duty (force pumping up to 10 m).

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
H						15	35	

Applications

Countries where used:

Paraguay

Pump Head

- . rod linkage

Hand-operated; vertical reciprocating operation;
three-pivot system; stuffing box/rod guide; variable stroke length

- . pins, bearings, fasteners

plain bearings

- . materials

cast iron and fabricated steel

- . weight: 25 kg

Connecting Assembly

- | . pumprod | material | weight | size | length |
|-------------|----------|--------|------|--------|
| . drop pipe | | | | |

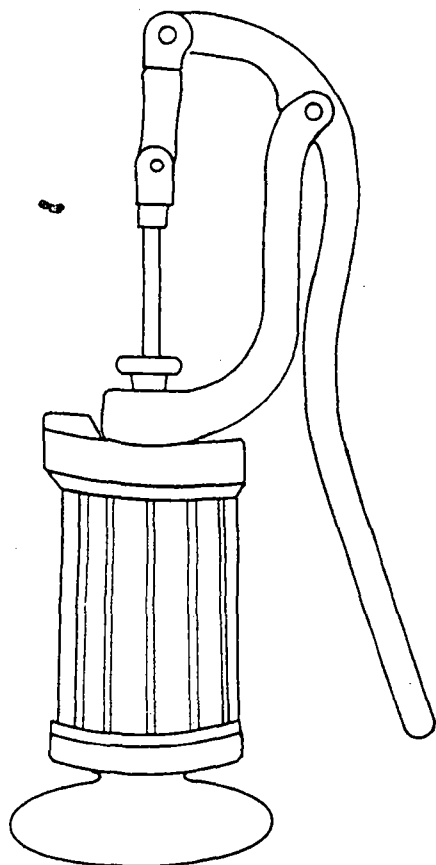
Cylinder

- . type closed
- . material
- . plunger
- . cup seals
- . discharge valve type
- . suction valve type
- . weight
- . min. well casing diam.

Kasamatsu S.A.
 Commercial y Industrial phone: 81-636
 Chile 452 Piso 2° Edificio Victoria telex: 156-KASAMATSU
 Casilla de Correa No. 52 Asuncion, Paraguay grams: KASAMATU

Gera

SW	Latin America	8
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Description:

The Gera G-60 is a shallow well handpump. It is mainly of cast iron.

The pump uses a three-pivot handle system with a stuffing box/pump rod guide.

The pumpstand is mounted on a separately constructed support at a height convenient to the pump users (pumpheight 70 m)

The cylinder is of the double acting type. Suitable for lift pumping to 7 m and force pumping up to 12 m.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
G-60						20	7	

Applications

Countries where used:

Paraguay

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation;
three-pivot system; stuffing box/rod guide; variable stroke length

 - . pins, bearings, fasteners

plain bearings

 - . materials

cast iron

 - . weight: 17 kg
-

Connecting Assembly

- | . pumprod | material | weight | size | length | |
|-------------|----------|--------|------|--------|--|
| . drop pipe | | | | | |
-

Cylinder

- . type situated in pumpstand; double acting type

- . material

- . plunger

- . cup seals

- . discharge valve type

- . suction valve type

- . weight

- . min. well casing diam.

Equipo Technico Industrial, C. por A.
 Calle San Juan de la Maguana No. 102
 Villas Agricolas, Apartado No. 158-12 phone: 566-8776
 Santa Domingo
 Dominican Republic

AID/Battelle

SW

Latin
 America

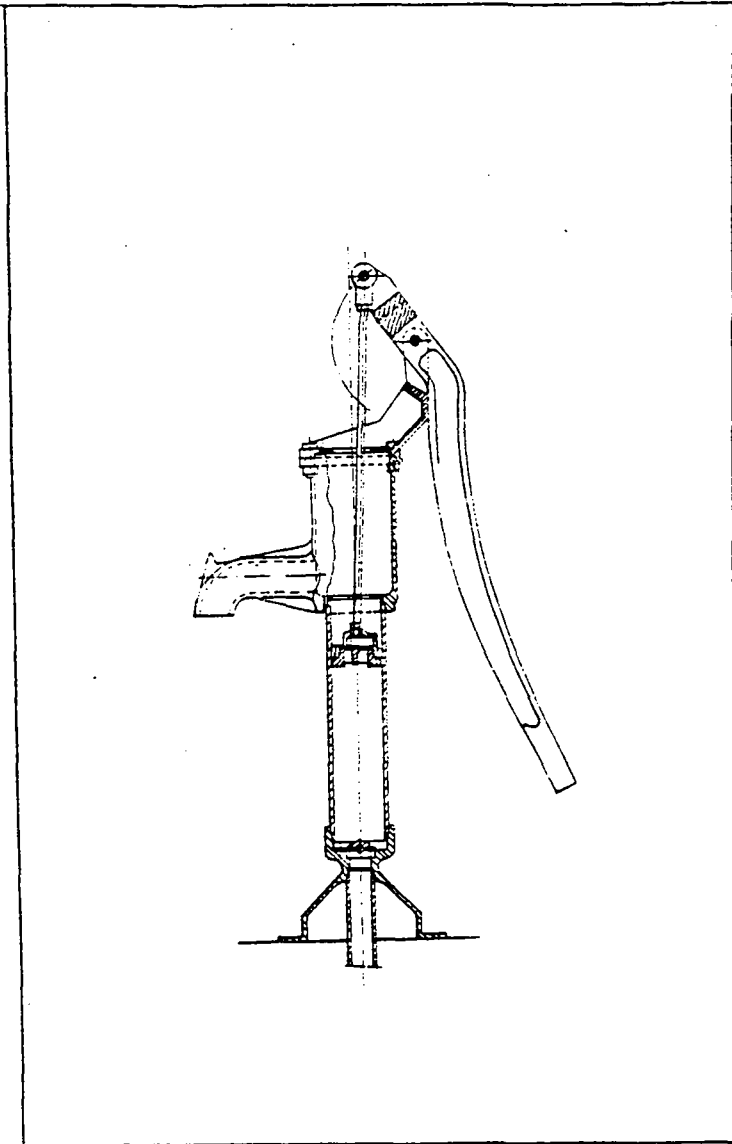
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Description:

The AID/Batelle handpump is the result of a considerable amount of research and development work carried out since 1966 by the Batelle Laboratories, Georgia Institute of Technology and others, for the US Agency for International Development (AID).

The AID/Batelle pump (modified design) is being introduced, with assistance from US AID, in the Dominican Republic and other countries, for installation on rural water supply wells. Both shallow-well and deep-well are manufactured locally.

The shallow-well model has the cylinder situated in the pumpstand. The pump uses a two-pivot handle arrangement.



Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
AID/Batelle Handpump	68	2 7/16"	152	6"		56.7	37	120
AID Hand-pump (New model)	68	2 7/16"	152	6"			46	150

Countries where used:

Dominican Republic, Haiti, Guatemala, C.A.

Pump Head

- . rod linkage

- . pins, bearings, fasteners
 - Pins : Length 5 1/8"; Diameter 5/8"
3 11/16"; 5/8"
 - Bussings : Length 1 1/2"; ID 41/64; OD 25/32"
3/4"; 41/64; 25/32"

- . materials

Connecting Assembly

	pumprod	material	weight	size	length
.		galvanised steel	1 lbs	7/16"	16 1/2" 21 1/2"
.	drop pipe	galvanised steel	1/2 lbs	1 1/2"	16 1/2"
				2" (new model)	

Cylinder

- . type

- . material galvanized steel, PVC pipe (inside), brass and cast iron, Diam. 69 mm
length 73 mm.

- . plunger

- . cup seals leather best quality

- . discharge valve type flapper valve and check valve

- . suction valve type flapper suction and check valve

- . weight deep-well: 8.2 kg; shallow-well: 5.0 kg

- . min. well casing diam. 6" inches but can be 4"

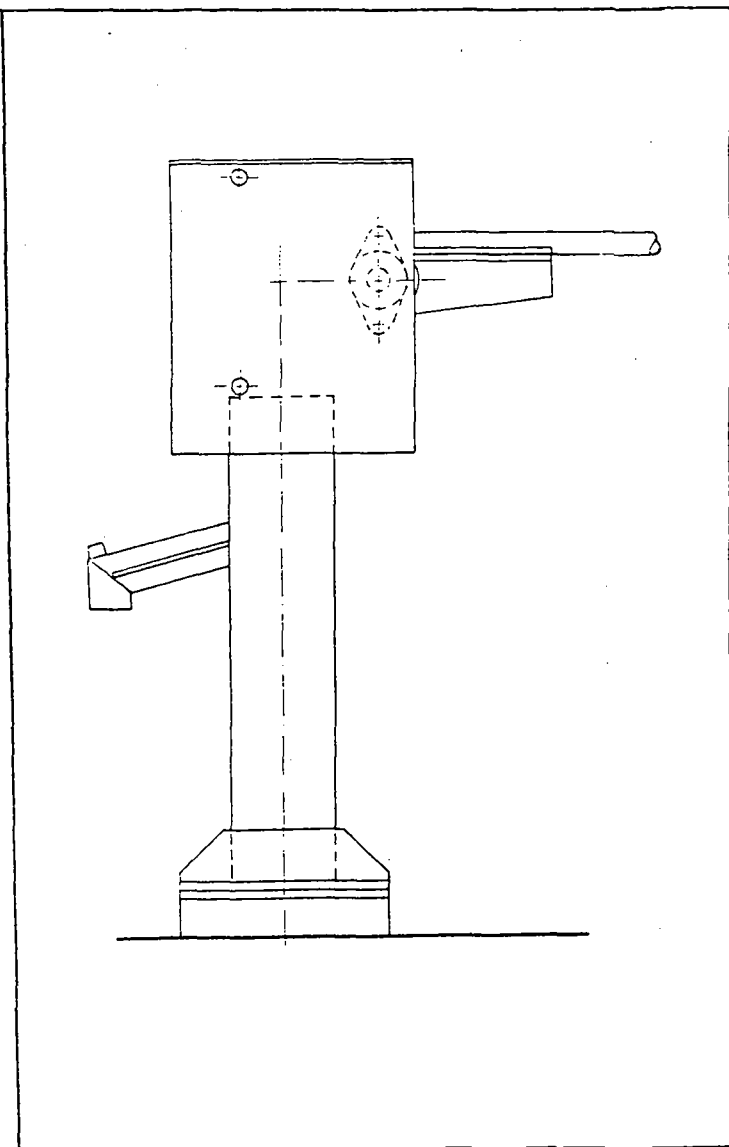
GSW Ltd.
 1183 Finch Avenue West, Suite 307 Phone: (416) 635-2995
 Downsview, Ontario
 Canada M3J 2G2

GSW

DW

North
 America

1



Description:

In the manufacturing of the GSW (Beatty) pump model, a wide range of production processes is used.

The pump stand base is made from pressed steel, it is welded to the lower part of the pump body which is of steel tube. The middle section of the pumpstand, including the spout is an iron casting. The handle is made from steel tubing.

The pumprod is supported by a yoke, sliding on two guide pillars (bronze bushings).

The pump has a three-pivot handle system, with plain pin bearings running in bronze bushings. The handle provides three different pivot positions for varying the mechanical advantage. Lubrication of the pivot points is by way of an oiled felt pad.

The 2½" ID cylinder is made of brass with cast iron and caps; the plunger has two leather washers.

Pump rod dia. 7/16", and drop pipe 1½". Pump is painted blue finish.

Pump stand is bolted to the well platform.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
1205 (Ghana)	63	2½	153	6"	0.45	14	40	125

22 str/min

Countries where used:

Africa: Ghana 1200 pcs. and Zaire; Canada

Pump Head

- rod linkage

Hand-operated; vertical reciprocating operation; three-pivot system; double guides for maintaining pump rod alignment; variable stroke length; variable mechanical advantage.

- pins, bearings, fasteners

The two upper bearings in the main pivot point are sintered bronze, lubricated by an oiled felt pad; pins are 14.2 mm dia. secured by locking bolts, rod guide pillars are of white metal.

- materials

cast iron parts, steel and pressed steel sections; painted; rod guides are zinc plated.

25.3 kg

Connecting Assembly

	pumprod	material	weight	size	length
		galvanized zinc-plated steel	0.79 kg/m	7/16"	
	drop pipe	galvanized steel	3.5 kg/m	1½"	

Cylinder

- type closed
- material brass with cast iron end caps
- plunger
- cup seals two leathers
- discharge valve type poppet T
- suction valve type poppet (spring)
- weight 4.3 kg
- min. well casing diam.

GSW Ltd.
 1183 Finch Avenue West, Suite 307
 Downsview, Ontario
 Canada M3J 2G2

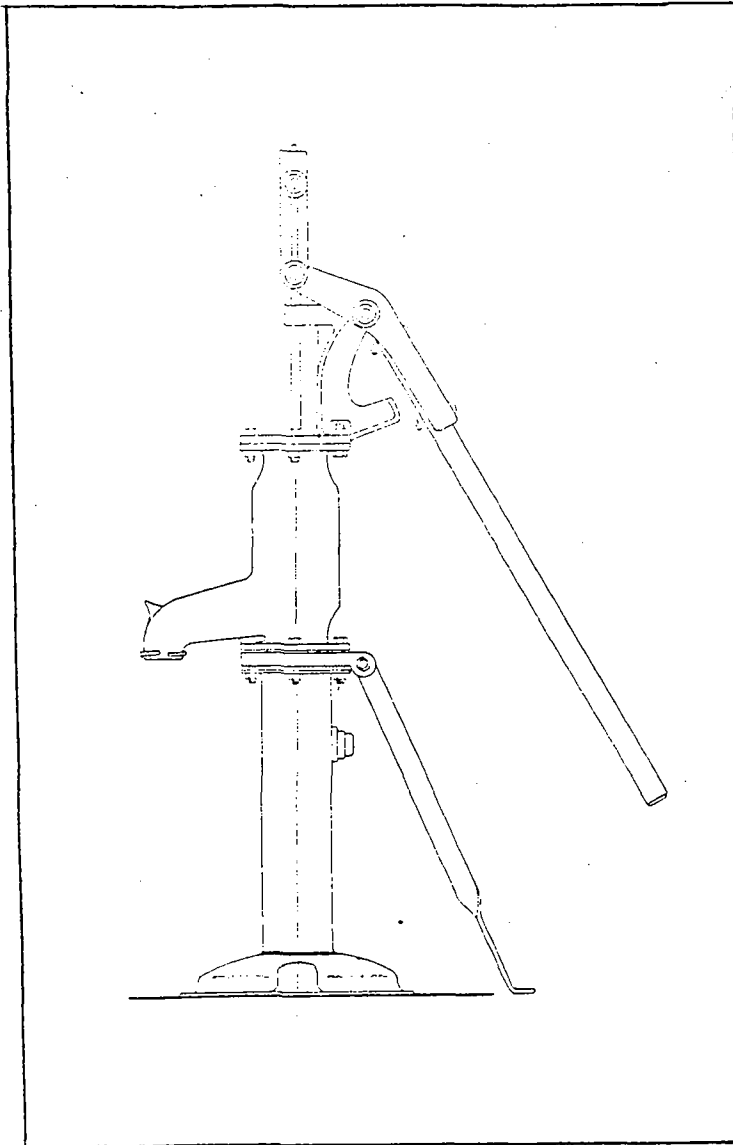
phone: (416)635.2995

GSW

DW

North
 America

2A



Description:

The GSW Deep Well Hand Pump 1205 AFB is manufactured from steel, cast iron and ductile iron.

The three point pivot handle system uses sealed ball bearings.

The spout is cast iron with the pivot linkage in ductile iron. The handle is made from steel tubing.

The base is formed steel welded to a steel tube.

The 2½" ID cylinder is made of brass with cast iron end caps; the plunger has two leather washers.

Pump rod dia. 7/16", and drop pipe 1½". Pump is painted, blue finish.

Pump stand is bolted to the well platform.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
1205 AFB	63	2½	153	6	0.45	14	40	125

Countries where used:

Pump Head

- . rod linkage

Hand operated, vertical reciprocating operation: three-pivot system.

- . pins, bearings, fasteners

The bearings are sealed and lubricated ball bearing.

Pivot pins are 14.2 mm. secured by locking nuts.

- . materials

Cast iron parts, steel and pressed steel sections, steel tubing painted; some castings are ductile iron.

25 kg.

Connecting Assembly

. pumprod	material	weight	size	length
	galvanized zinc			
. drop pipe	plated steel	0.79 kg/m	7/16"	
	galvanized steel	3.5 kg/m	1 1/4"	

Cylinder

- . type closed

- . material brass with cast iron end caps

- . plunger

- . cup seals two leathers

- . discharge valve type poppet T

- . suction valve type poppet (spring_

- . weight 4.3 kg

- . min. well casing diam. 4" (100 mm)

GSW Ltd.
 1183 Finch Avenue West, Suite 307
 Downsview, Ontario
 Canada M3J 2G2

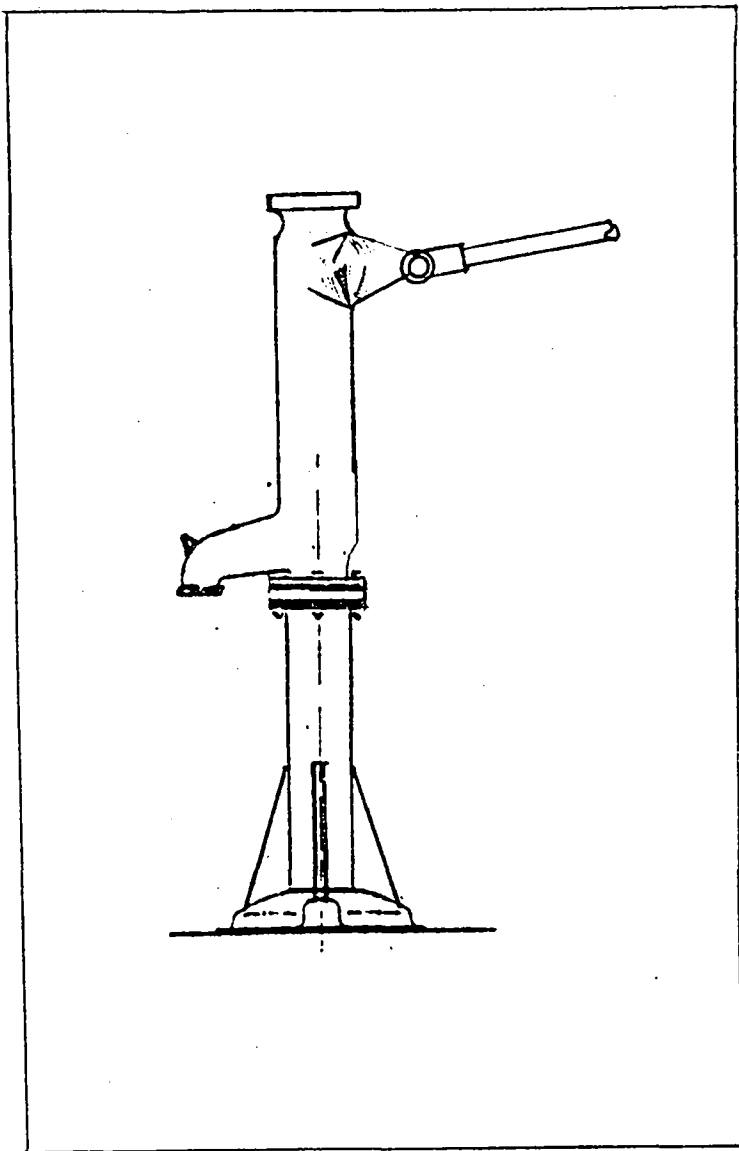
phone: (416) 635-2995

GSW

DW

North
 America

2B



Description:

The GSW Deep Well Hand Pump 1205X is manufactured from steel and cast iron. It features a two-point pivot handle system with sealed ball bearings.

All fasteners are concealed to prevent tampering and the spout and handle enclosure prevents contamination entering the water chamber.

The spout and handle enclosure is cast iron with a steel tubing handle.

The base is a heavy gauge steel with steel reinforcing brackets welded in four positions.

The 2½" ID cylinder is made of brass with cast iron and caps; the plunger has two leather washers.

Pump rod dia. 7/16", and drop pipe 1½". Pump is painted, blue finish.

Pump stand is bolted to the well platform.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
1205X	63	2 - 1/2	153	6	0.45	14	40	125

22 str/min.

Countries where used:

Pump Head

- . rod linkage
Hand operated, vertical reciprocating operation; two pivot system.
Concealed linkage inside spout and handle enclosure.
 - . pins, bearings, fasteners
bearings are ball type, sealed and lubricated. Pins and fasteners are recessed or locked type to prevent vandalism.
 - . materials
Cast iron parts, steel and pressed steel sections, steel tubing, handle sockets and internal linkage is ductile iron, painted.
- 25.5 kg

Connecting Assembly

	pumprod	material	weight	size	length
		galvanized zinc			
	drop pipe	plated steel	0.79 kg/m	7/16"	
		galvanized steel	3.5 kg/m	1 1/4"	

Cylinder

- . type closed
- . material brass with cast iron end caps
- . plunger
- . cup seals two leathers
- . discharge valve type poppet T
- . suction valve type poppet (spring)
- . weight 4.3 kg
- . min. well casing diam. 4" (100 mm)

Monarch Industries Limited
 889 Erin Street P.O. Box 429
 Winnipeg R3C 3E4
 Canada

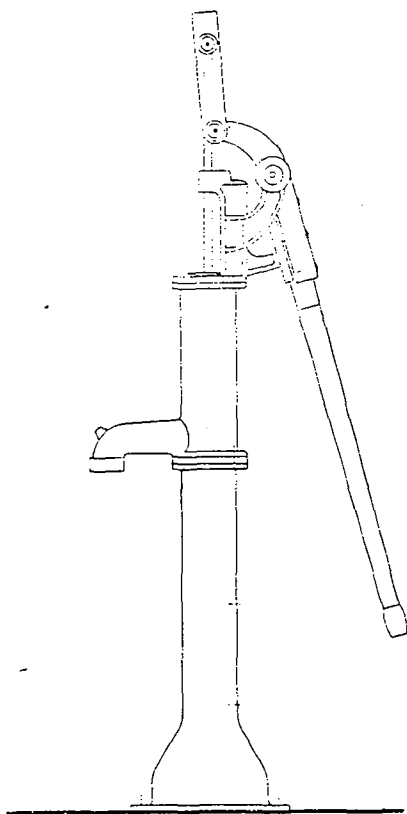
phone: (204) 786-7921
 telex: 07-37155
 cable: "MONARCH"

Monarch

DW

North
 America

3



Description:

The Monarch P3 is mainly made of cast iron components.

The pump uses a three-pivot handle system (yoke type). Each pivot has two double-sealed ball races. The handle is separate and made of wood; it is bolted to the lever.

Two-sintered bronze bushes guide the top of the pump rod; pivot point for linkage to the handle.

The 2½" dia cylinder is made of brass; plunger has two leathers.

Pump dia rod is 7/16" and drop pipe size 1½". The pump is completely painted (orange colour).

The pumpstand base has a foundation plate with built-in anchor bolts and stainless steel mounting bolts, to fit 102 mm, 127 mm and 152 mm (4, 5 or 6 inch) well casings.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
P3	89	3½	150	6"		47	46	150

Applications

50 str/min

Countries where used:

Ghana: 1100 pcs

Pump Head

. rod linkage

Hand-operated; vertical reciprocating operation; three-pivot handle system; rod guide for maintaining pump rod alignment; variable stroke length; mechanical advantage 6:1

. pins, bearings, fasteners

The three-pivot handle system has two sealed ball races for each pivot (i.e. six in all); ball races are identical and measure 28.5 mm OD x 12.6 mm ID; pins with castle nuts; rod guide bearings are of sintered bronze.

. materials

Mostly cast (ductile) iron; wooden handle.

Connecting Assembly

	pumprod	material	weight	size	length
.		galvanised steel	0.79 kg/m	7/16"	
.	drop pipe	galvanised steel	44 kg/m	1½"	

Cylinder

. type closed

. material brass or cast iron

. plunger

. cup seals leathers (2)

. discharge valve type poppet (T)

. suction valve type poppet (T)

. weight 4.6 kg

. min. well casing diam. 4" (100 mm)

Baker Monitor Division
 133 Enterprise Street
 Evansville, Wisconsin 53536
 U.S.A.

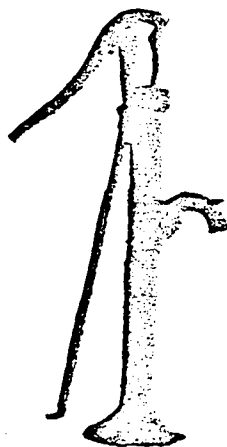
phone: (608)882-5100
 telex:
 grams:

Monitor

SW

North
 America

4



Description:

The Monitor pump model 11 HA is a shallow well handpump. It is mainly made of cast iron.

The pump uses a two-pivot handle system, suitable for lift duty only.

The pumpstand features an additional brace for fitting the pump to the well apron.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
11 HA	63,5	2½	152,4	6	0,48	19	10	

Applications

40 str/min

Countries where used:

Several countries in Latin America

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation; three pivot system;
adjustable fulcrum; variable stroke length; pump rod guide/stuffing box for
alignment.
- . pins, bearings, fasteners
plain bearings
- . materials
cast iron

Connecting Assembly

- | | pumprod | material | weight | size | length |
|---|-----------|------------------|--------|--------|--------|
| . | | galvanised steel | | 7 1/16 | 18' |
| . | drop pipe | galvanised steel | | | |

Cylinder

- . type closed
- . material cast iron or brass
- . plunger brass
- . cup seals leathers (2)
- . discharge valve type flapper
- . suction valve type flapper
- . weight
- . min. well casing diam. 4" (100 mm)

Baker Monitor Division
 133 Enterprise Street
 Evansville Wisconsin 53536
 U.S.A.

phone: (608) 882-5100

Monitor

DW

North
 America

5

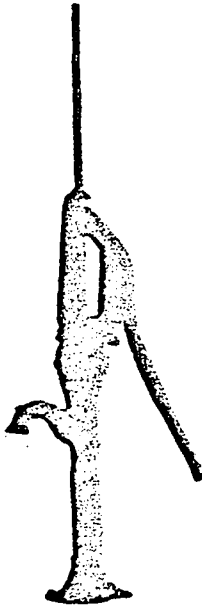
Description:

The Monitor HD and HB models are mainly of cast iron.

These pumps use a three-pivot handle system with an adjustable fulcrum (three positions) rod guides are provided for pump rod alignment; an additional stuffing box and packing tube is available for using the pump for force duty. Can be used with windmill.

Various types of cylinder, cast iron, or brass, are available.

The pumpstand is bolted to a flange which is fixed on the well casing. A sealed pump flange is also available.



Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
11 HD) 12 HD)	force pump	2½		4.6.8			100	360
11 HB) 23 HD)	lift pump							

Applications

40 str/min

Countries where used:

Several countries in Latin America

Pump Head

- rod linkage

Hand-operated; vertical reciprocating operation; three-pivot system
adjustable mechanical advantage; variable stroke length; pump rod guide;
stuffing box

- pins, bearings, fasteners

plain bearings

- materials

cast iron/ductile iron/steel

Connecting Assembly

- | pumprod | material | weight | size | length |
|-----------|------------------|--------|-------|--------|
| | galvanised steel | | 7/16" | 18' |
| drop pipe | galvanised steel | | | |

Cylinder

- type closed
- material cast iron or brass
- plunger brass
- cup seals leathers (2)
- discharge valve type flapper
- suction valve type flapper
- weight
- min. well casing diam. 2" (50 mm). May be used on 2" dia driven well with 1 11/16" I.D. cylinder

Columbiana Pump Co.
 131 E. Railroad St.
 Columbiana, Ohio, 4408
 U.S.A.

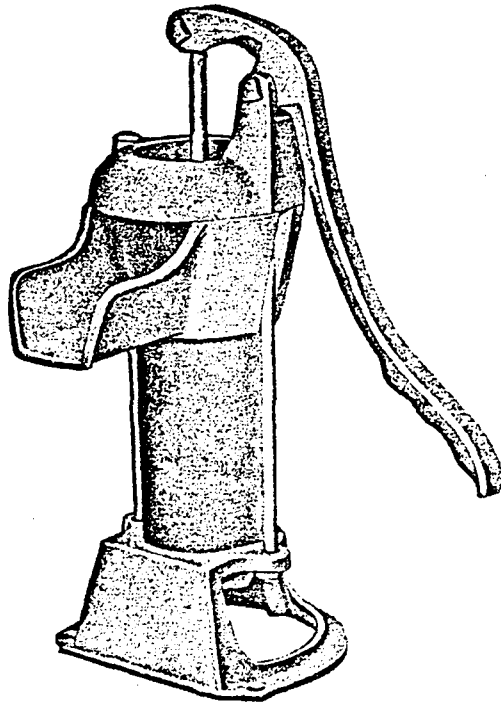
phone: (216)482-3381

Columbiana

SW

North
 America

6



Description:

The Columbiana No. 121 handpump is mainly of cast iron.

The pump uses a two-pivot handle system. Pumpstand and drop pipe are of the same construction.

The pumpstand is fixed to the well apron with bolts and nuts.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
No. 121		2½		6			25	

Applications

Countries where used:

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation;
two-pivot system; variable stroke length
- . pins, bearings, fasteners
Plain bearings
- . materials
cast iron

Connecting Assembly

- | | material | weight | size | length |
|-------------|----------|--------|------|--------|
| . pumprod | | | | |
| . drop pipe | | | | |

Cylinder

- . type closed
- . material iron or brass lined
- . plunger
- . cup seals
- . discharge valve type
- . suction valve type
- . weight
- . min. well casing diam.

Columbiana Pump Co.
 131 E. Railroad St.
 Columbiana, Ohio, 4408
 U.S.A.

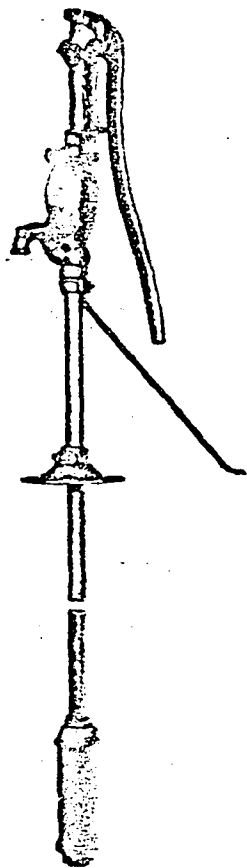
phone: (216)182-3381

Columbiana

DW

North
 America

7



Description:

The Columbiana Nr. 80 handpump is mainly of cast iron.

The pump uses a three-pivot handle system; stuffing box and pump rod alignment.

Pump stand and drop pipe are of the same construction.

The pump is installed with a flange bolted on the well apron; an additional support is provided.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
No. 80		2½		6				25-75

Applications

Countries where used:

Pump Head

- . rod linkage
- . Hand-operated; vertical reciprocating operation; three-pivot system; variable stroke length; stuffing box; pump rod alignment
- . pins, bearings, fasteners
 - plain bearings
- . materials
 - cast iron; stuffing box bronze

Connecting Assembly

- | . pumprod | material | weight | size | length |
|-------------|----------|--------|------|--------|
| . drop pipe | | | | |

Cylinder

- . type closed
- . material highly polished iron or brass
- . plunger
- . cup seals
- . discharge valve type
- . suction valve type
- . weight
- . min. well casing diam.

Dempster Industries Inc.
P.O. Box 848, 711 South Sixth Street
Beatrice, Nebraska 68310
U.S.A.

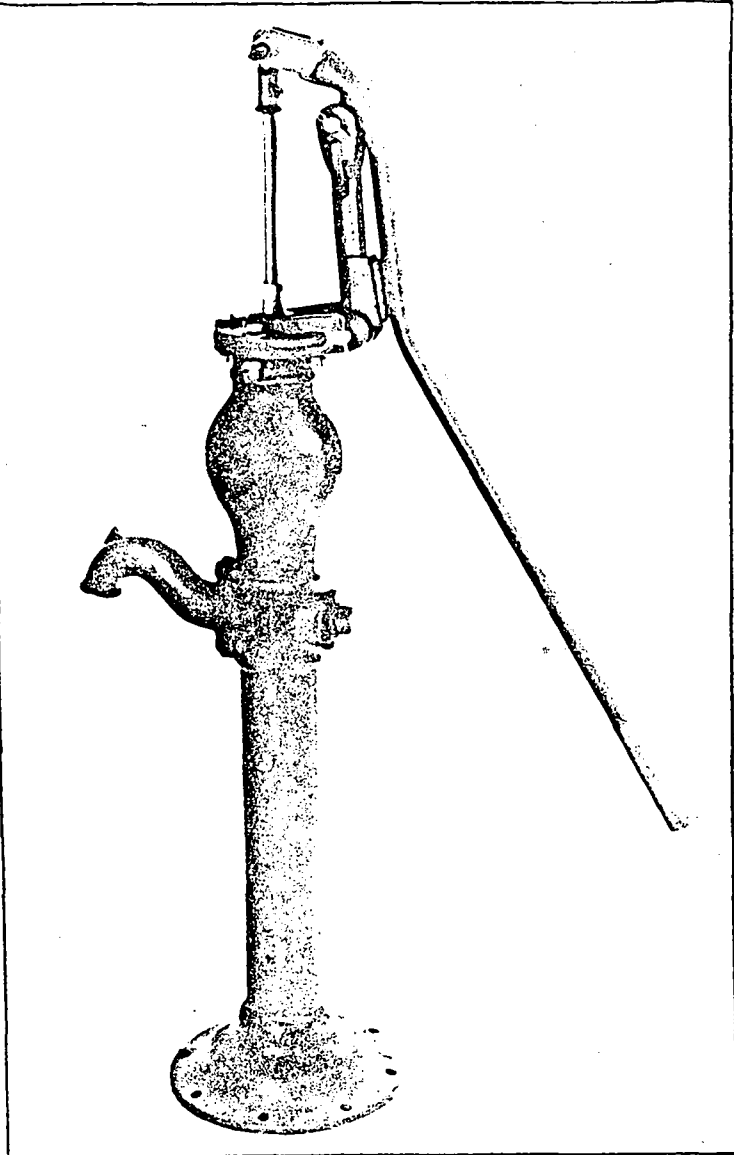
Phone: (402) 223-4026

Dempster

DW

North
America

8



Description:

The Dempster pump Model 23F (EX) uses a normal non-extractable pumping cylinder of cast iron with brass lining; two-leather plunger, galvanized pump rod.

The pumpstand is mainly of cast iron. Pump uses a three-pivot handle system; stuffing box/rod guide. Handle assembly is formed from 1" steel pipe.

An airchamber is provided, to even out the water discharge during force pumping. Two types of spouts are available.

The pumpstand is equipped with 8-1/2" bolt holes for fixing to the well platform; for wooden platform use 7/16" x 2" lag screws; for concrete platform use 7/16" x 8" bolts.

** Note: These Max. Lift values are based on comfortable pump operating force onto the pump handle.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift **	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
23F (EX) or 23F (CS)EX		2-1/4 (Brass lined)		7-1/4"	.47	19	40	
		2-1/2" (PVC)		7-1/4"	.58	23	33	

Applications

Countries where used:

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation;
three-pivot handle system; variable stroke-length; stuffing box/rod guide

- . pins, bearings, fasteners
Plain bearings with induction hardened galvanized steel pins running in nylon bushes; two 5/8" Dia. pins and one 1/2" dia. pin, secured by split pins; no special provision for lubrication.

- . materials
Mainly cast iron; painted; brass stuffing box with hemp packing

- . Weight: 30 kg

Connecting Assembly

. pumprod	material	weight	size	length
. drop pipe	galvanized steel	0.79 kg/m	7/16"	20 Ft.
	galvanized steel	3.5 kg/m	1-1/4"	20 Ft.

Cylinder

- . type Model 81 Non-Extractable (Closed)
- . material Brass lining; cast iron
- . plunger Brass
- . cup seals two
- . discharge valve type Poppet (winged)
- . suction valve type Poppet (winged)
- . weight 6 kg
- . min. well casing diam. 4" (100 mm)



- Model PVC Non-Extractable (Flush Cap)
- PVC
- Brass
- two
- Poppet (winged)
- Poppet (winged)
- 4 kg
- 4" (100 mm)



The Heller Aller Co.
 Perry Oakwood Street
 Napoleon, Ohio, 43545
 U.S.A.

phone: (419) 592-1856
 telex:
 grams: HELALER

Heller-Aller

DW

North
 America

9

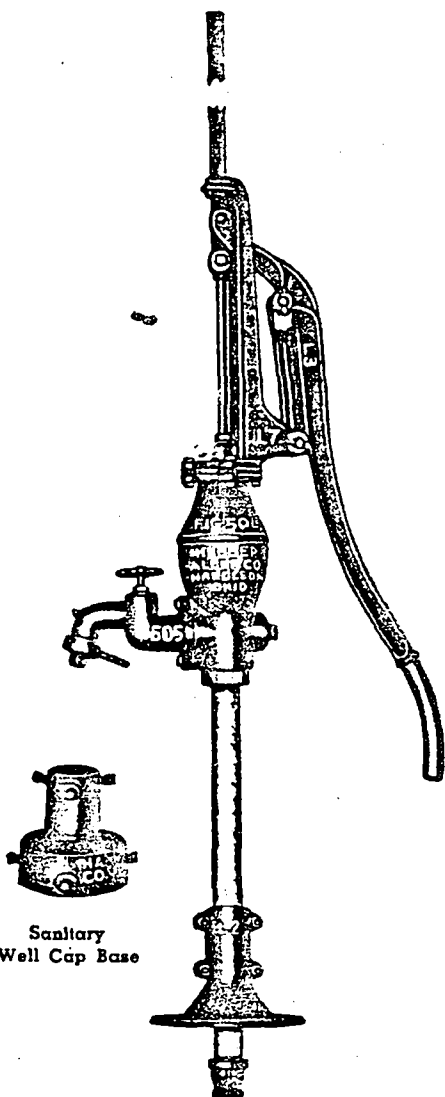
Description:

The Heller-Aller lift and force pump is mainly of cast iron.

The pump uses a three-pivot handle system; pump rod guide and stuffing box. The spout has a tap which is locked when the pump is used for force duty.

The cylinder is of brass and available in different sizes.

The pump stand base with flange is mounted on concrete apron built around well casing, or pump is mounted on a platform cover of dug well.



Sanitary
 Well Cap Base

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
Nr. 50 ASB								

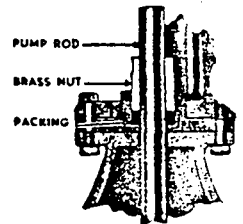
Applications

Countries where used:

Several countries in Latin America, Africa, India/Burma

Pump Head

- . rod linkage
Hand-operated; vertical reciprocating operation; three-pivot system;
pump rod guide/stuffing box; variable stroke length.
- . pins, bearings, fasteners
plain bearings
- . materials
cast iron

Connecting Assembly

- | | pumprod | material | weight | size | length |
|---|-----------|------------------|--------|--------|--------|
| . | | galvanised steel | | 3/8" | |
| . | drop pipe | galvanised steel | | 1 1/4" | |

Cylinder

- . type closed
- . material brass
- . plunger brass
- . cup seals leather (2)
- . discharge valve type poppet
- . suction valve type poppet
- . weight
- . min. well casing diam. 4" (100 mm)

Mark Controls International
 1900 Dempster St. Evanston
 Illinois 60204
 U.S.A.

phone: (312)864-9100
 telex: 72-4353
 grams:

Clayton Mark

DW

North
 America

10

Description:

The Clayton Mark pump is an assembly-type of pump.

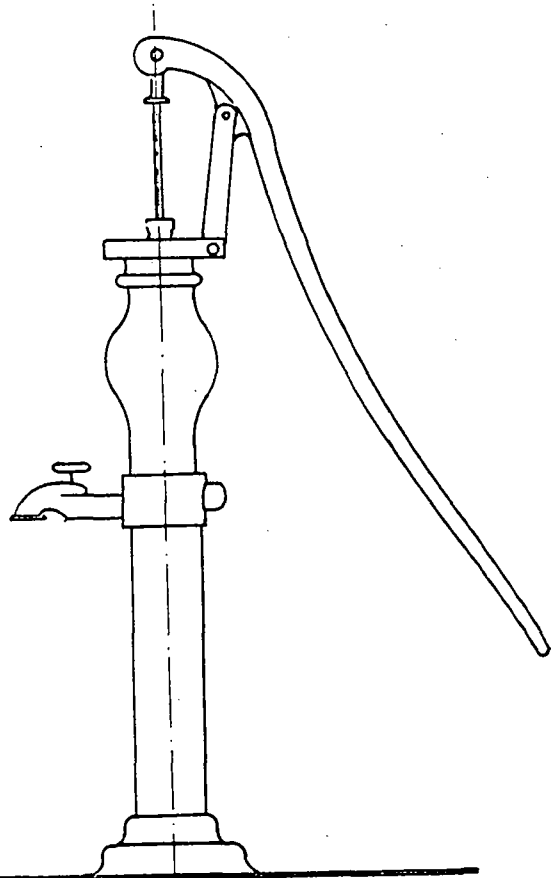
The pump has a pumpstand, connecting assembly and cylinder; suitable for a 1½" or 2" shallow well for pumping from depths up to 15 m.

This pump is of cast iron; it can be used for both lift and force duty.

The pump uses a three-pivot system; stuffing box; pumprod alignment.

Cylinder is 1½" dia, epoxy lined, galvanized steel.

The pump is specially designed for use in driven wells; first the drop pipe is driven, then the cylinder is positioned in the well and sealed in the well pipe; the pumpstand is fitted over the well pipe and bolted to the platform.



Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
		1½"						50
		2"						

Applications

Countries where used:

Pump Head

- rod linkage

Hand-operated; vertical reciprocating operation; three-pivot system; stuffing box/pumprod guide; variable stroke length.

- pins, bearings, fasteners

plain bearings

- materials

cast iron

Connecting Assembly

	pumprod	material	weight	size	length
	drop pipe	galvanised iron		3/8"	5'
	drive pipe	galvanised iron		1 1/4"	5'

Cylinder

- type open
- material galvanised steel, epoxy lined
- plunger cast iron
- cup seals leathers (2)
- discharge valve type poppet
- suction valve type poppet
- weight
- min. well casing diam. driven well

Robbins & Myers Inc.
 1400 Winters Bank Tower
 Dayton, Ohio 45423
 U.S.A.

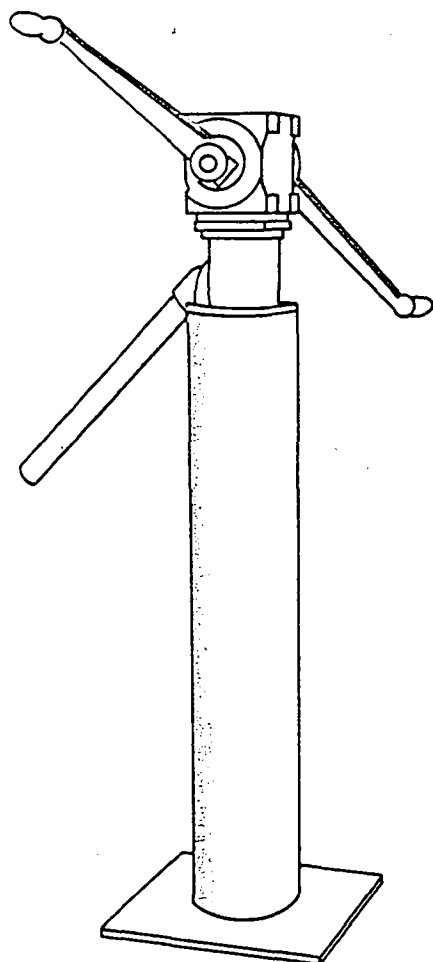
phone: (313)222-2610
 telex: 288-359, RM Corp.DTN

Robbins & Myers

DW

North
 America

11



Description:

The Robbins and Myers Models 1V12 and 2V12 are rotary handpumps, driven by one or two handles.

The rotary drive is transmitted to the mild steel pump rod by means of cast bevel gearing; gears are immersed in an oil bath.

The pumping element is of the helical rotor type, i.e. it is a progressive cavity pump. The single helical rotor rotates inside a double helical stator.

Suction valve is provided for maintaining the prime of the pump when it is not being used.

The pumpstand has an inside diameter of 14 cm allowing it to be placed directly over the well casing. Pumpstand is fabricated from steel plate and pipe and coated.

Pumpstand is mounted on a separate concrete base. Anchor bolts are placed in the well platform. For covering of dug wells pre-cast well apron are most suitable in combination with this pump.

Specifications (output ratings)

For other supplier: see next page

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
1V12						8	45	150
2V12						8	90	300

Applications

50 rpm

Countries where used:

Ghana 500 pcs (Evaluation projects too)
 Upper Volta 150 pcs

Pump Head

- rod linkage

One (1V12) or two (2V12)- handle drive of rotary crank.

- pins, bearings, fasteners

plain bearings for handle; tapered roller bearings in the vertical pump shaft; lubrication from internal oil reservoir.

- materials

cast iron; gears are cast steel fittings

weight: 45.5 kg

Connecting Assembly

	pumprod	material	weight	size	length
		steel	0.85 kg/m	½"	3 m
	drop pipe	galvanised steel	4.4 kg/m	1½"	3 m

Cylinder

- type helical rotor/stator

- material steel cylinder with rubber stator; painted chromium-plated rotor

- plunger n-a

- cup seals n-a

- discharge valve type none

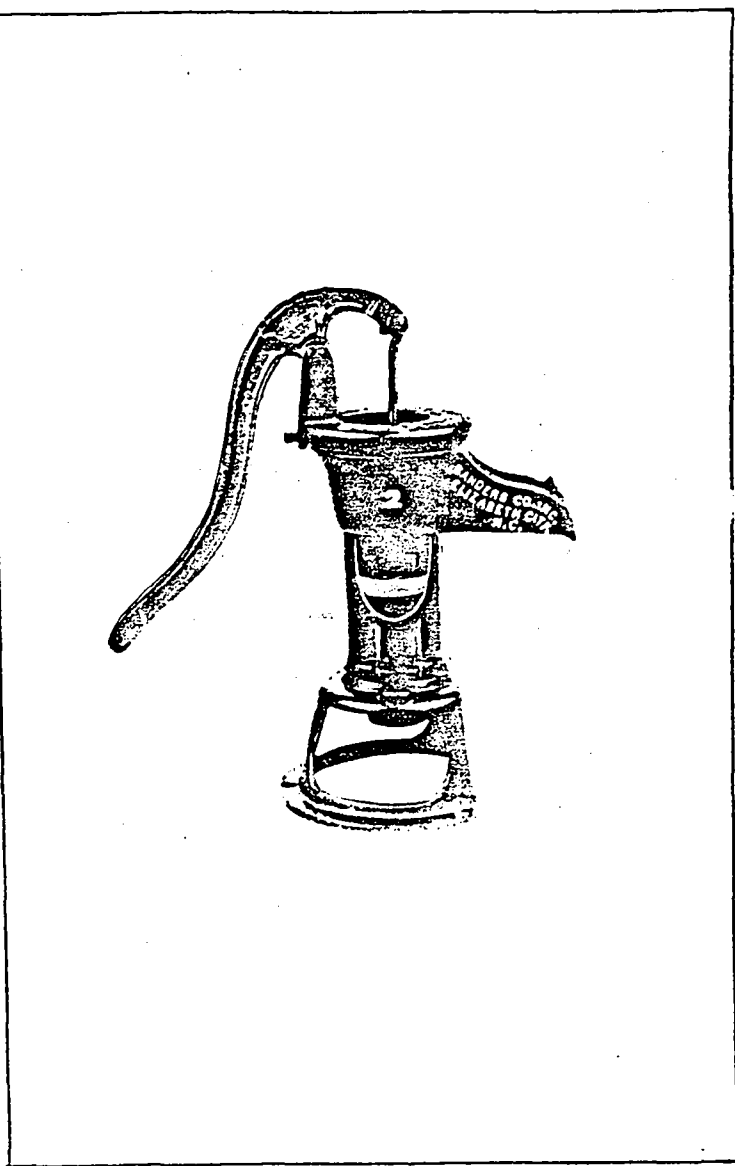
- suction valve type poppet (spring loaded)

- weight 16.5 or 19.4 kg

- min. well casing diam. 8 cm

Various manufacturers	Pitcher Spout	
	SW	North America 12

See next page



Description:

The Pitcher Spout handpump is a shallow well or cistern pump with open spout.

The pump uses a two-pivot handle system.

The pump is bolted on a separate stand to a height convenient for the users.

Specifications (output ratings)

Model	Cylinder I.D.		Stroke Length		L/stroke	Output Q l/min.	Max. Lift	
	(mm)	(in)	(mm)	(in)			(m)	(ft)
100		3"						25

Applications

Countries where used:

U.S.A.

Manufacturers of Pitcher Spout Handpumps

Columbiana Pump Co.

131 E. Railroad St.

Columbiana, Ohio, 4408

U.S.A.

phone: (216)-482-3381

telex:

grams:

Mart Controls International

1900 Dempster St, Evanston

Illinois 60204

U.S.A.

phone: (312)-864-9100

telex: 72-4353

grams:

Sanders Company Inc.

410 North Poindexter Street

P.O. Box 324

Elizabeth City, N.C. 27909

U.S.A.

phone: (919)-338-3995

telex:

grams: