





# HEAVY DUTY AGRICULTURAL PUMP

ROBUST & COMPACT DESIGN

PROVEN TWO PIN CARDAN JOINT

LOWER MAINTENANCE COST



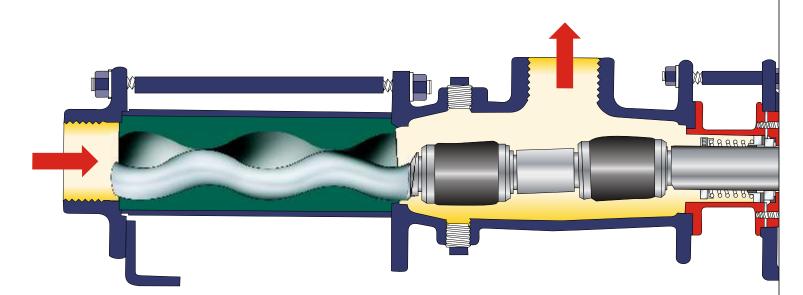






# TYPICAL APPLICATIONS

- PUMPING SALTY WATER
- EFFLUENT FIELD IRRIGATION
- PUMPING ANIMAL EFFLUENT



PRINCIPLE: The pumping element comprises of a single external helix precision machined metal rotor and a double internal helix elastomer stator. As the rotor rotates eccentrically inside the stationary stator, continuous sealed cavities are formed 180 degrees apart which progress from the suction to the delivery end of the pump, carrying the fluid to be pumped.



# MULTI-UTILITY PUMPS

CAPACITY: 233 LPM HEAD: UP TO 120 METERS

'GD' Series Progressive Cavity Pumps is built on the robust field proven 'M' range platform retaining vital features such as the CARDAN Universal Joint and improved Rotor-Stator geometry that ensures a lower life cycle cost. This series is a culmination of ROTO's more than three decades of experience in designing, validating and manufacturing of Progressive Cavity Pumps backed by state-of-the-art R&D centre and manufacturing infrastructure. All critical components including rotors are manufactured in-house to close tolerances in our ISO-9001 certified manufacturing unit. From formulation to compound preparation and moulding under strict process control in our captive polymer division not only ensures superior quality of stators but also a high degree of dimensional accuracy and repeatability.

SPECIAL ROTOR-STATOR GEOMETRY: Improved Rotor-Stator geometry minimises wear due to lower rubbing velocity as compared to conventional geometry, particularly useful in abrasive application. Lower starting torque and effective sealing line improves volumetric efficiency resulting in reduced power consumption.

PUMP HOUSING: Is designed to reduce entry losses and has an easy drainage slope. Suction port can be rotated in four positions at  $90^\circ$  apart.

STUFFING BOX: External stuffing box facilitates easy access to lantern ring and other flushing connections required for mechanical seals.

SMARTER SHAFT SEALING ARRANGEMENT: Easier-than-ever-before dismantling and mounting of seals without the need of dissembling the bearing housing.

 ${\bf DRIVE: Standard\: IEC\: Frame\: motors\: used\: for\: ease\: of\: replacement.}$ 

#### **FEATURES & BENEFITS**

- ROTARY POSITIVE DISPLACEMENT: Uniform nonpulsating metered flow proportional to speed.
- INHERENTLY SELF PRIMING: Head developed independent of speed. Avoids use of foot valve.
- INHERENTLY NON CLOGGING: Ability to handle entrained air/gas in fluid. Handles high percentage of suspended solids.
- REVERSIBLE: Bare-shaft pump GDAA provides flexibility of reversible operation.



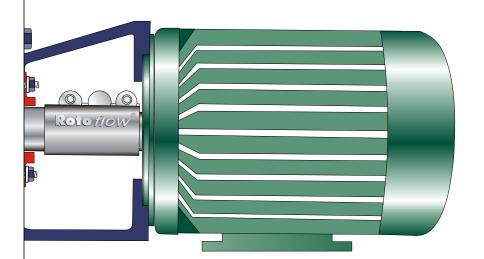
THE 2 PIN CARDAN UNIVERSAL JOINT



The Cardan type universal joint used in this pump is acknowledged as being far superior to the conventional single pin & bush joint having only line contact, which is subjected to extreme concentrated load, resulting in higher wear rate. The Cardan type of UJ employs two sets of pins perpendicular to each other, each providing freedom of angular movement which facilitates smoother transmission of angular load and also is designed to better withstand the axial forces, dominant in Progressive Cavity Pumps.

- STOCK & DOMESTIC WATER SUPPLY
- **PUMPING WATER CONTAINING SANDOR SILT**
- **TRANSFER FROM DAMS & CREEKS**



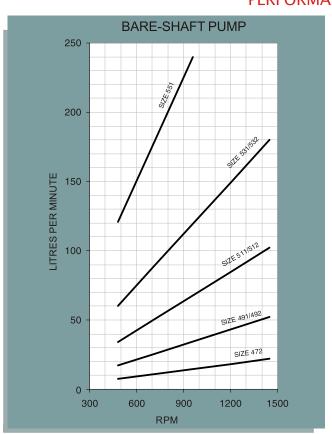


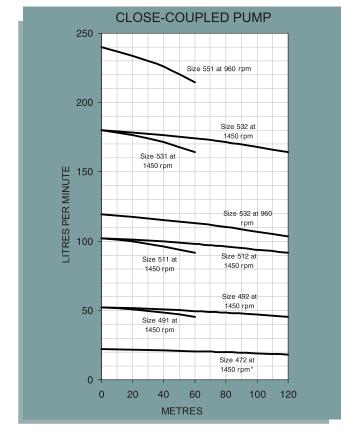
## **PERFORMANCE DATA**

PUMP SIZE	SPEED	MOTOR	FLOW RATE	STATIC LIFT
	RPM	KW	LPM	m
472	1450	0.75	22	8.20
491	1450	1.10	52	7.50
492	1450	2.20	52	7.50
511	1450	2.20	102	6.70
512	1450	4.00	102	6.70
531	1450	3.00	180	5.00
532	960	4.00	119	7.50
332	1450	5.50	180	5.00
551	960	4.00	240	5.00

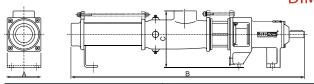
Capacities & Motor ratings at maximum pressure

# PERFORMANCE CURVES

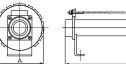


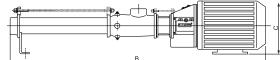


# **DIMENSIONS**



MODEL	DIMENSIONS (IN MM)			MODEL	DIMENSIONS (IN MM)		
	Α	В	С		Α	В	C
GDAA-472	104	647	125	GDAA-512	115	915	192
GDAA-491	104	578	135	GDAA-531	104	728	170
GDAA-492	104	764	160	GDAA-532	115	1005	192
GDAA-511	104	683	170	GDAA-551	115	881	197





MODEL	DIMENSIONS (IN MM)			MODEL	DIMENSIONS (IN MM)		
	Α	В	С		Α	В	C
GDCA-472	220	738	220	GDCA-512	270	1081	270
GDCA-491	240	673	240	GDCA-531	250	893	250
GDCA-492	250	929	250	GDCA-532	350	1275	350
GDCA-511	250	848	250	GDCA-551	350	1152	350

The dimensions 'A' & 'C' for close-coupled pumps depend on the motor make and are therefore approximate and for reference purpose only.

Note: All dimensions are subject to change without notice.





#### OTHER PROGRESSIVE CAVITY PUMPS









'DMAA' -

Wine & Beverage Pump

'VMCA' - Vertical Pump

'DC' Series Multi-Purpose Pump

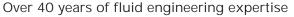
## THE ROTO ADVANTAGE





Roto's new integrated manufacturing plant with an in-house Polymer unit and its other plant at Duty Free Zone are spread over 20,000 sq. mtrs., the plants have sophisticated machine tools & testing facilities that ensure a consistent world-class quality products matching today's demanding customer expectations. All critical components are manufactured in-house to ensure 100% quality conformance. Roto's state-of-theart R&D facilities translate concepts to prototypes and prototypes into final products. Headed by some of the world's finest pump professionals. It is equipped with a battery of solid H stations and sophisticated Test  $beds\ with\ Data\ Acquisition\ \&\ Analysis\ Systems,\ to\ ensure\ a\ comprehensive\ validation\ of\ pump\ design.$ 

Roto's world class products are available through its own Warehouse - Marketing offices in Australia and the U.K, along with a strong network of dedicated distributors spread across the globe.



Roto's application expertise has been gained over four decades in providing fluid engineering solutions to more than 4000 customers world-wide. The Roto excellence spanning over 1500 types of fluids, is a valuable asset for you to bank upon for more efficient and cost effective solutions to your fluid handling requirements.

### International Quality

Continuous investment in precision measuring instrument, state-of-the-art testing facilities, and a dedicated team of engineers are testimony to Roto's commitment to maintain and constantly upgrade the quality of its products. The manufacturing units are certified for conformance to ISO 9001-2000 quality surveillance systems.



Plant at Duty Free Zone



U.K. Office



Australia Office

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