

2013 Flowserve 250 l/s Raw Water Vertical Diffuser Pumps x 3 UNUSED



Make	Flowserve		Model	Raw Water Vertical Diffuser Pumps 250 l/s 116 mtr Head x 3 UNUSED	
Year	2013	Hours		As at	
Mileage			km	As at	
Serial/VIN			Engine Serial		
Details	<p>2013 Flowserve Raw Water Vertical Diffuser Pumps 250 l/s x 3 UNUSED. These pumps were purchased new in January 2013 at a cost of AUD \$692,000 + GST and were never delivered to site and remain UNUSED in the original supply crates and relocated from the supplier to warehousing in Brisbane Qld, Australia. Detailed specifications sheet can be seen in the GES Equipment report noting: Capacity: 254.4 l/s Total developed head: 116 mtr Hydraulic Power: 308 KW with 400 KW drive. Offered for sale via Online auction on an As Is basis lifted on to buyers transport ex Pinkenba, Brisbane, Queensland Australia.</p>				
Asking price	AUD	Under review - call for pricing			
Ex site	Australia, Queensland, Brisbane				

**Service
history**

**For further details, to make an offer or book an inspection, contact
Global Equipment Solutions on Office: 08 9201 1142**



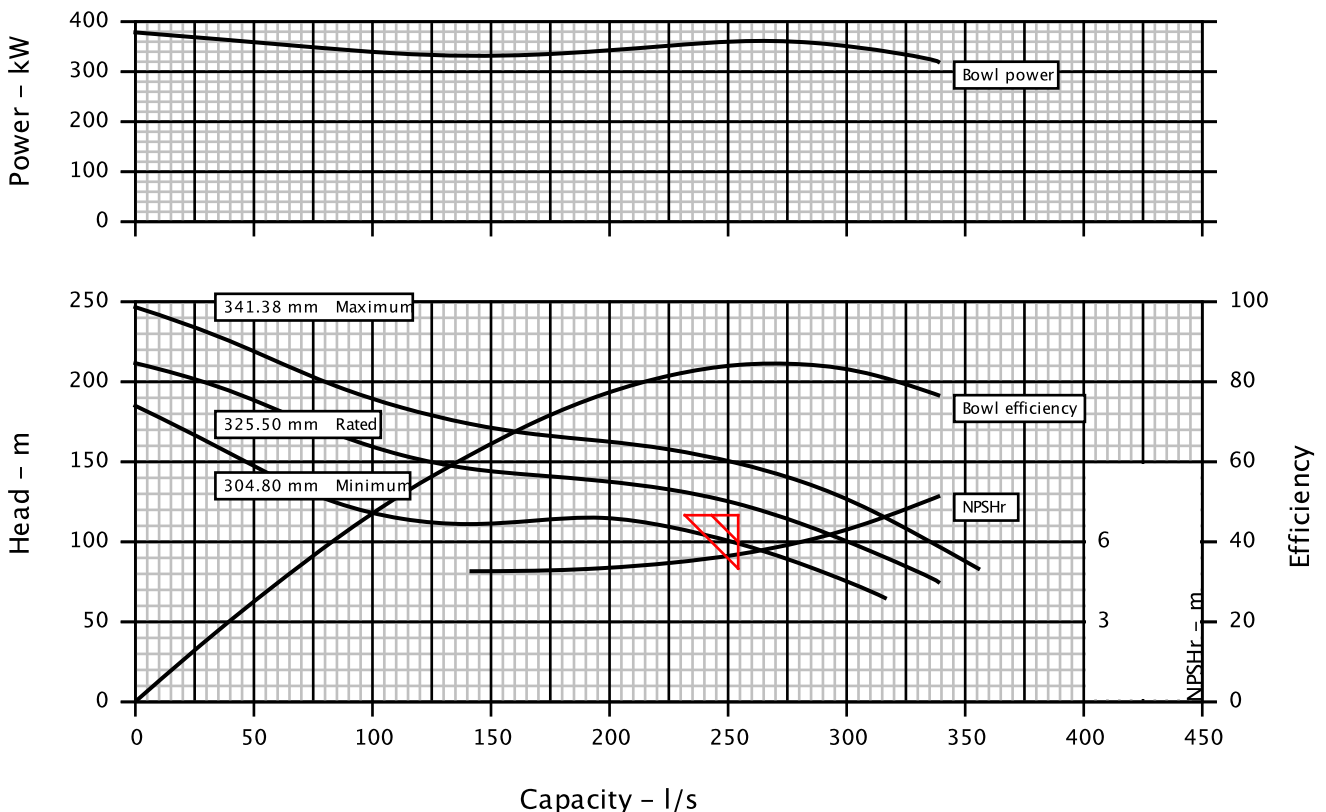
Customer	: LIHIR GOLD LTD	Pump / Stages	: 17EPM / 7
Customer reference	:	Based on curve no.	: EC-1561
Item number	: 1825-PU-2161, 2, 3	Vendor reference	: 62444 Version 1
Service	: Wurtol Main Pumps	Date	: August 19, 2011

Operating Conditions	Materials / Specification
Capacity : 254.5 l/s	Material column code : B30
Water capacity (CQ=1.00) : 254.5 l/s	Pump specification : -
Normal capacity : -	Other Requirements
Total Developed Head : 116.00 m	Hydraulic selection : No specification
Water head (CH=1.00) : 116.00 m	Construction : No specification
NPSH available (NPSHa) : Ample	Test tolerance : ISO 9906 Level 2
NPSHa less NPSH margin : -	Driver Sizing : Max Power (SO to EOC) with SF
Maximum suction pressure : 0.0 kPa.g	Performance data based on standard impeller
Liquid	
Liquid type : Other	
Liquid description : Raw Water	
Temperature : 30 C	
Specific gravity / Viscosity : 1.000 / 1.0 cP	

Performance	
Hydraulic power : 308 kW	Impeller diameter
Pump speed : 1485 rpm	Rated : 325.5 mm
Efficiency (CE=1.00) : 83.8 %	Maximum : 341.4 mm
NPSH required (NPSHr) : 5.2 m	Minimum : 304.8 mm
Rated power : 368 kW	Suction specific speed : 11080 US units
Maximum power : 378 kW	Minimum continuous flow : 190.1 l/s
Driver power : 400 kW / 536 hp	Maximum head @ rated dia : 212.48 m
Casing working pressure : 2080.7 kPa.g	Flow at BEP : 271.9 l/s
(based on shut off @ cut dia)	Flow as % of BEP : 93.6 %
Maximum allowable : 2004.7 kPa.g	Efficiency at normal flow : -
Bowl & column hydrotest : 2600.9 kPa.g	Impeller dia ratio (rated/max) : 95.3 %
Minimum submergence : 965.2 mm	Head rise to shut off : 70.7 %
Pump thrust at rated flow : 65023.1 N	Total head ratio (rated/max) : 83.1 %

CURVES ARE APPROXIMATE, PUMP IS GUARANTEED FOR ONE SET OF CONDITIONS, CAPACITY, HEAD, AND EFFICIENCY.

Bowl performance shown below is corrected for materials, viscosity and construction.



Bowl head of 124.45 m corresponds with 116.0 m head at discharge flange adjusted for elevation and friction losses.

VERSION 1102

VERTICAL DIFFUSER PUMP

Client: Lihir Gold Limited
Project: Wurtol Pump Station
Client Ref: MOPU-1066-L
TKL Ref: 4336CG11

Pumped Fluid Raw Water
 Fluid Density 1000 kg/m³
 Duty Flow 254.5 L/s
 Duty Head 116 m
 Speed 1481 r/min
 Power Abs/d 111 kW

PUMP
 Pump Mass 3385 Kg
 M of I [MK²] 5.539 kg.m²

MATERIALS
 Suct. Bell Not Fitted
 Imp. Case Not Fitted
 Suct. Case CI
 Ser/Top Case CI
 Impeller Bze
 Imp. Rings Not Fitted
 Case Rings Not Fitted
 Shafts F1 1/2 A313SS
 Columns Fab MS
 Disch. Bend Fab MS
 Pump Bearing Ferroform
 Line Bearings Ferroform
 Bolting Steel
 Strainer Galv MS

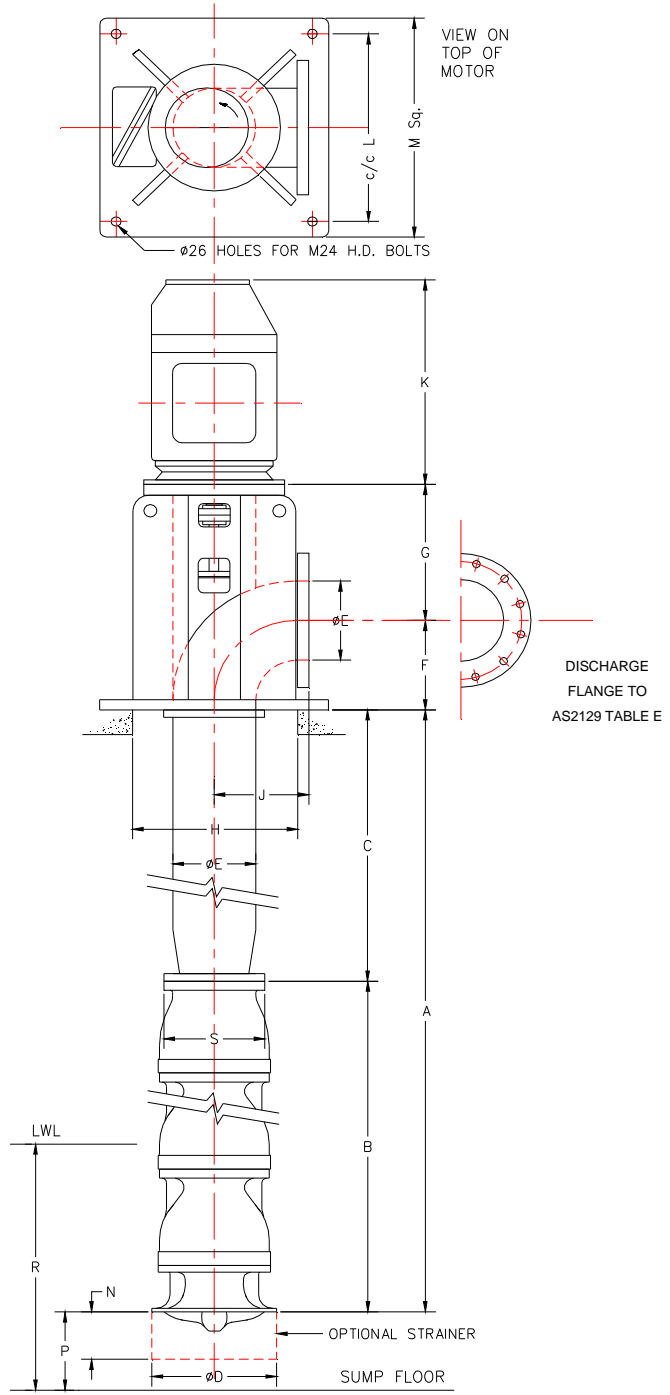
FEATURES
 Shaft Seal Packed
 Piping Plan Plan 13
 Thrust Brng. 52206/55443
 Brng. Lube. Grease
 Coupling Omega E100-M
 Disch. Flange AS2129 TABLE E

ELECTRIC MOTOR DETAILS
 Make Teco
 Frame 400AB
 Rating 400 kW
 Speed 1481 r/min
 Mass 1100 kg
 M of I [MK²] 15.5 kg.m²

UNIT M of I 23.039 kg.m²
 M of I expressed as MK² value

DIMENSIONS [mm]	
A	8648
B	3661
C	5111
D	1117
E	350
F	394
G	860
H	100
J	404
K	1111
L	745
M	820
N	661
P	600
R	1111
MAX. S	525
T	
U	

**TENDER DRAWING ONLY
 NOT FOR CONSTRUCTION**



NOT TO SCALE

TITLE: **GENERAL ARRANGEMENT OF
 7 STAGE
 GA Raw Water Pump**

DATE: 08/18/2011
 DRAWING No.
 DRN: Silvan Pereira

FLOWSERVE Pump Division
 A.C.N. 004 249 012



Lihir Gold Ltd

ARBN 069 803 998
 Tradex Order# 2001-748

Supplier
 FLOWERVE PUMP DIVISION
 P O BOX 42
 ARCHERFIELD QLD
 4108

Phone No: +61737154118
 Fax No: +61732770783

PO Header Narrative

Delivery Terms:
 EXW Vendor store, Dry Creek, SA.

Agility to arrange collection and on forwarding via air freight.

Delivery Schedule: One (1) days from receipt of purchase order.

PURCHASE ORDER

Deliver To (Location)

FOR FREIGHT FORWARDING DETAILS PLEASE CONTACT:-
 AGILITY PROJECT LOGISTICS PTY LTD
 175 EAGLE FARM ROAD
 PINKENBA QLD 4008 AUSTRALIA
 NEOMI SAWICKI TEL: +617 3291 8660
 BRATISLAV VARAGIC TEL: +617 3291 8657
 FAX: +617 3291 8630
 Email:
 BVaragic@agilitylogistics.com

Freight Instructions

EXW INCOTERMS 2000 VENDOR WORKS

PURCHASE ORDER NO: A03880

Order Date: 17 Jan 2013

Total Number of items on this PO is : 4

Purchasing Officer: SAM TEAGUE

Phone:

Fax:

Email: reception@saggers.biz

Web Address: www.newcrest.com.au

Payment Terms: By end of month following month of receipt

Forward Original Invoices to: Lihir Gold Ltd
 Level 7, Pacific Place
 PO Box 789
 Port Moresby
 PNG

Item No	Description of Goods or Services (see notes below)	Qty	Unit	Unit Price (excl GST)	Currency	Price	Delivery Date
001	Purchase Req No: 003932 / 001 Submssion of drawings progress payments No. 1 AUD \$69,206.10	1	EA	69,206.10	AUD	69,206.10	17 Jan 2013



PURCHASE ORDER

PURCHASE ORDER NO: A03880

Order Date: 17 Jan 2013

Total Number of items on this PO is : 4

Lihir Gold Ltd

002	Purchase Req No: 003932 / 002 Submission of Hydrostatic test certificates. Payment No. 2 AUD \$276,824 .40	1	EA	276,824.40	AUD	276,824.40	17 Jan 2013
003	Purchase Req No: 003932 / 003 Receipt of motors into Newcrest Stores Payment No. 3 AUD \$276,824.40	1	EA	276,824.40	AUD	276,824.40	17 Jan 2013
004	Purchase Req No: 003932 / 004 Delivery to site. Payment No. AUD \$69,206.10	1	EA	69,206.10	AUD	69,206.10	17 Jan 2013

Total Value & Currency (excl GST)	AUD	692,061.00
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PO Footer Narrative

Pricing: Firm and fixed in AUD.

Refer Quotation Reference:
AM122286 dated 18/12/12

Payment:
Thirty (30) days from invoice date.

This Purchase Order is subject to Lihir Gold Limited - Operations Purchase Order General Conditions of Purchase (for Goods) or Service Order General Conditions (for Services), both of which are available from our website www.newcrest.com.au

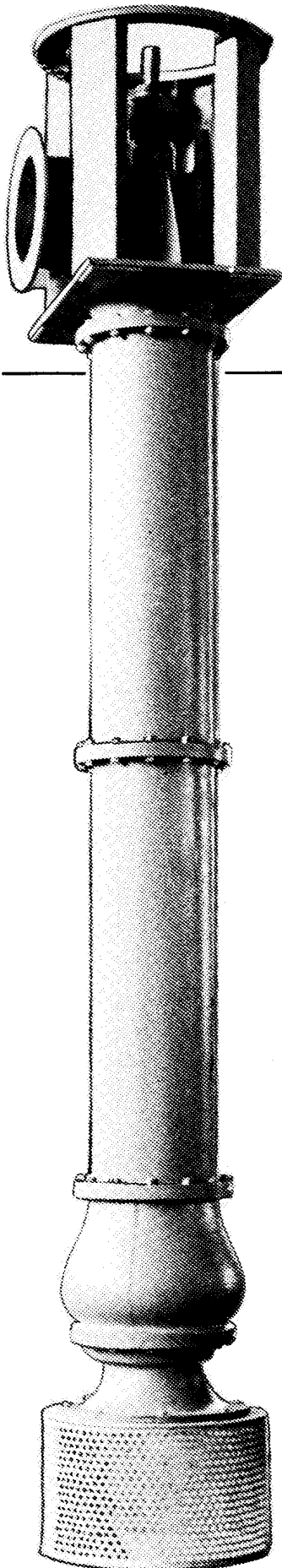
- (1) This price excludes any applicable Goods and Services Tax (GST) or Value added Tax (VAT).
Lihir Gold Limited is zero-rated for Papua New Guinea GST purposes. **YOUR INVOICE MUST EXCLUDE PNG GST.**
Lihir Gold Limited is a Papua New Guinea company registered for Australian GST. Certain supplies to Lihir Gold Limited will attract Australian GST and, in these circumstances, GST of 10% should be added to the invoice amount. We recommend that independent tax advice be obtained to confirm the appropriate treatment in your precise circumstances.
- (2) The Supplier must not substitute any goods shown with an alternative item without prior approval



**Thompsons
Kelly & Lewis**

Quality

VERTICAL DIFFUSER PUMPS



INTRODUCTION

Individual customers deserve individual solutions. Thompsons Kelly & Lewis (TKL) is the Australian specialist for premium quality medium to large diameter Vertical Diffuser Pumps. Manufactured using the latest in pump-making technology, and with a dedicated commitment to the customers needs.

PUMP TYPE

The TKL Vertical Diffuser Pumps are specifically designed for operation in a wide range of industrial applications. The pumps consist of a pump bowl assembly, either single or multistage, suspended on a flanged welded steel column connected to a welded steel discharge head incorporating a short radius bend with discharge flange, stuffing box, thrust bearing mount and driver support. The distinct advantages of this type of pump over a horizontal pump for the same service are as follows:

- Self priming because the pumping element is submerged.
- Minimum floor space required because of vertical configuration.
- Maybe installed at any convenient location in a reservoir, pit or sump, wherever supporting beams can be provided.
- Suction piping with its attendant friction losses is eliminated.
- Unit is self contained having fixed components machined for positive location avoiding any possibility of misalignment.
- Vertical pump shaft means minimum wear on bearings and rotating parts.

PUMP RANGE

Sizes/Discharge	250 - 1000 mm
Flow Rate	to 2350 L/s
Total Head	to 180 m
Working Pressure	to 3500 kPa
Temperature	0° to 110° C
Pump Speeds	590, 740, 980, 1480 & 1800 r/min
Power Range	to 2500 kW

MATERIALS

TKL Vertical Diffuser Pumps are constructed from high quality materials carefully selected for suitability in a broad range of industrial pumping applications. The standard materials are a cast iron suction bellmouth, suction and top case, bronze impeller bowl and impeller with a stainless steel shaft. Other materials commonly used for special services are also available.

PUMP FEATURES

BOWL ASSEMBLY

Available with closed and semi-open impellers. The impellers are mounted and keyed on the shaft. Bowl sections have centring fits and are secured by studs and nuts. Diffusers convert kinetic energy to pressure energy. The suction bellmouth guides the liquid into the first stage impeller. A bronze bearing packed with waterproof grease supports shaft.

COLUMN ASSEMBLY

Fabricated steel flanged columns in pipe sizes from 250 to 1000 mm support the bowl assemblies. The open lineshaft is guided by Ferroform sleeve bearings lubricated by the liquid being pumped and supported in bearing spiders at the top of each column. Centring fits are used at all column joints. The lineshaft length between bearings is selected so that the pump always operates below first critical speed. Sleeve and split ring type muff couplings are used to join the lengths of lineshaft.

DISCHARGE HEAD

Fabricated steel discharge head to suit the column size selected. Discharge flange is to AS 2129 Table E for hydro test pressure up to 2100 kPa, above this to AS 2129 Table H. Other flange drillings can be supplied if requested. The discharge head incorporates a short radius elbow, stuffing box, thrust bearing mounting plate and motor mounting flange. The stuffing box seal can be packed or mechanical seal fitted.



**Thompsons
Kelly & Lewis**

Quality

THRUST BEARING

The thrust bearings are grease lubricated and mounted in a cast iron housing. The bearings have a minimum design life of 25000 hours. The bearing housing design allows for the fitting of grease nipples and temperature detectors if required.

FLEXIBLE COUPLING

A TKL Cone Ring type flexible coupling is provided between the top shaft and electric motor shaft. Other types of flexible couplings can be offered if specified.

DRIVERS

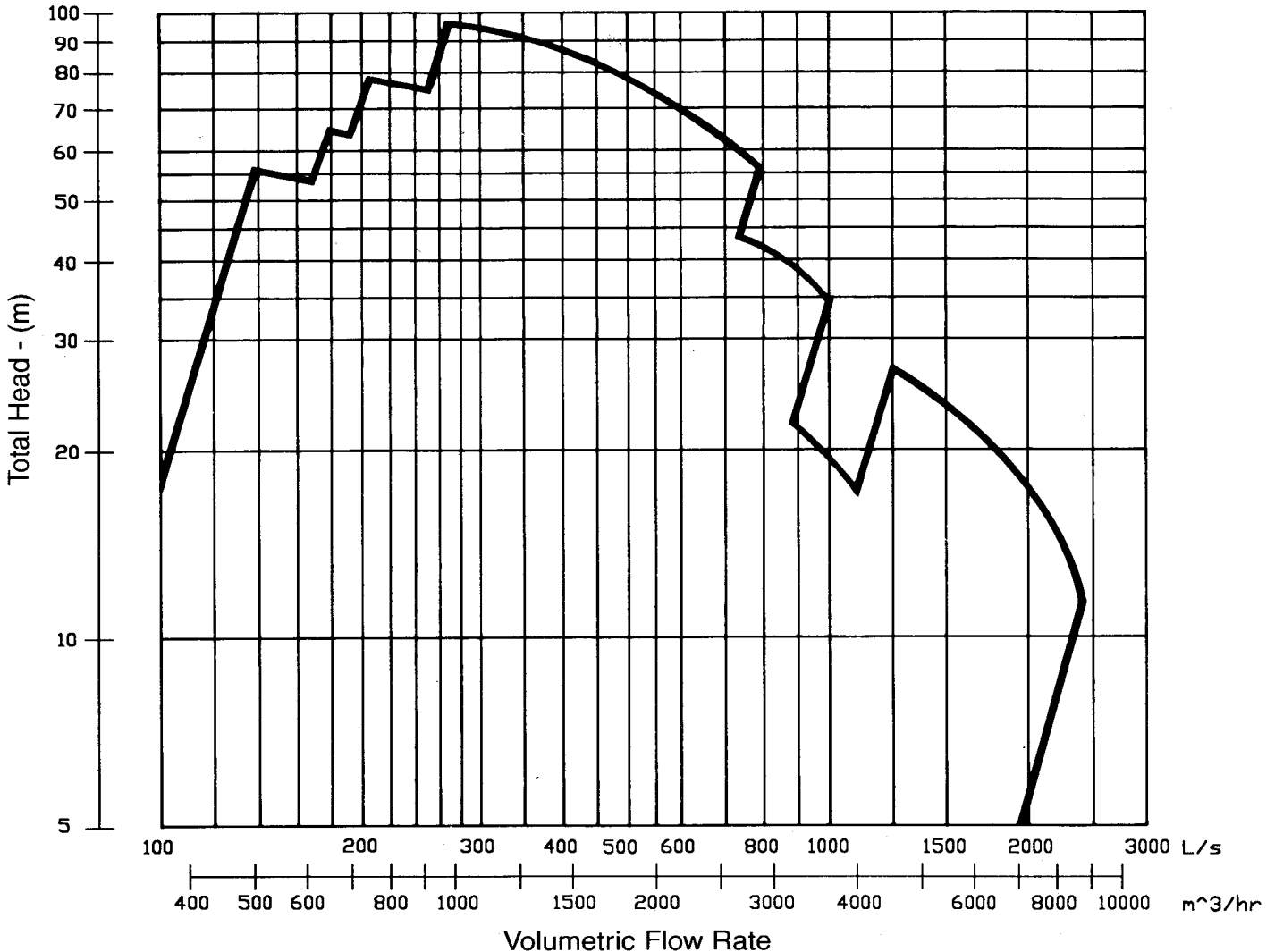
TKL Vertical Diffuser Pumps are normally direct coupled through flexible couplings to electric motor drivers. However they can be driven by diesel engines through right angle gearboxes in which case the pump thrust can be taken by the gearbox.

APPLICATIONS

- Water supply
- Booster and Transfer
- Irrigation and Drainage
- Flood control
- Circulating condenser water
- Cooling water
- Stormwater pumping
- Raw water intake
- Water storage pumping
- Dock service
- Steelworks
- High-lift pumping
- Make-up water service

RANGE CHART

Single stage performance shown, higher heads can be obtained by multistaging. Refer to TKL Sales Office for maximum number of stages at given speed.



Thompsons, Kelly & Lewis Pty. Ltd.

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Internet: www.tkl.com.au

For further information, sales, service or technical assistance consult your telephone directory for nearest sales office:
AUSTRALIA Sydney Melbourne Brisbane Adelaide Perth
NEW ZEALAND Auckland Christchurch Hamilton
EAST ASIA Singapore

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Vertical Diffuser/1.2 November 2000