

# Packaged Pump Stations – Customer Inquiry

Date \_\_\_\_\_

## Customer Details

Company \_\_\_\_\_

Contact name \_\_\_\_\_

Phone number \_\_\_\_\_

Fax number \_\_\_\_\_

Email address \_\_\_\_\_

## Project

Project name \_\_\_\_\_

Project location \_\_\_\_\_

## Application

Type of material being pumped: (i.e. sewage, storm water, chemicals) \_\_\_\_\_

## Pump Selection

Minimum flow rate required \_\_\_\_\_ l/s

OR

Maximum flow rate required \_\_\_\_\_ l/s

Static lift \_\_\_\_\_ m

(the vertical lift in meters from the inlet of the pump to the outlet)

Rising main length \_\_\_\_\_ m

Rising main diameter \_\_\_\_\_ mm

Rising main material \_\_\_\_\_

Rising main pressure class \_\_\_\_\_

Number of 30° bends \_\_\_\_\_

Number of 45° bends \_\_\_\_\_

Number of 60° bends \_\_\_\_\_

Number of 90° bends \_\_\_\_\_

## Special consideration

Does this station have any special consideration which need to be taken into account during design

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

For further information or advice  
freephone Humes on: 0800 502 112  
or visit [www.humes.co.nz](http://www.humes.co.nz)

ITT on: 0800 331 914  
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# Scope of Supply

## I – Precast Concrete Wet Well

General	Designed for light traffic loading, normal ground conditions, B1/B2 exposure, and 50 years life time. ( All other conditions are optional )
Inside Diameter	2050, 2550, and 3000
Inside Depth	2400 to 12000
Material	40 Mpa steel reinforced concrete and standard Humes manhole risers (Optional Duracem concrete)
Lifting	Factory installed lifting devices
Interior Coating	Altex- Altrashield 100 Three Coats Epoxy coating system (Optional with Duracem concrete )
Joints	Standard Humes manhole joints, sealers included, Epoxy by others
Penetrations	Discharge pipes bends pre-installed in concrete wall. All other penetrations such as inlet pipes, valve chamber drain, cable ducts, by others.

### A – Base and Basin

Description	One piece precast concrete base and basin, 1200 high with 150 wide flange (Optional for sinking installations and floating risk areas, one piece precast basin for installation on top of insitu base)
Basin	ITT- Flygt fibreglass TOPS sump base 65, 100 or 150, with 40 Mpa concrete benching Epoxy coated
Pump Discharge	ITT Flygt pump discharge elbows pre-installed in the basin, DI 50, 80, 100, 150 to match pumps

### B – Precast Concrete Riser Sections

Description	Standard Humes precast concrete manhole risers, DI to match base, 600 1200, 1800, 2400 high ( Optional in Duracem concrete )
Top Riser	1200 high, with pre-installed discharge bends in concrete wall
Joints	Standard Humes manhole joints, sealers included, Epoxy by others
Interior Coating	Altex- Altrashield 100 Three Coats Epoxy coating system (Optional with Duracem concrete)
Penetrations	All penetrations by others



### C – Wet Well Precast Lid

Material	40 Mpa steel reinforced precast concrete with Epoxy protective coating on the bottom face (Optional in Duracem Concrete)
Lockable Hatch	Pre- Installed Galvanized Steel and Aluminium Alloy double access doors and safety grills dimension, 1100 x 800, 1300 x 900, to match TOPS sumps 65, 100, & 150 (Optional as per TA Standards)
Guide Rail Brackets	Stainless Steel 316 pre-installed in lid opening

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## II – Mechanical Equipments Inside Wet Well

### Standard

Pump Discharge Elbows	ITT Flygt discharge elbows pre-installed, ID to match pumps
Discharge Piping	Schedule 10 Stainless Steel 316 (optional UPVC pipe work)
Wall Penetrations	Paddle Flanged pipes, preassembled in concrete walls
Pump Lifting Chain, Guide Rails and Hardware	Stainless Steel 316
Brackets and Fasteners	Stainless Steel 316

### Optional

Check Valve	IAVK Ball Check Valve and Gate Valve assembly on the discharge pipe in the wet well (No Valve Chamber) for stormwater and industrial applications
Pipe Materials	Other pipe materials for special applications or as specified
Lined Concrete	Polymer lined concrete risers

## III – Pumps

### Standard

Pumps	ITT Flygt pumps will be supplied in each station Pump will be sized to suit required duty point (Flow, Head)
Pump sizes	Pumps will range between Flygt 3045 to 3171 (approximately equal to 0.5l/s to 95l/s)



## IV – ITT Flygt TOPS Bases

### Standard

Pumps on 65 TOPS Sump	Suitable for pumps with 50mm outlet
Pumps on 100 TOPS Sump	Suitable for pumps with 80 and 100mm outlet
Pumps on 150 TOPS Sump	Suitable for pumps with 80, 100 and 150mm outlet

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## V – Precast Valve Chamber and Valve Assemblies

### A – Standard Chamber

General	Designed for light traffic loading, normal ground conditions, B1/B2 exposure, and 50 years life time. ( All other conditions are optional )
Description	
– 50mm Pipes	Standard Humes Modular SMC Chamber System 1200 X 1200 and 900 Deep
– 80, 100mm Pipes	40 Mpa precast manhole Ø1800 x 1200 Deep with internal Y connection
– 150mm Pipes	40 Mpa precast manhole Ø2300 x 1200 Deep with internal Y connection
Lid	For concrete boxes, 40 Mpa precast concrete removable lid
Access Hatches	Large double Humes standard SMC access covers, with security locks, and pre- installed composite, or 316 Stainless Steel frames
Pipe Supports	Epoxy Coated Galvanised Mild Steel (Optional 316 Stainless Steel)
Floor Drain	Pre-installed gully for floor drain, 100mm PVC connection pipe, and flap valve (connection and wet well penetration by others)

### B – Piping

General	All piping for 50, 80, 100 and 150 assemblies Schedule 10 Stainless Steel 316 Valves and Fittings are Flanged AVK to Australian Standards AS 4087, pre-assembled in chamber.
Connection to Wet Well	Flexible connection, 2 AVK Supper Adaptors CW non creep ring, and connection pipe 2 x 1000 long PVC pressure pipe
Lines Connection	45 Degrees Flanged Y connection (optional 90 Degrees T connection)
Dismantling Assembly	2 AVK Universal Supper Adaptors CW non creep ring and connecting PVC pressure pipe
Wall Penetrations	Paddle Flanged pipes, preassembled in concrete walls
Get Valves	AVK resilient seated gate valves to AS 2638-2
Check Valves	AVK resilient seated ball check valve to AS Standards (Optional AVK swing check valve)

### Optional

Other Assembly Options	Emergency pumping port, pigging port, air vacuum release, special valve requirements
Other Pipe Materials	For industrial and special uses pipe materials as specified



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## VI – Electrical Control Panels and Liquid Level Sensors

### A – Control Panel

Power Rating	415VAC 3 phase + Neutral + Earth (current rating determined by pumps)
Enclosure	Free standing roadside Cabinet – 5mm Marine Grade aluminium powder coated green or – 316 Stainless steel
Mounting	4 – 8 Dyna Bolts into concrete plinth
Equipment	AC3 lockable mains switch, tariff metering enclosure with window, MCB, phase fail relay, 24VDC power supply, lockable pump isolators, pump contactors and overloads, current transformers, Auto/Off/Manual switches, single phase socket outlet
Accessories	Softstarts or VFD, power factor correction capacitors, MCCB and HRC fuses, Emergency Generator connection, internal light, external strobe light, GSM modem, battery back-up system, any other council requirement

### B – Pump Controllers

Pump Controller	Flygt APP521 Dual pump controller
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### C – Liquid Level Sensors

Primary	ITT Flygt LS 100 Pressure Transducer
Primary (Optional)	ITT Flygt LSU 100 Ultrasonic Level Sensor
Primary (Optional)	ITT Flygt ENM-10 Floats
Backup Level Sensing	ITT Flygt ENM-10 Floats



## VII – Communications

### Optional

Communications card	Allows the controller to communicate Aquacom, Modbus or Comli and can connect to most third part SCADA systems With GSM modem controller can message alarms directly to mobile phones
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## VIII – Engineering and Field Services

### A – Scope of Supply

#### Standard

Documentation	Complete listing and description of the components supplied
Station Serial No.	Each Station supplied will have a serial no. to refer to when spares, documents, and upgrade is requested

### B – Design Submittal

#### Standard

Documentation	Defines all aspects of selection of the pump type, wet well size, and storage capacity, load rating, exposure conditions, and design life time of structural components
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#### Optional

Documentation	Mechanical, and electrical design calculations, and Producer Statement Structural Design calculations for Valve Chamber box and lid and Wet Well lid
Services	Special design of Wet Well Base, lid, and Valve Chamber for non standard ground, loading, and exposure conditions Site Designs and layout

### C – Drawings

#### Standard

Documentation	Civil and Mechanical – Wet Well, and Valve Chamber Electrical – Process and instrumentation layout, and control panel
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#### Optional

Documentation	Structural drawings of Valve Chamber, and Lids, site plans
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### D – Data Sheets

#### Standard

Pumps	Care and Maintenance manual, parts list
Level Sensing	Technical specification
Wet Well	Coating, standard risers, joint seals, pipes and fittings
Valve Chamber	Valves, pipes and fittings, and covers
Controls	User Manual, Installation manual

#### Optional

Optional Components	Suppliers Technical Data Sheets and Manuals
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### E – Field Services and Supports

#### Standard

Services	Electrical interconnection advisor Start-up Technician on site to perform start-up
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#### Optional

Services	Underground construction advise
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## IX – Miscellaneous Supplies

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### Optional

Precast Concrete Tanks for underground emergency storage

Separate Flowmeter precast concrete chamber and lid including preassembled Flowmeter and Piping as specified

Pipes and fittings for potable water connection

Back Flow Preventer

Inlet and rising main pipes and fittings (Supplied as separate item by Humes)

CSP Light Pole (optional, modified as wet well aeration pole)

Pump lifting gantry or arm

Stand By Generator

De-Odering Unit

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