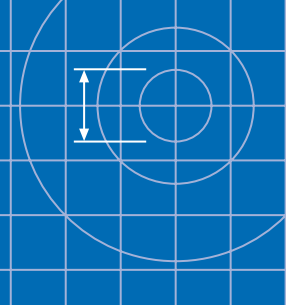


Concrete Wingwalls to improve culvert flow



Improves culvert inlet and outlet hydraulics

Humes precast concrete wingwalls have been developed to make culvert systems faster and inexpensive to install and maintain.

The design allows for maximum flow performance both at the inlet and outlet ends of the culvert wingwalls. The haunched base ensures that the incoming water is unimpeded and that debris does not lodge in the corners of the unit.

The cast-in heel under the toe of the unit prevents movement after installation by keying into the levelled base. It also strengthens the unit against impact loads under flood conditions and the possibility of scouring under base.

Features

- No costly mounds or formwork
- Efficient installation
- Units capable of fitting a wide range of pipe sizes
- Swift lift anchors cast into unit
- Thinwall knockout section for pipe openings

Benefits

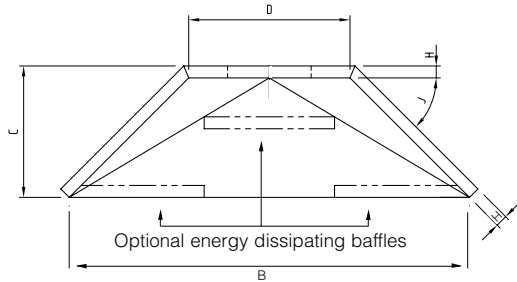
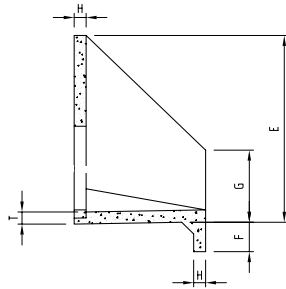
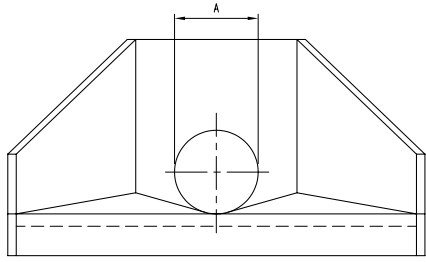
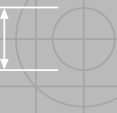
- Economical installation
- Minimises bank scouring and culvert blockages

Options

- Galvanised steel grilles
- Energy dissipation can be increased at the outlet by adding baffles to the apron slab (see diagram overleaf)



Concrete Wingwalls to improve culvert flow



Key Dimensions

Item Number	Series	Nominal Pipe Diameter	Approximate Mass (kg)	A*	B	C	D	E	F	G	T	H	J
4637	200	100-200	20	100-200	460	205	300	375	N/A	325	57	57	60°
4640	300	150-300	240	100-300	990	660	450	600	170	180	57	57	45°
4638	600	300-600	650	375-700	2300	825	800	910	175	395	80	80	45°
4639	900	600-900	2100	695-1053	3350	1100	1350	1595	250	600	100	100	45°
5536	1050	900-1050	3700	1060-1250	3800	2200	1400	1550	300	450	100	125 ⁺	60°
5537	1350	1200-1350	5300	1390-1550	4100	2200	1700	1875	300	625	125	125 ⁺	60°
5538	1800	1500-1800	7700	1700-2030	4600	2200	2200	2400	300	800	150	125 ⁺	60°

Dimensions

- All dimensions in mm unless marked otherwise.
- Dimensions may vary slightly between regions.

+ The cut off wall and headwall are 125mm for this size.

* Standard hole openings to fit standard flush joint reinforced concrete pipes. Special openings within this diameter range can be made to order. Rubber ring joint collar dimensions restrict the upper sizes for inlet structures.

Installation

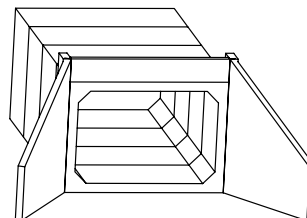
The Swiftlift laying system is placed into the structure of the units to accommodate easier handling. The gap between the pipe and the wingwall opening is to be sealed with Humes epoxy mortar. Ask your nearest Humes Sales Centre for advice.

Manufacturing standards

Precast manufacture is to NZS 3109:1997 with surface finishes to NZS 3114:1987.

Box culvert wingwalls

Precast wingwalls are available for box culvert installations. See Humes Box Culvert brochure for further details.



Example of wingwall option on Humes Culvert System.

Disclaimer: "Buyers and users must make their own assessment of our products under their own conditions for their own use. All queries regarding product suitability or purpose or installation should be directed to the nearest Humes office for advice and assistance". Availability of product may differ slightly from that available in your area. © Copyright Humes Pipeline Systems 2004.

