

FE SERIES

Automatic control gates are used extensively in canal systems for regulating water levels and discharge.

They are usually float operated and are designed to maintain constant levels in the canal so that discharges from off-takes can be kept at a constant known rate.

Armfield are able to supply models of three types of commonly used gate:

Float Operated Radial Gate - FEX40-5

Float Operated Tilting Gate - FEX40-6

Float Operated Weir Gate - FEX40-7

Experimental content

- Demonstration of the most widely used automatic control gates in distribution systems for maintaining constant water levels under varying discharges or vice versa

FEX40-5

This is a counterbalanced radial-type gate, which is controlled by means of a displacer located in a chamber. The displacer chamber is fed with upstream water via a V-notch Weir and water is discharged from the chamber downstream through a circular orifice.

The flow through this orifice may be adjusted by means of a throttle valve, altering the characteristics of the gate as required. The gate, of the undershot type, provides upstream level control and is designed to fit in a rectangular channel section 0.450m wide.

FEX40-6

This consists of a gate flap, which is hinged at the base. The position of the gate is controlled by means of a displacer housed in a chamber.

Water is fed to the chamber from the upstream side over a V-notch Weir and discharged downstream through an orifice.

A throttle valve enables the orifice flow to be controlled and the gate characteristics to be modified as required. The gate, of the overshot type, provides a further method of control of upstream level and is designed to fit in a rectangular channel section 0.450m wide.

FEX40-7

This is a radial-type gate incorporating buoyancy tanks. The gate floats at a constant depth so the head of water over the gate crest remains constant despite variations in upstream level.

The gate is suitable for applications where constant flow is required, for example in irrigation canal off-takes, and is designed to fit in a rectangular channel section 0.450m wide.

Overall dimensions

Model	FEX40-5	FEX40-6	FEX40-7
Length	0.715m	0.480m	0.480m
Width	0.480m	0.470m	0.470m
Height	0.475m	0.445m	0.445m
Packed and crated shipping specifications			
Volume	0.3m ³	0.3m ³	0.3m ³
Gross weight	70Kg	70Kg	70Kg

UK office - email: sales@armfield.co.uk tel: +44 (0) 1425 478781 (for ROW)

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Automatic Water Control Gates – FEX40-5/6/7



FLOAT OPERATED RADIAL GATE – FEX40-5



FLOAT OPERATED TILTING GATE – FEX40-6



FLOAT OPERATED WEIR GATE – FEX40-7

Ordering codes

- FEX40-5
- FEX40-6
- FEX40-7

Issue: 2

URL: <http://www.armfield.co.uk/fex26>

Applications

ChE IP

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