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FREEFALL FIRE VALVE

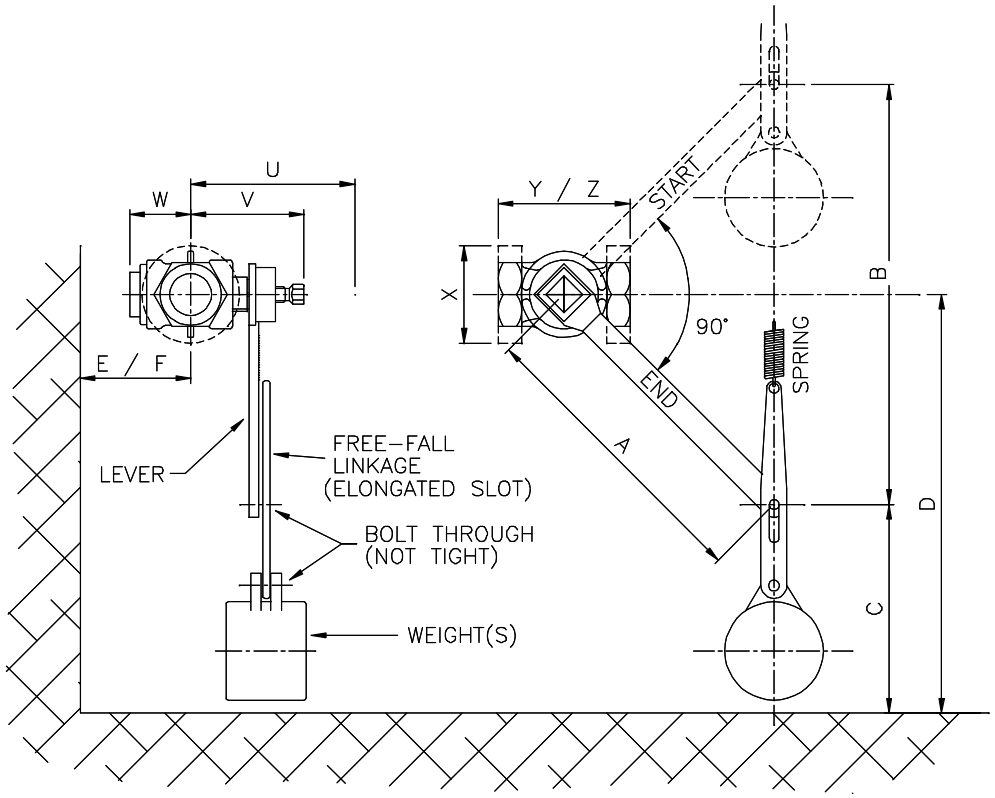
The Landon Kingsway range of free-fall fire valves provide a compact, leak-proof positive action mechanism that can be installed in either horizontal or vertical pipe runs on oil, gas or any non-aggressive media. The valve may be used for either cut-off or dump applications.

The free-fall linkage allows the weight to start to fall before it is required to move the valve lever. This makes sure that the weight achieves sufficient momentum to overcome the initial stiffness of the valve.

Technical Specification

Material	Cast Iron, painted red.
Maximum Pressure	14 Bar (200psi)
Standard Cable	9m
Fusible Link	71°C as standard
Maintenance Reqd.	Test & Lubricate 4 times/year
Valve Rotation	90° (¼ turn)
Lubricant	4",5",6" valves: Type 44 under 4"valves: Type 90
Flange Spec	BS4504, PN16
Screwed Spec	BSP parallel
Weights Available	2.25, 4.5, 6.8kg (5, 10, 15lb)

Dimensions (not to scale)



Important dimensions

E Min dist to remove plug with valve in-line
F Min dist to wall
U Clearance to remove lubricating screw
X Flange diameter
Y Length of screwed valve
Z Length of flanged valve

Valve Size	Lever Size	Z	Y	X	W	V	U	A	B	C	D	E	F	Weight
½"	A	82	95	95	38	60	110	241	343	178	349	152	51	1x 5lb
¾"	A	90	105	102	44	64	114	241	343	178	349	165	58	1x 5lb
1"	A	107	115	114	51	73	125	241	343	178	394	191	64	1x 5lb
1¼"	B	111	140	121	62	83	135	305	432	178	394	229	76	1x 5lb
1½"	B	117	150	133	68	90	144	305	432	229	444	254	76	1x 10lb
2"	C	150	178	152	83	125	213	381	540	229	502	330	102	1x 15lb
2½"	C	165	190	165	94	135	222	381	540	229	502	330	102	1x 15lb
3"	D	189	200	184	111	167	275	775	1092	251	800	457	152	1x 15lb
4"†	E	229	—	216	141	184	297	629	864	251	683	470	165	2x 15lb
5"†	E	254	—	254	160	213	327	629	864	251	683	559	178	2x 15lb
6"†	F	267	—	279	184	241	356	737	1041	276	813	660	203	4x 15lb

† The 4", 5" and 6" valves are only available in flanged versions.

FREEFALL FIRE VALVE

INSTALLATION

The valve may be installed in either horizontal or vertical pipe providing it is oriented such that the plug is parallel to the ground. Ensure that any pipe expansion or miss-alignment will not distort the valve body as this will cause it to stick.

Fit the lever onto the square valve shaft and tighten the fixing screw. Make sure that the lever travels freely from 45° up to 45° down.

Attach the free-fall linkage and weight(s) to the lever using the supplied nuts and bolts as shown in the diagrams. If using a 4", 5" or 6" valve, multiple weights and the pulley arrangement must be used as shown below. DO NOT tighten the bolt through the lever and free-fall link too tight as the free-fall link MUST be able to slide freely.

Finally fit the spring and cable to the top of the free-fall link. The cable should run vertically from the spring to the first pulley. The cable should then pass over any anticipated fire hazards with fusible link(s) installed in the cable 0.3 to 1.0m above the hazard. The cable may then be routed to a manual quick release by the exit or terminated at a wall anchor by means of crimping.

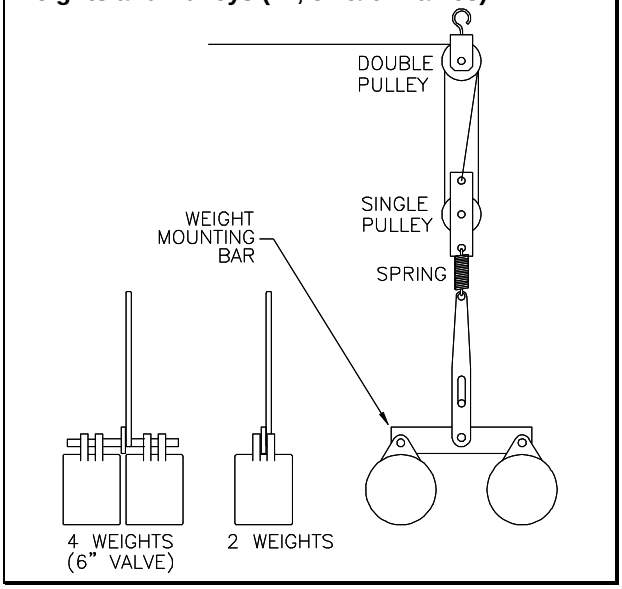
Note: When using a manual quick release, the distance from the release to the first pulley must be greater than the movement of the arm (B).

To crimp cables together, pass the two wires through a cable connector and crimp using a pair of pliers.

Lift the valve lever into the START/UP position and make sure that the lever pin is at the bottom of the elongated slot in the link. Use the spring/wire strainer to tension the cable.

NOTE: The close proximity of the flange to the body does not allow room for all bolt holes to be drilled through on the larger valves. The holes are therefore tapped M16 on 4" and 5" valves and M20 on the 6" valve.

Weights and Pulleys (4", 5" & 6" valves)



Standard Parts & Spares *No.* = Standard Quantity

1	Lever (sizes A to F depending on valve size)
1	Free-fall elongated slot link
9m	Cable - s/steel (30m, 150m, 300m, 760m avail.)
2	Brass woodscrew hooks with pulleys
1	¼" BSP screw hook with pulley
1	Brass wall anchor
1	Turnbuckle/wire strainer (for valves ≥ 2" BSP)
1	Weight mounting bar (for valves ≥ 4")
5	Cable connectors (soft tube)
1	Tension Spring (light / heavy types)
1	Fusible link 71°C (std.), 92°C, 104°C, 127°C, 143°C, 180°C avail.
1	Warning notice to hang on cable
1	Double Pulleys (for 4", 5" & 6" valves)

TEST

Release the cable by releasing the quick release mechanism. The valve should close in a controlled manner with the lever travelling through a full 90°.

If the valve does not travel through the full 90° (¼ turn):

- Check for physical obstruction of the lever and weight(s) E.g. pipework
- Check the fusible link(s) and cable joins do not jam against pulleys
- Make sure that the cable is fitted around the pulleys and has not slipped off
- Lubricate the valve if stiff (see below)

LUBRICATION

If using a grease injection gun, connect to the grease nipple at the end of the lubricating screw. If lubricating by hand remove the lubricating screw from the end of the square shaft. Fill the reservoir inside the shaft with lubricant and replace the screw. Tighten the screw until a definite increase in resistance is felt, inserting further lubricant as necessary. 'Pump' the valve lever up and down several times to ensure the valve is free-moving.

If you have any questions or need any help then please contact our sales office.

Lubrication Access