



EA1185 Flanged Lever Lugged Butterfly Valve

For electronic isolation of heating and cooling systems on flanged pipework

Overview

The WRAS approved Lugged Pattern Butterfly Valve comes complete with actuator to provide electronic isolation of hot and cold-water systems for a wide variety of applications including potable water, HVAC, oil, and gas production, marine, chemical, wastewater and mining. Note: unsuited to petroleum services, steam services, or services where the working pressure or temperature fall outside of ranges stated.

Features and Benefits

- Universal lugged pattern design
- Stainless steel notch plate and fittings greatly reduce risk of corrosion
- Multi-voltage actuator (24-240V DC/AC) with automatic voltage sensing, and manual override as standard
- Fully stocked from DN50-DN250, with up to DN600 available on request¹
- Face to face dimensions to BS EN 558 Series 20
- Pressure test standard BS EN 12266 PN16
- Regulation 4 approved for use on potable water systems



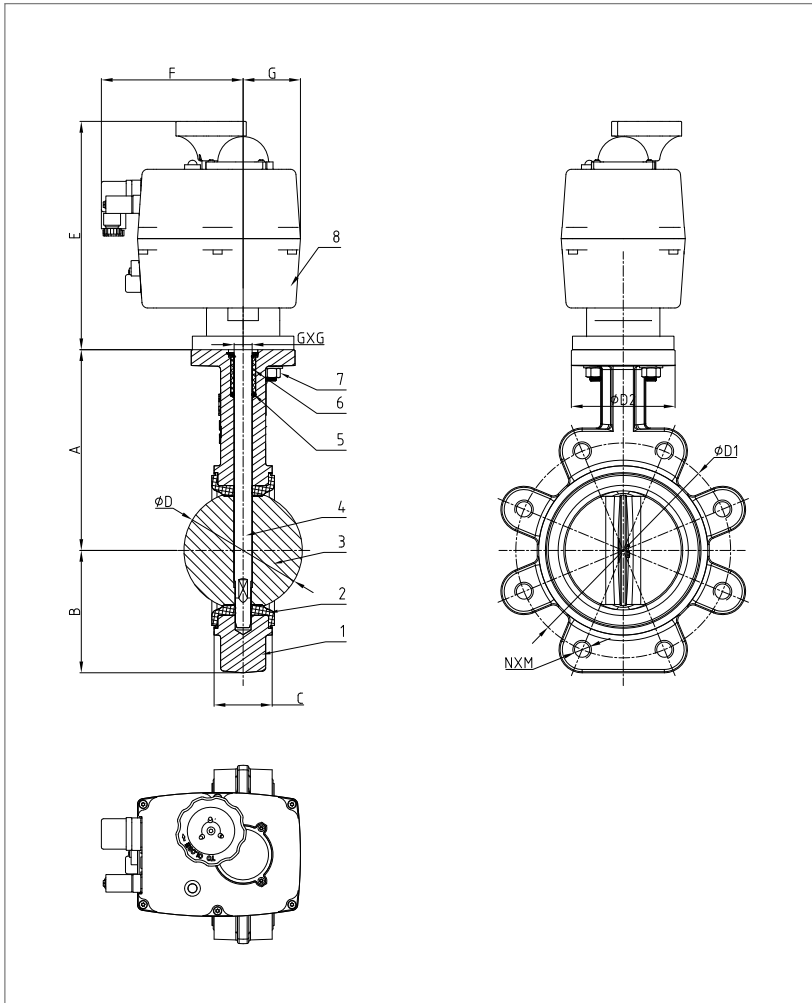
Technical Specification

Specification	
Medium	Heating, cooling, and potable water systems
Maximum working pressure	PN16
Working temperature range	0 – 110°C
Installation	Vertical or horizontal
Threads	Flanged
Handle	Lever type, black handle
Paint RAL	RAL5005 (max 80°C)
Actuator	Multi-voltage (24-240V DC/AC) with automatic voltage sensing and manual override

Product Codes

Product Code	Size DN (mm)	Size NPS (inches)	Weight (kg)
EA1185-050	DN50	2"	9.68
EA1185-065	DN65	2 ½"	10.89
EA1185-080	DN80	3"	12.25
EA1185-100	DN100	4"	14.33
EA1185-125	DN125	5"	17.64
EA1185-150	DN150	6"	19.13
EA1185-200	DN200	8"	29.89
EA1185-250	DN250	10"	38.63

Dimensions & Materials



Description	Material	Grade
1 Body	Ductile iron	EN-GJS-450-10
2 Seat	Rubber	EPDM
3 Disc	Stainless steel	SS316
4 Stem	Stainless steel	SS316
5 O-Ring	Rubber	EPDM
6 Bushing	Plastic	PTFE
7 Bolts and nuts	Stainless steel	SS316
8 Actuator ²	Composite / various	Polyamide

* For full actuator materials and specification see datasheet EC1185A-B



Butterfly Dimensions

Dimension	Size							
	DN50	DN65	DN80	DN100	DN125	DN150	DN200	DN250
A	140.5	153	157.5	176	191	202.5	243.5	273
B	64.5	72	86	100	112	128	162	194
C	43	46	46	52	56	56	60	68
D	53.9	65.2	79.7	105	129.8	155.8	206.7	253.3
D1	125	145	160	180	210	240	295	355
D2	90	90	90	90	90	90	125	125
E	181	181	181	208	208	208	266	266
F	130	130	130	130	130	130	128	128
G	51	51	51	51	51	51	107	107
V	32	32	32	32	32	32	45	45
N x M	4xM16	4xM16	8xM16	8xM16	8xM16	8xM16	12xM20	12xM24
G x G	11x11	11x11	11x11	14x14	14x14	14x14	17x17	22x22
L	251	251	251	251	251	251	388	388
ISO 5211	F07	F07	F07	F07	F07	F07	F10	F10

Actuator Details



Features and Benefits

- Multi-voltage design (24-240V DC/AC) with automatic voltage sensing
- On/Off & Modulating Versions
- Failsafe Battery Backup Option
- Manual Override feature
- IP67 Weatherproof Polyamide Body
- Anti-condensation heater
- 4 Limit Switches
- Modbus interface (EC1185B range)



Actuator Specification²

Specification	Product Codes					
	EC1185A001	EC1185A002	EC1185A003	EC1185A004	EC1185A005	EC1185A006
Operation time	9 sec / 90°		13 sec / 90°	29 sec / 90°	34 sec / 90°	58 sec / 90°
Max. Torque break	25Nm	38Nm	60Nm	90Nm	170Nm	350Nm
Max. operational torque	20Nm	35Nm	55Nm	85Nm	140Nm	300Nm
Compatible butterfly valves	EV1185-050 EV1205-050	EV1185-065, 080 EV1205-065, 080	EV1185-100 EV1205-100	EV1185-125, 150 EV1205-125, 150		EV1185-200, 250 EV1205-200, 250
Duty rating	75%					
Max. working angle	0° – 270°C					
Limit switch	4 SPST NO motor (2 motor stop and 2 conformations)					
Automatic heater	3.5W					
Big plug	EN175301-803 Form A					
Small plug	DIN43650/C					
Protection IEC 60529 rating	IP67					
Temperature	-20 – 70°C					
ISO 5211 plate	F03/F04/F05 (optional F07*17)		F05/F07		F07/F10 (optional F12)	
DIN 3337 female output drive	*14 (*9, *11 optional)		*17 (*11, *14 optional)		*22 (17 optional)	
Compatible accessories (EC1185C-H)	EC1185C001 – KIT DPS 1 EC1185D001 – KIT BSR 1 EC1185G001 – Potentiometer EC1185H001 – 3 Position actuator			EC1185C002 – KIT DPS 2 EC1185D002 – KIT BSR 2 EC1185G001 – Potentiometer EC1185H001 – 3 Position actuator		

Technical Details

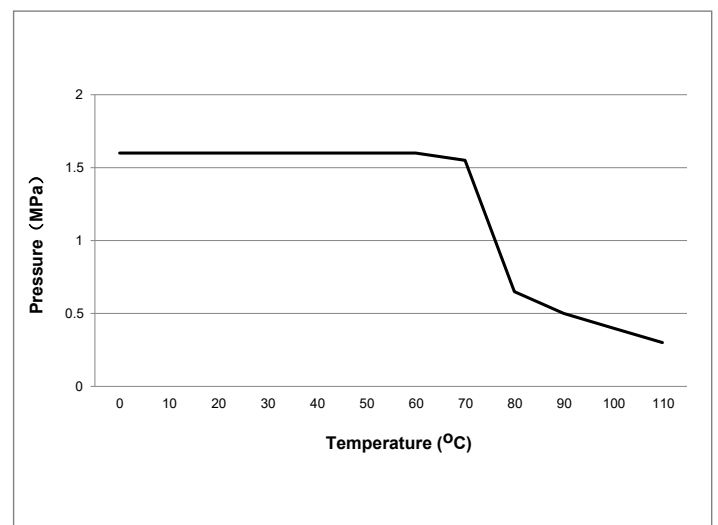
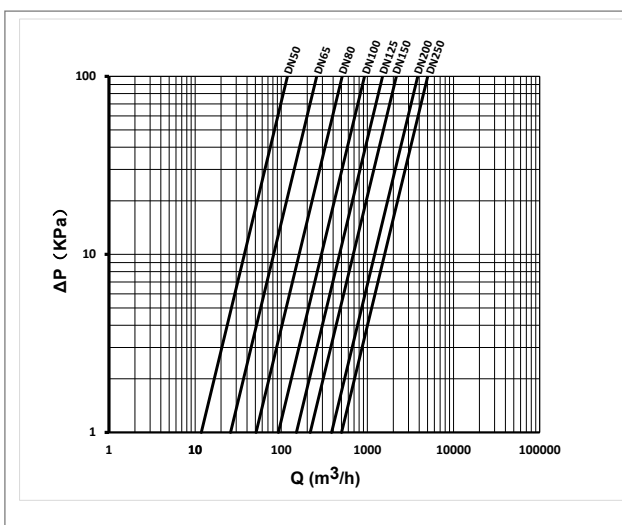


Torque Ratings

Size	Nominal pressure of 10 bar		Nominal pressure of 16 bar	
	Torque	+30% safety	Torque	+30% safety
DN40	10	13	10	13
DN50	14	18.2	14	18.2
DN65	18	23.4	18	23.4
DN80	21	27.3	21	27.3
DN100	32	41.6	32	41.6
DN125	45	58.5	45	58.5
DN150	61	79.3	61	79.3
DN200	112	145.6	112	145.6
DN250	206	267.8	206	267.8

Pressure Drops

Nominal diameter	Butterfly valve Kv value flow coefficient at opening angle of butterfly valve								
	10°	20°	30°	40°	50°	60°	70°	80°	90°
DN									
DN50		0.9	6.3	14	29	53	94	116	118
DN65		2.5	11	28	50	92	168	245	258
DN80		5.3	22	50	90	157	282	460	510
DN100		9.8	40	90	158	268	485	823	926
DN125		16	70	150	263	430	766	1350	1500
DN150		84	113	230	395	640	1096	1850	2170
DN200		112	212	405	678	1084	1785	3045	3842
DN250	20	155	309	590	989	1590	2716	4765	5014



1) For larger actuated solutions please speak to Essco Process Valves team.
2) For full actuator specification please see data sheet EC1185A-B.