


INDEX ACTUATED VALVES					
SHAW FIG. No.	Pressure Designation	Nominal Size		APPLICABLE DRAWING	
		DN	NPS	DRG.No.	REV
LM6420EC	Class 300	25, 40, 50	1, 1 1/2, 2	OS4436	0
LM6320EC	Class 300				
LM6620EC	PN40				
LM6421EC	Class 300	25, 40, 50	1, 1 1/2, 2	OS4437	0
LM6321EC	Class 300				
LM6621EC	PN40				
LM6422EC	Class 300	25, 40, 50	1, 1 1/2, 2	OS4439	0
LM6322EC	Class 300				
LM6622EC	PN40				

MAY-2023

F					DRAWN	DATE	NAME
E					CHECKED	11.3.20	O.Kitchingman
D					APPROVED		
C					PROJECTION	<input type="checkbox"/> <input checked="" type="radio"/>	PRINT OUT. A3
B					DESCRIPTION	ARRANGEMENT OF FIG. LM6420EC BELLOWS SEALED GLOBE VALVE WITH PNEUMATIC ACTUATOR	
A							
REV.					DESCRIPTION	DATE	BY

  
**BLACKHALL  
ENGINEERING LTD,**

**BRIGHOUSE W., YORKSHIRE  
ENGLAND**

**DRAWING:-  
OS4436**

**ACAD**

ITEM No.	DESCRIPTION	MATERIAL	SPECIFICATION	No. OFF
1	BODY	LOW TEMP. CAST STEEL OR	ASTM A352 LCC (1.6220)	1
2	BONNET	LOW TEMP. FORGED STEEL	ASTM A350 LF2	1
3	DISC	LOW TEMP. FORGED STEEL	ASTM A350 LF2	1
4	STEM	STAINLESS STEEL	ASTM A479 316L (1.4404)	1
5	GUIDE PILLAR	STAINLESS STEEL	ASTM A479 316 (1.4401)	2
6	CROSSHEAD	STAINLESS STEEL	ASTM A479 316L (1.4404)	1
7	PACKING GLAND	STAINLESS STEEL	BS.970 316 S31	1
8	GUIDE BRIDGE	STAINLESS STEEL	ASTM A479 316L (1.4404)	1
9	DISC NUT	STAINLESS STEEL	ASTM A479 316 (1.4401)	1
10	GLAND FLANGE	MILD STEEL	BS.970 080 A15	1
11	NUTS(PILLAR)	STAINLESS STEEL	ISO 3506 GR A2-70	2
12	NUTS(BODY)	CARBON-MOLYBDENUM STEEL	ASTM A194 GRD.4L	8
13	NUTS(GLAND)	CARBON-MOLYBDENUM STEEL	ASTM A194 GRD.4L Xylan 1270 COATED	6
14	STUDS(GLAND)	CHROM-MOLYBDENUM STEEL	ASTM A320 GRD.L7 Xylan 1270 COATED	2
15	STUDS(BODY)	CHROM-MOLYBDENUM STEEL	ASTM A320 GRD.L7	4
16	LOCKING WASHER	MONEL 400		
17	NAMEPLATE	STAINLESS STEEL	BS.970 316	1
18	BELLOWS	STAINLESS STEEL	AISI 316Ti (1.4571)	1
19	GASKET	GYLON 3510	PROPRIETARY	1
20	COUPLING ASSEMBLY	STAINLESS STEEL	ASTM A479 316 (1.4401)	1
21	COUPLING	STAINLESS STEEL	ASTM A479 316 (1.4401)	1
22	STEM CONNECTOR	STAINLESS STEEL		1
23	STEM CONNECTOR NUT	STAINLESS STEEL	ISO 3506 GR A2-70	1
24	SPLIT RING	STAINLESS STEEL	ASTM A479 316 (1.4401)	1
25	SEAL (GLAND)	NITRILE		1
26	SEAL (STUFFING BOX)	NITRILE		1
27	ACTUATOR			1
	GLAND PACKING	PTFE	PROPRIETARY	Var

**PRESSURE/TEMPERATURE RATING**  
 THE ALLOWABLE PRESSURE/TEMPERATURE RATING IS GIVEN IN BS. EN. 1092-1 FOR PN FLANGED VALVES AND BS. EN. 1759-1 FOR CLASS FLANGED VALVES FOR THE APPROPRIATE BODY /BONNET MATERIAL.  
 ADDITIONAL TEMPERATURE LIMITS ARE STATED ON THE NAMEPLATE AND ARE IMPOSED FOR CHLORINE SERVICE. I.E. 120°C MAXIMUM OR FOR REASONS OF MATERIAL SELECTION.

**DESPATCH CONDITION:**  
 EXTERNAL SURFACES UNLESS OTHERWISE SPECIFIED IN THE CONTRACT ARE ZINC PHOSPHATE PRIMED AND FINISHED IN EPOXY HIGH BUILD GLOSS.  
 EACH VALVE IS SOAKED IN DRY HEAT AT 130°C FOR 3 HOURS MIN.  
 VALVE PIPE FLANGES ARE BLANKED OFF WITH SILICA GEL DESICCANT SACHET ATTACHED TO END PLATES.

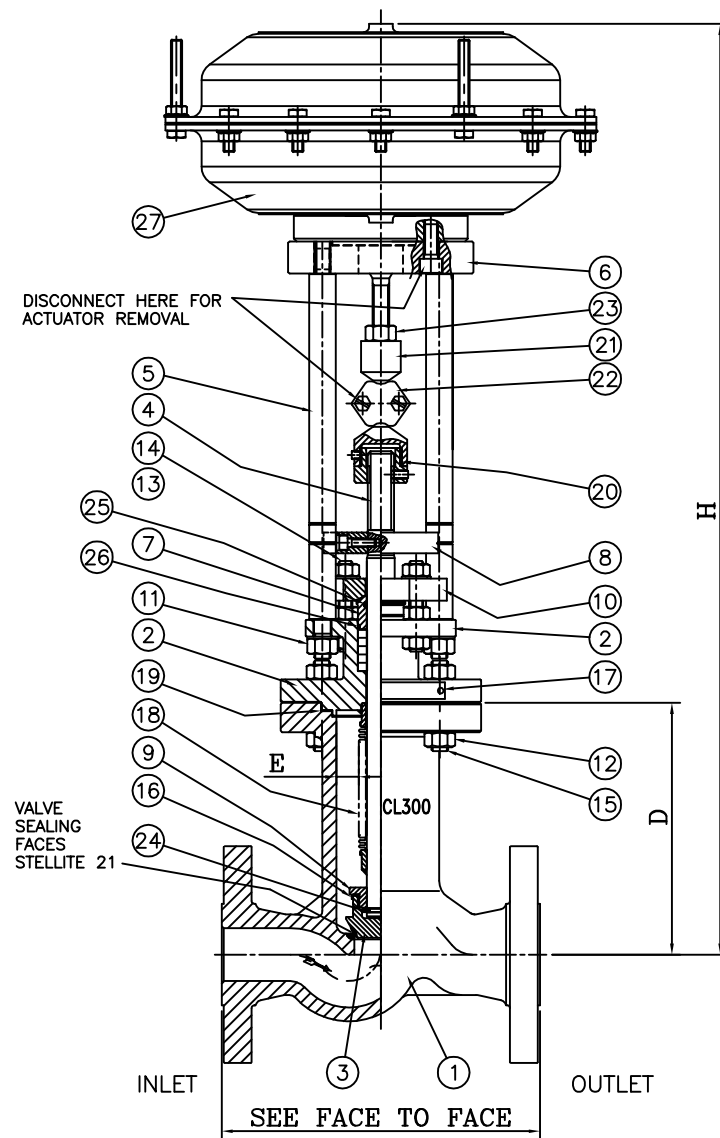
SIZE	25	40	50
H	629	670	696
D	156	181	187
E	10.5	16	16
APPROX WT(kg.)	26	33	36

\* WEIGHTS ARE BASED ON FIG. LM6420EC WITH CLASS 300 R/F FLANGES.  
FACE TO FACE  
THE FACE TO FACE DIMENSION FOR THE APPROPRIATE FIGURE NUMBER AND FLANGE IS GIVEN BELOW

FIG No	FLANGE	SIZE 55 DN 308	25	40	50
LM6420EC	CLASS 300 RF	BASIC SERIES 21	203	229	267
LM6320EC	CLASS 300 RF	BASIC SERIES 4	165	190	216
LM6620EC	PN40 TYPE 'B1'	BASIC SERIES 1	160	200	230

FLANGES: THE DIMENSIONS OF THE FLANGES ARE GIVEN IN BS EN 1092-1 FOR PN FLANGED VALVES AND BS EN 1759-1 FOR CLASS FLANGED VALVES

ACTUATOR SIZED TO SUIT SERVICE MAX.  $\Delta p$



## QUALITY APPROVALS

APPROVED TO ISO 9001:2015 BY LRQA.  
APPROVAL NUMBER: ISO 9001 - 0004073  
STOOMWEZEN  
EURO - CHLOR

## DESIGN FEATURES

DESIGN FEATURES

PRINCIPAL VALVE DESIGN FEATURES CONFORM TO THE REQUIREMENTS OF  
EURO - CHLOR GEST 17/492 ED.2 2021.  
BELLOWS PROOF CYCLE TESTED PER BS.5352  
APPENDIX 'C'  
INTERNAL VALVE LUBRICANTS - CHLORINE COMPATIBLE

## PRODUCTION TESTS

1. HYDRAULIC PRESSURE TEST OF BODY BONNET & BELLOWES AT 1.5 x P<sub>0</sub>  
ACCEPTANCE CRITERIA - NO VISIBLE LEAKAGE AFTER TWO MINUTES.
2. PNEUMATIC PRESSURE TEST OF ASSEMBLED VALVE USING NITROGEN (OXYGEN FREE) - BODY & SEAT AT 1.1 x P<sub>0</sub>  
ACCEPTANCE CRITERIA - NO VISIBLE LEAKAGE AFTER TWO MINUTES.
3. HELIUM LEAK TEST OF BELLOWES UNIT AT 1ATM USING MASS SPECTROMETER.  
ACCEPTANCE CRITERIA - MAXIMUM ALLOWABLE LEAKAGE RATE, 10<sup>-6</sup> CM<sup>3</sup>/S



REV.	A	B	C	D	E	F
DESCRIPTION						
DATE						
BY						
CHKD						
DRAWN		CHECKED		DATE		NAME
11.3.20		O.Kitchingman				
APPROVED		PROJECT		PRINT DUTY		A3
ARRANGEMENT OF FIG. LM6421EC		BELLOWS SEALED GLOBE VALVE		WITH PNEUMATIC ACTUATOR		
DRAWING--		BRIGHOUSE V. YORKSHIRE		ENGLAND		BLACKHALL ENGINEERING LTD.
OS4438		ACAD				

ITEM No.	DESCRIPTION	MATERIAL	SPECIFICATION	No. OFF
1	BODY	LOW TEMP. CAST STEEL OR	ASTM A352 LCC	1
2	BONNET	LOW TEMP. FORGED STEEL	ASTM A350 LF2	1
3	DISC	LOW TEMP. FORGED STEEL	ASTM A350 LF2	1
4	STEM	STAINLESS STEEL	ASTM A479 316L (1.4404)	1
		DUPLEX STAINLESS STEEL	ASTM A479 S31803	1
5	GUIDE PILLAR	MILD STEEL	BS.970 070 M20	2
6	CROSSHEAD	MILD STEEL	BS.970 070 M20	1
7	PACKING GLAND	STAINLESS STEEL	BS.970 303 S31	1
8	GUIDE BRIDGE	MILD STEEL	BS.970 070 M20	1
9	DISC NUT	STAINLESS STEEL	ASTM A479 316 (1.4401)	1
10	GLAND FLANGE	MILD STEEL	BS.970 080 A15	1
11	NUTS(PILLAR)	STAINLESS STEEL	ISO 3506 GR A2-70	2
12	NUTS(BODY)	CARBON-MOLYBDENUM STEEL	ASTM A194 GRD.4L	Var
13	NUTS(GLAND)	CARBON-MOLYBDENUM STEEL	ASTM A194 GRD.4L Xylan 1270 COATED	6
14	STUDS(GLAND)	CHROM-MOLYBDENUM STEEL	ASTM A320 GRD.L7 Xylan 1270 COATED	2
15	STUDS(BODY)	CHROM-MOLYBDENUM STEEL	ASTM A320 GRD.L7	Var
16	LOCKING WASHER	MONEL 400		1
17	NAMEPLATE	STAINLESS STEEL	ASTM 316	1
18	BELLOWS	HASTELLOY	HASTELLOY C276 (N10276) (2.4819)	1
19	GASKET	GYLON 3510	PROPRIETARY	1
20	COUPLING ASSEMBLY	STAINLESS STEEL	ASTM A479 316 (1.4401)	1
21	COUPLING	STAINLESS STEEL	ASTM A479 316 (1.4401)	1
22	STEM CONNECTOR	STAINLESS STEEL	ASTM A479 316 (1.4401)	1
23	STEM CONNECTOR NUT	STAINLESS STEEL	ISO 3506 GR A2-70	1
24	SPLIT WASHER	STAINLESS STEEL	ASTM A479 316 (1.4401)	1
25	SEAL (GLAND)	NITRILE		1
26	SEAL (STUFFING BOX)	NITRILE		1
27	ACTUATOR			1
	GLAND PACKING	PTFE	PROPRIETARY	Var

**PRESSURE/TEMPERATURE RATING**  
THE ALLOWABLE PRESSURE/TEMPERATURE RATING IS GIVEN IN BS. EN. 1092-1 FOR PN FLANGED VALVES AND BS. EN. 1759-1 FOR CLASS FLANGED VALVE FOR THE APPROPRIATE BODY/BONNET MATERIAL.  
ADDITIONAL TEMPERATURE LIMITS ARE STATED ON THE NAMEPLATE AND ARE IMPOSED FOR CHLORINE SERVICE I.E. 120°C MAXIMUM OR FOR REASONS OF MATERIAL SELECTION.

**DESPATCH CONDITION:**  
EXTERNAL SURFACES UNLESS OTHERWISE SPECIFIED IN THE CONTRACT ARE ZINC PHOSPHATE PRIMED AND FINISHED IN EPOXY HIGH BUILD GLOSS.  
EACH VALVE IS SOAKED IN DRY HEAT AT 130°C FOR 3 HOURS MIN.  
VALVE PIPE FLANGES ARE BLANKED OFF WITH SILICA GEL DESICCANT SACHET ATTACHED TO END PLATES.

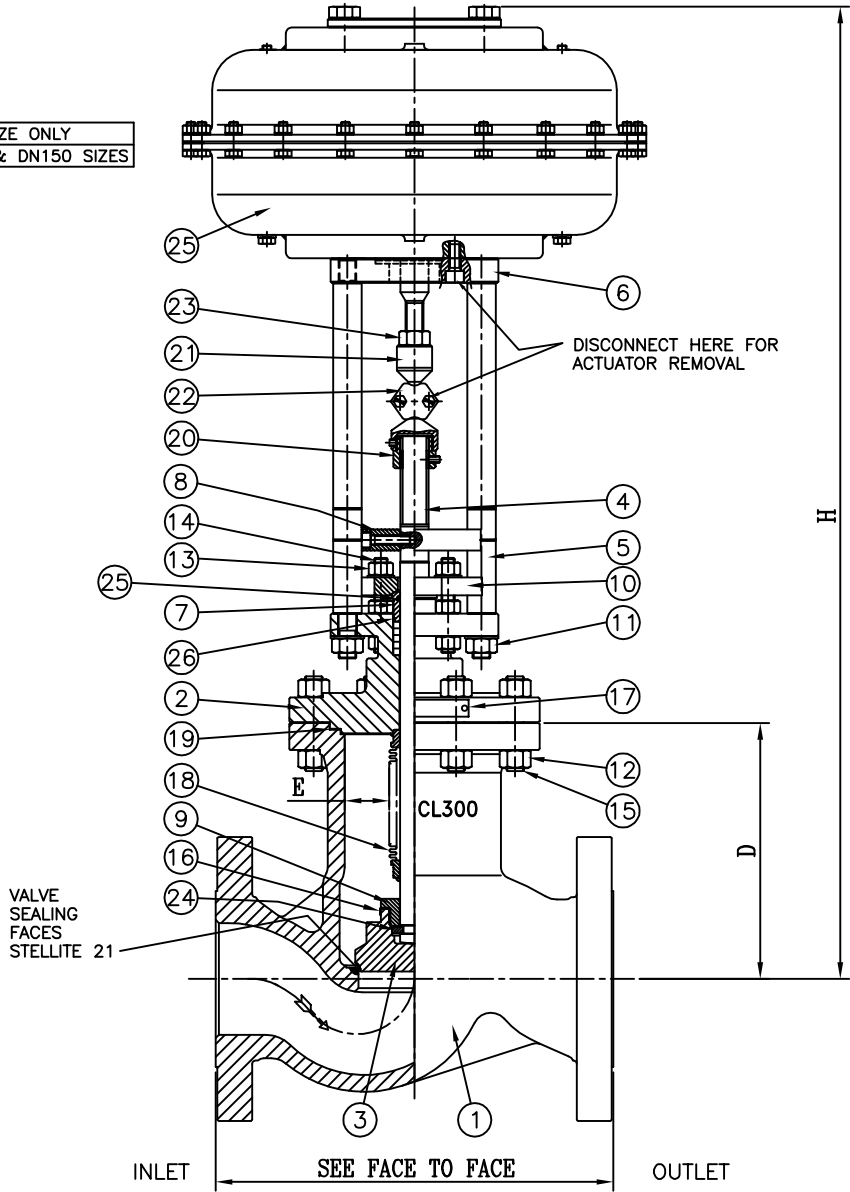
SIZE	80	100	150
H	827	871	1431
D	212	229	302
E	22.5	40	64.5
APPROX. WT(Kg.)	103	127	365

FACE TO FACE  
THE FACE TO FACE DIMENSION FOR THE APPROPRIATE FIGURE NUMBER AND FLANGE IS GIVEN BELOW

FIG No	FLANGE	SIZE BS EN 356	80	100	150
LM6421EC	CLASS 300 RF	BASIC SERIES 21	318	356	444
LM6321EC	CLASS 300 RF	BASIC SERIES 4	283	305	403
LM6621EC	PN40 TYPE 'B1'	BASIC SERIES 1	310	350	480

FLANGES: THE DIMENSIONS OF THE FLANGES ARE GIVEN IN BS EN 1092-1 FOR PN FLANGED VALVES AND BS.EN. 1759-1 FOR CLASS FLANGED VALVES

DN80 SIZE ONLY  
DN100 & DN150 SIZES





**QUALITY APPROVALS**  
APPROVED TO ISO 9001:2015 BY LRQA.  
APPROVAL NUMBER: ISO 9001 - 0004073  
STOOMWEZEN  
EURO - CHLOR

**DESIGN FEATURES**  
PRINCIPAL VALVE DESIGN FEATURES CONFORM TO THE REQUIREMENTS OF EURO - CHLOR GEST 17/482 ED.2 2021.  
BELLOWS PROOF CYCLE TESTED PER BS.5352  
APPENDIX 10  
INTERNAL VALVE LUBRICANTS - CHLORINE COMPATIBLE

**PRODUCTION TESTS**  
1. HYDRAULIC PRESSURE TEST OF BODY BONNET & BELLOWS AT 1.5 x P<sub>a</sub>  
ACCEPTANCE CRITERIA - NO VISIBLE LEAKAGE AFTER TWO MINUTES.  
2. PNEUMATIC PRESSURE TEST OF ASSEMBLED VALVE USING NITROGEN (OXYGEN FREE) - BODY & SEAT AT 1.1 x P<sub>a</sub>  
ACCEPTANCE CRITERIA - NO VISIBLE LEAKAGE AFTER TWO MINUTES.  
3. HELIUM LEAK TEST OF BELLOWS UNIT AT 1ATM USING MASS SPECTROMETER.  
ACCEPTANCE CRITERIA - MAXIMUM ALLOWABLE LEAKAGE RATE 10<sup>-6</sup> CM<sup>3</sup>/S

ACTUATOR SIZED TO SUIT SERVICE MAX. Δp

REV.	A	B	C	D	E	F
DESCRIPTION						
DATE						
BY						
CHKD						
ARRANGEMENT OF FIG. LM6422EC BELLOWS SEALED GLOBE VALVE WITH PNEUMATIC ACTUATOR						
DRAWN: 11.3.20 CHECKED: APPROVED: PROJECTOR:  PRINT DUTY: A3						DATE: 11.3.20 NAME: O.Kitchingman
DRAWING:- BRIGHOUSE V. YORKSHIRE ENGLAND						BLACKHALL ENGINEERING LTD.  ACAD

ITEM No.	DESCRIPTION	MATERIAL	SPECIFICATION	No. OFF
1	BODY	LOW TEMP. CAST STEEL OR	ASTM A352 LCC (1.6220)	1
2	BONNET	LOW TEMP. FORGED STEEL	ASTM A350 LF2	1
3	DISC	LOW TEMP. FORGED STEEL	ASTM A350 LF2	1
4	STEM	HASTELLOY	HASTELLOY C22	1
5	GUIDE PILLAR	STAINLESS STEEL	ASTM A479 316 (1.4401)	2
6	CROSSHEAD	STAINLESS STEEL	ASTM A479 316L (1.4404)	1
7	PACKING GLAND	STAINLESS STEEL	BS.970 316 S31	1
8	GUIDE BRIDGE	STAINLESS STEEL	ASTM A479 316L (1.4404)	1
9	DISC NUT	MONEL 400	ASTM B164 UNS N04400	1
10	GLAND FLANGE	MILD STEEL	BS.970 080 A15	1
11	NUTS(PILLAR)	STAINLESS STEEL	ISO 3506 GR A2-70	2
12	NUTS(BODY)	CARBON-MOLYBDENUM STEEL	ASTM A194 GRD.4L	8
13	NUTS(GLAND)	CARBON-MOLYBDENUM STEEL	ASTM A194 GRD.4L Xylan 1270 COATED	6
14	STUDS(GLAND)	CHROM-MOLYBDENUM STEEL	ASTM A320 GRD.L7 Xylan 1270 COATED	2
15	STUDS(BODY)	CHROM-MOLYBDENUM STEEL	ASTM A320 GRD.L7	4
16	LOCKING WASHER	MONEL 400		1
17	NAMEPLATE	STAINLESS STEEL	BS.970 316	1
18	BELLOWS	HASTELLOY	HASTELLOY C276 (N10276) (2.4819)	1
19	GASKET	GYLON 3510	PROPRIETARY	1
20	COUPLING ASSEMBLY	STAINLESS STEEL	ASTM A479 316 (1.4401)	1
21	COUPLING	STAINLESS STEEL	ASTM A479 316 (1.4401)	1
22	STEM CONNECTOR	STAINLESS STEEL		1
23	STEM CONNECTOR NUT	STAINLESS STEEL	ISO 3506 GR A2-70	1
24	SPLIT RING	MONEL 400	ASTM B164 UNS N04400	1
25	SEAL (GLAND)	NITRILE		1
26	SEAL (STUFFING BOX)	NITRILE		1
27	ACTUATOR			1
	GLAND PACKING	PTFE	PROPRIETARY	Var

**PRESSURE/TEMPERATURE RATING**

THE ALLOWABLE PRESSURE/TEMPERATURE RATING IS GIVEN IN BS. EN. 1092-1 FOR PN FLANGED VALVES AND BS. EN. 1759-1 FOR CLASS FLANGED VALVES FOR THE APPROPRIATE BODY / BONNET MATERIAL. ADDITIONAL TEMPERATURE LIMITS ARE STATED ON THE NAMEPLATE AND ARE IMPOSED FOR CHLORINE SERVICE. I.E. 120°C MAXIMUM OR FOR REASONS OF MATERIAL SELECTION.

**DESPATCH CONDITION:**

EXTERNAL SURFACES UNLESS OTHERWISE SPECIFIED IN THE CONTRACT ARE ZINC PHOSPHATE PRIMED AND FINISHED IN EPOXY HIGH BUILD GLOSS. EACH VALVE IS SOAKED IN DRY HEAT AT 130°C FOR 3 HOURS MIN. VALVE PIPE FLANGES ARE BLANKED OFF WITH SILICA GEL DESICCANT SACHET ATTACHED TO END PLATES.

SIZE	25	40	50
H	629	670	696
D	156	181	187
E	10.5	16	16
APPROX. WT(Kg.)	26	33	36

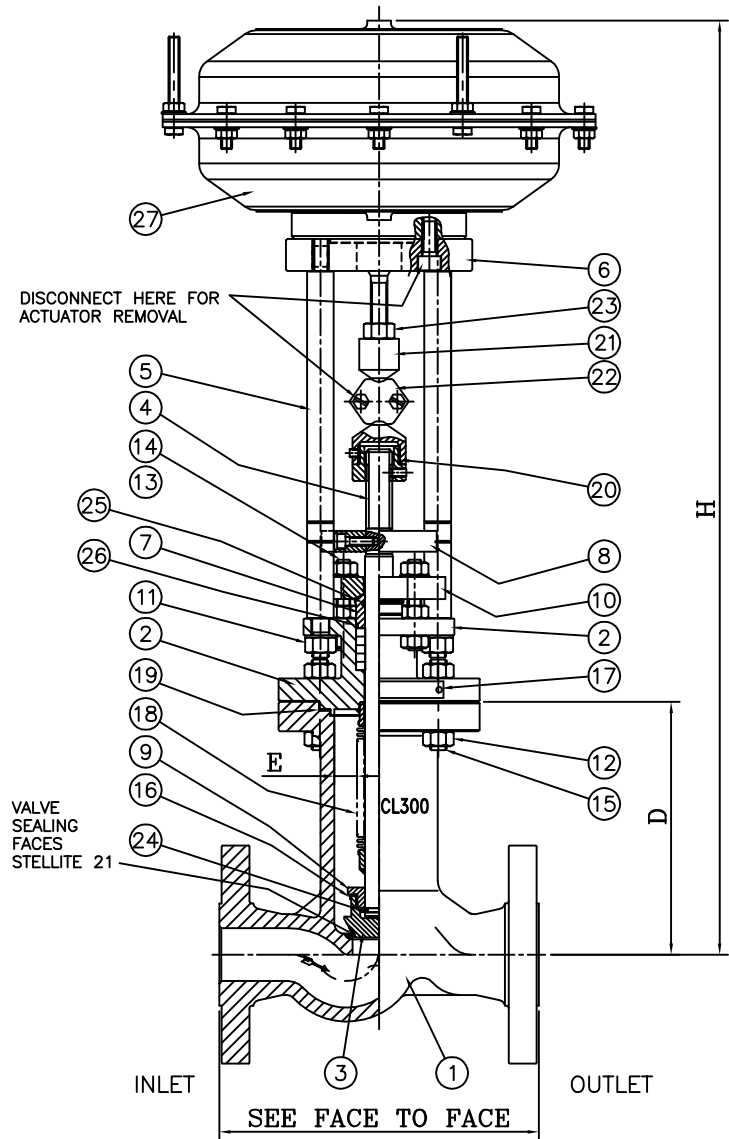
\* WEIGHTS ARE BASED ON FIG. LM6420EC WITH CLASS 300 R/F FLANGES.

**FACE TO FACE**

THE FACE TO FACE DIMENSION FOR THE APPROPRIATE FIGURE NUMBER AND FLANGE IS GIVEN BELOW

FIG No	FLANGE	BS EN 536	25	40	50
LM6422EC	CLASS 300 RF	BASIC SERIES 21	203	229	267
LM6322EC	CLASS 300 RF	BASIC SERIES 4	165	190	216
LM6622EC	PN40 TYPE 'B1'	BASIC SERIES 1	160	200	230

FLANGES: THE DIMENSIONS OF THE FLANGES ARE GIVEN IN BS EN 1092-1 FOR PN FLANGED VALVES AND BS.EN. 1759-1 FOR CLASS FLANGED VALVES



**QUALITY APPROVALS**

APPROVED TO ISO 9001:2015 BY LRQA  
APPROVAL NUMBER: ISO 9001 - 0004073  
STOOMWEZEN  
EURO - CHLOR

**DESIGN FEATURES**

PRINCIPAL VALVE DESIGN FEATURES CONFORM TO THE REQUIREMENTS OF EURO - CHLOR GEST 17/492 ED.2 2021.  
BELLOWS PROOF CYCLE TESTED PER BS.5352  
APPENDIX 'C'  
INTERNAL VALVE LUBRICANTS - CHLORINE COMPATIBLE

**PRODUCTION TESTS**

1. HYDRAULIC PRESSURE TEST OF BODY BONNET & BELLOWS AT 1.5 x P<sub>h</sub>  
ACCEPTANCE CRITERIA - NO VISIBLE LEAKAGE AFTER TWO MINUTES.
2. PNEUMATIC PRESSURE TEST OF ASSEMBLED VALVE USING NITROGEN (OXYGEN FREE) - BODY & SEAT AT 1.1 x P<sub>h</sub>  
ACCEPTANCE CRITERIA - NO VISIBLE LEAKAGE AFTER TWO MINUTES.
3. HELIUM LEAK TEST OF BELLOWS UNIT AT 1ATM USING MASS SPECTROMETER.  
ACCEPTANCE CRITERIA - MAXIMUM ALLOWABLE LEAKAGE RATE 10<sup>-6</sup> CM<sup>3</sup>/S

ACTUATOR SIZED TO SUIT SERVICE MAX. Δp

REV.	A	B	C	D	E	F	
DESCRIPTION							
DATE							
BY							
CHKD							
DESCRIPTION		DRAWN		DATE		NAME	
ARRANGEMENT OF FIG. LM6422EC		11.3.20				O.Kitchingman	
BELLOWS SEALED GLOBE VALVE		CHECKED					
WITH PNEUMATIC ACTUATOR		APPROVED					
		PROJECTION		PRINT OUT		A3	
		DRAWING--		BRIDGEHOUSE W. YORKSHIRE		BLACKHALL	
		OS4440		ENGLAND		ENGINEERING LTD.	
						ACAD	

ITEM No.	DESCRIPTION	MATERIAL	SPECIFICATION	No. OFF
1	BODY	LOW TEMP. CAST STEEL OR	ASTM A352 LCC	1
2	BONNET	LOW TEMP. FORGED STEEL	ASTM A350 LF2	1
3	DISC	LOW TEMP. FORGED STEEL	ASTM A350 LF2	1
4	STEM	HASTELLOY	HASTELLOY C22	1
5	GUIDE PILLAR	MILD STEEL	BS.970 070 M20	2
6	CROSSHEAD	MILD STEEL	BS.970 070 M20	1
7	PACKING GLAND	STAINLESS STEEL	BS.970 316 S31	1
8	GUIDE BRIDGE	MILD STEEL	BS.970 070 M20	1
9	DISC NUT	MONEL 400	ASTM B164 UNS 04400	1
10	GLAND FLANGE	MILD STEEL	BS.970 080 A15	1
11	NUTS(PILLAR)	STAINLESS STEEL	ISO 3506 GR A2-70	2
12	NUTS(BODY)	CARBON-MOLYBDENUM STEEL	ASTM A194 GRD.4L	Var
13	NUTS(GLAND)	CARBON-MOLYBDENUM STEEL	ASTM A194 GRD.4L Xylan 1270 COATED	6
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15	STUDS(BODY)	CHROM-MOLYBDENUM STEEL	ASTM A320 GRD.L7	Var
16	LOCKING WASHER	MONEL 400		1
17	NAMEPLATE	STAINLESS STEEL	ASTM 316	1
18	BELLOWS	HASTELLOY	HASTELLOY C276 (N10276) (2.4819)	1
19	GASKET	GYLON 3510	PROPRIETARY	1
20	COUPLING ASSEMBLY	STAINLESS STEEL	ASTM A479 316 (1.4401)	1
21	COUPLING	STAINLESS STEEL	ASTM A479 316 (1.4401)	1
22	STEM CONNECTOR	STAINLESS STEEL	ASTM A479 316 (1.4401)	1
23	STEM CONNECTOR NUT	STAINLESS STEEL	ISO 3506 GR A2-70	1
24	SPLIT WASHER	MONEL 400	ASTM B164 UNS 04400	1
25	SEAL (GLAND)	NITRILE		1
26	SEAL (STUFFING BOX)	NITRILE		1
27	ACTUATOR			1
	GLAND PACKING	PTFE	PROPRIETARY	Var

**PRESSURE/TEMPERATURE RATING**  
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VALVE PIPE FLANGES ARE BLANKED OFF WITH SILICA GEL DESICCANT SACHET ATTACHED TO END PLATES.

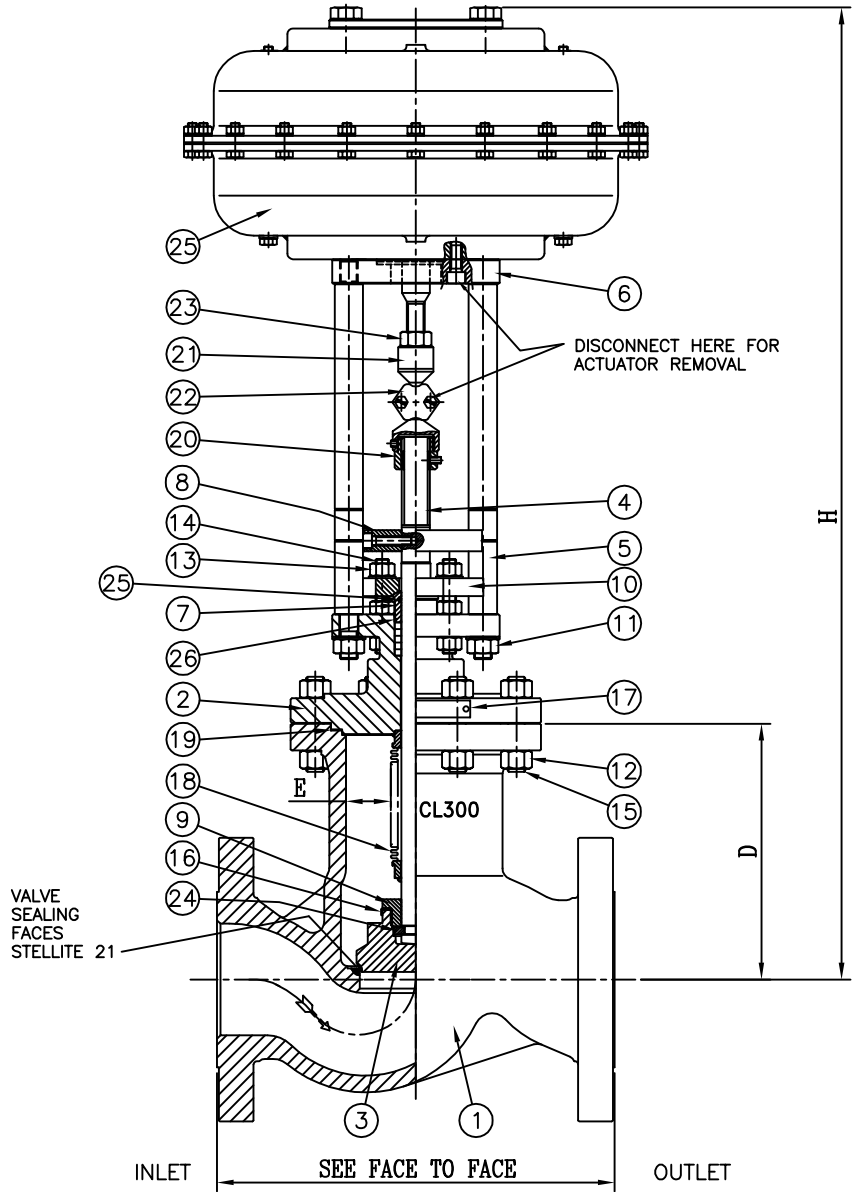
SIZE	80	100	150
H	827	871	1431
D	212	229	302
E	22.5	40	64.5
APPROX. WT(Kg.)	103	127	365

**FACE TO FACE**  
THE FACE TO FACE DIMENSION FOR THE APPROPRIATE FIGURE NUMBER AND FLANGE IS GIVEN BELOW

FIG No	FLANGE	SIZE BS EN 1092-1	80	100	150
LM6422EC	CLASS 300 RF	BASIC SERIES 21	318	356	444
LM6322EC	CLASS 300 RF	BASIC SERIES 4	283	305	403
LM6622EC	PN40 TYPE 'B1'	BASIC SERIES 1	310	350	480

**FLANGES:** THE DIMENSIONS OF THE FLANGES ARE GIVEN IN BS EN 1092-1 FOR PN FLANGED VALVES AND BS.EN. 1759-1 FOR CLASS FLANGED VALVES

ACTUATOR SIZED TO SUIT SERVICE MAX. Δp



**QUALITY APPROVALS**

APPROVED TO ISO 9001:2015 BY LRQA  
APPROVAL NUMBER: ISO 9001 - 0004073  
STOOMWEZEN  
EURO - CHLOR

**DESIGN FEATURES**

PRINCIPAL VALVE DESIGN FEATURES CONFORM TO THE REQUIREMENTS OF  
EURO - CHLOR GEST 17/492 ED.2 2021.  
BELLOWS PROOF CYCLE TESTED PER BS.5352  
APPENDIX 'C'  
INTERNAL VALVE LUBRICANTS - CHLORINE COMPATIBLE

**PRODUCTION TESTS**

1. HYDRAULIC PRESSURE TEST OF BODY BONNET & BELLOWS AT 1.5 x P<sub>n</sub>  
ACCEPTANCE CRITERIA - NO VISIBLE LEAKAGE AFTER TWO MINUTES.
2. PNEUMATIC PRESSURE TEST OF ASSEMBLED VALVE USING NITROGEN (OXYGEN FREE) - BODY & SEAT AT 1.1 x P<sub>n</sub>  
ACCEPTANCE CRITERIA - NO VISIBLE LEAKAGE AFTER TWO MINUTES.
3. HELIUM LEAK TEST OF BELLOWS UNIT AT 1ATM USING MASS SPECTROMETER.  
ACCEPTANCE CRITERIA - MAXIMUM ALLOWABLE LEAKAGE RATE 10<sup>-6</sup> CM<sup>3</sup>/S