

VSD 低温角型调节阀 Cryogenics Angle Valves

概要

低温角型调节阀是一种体积小、结构简单、适合于控制低温流体的单座调节阀。

与精小型设计的多弹簧薄膜式执行机构组合为标准产品。

GENERAL

Simple structure and compact size characterize our cryogenics angle valves. It can be used to control extremely low temperature fluids. Standard combined actuators are Multi-Spring diaphragm actuators.

标准规格 STANDARD SPECIFICATION

本体部 BODY

形式 Type	不平衡阀芯型 Unbalance plug type
公称通径 Body size	0.75"~8" (20A~200A 即 DN20~DN200)
阀芯形状 Plug form	P 孔单座、Q 孔单座 P-port single seated, Q-port single seated.
流量特性 Characteristics	等百分比、线性、开关 Equal percentage, Linear, On-off.
阀内件材质 Trim materials 阀内件处理 Trim treatment	标准材质组合及使用温度, 请参见表 1 及图 1。 See Table 1 & Fig.1 for hardening treatment and operating temperature.
公称压力 Body ratings	PN 1.6, 4.0, 6.3MPa
连接方式 Body connections	焊接型 (BW), 焊接尺寸请参见第 16 页。 Weld ends (BW), Weld dimension, see page 16.
法兰距 Face to Face dimension	请参见第 8~15 页。 See pages 8~15.
阀体及上阀盖材质 Body & Bonnet Material	阀体 Body: LF4/5083 上阀盖 Bonnet: SCS13A/A351-CF8 各种材质的使用温度, 请参见表 1。 As to the operating temperature limitation for each material, see Tables 1.
上阀盖形式 Bonnet type	加长型 Long-Extension type: $-196\sim-45^{\circ}\text{C}$ 内抽式波纹管密封型 Top-Entry bellow seal type: $-196\sim-45^{\circ}\text{C}$ 波纹管密封型 Bellow seal type: $-196\sim-45^{\circ}\text{C}$ 但必须注意各材质的使用温度。 Note: The allowable operating temperature limitation for each material.
填料 Packing	聚四氟乙烯纤维+纯聚四氟乙烯 (P4525 + P4390W ₂) Teflon fiber+Pure teflon
垫圈 Gasket	金属 O 形圈 (L3-M) Metal O ring
表面涂层色 Painting color	本体部不加涂层。 No painting is standard.

执行机构 ACTUATOR

型号 Type	气动薄膜式 Diaphragm type
	5200LA
	多弹簧型 Multi-Spring type
规格 Specification	
用途 Purpose	调节 Modulation
供气压力 Air supply	供气压力（弹簧范围） Air supply (Spring range) 140（20~100）KPa G 300（80~200）KPa G 340（80~200）KPa G 340（120~300）KPa G
接口 Connection	空气配管：Rc1/4(φ650: Rc3/8) Air piping: Rc1/4(φ650: Rc3/8)
正作用 Direct action	气压增加阀闭 Air to valve shut
反作用 Reverse action	气压增加阀开 Air to valve open
滞后 Hysteresis	≤1% FS（带定位器） ≤1% of FS with positioner
直线性 Linearity	≤±2% FS（带定位器） ≤±2% of FS with positioner
允许环境温度 Ambient Temp.	-10~+70℃
标准涂层色 Painting	银色环氧树脂 Munsell : N-6
选购设备 Option	E/P • P/P-Positioner, Air-set, Solenoid valve, Limit switch, Speed controller, Lock valve, Lock-up valve, Manual handle, etc

性能 PERFORMANCE

额定 Cv 值 Rated Cv	请参见表 2。 See Table 2.
流量特性 Flow characteristics	请参见图 2。 See Fig. 2.
可调比 R Rangeability	50 : 1 (Plug size ≤ 1/4B — 30: 1)
阀座泄漏量 Seat leakage	请参见表 1。 See Table 1.
允许压差 Allowable pressure drops	请参见表 4。 See Table 4.

特殊规格（有偿） OPTIONAL SPECIAL SPECIFICATIONS (additional cost is required)

本体部特殊检查 Special testing for Body	材料检查、液体渗透探伤检查（PT）、放射线检查（RT）、流量特性检查、低温试验 Material certificate, liquid penetrant testing, Radiographic testing, Flow characteristic testing, Low temperature testing.
本体部特殊清洗 Special Cleaning for Body	完全禁油、除水处理 Oxygen clean, Oil-free, Water-free
本体部及执行机构特殊规格 Special specification for Body and Actuator	防砂、防尘型、防盐腐蚀型、寒冷地区用、热带地区用、无铜处理、特殊空气配管及特殊气接头、真空工作条件用、接触大气部分的螺栓、螺母采用不锈钢、指定涂层色 Sand and Dust proof, Salty environment proof, Cold area proof, Tropical area proof Do not use copper alloy, Special piping and fitting, Vacuum service proof, SUS bolt and nut for exposed parts, Non-standard painting.
认证 Authorization	获得高压气体认定法的认定 Japanese government authorization for high pressure gas.

表 1. 阀体、阀内件材质组合及使用温度范围·阀座允许泄漏量

Table 1. BODY/TRIM STANDARD MATERIAL COMBINATION, OPERATING TEMPERATURE AND SEAT LEAKAGE.

- ① 当阀座泄漏率要达到 ANSI CLASS V 时, 请与我们联系。
 - ② 阀芯尺寸 1/4B(8A)以下, 只有全部堆焊司太莱合金。(无部分堆焊司太莱合金)
 - ③ ON-OFF Q 孔 (金属密封) 的阀座允许泄漏量可以制造到额定 Cv×0.001%。
 - ① When ANSI CLASS V for seat leakage is required, please consult with us.
 - ② In the case of stellite seat for plug size less than 1/4" we will make full stellite surface.
 - ③ Non-standard Q port single is available on request, which can reduce the seat leakage to as small as 0.001% of the rated Cv.
- SS : 部分堆焊司太莱合金 Stellite seat surface ● SF : 全部堆焊司太莱合金 Stellite full surface
 ● PS : 堆焊司太莱合金 Partial stellite ● Kel-F : 聚三氟氯乙烯 PCTFE

阀体材质 Body material		LF4/5083			
阀芯 Plug	材质 Material	SUS316	SUS316	SUS316	SUS316
	处理 Treatment	Kel-F	---	SS	SF
阀座 Seat ring	材质 Material	SUS316	SUS316	SUS316	SUS316
	处理 Treatment	---	---	SS	SF
导向套 Guide	材质 Material	SUS316			
	处理 Treatment	PS			
波纹管 Bellow	材质 Material	316Ti			
垫圈 Gasket	材质 Material	L3-M			
阀座允许泄漏量 Seat Leakage	ANSI	Class VI	Class IV	Class IV	Class IV
	Rated Cv×	bubble-tight	0.01%	0.01%	0.01%
使用温度 Operating Temp. °C		-196~-45°C			

表 2. 额定 Cv·行程及缩腔型阀芯制造范围

Table 2 Cv VALUE, STROKE AND REDUCED PLUG MANUFACTURING RANGE

*① : IEC Standard Cv

*② : Large rated Cv

公称通径 Valve size inch (mm)	阀芯尺寸 Plug size inch (mm)	额定 Cv 值 Rated Cv			行程: mm Stroke	
		P-port		Q-port ON-OFF	P-port	Q-port
		高特性形 *①	大 Cv *②			
3/4 (20)	1/12 (4)	0.1	-	-	12	-
	3/32 (5)	0.14	-	-	12	-
	1/8 (6)	0.28	-	-	12	-
	3/16 (7)	0.52	-	-	12	-
	1/4 (8)	0.96	-	-	12	-
	5/16 (9)	1.6	-	-	20	-
	3/8 (10)	2.5	-	-	20	-
	1/2 (15)	4	-	-	20	-
	3/4 (20)	8	-	10	20	16
1 (25)	1/12 (4)	0.1	-	-	12	-
	3/32 (5)	0.14	-	-	12	-
	1/8 (6)	0.28	-	-	12	-
	3/16 (7)	0.52	-	-	12	-
	1/4 (8)	0.96	-	-	12	-
	5/16 (9)	1.6	-	-	20	-
	3/8 (10)	2.5	-	-	20	-
	1/2 (15)	4	-	-	20	-
	3/4 (20)	8	-	-	20	-
1 (25)	13	-	15	20	16	
1-1/2 (40)	1/12 (4)	0.1	-	-	12	-
	3/32 (5)	0.14	-	-	12	-
	1/8 (6)	0.28	-	-	12	-
	3/16 (7)	0.52	-	-	12	-
	1/4 (8)	0.96	-	-	12	-
	5/16 (9)	1.6	-	-	20	-
	3/8 (10)	2.5	-	-	20	-
	1/2 (15)	4	-	-	20	-
	3/4 (20)	8	-	-	20	-
	1 (25)	13	-	-	20	-
	1-1/4 (32)	20	-	-	20	-
	1-1/2 (40)	25	30	35	20	16

公称通径 Valve size inch (mm)	阀芯尺寸 Plug size inch (mm)	额定 Cv 值 Rated Cv			行程: mm Stroke	
		P-port		Q-port ON-OFF	P-port	Q-port
		高特性形 *①	大 Cv *②			
2 (50)	1-1/4 (32)	20	-	-	20	-
	1-1/2 (40)	25	-	-	20	-
	2 (50)	45	50	55	20	16
2-1/2 (65)	1-1/2 (40)	25	-	-	30	-
	2 (50)	45	-	-	30	-
	2-1/2 (65)	72	85	95	30	20
3 (80)	2 (50)	45	-	-	30	-
	2-1/2 (65)	72	-	-	30	-
	3 (80)	100	125	135	30	20
4 (100)	2-1/2 (65)	72	-	-	40	-
	3 (80)	100	-	-	40	-
	4 (100)	175	200	220	40	30
5 (125)	3 (80)	100	-	-	50	-
	4 (100)	175	-	-	50	-
	5 (125)	280	310	330	50	40
6 (150)	4 (100)	175	-	-	50	-
	5 (125)	280	-	-	50	-
	6 (150)	365	425	460	50	40
8 (200)	5 (125)	280	-	-	70	-
	6 (150)	365	-	-	70	-
	8 (200)	640	700	720	70	60

- 注: 1. Q 孔时, 阀芯尺寸即等于公称通径。
- 2. 软密封规格中, 最小阀芯尺寸为 3/4B(20A)。
- 3. 软密封规格, 只有 P 孔为线性或等百分比流量特性。
- 4. 阀芯尺寸为 4mm 或 5mm 时, 流量特性仅有线性。

- Note : 1. In the case of Q port, plug size is equal to valve size.
- 2. In the case of soft seat, minimum available plug size is 3/4 inch.
- 3. Soft seat valve has P port Linear or EQ% plug.
- 4. Plug size of 4mm or 5mm, the flow characteristics of only linear.

图 1. 阀内件材质·处理选定基准

Fig. 1 TRIM TREATMENT/MATERIAL VS OPERATING PRESSURE-TEMPERATURE RATINGS

图 1-1. 金属密封

Fig. 1-1 METAL SEAT

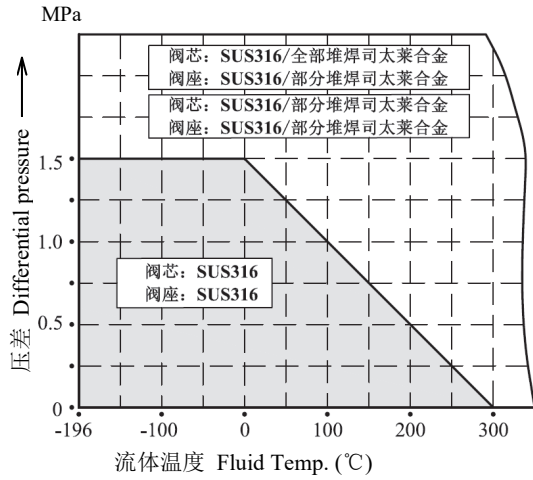


图 1-2. 软密封 (Kel-F)

Fig. 1-2 SOFT SEAT (Kel-F)

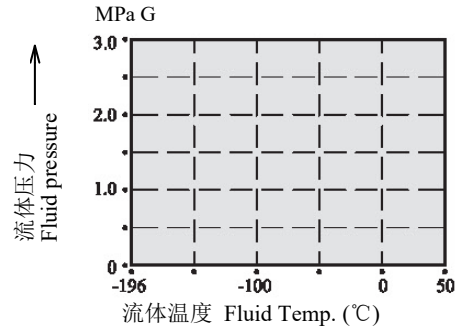


图 2. 流量特性

Fig. 2 FLOW CHARACTERISTICS

图 2-1. IEC 标准等百分比特性

Fig. 2-1 EQ% FLOW CHARACTERISTICS(IEC STANDARD)

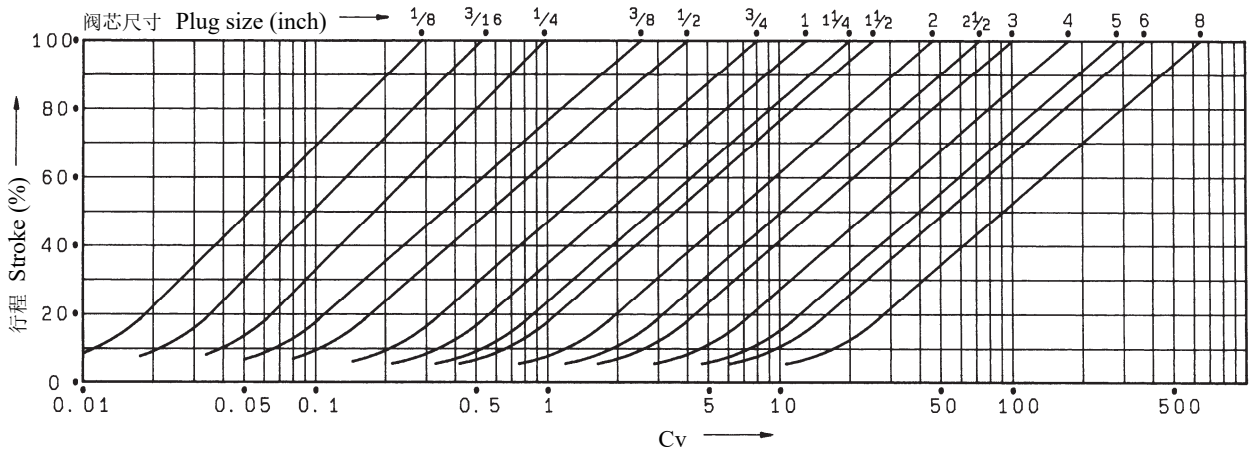


图 2-2. 大容量改良等百分比特性

Fig. 2-2 MODIFIED EQ% FLOW CHARACTERISTICS(LARGE RATED Cv)

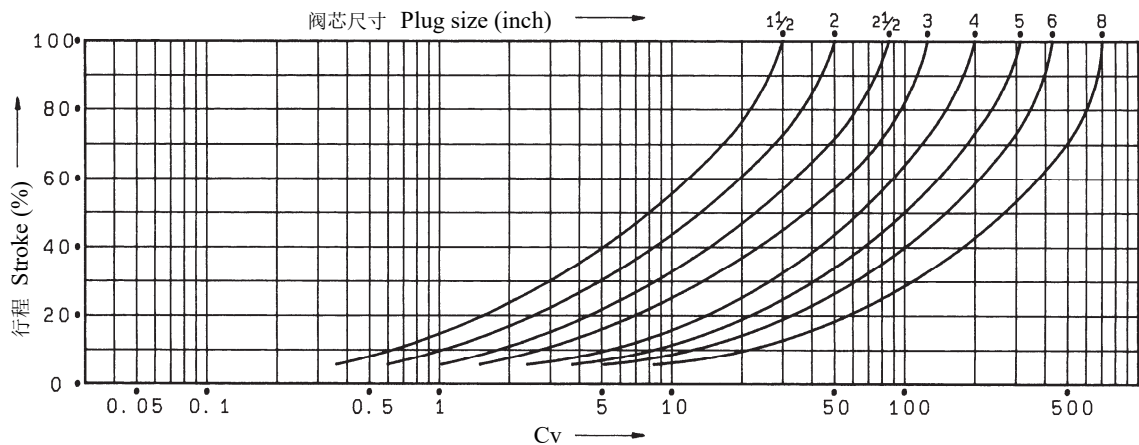


表 3.1 加长型保温长度 (L)

Table 3.1 LONG-EXTENSION TYPE HEAT PRESERVATION LENGTH (L)

公称通径 Valve size	使用温度范围 Operating Temp. °C
	-45~-196°C
DN20~DN100	600~900mm
DN125~DN200	700~900mm

表 3.2 内抽式保温长度 (A)

Table 3.2 TOP-ENTRY BELLOW SEAL TYPE HEAT PRESERVATION LENGTH (A)

公称通径 Valve size	使用温度范围 Operating Temp. °C	公称通径 Valve size	使用温度范围 Operating Temp. °C
	-45~-196°C		-45~-196°C
DN25	635mm	DN100	815mm
DN40	660mm	DN150	800mm
DN50	660mm	DN200	840mm
DN80	625mm		

图 3.1 加长型阀盖本体部构造

Fig. 3.1 LONG-EXTENSION TYPE BONNET BODY SECTION VIEW

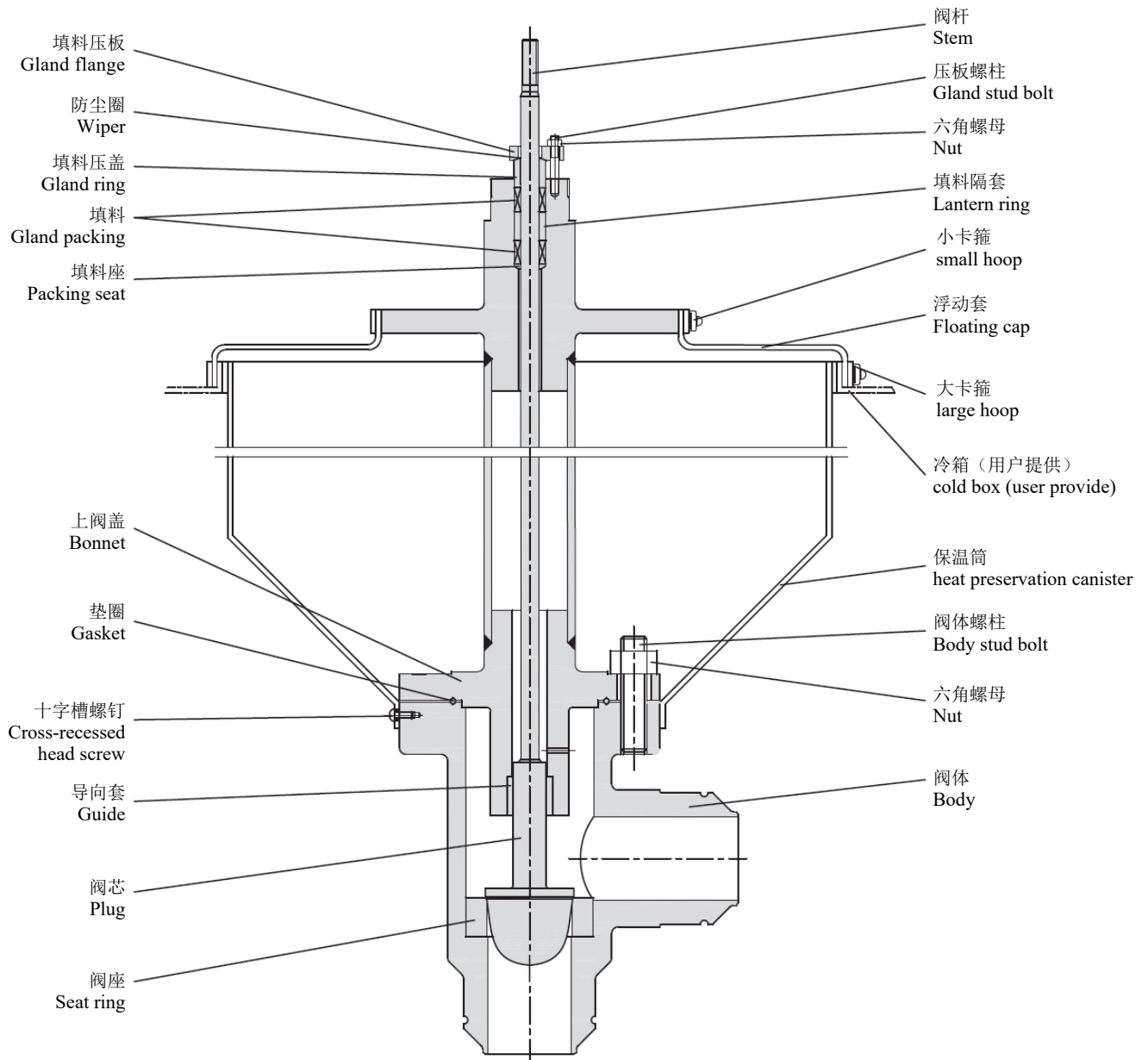


图 3.2 内抽式波纹管密封型阀盖本体部构造 (25A)

Fig. 3.2 TOP-ENTRY BELLOWS SEAL TYPE BONNET BODY SECTION VIEW (25A)

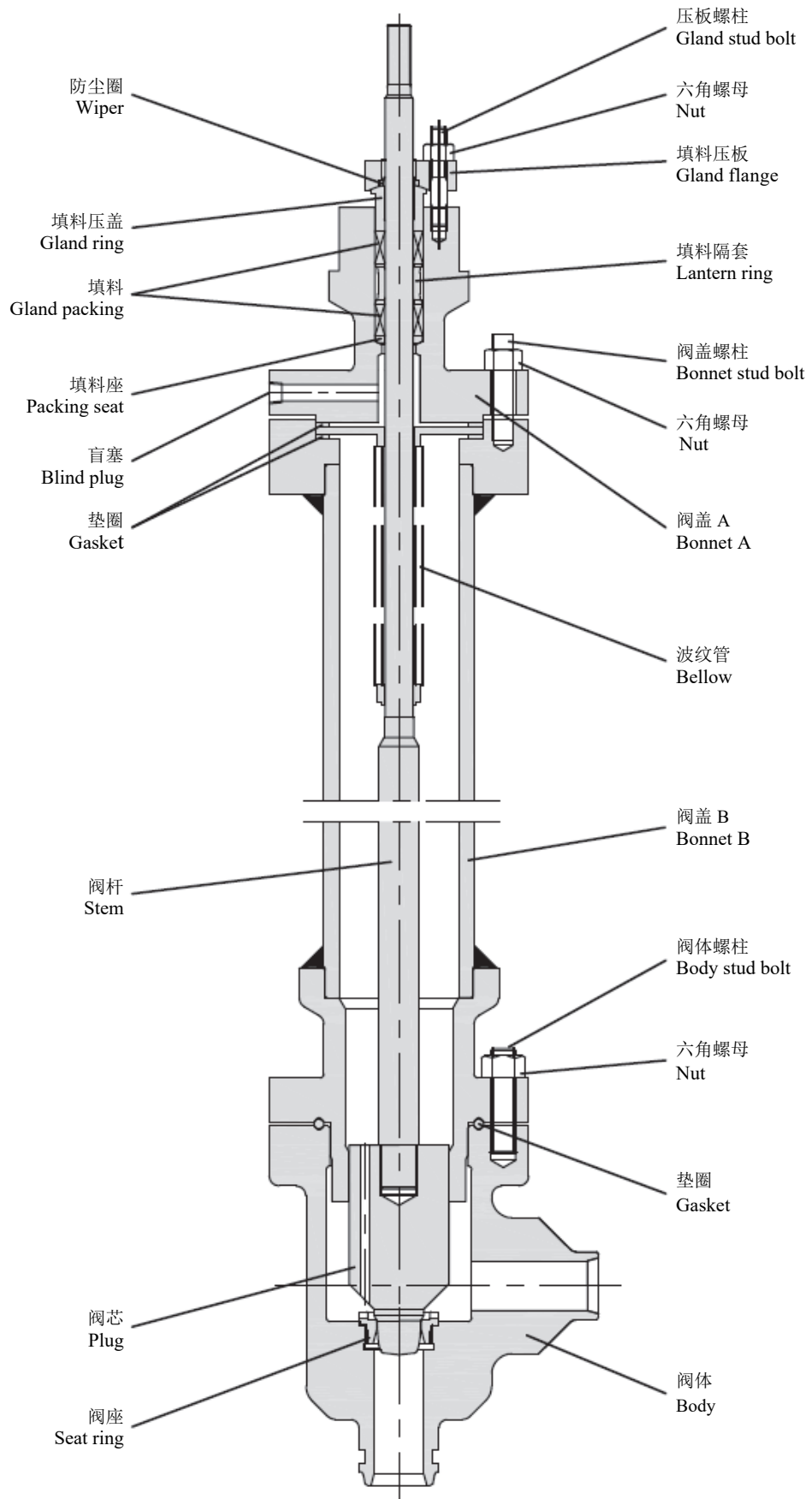


图 3.3 内抽式波纹管密封型阀盖本体部构造 (40A~100A)

Fig. 3.3 TOP-ENTRY BELLOWS SEAL TYPE BONNET BODY SECTION VIEW (40A~100A)

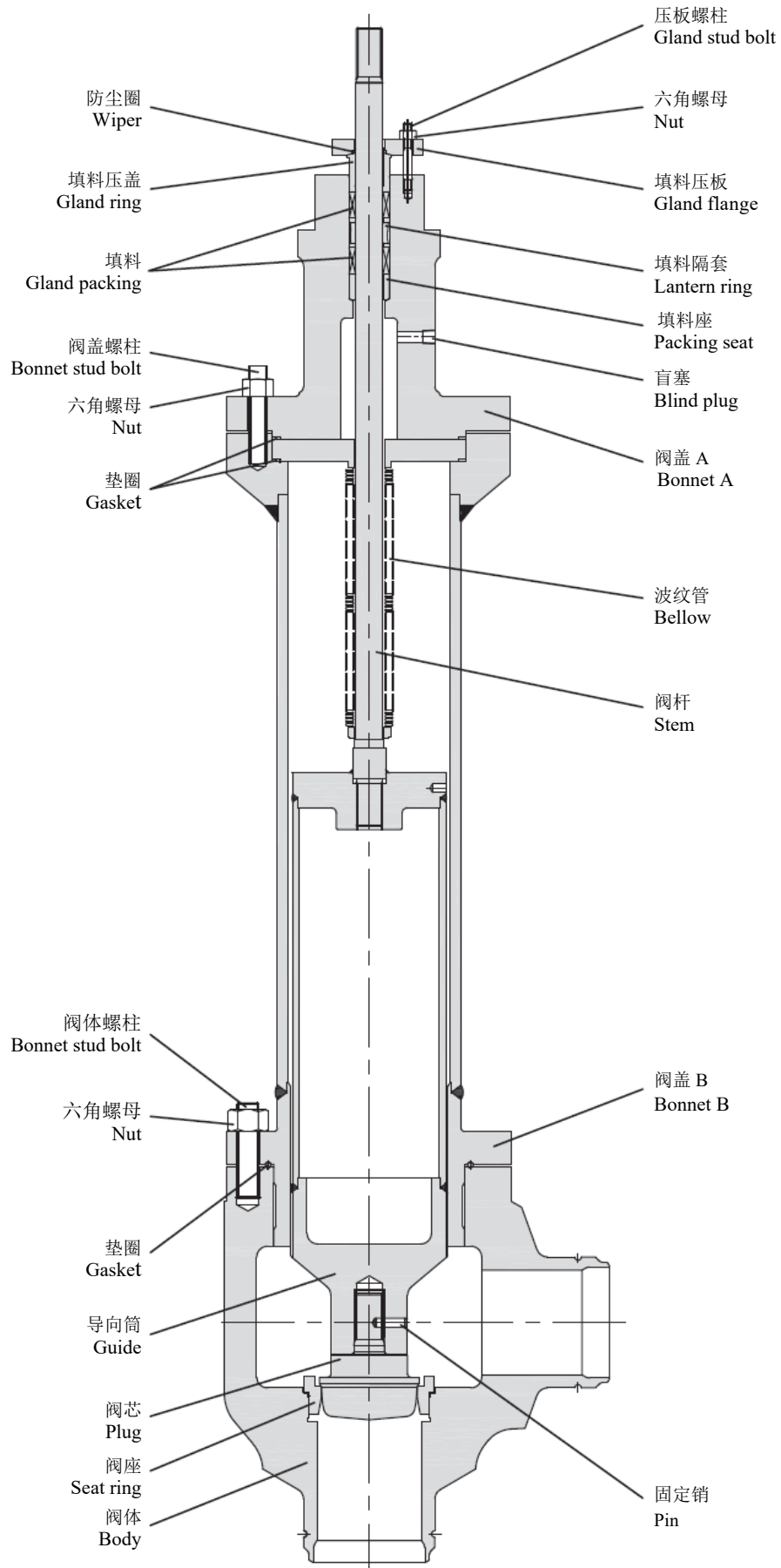


图 3.4 波纹管密封型阀盖本体部构造 (150A~200A)

Fig. 3.4 BELLOWS SEAL TYPE BONNET BODY SECTION VIEW (150A~200A)

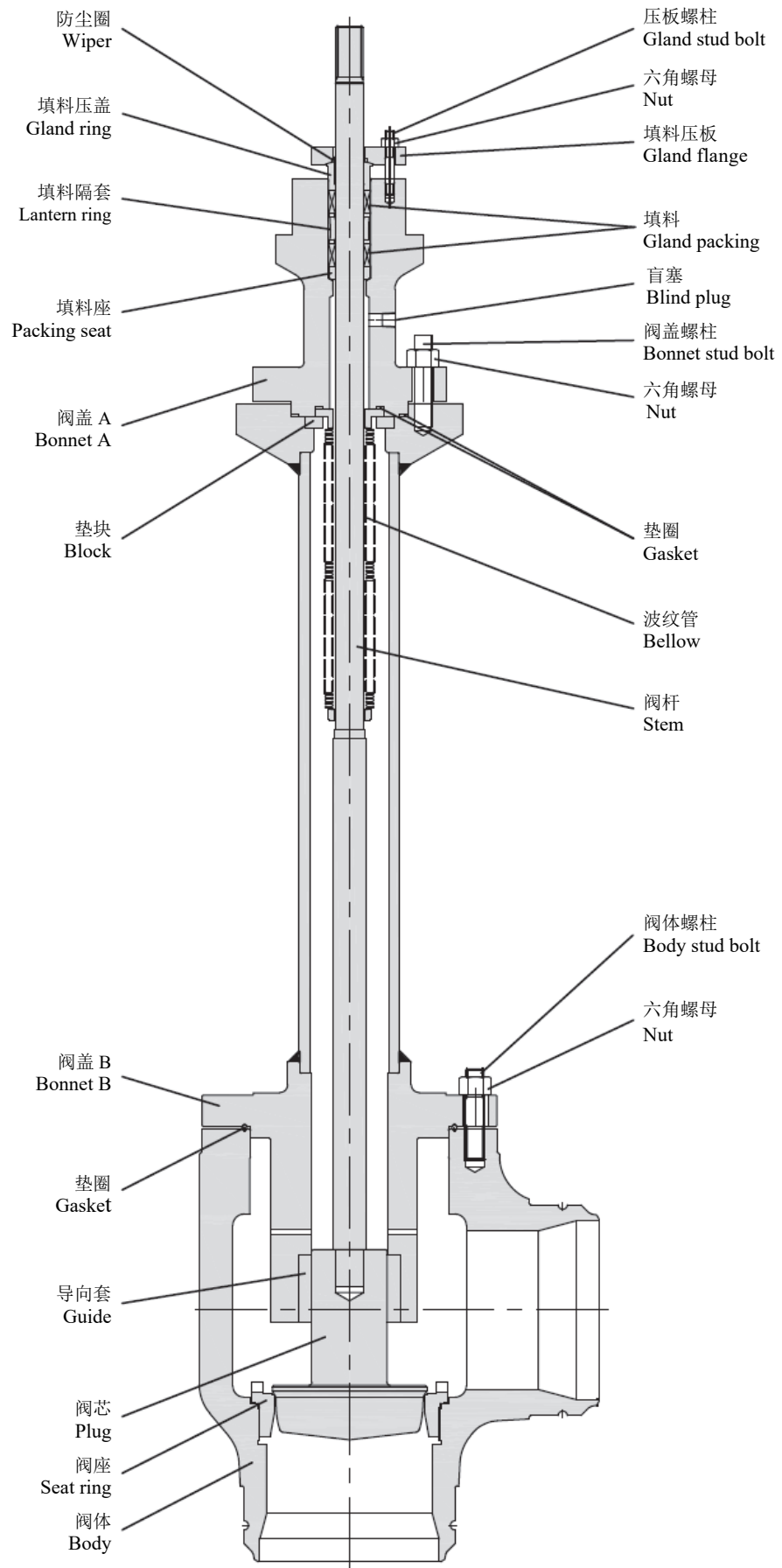


表 4. 最大允许压差 (单位: MPa) Table 4 ALLOWABLE PRESSURE DROPS (UNIT : MPa)
 阀门口径与执行机构的标准组合请参见第 8~15 页。 See page 8~15 valve size-actuator size combinations.
 DA : 正动作 (气压增加时阀闭) Direct action (Air to valve shut)
 RA : 反动作 (气压增加时阀开) Reverse action (Air to valve open)

薄膜式执行机构 (5200LA) / 填料 : 聚四氟乙烯纤维+纯聚四氟乙烯 (P4525 + P4390W₂)
 DIAPHRAGM ACTUATOR(5200LA) / PACKING : TEFLON FIBER+PURE TEFLON

执行机构尺寸 Actuator size	气源压力 Air supply (不平衡) KPa G (off- balance)	弹簧范围 Spring range KPa G	阀座形式 Seat ring	阀芯尺寸 Plug size (inch)															
				<0.5	0.5	0.75	1	1.25	1.5	2	2.5	3	4	5	6	8			
218	140 (20)	DA&RA 20~100	金属密封	1.38	0.74	0.51	0.35												
			软密封	—	—	0.31	0.20												
			Q 孔	—	—	0.36	0.24												
	300 (80)	DA&RA 80~200	金属密封	6.30	3.96	2.98	2.15												
			软密封	—	—	2.42	1.76												
			Q 孔	—	—	2.57	1.86												
	340 (120)	DA: 80~200 RA:120~300	金属密封	6.30	6.14	4.63	3.34												
			软密封	—	—	3.00	2.79												
			Q 孔	—	—	4.03	2.95												
270	140 (20)	DA&RA 20~100	金属密封	2.53	1.31	0.97	0.70	0.45	0.31	0.19									
			软密封	—	—	0.72	0.49	0.31	0.20	0.10									
			Q 孔	—	—	0.78	0.54	—	0.23	0.12									
	300 (80)	DA&RA 80~200	金属密封	6.30	6.30	5.08	3.68	2.46	1.76	1.11									
			软密封	—	—	3.00	3.00	2.09	1.50	0.94									
			Q 孔	—	—	4.46	3.26	—	1.57	0.99									
	340 (120)	DA: 80~200 RA:120~300	金属密封	—	—	6.30	5.68	3.80	2.73	1.73									
			软密封	—	—	3.00	3.00	3.00	2.36	1.51									
			Q 孔	—	—	6.30	5.06	—	2.46	1.57									
350	140 (20)	DA&RA 20~100	金属密封					0.97	0.69	0.42	0.27	0.19							
			软密封					0.77	0.53	0.31	0.20	0.13							
			Q 孔					—	0.57	0.34	0.22	0.15							
	300 (80)	DA&RA 80~200	金属密封					4.54	3.26	2.06	1.37	0.98							
			软密封					3.00	2.84	1.81	1.22	0.86							
			Q 孔					—	2.95	1.88	1.27	0.89							
450	140 (20)	DA&RA 20~100	金属密封					1.81	1.29	0.81	0.53	0.37	0.21	0.13	0.09	0.03			
			软密封					1.50	1.07	0.67	0.43	0.29	0.16	0.09	0.06	0.01			
			Q 孔					—	1.13	0.71	0.46	0.31	0.18	0.10	0.07	0.01			
	300 (80)	DA&RA 80~200	金属密封					6.30	5.72	3.63	2.43	1.74	1.01	0.66	0.46	0.24			
			软密封					3.00	3.00	3.00	2.20	1.58	0.92	0.60	0.41	0.21			
			Q 孔					—	5.25	3.36	2.27	1.62	0.94	0.62	0.43	0.21			
650	300 (80)	DA&RA 80~200	金属密封									3.90	2.28	1.49	1.05	0.57			
			软密封										3.00	2.13	1.40	0.99	0.56		

表 5. 与标准执行机构组合时的产品重量 (单位: kg)
 Table 5 NET WEIGHT OF STANDARD VALVE AND ACTUATOR COMBINED(UNIT: kg)
 本表中所示重量, 均为执行机构和本体部的标准产品重量, 不包括附件、手动机构等。
 Only standard types are represented. Weights of accessories, a handwheel and the like are not included.

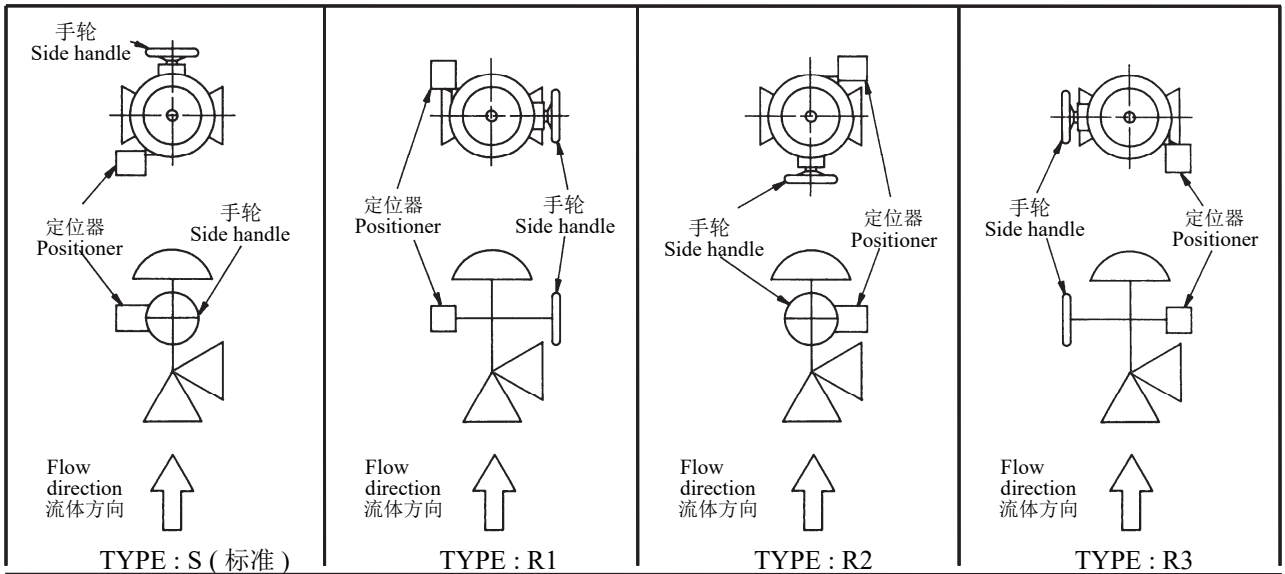
公称口径 Valves size Inch (mm)	本体规格 Body rating class MPa	5200LA 薄膜式执行机构 Diaphragm actuator size						
		218	270	350	450S	450L	650S	650L
0.75 (20)	1.6, 4.0, 6.3	24	40	—	—	—	—	—
1 (25)		25	41	—	—	—	—	—
1.5 (40)		—	45	67	95	—	—	—
2 (50)		—	47	69	97	—	—	—
2.5 (65)		—	—	97	125	—	—	—
3 (80)		—	—	99	127	—	—	—
4 (100)		—	—	—	135	—	—	—
5 (125)		—	—	—	—	160	265	—
6 (150)		—	—	—	—	187	292	—
8 (200)		—	—	—	—	215	—	350

图 4 控制阀安装方位 (5200LA)

Fig. 4 ACTUATOR MOUNTING FORMS FOR 5200LA

图 4-1 执行机构尺寸: 218~450

Fig. 4-1 ACTUATOR SIZE : 218~450

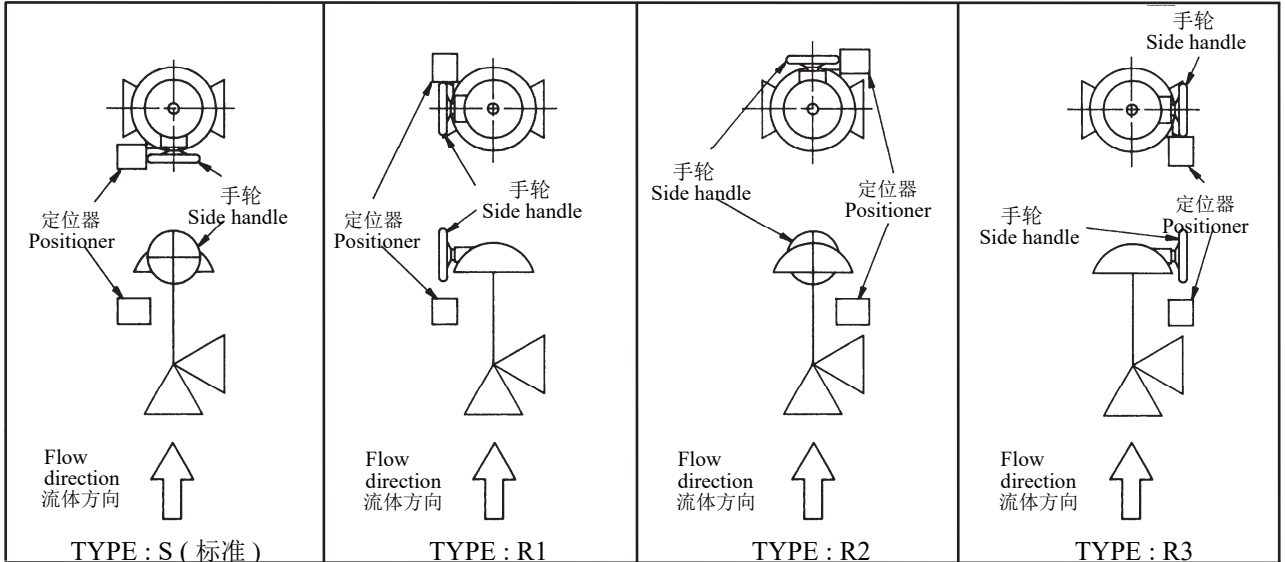


注) 安装位置为非标准时, 请指定安装位置的形式 (TYPE)。

NOTE : Type S is automatically applied, unless otherwise specified.

图 4-2. 执行机构尺寸: 650

Fig. 4-2 ACTUATOR SIZE : 650

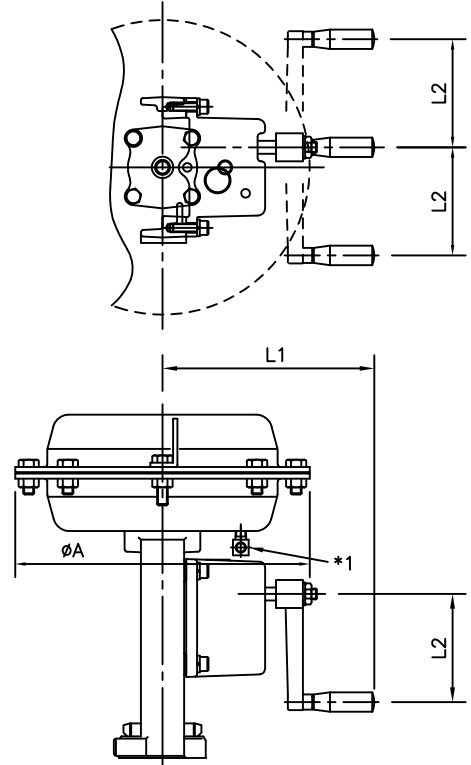
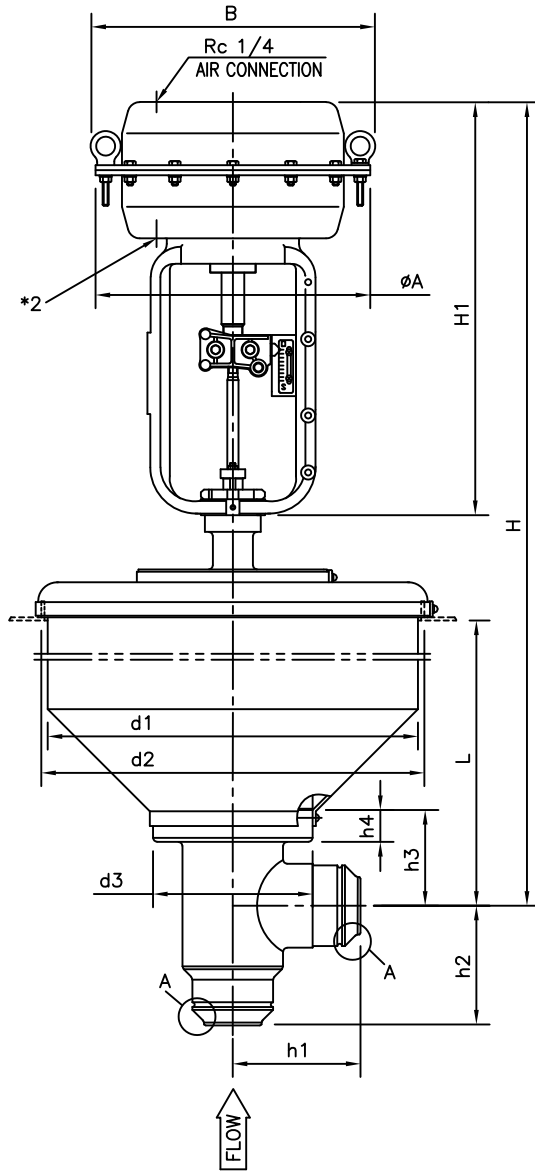


注) 安装位置为非标准时, 请指定安装位置的形式 (TYPE)。

NOTE : Type S is automatically applied, unless otherwise specified.

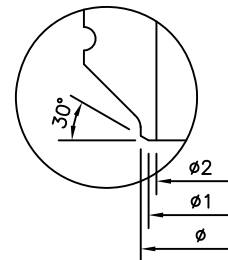
ANGLE VALVE *Direct Action*

*1 AIR EXHAUST POSITION FOR $\phi 218$ &270.
 *2 AIR EXHAUST POSITION FOR $\phi 350$ &450.



WITH MANUAL HANDLE

A SECTION



DIMENSIONS

UNIT : mm

VALVE SIZE	CODE No.	h1	h2	h3	h4	d1	d2	d3	H				A	B	H1	ACTUATOR		CODE No.				
									<input type="checkbox"/> L=600		<input type="checkbox"/> L=700					<input type="checkbox"/> L=800			<input type="checkbox"/> L=900		<input type="checkbox"/> WITH MANUAL HANDLE	
									L1	L2	L1	L2				L1	L2		L1	L2		
0.75" (20A)	91	75	75	70	24	279	295	120	1095	1195	1295	1395	218	231	297	196	100	5221LA				
									1195	1295	1395	1495	270	283	395	230	100	5227LA				
1" (25A)	1	75	75	70	24	279	295	120	1095	1195	1295	1395	218	231	297	196	100	5221LA				
									1195	1295	1395	1495	270	283	395	230	100	5227LA				
1.5" (40A)	93	85	85	70	24	279	295	120	1095	1195	1295	1395	218	231	297	196	100	5221LA				
									1195	1295	1395	1495	270	283	395	230	100	5227LA				
									1230	1330	1430	1530	350	367	430	230	100	5235LA				
									1300	1400	1500	1600	450	472	495	336	160	524SLA				
2" (50A)	2	110	110	80	30	279	295	150	1195	1295	1395	1495	270	283	395	230	100	5227LA				
									1230	1330	1430	1530	350	367	430	230	100	5235LA				
									1300	1400	1500	1600	450	472	495	336	160	524SLA				
2.5" (65A)	94	160	150	120	40	460	476	200	1250	1350	1450	1550	350	367	430	230	100	5235LA				
									1315	1415	1515	1615	450	472	495	336	160	524SLA				
									1250	1350	1450	1550	350	367	430	230	100	5235LA				
3" (80A)	3	160	150	120	40	460	476	200	1315	1415	1515	1615	450	472	495	336	160	524SLA				
									1250	1350	1450	1550	350	367	430	230	100	5235LA				
4" (100A)	4	170	160	130	40	460	476	200	1315	1415	1515	1615	450	472	495	336	160	524SLA				

*FLANGE FOLLOEING TO STANDARD WHICH IS DESCRIBED ON SPECIFICATION SHEET.

NOTE:

DRAWING No.

E-VSD-5200LA-D- N
S

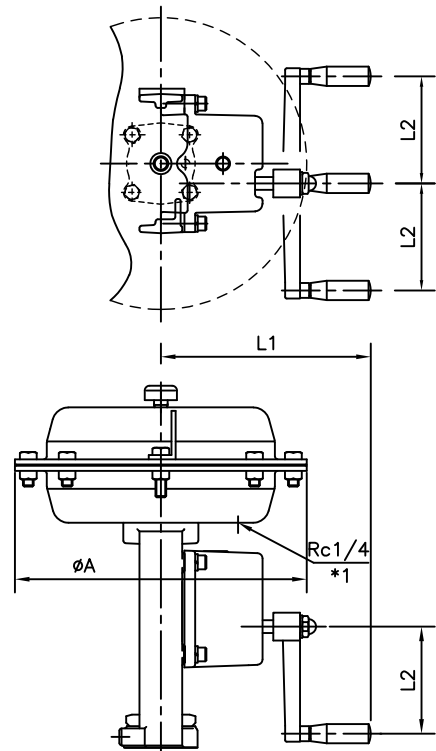
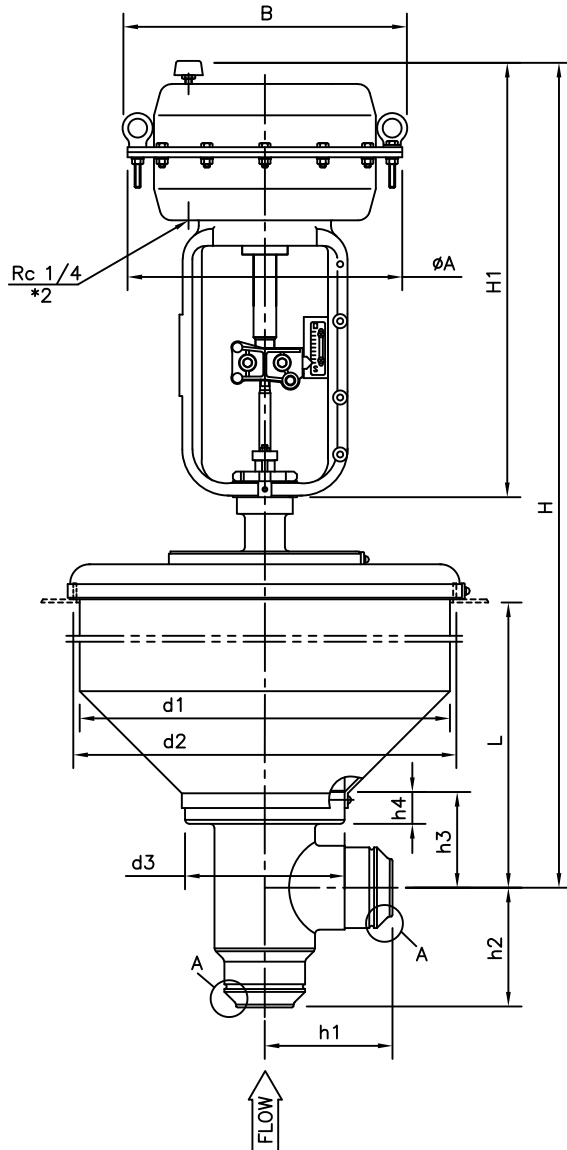
REV.

D

KOSO

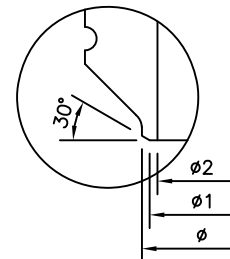
ANGLE VALVE *Reverse Action*

*1 AIR EXHAUST POSITION FOR $\phi 218$ &270.
*2 AIR EXHAUST POSITION FOR $\phi 350$ &450.



WITH MANUAL HANDLE

A SECTION



DIMENSIONS

UNIT : mm

VALVE SIZE	CODE No.	h1	h2	h3	h4	d1	d2	d3	H				A	B	H1	ACTUATOR		CODE No.
																WITH MANUAL HANDLE		
									L=600	L=700	L=800	L=900				L1	L2	
0.75" (20A)	91	75	75	70	24	279	295	120	1135	1235	1335	1435	218	231	337	196	100	5221LA
									1235	1335	1435	1535	270	283	435	230	100	5227LA
1" (25A)	1	75	75	70	24	279	295	120	1135	1235	1335	1435	218	231	337	196	100	5221LA
									1235	1335	1435	1535	270	283	435	230	100	5227LA
1.5" (40A)	93	85	85	70	24	279	295	120	1135	1235	1335	1435	218	231	337	196	100	5221LA
									1235	1335	1435	1535	270	283	435	230	100	5227LA
									1270	1370	1470	1570	350	367	470	230	100	5235LA
									1340	1440	1540	1640	450	472	535	336	160	524SLA
2" (50A)	2	110	110	80	30	279	295	150	1235	1335	1435	1535	270	283	435	230	100	5227LA
									1270	1370	1470	1570	350	367	470	230	100	5235LA
									1340	1440	1540	1640	450	472	535	336	160	524SLA
									1290	1390	1490	1590	350	367	470	230	100	5235LA
2.5" (65A)	94	160	150	120	40	460	476	200	1355	1455	1555	1655	450	472	535	336	160	524SLA
									1290	1390	1490	1590	350	367	470	230	100	5235LA
									1355	1455	1555	1655	450	472	535	336	160	524SLA
									1290	1390	1490	1590	350	367	470	230	100	5235LA
3" (80A)	3	160	150	120	40	460	476	200	1355	1455	1555	1655	450	472	535	336	160	524SLA
									1290	1390	1490	1590	350	367	470	230	100	5235LA
4" (100A)	4	170	160	130	40	460	476	200	1355	1455	1555	1655	450	472	535	336	160	524SLA

*FLANGE FOLLOEING TO STANDARD WHICH IS DESCRIBED ON SPECIFICATION SHEET.

NOTE:

DRAWING No.

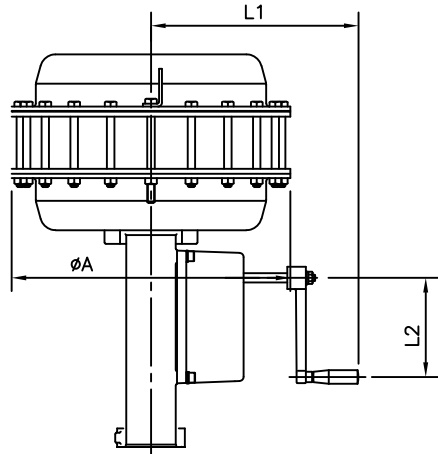
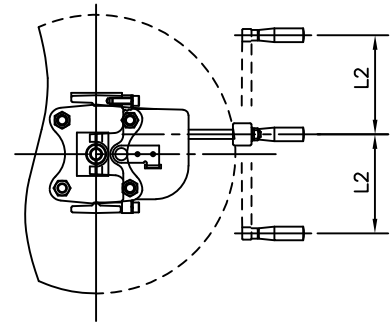
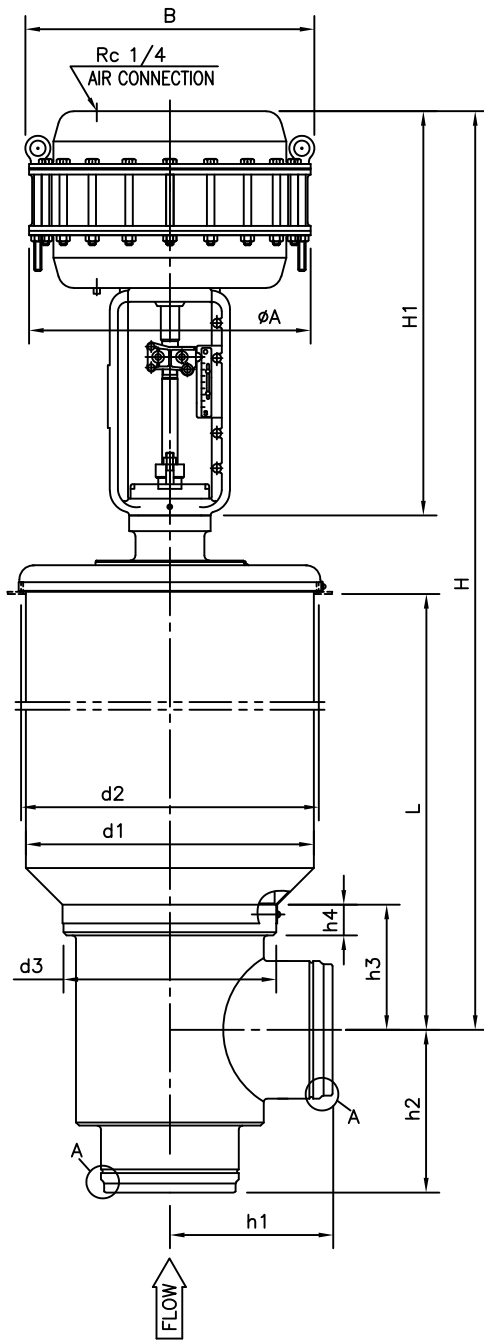
E-VSD-5200LA-R- N
S

REV.

D

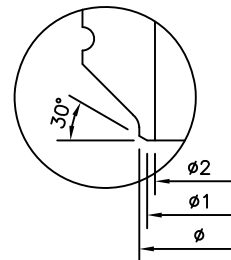
KOSO

ANGLE VALVE *Direct Action*



WITH MANUAL HANDLE

A SECTION



DIMENSIONS

UNIT : mm

VALVE SIZE CODE No.	h1	h2	h3	h4	d1	d2	d3	H			A	B	H1	ACTUATOR		CODE No.
								<input type="checkbox"/> L=700 <input type="checkbox"/> L=800 <input type="checkbox"/> L=900						<input type="checkbox"/> WITH MANUAL HANDLE		
								L1	L2							
5 <input type="checkbox"/> 5" (125A)	200	200	155	35	460	476	240	1560	1660	1760	<input type="checkbox"/> 450	472	635	<input type="checkbox"/> 336	<input type="checkbox"/> 160	524ELA
6 <input type="checkbox"/> 6" (150A)	220	220	165	35	460	476	265	1560	1660	1760	<input type="checkbox"/> 450	472	635	<input type="checkbox"/> 336	<input type="checkbox"/> 160	524ELA
8 <input type="checkbox"/> 8" (200A)	260	260	185	35	460	476	315	1580	1680	1780	<input type="checkbox"/> 450	472	655	<input type="checkbox"/> 336	<input type="checkbox"/> 160	524ELA

*FLANGE FOLLOEING TO STANDARD WHICH IS DESCRIBED ON SPECIFICATION SHEET.

NOTE:

DRAWING No.

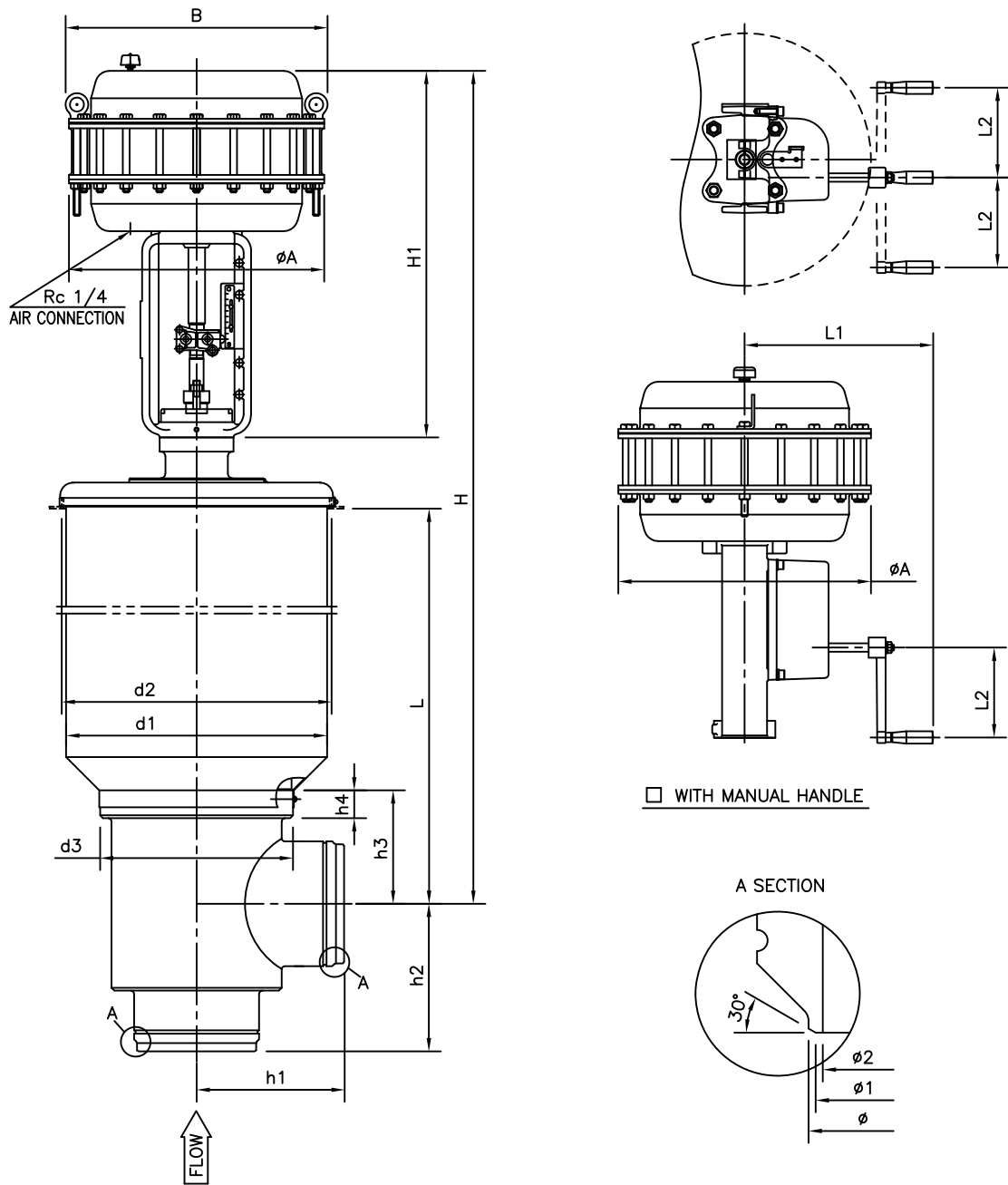
E-VSD-524ELA-D- N
S

REV.

B

KOSO

ANGLE VALVE *Reverse Action*



DIMENSIONS

UNIT : mm

VALVE SIZE CODE No.	h1	h2	h3	h4	d1	d2	d3	H			A	B	H1	ACTUATOR		CODE No.
														WITH MANUAL HANDLE		
								<input type="checkbox"/> L=700	<input type="checkbox"/> L=800	<input type="checkbox"/> L=900				L1	L2	
5 <input type="checkbox"/> 5" (125A)	200	200	155	35	460	476	240	1600	1700	1800	<input type="checkbox"/> 450	472	675	336	160	524ELA
6 <input type="checkbox"/> 6" (150A)	220	220	165	35	460	476	265	1600	1700	1800	<input type="checkbox"/> 450	472	675	336	160	524ELA
8 <input type="checkbox"/> 8" (200A)	260	260	185	35	460	476	315	1620	1720	1820	<input type="checkbox"/> 450	472	695	336	160	524ELA

*FLANGE FOLLOEING TO STANDARD WHICH IS DESCRIBED ON SPECIFICATION SHEET.

NOTE:

DRAWING No.

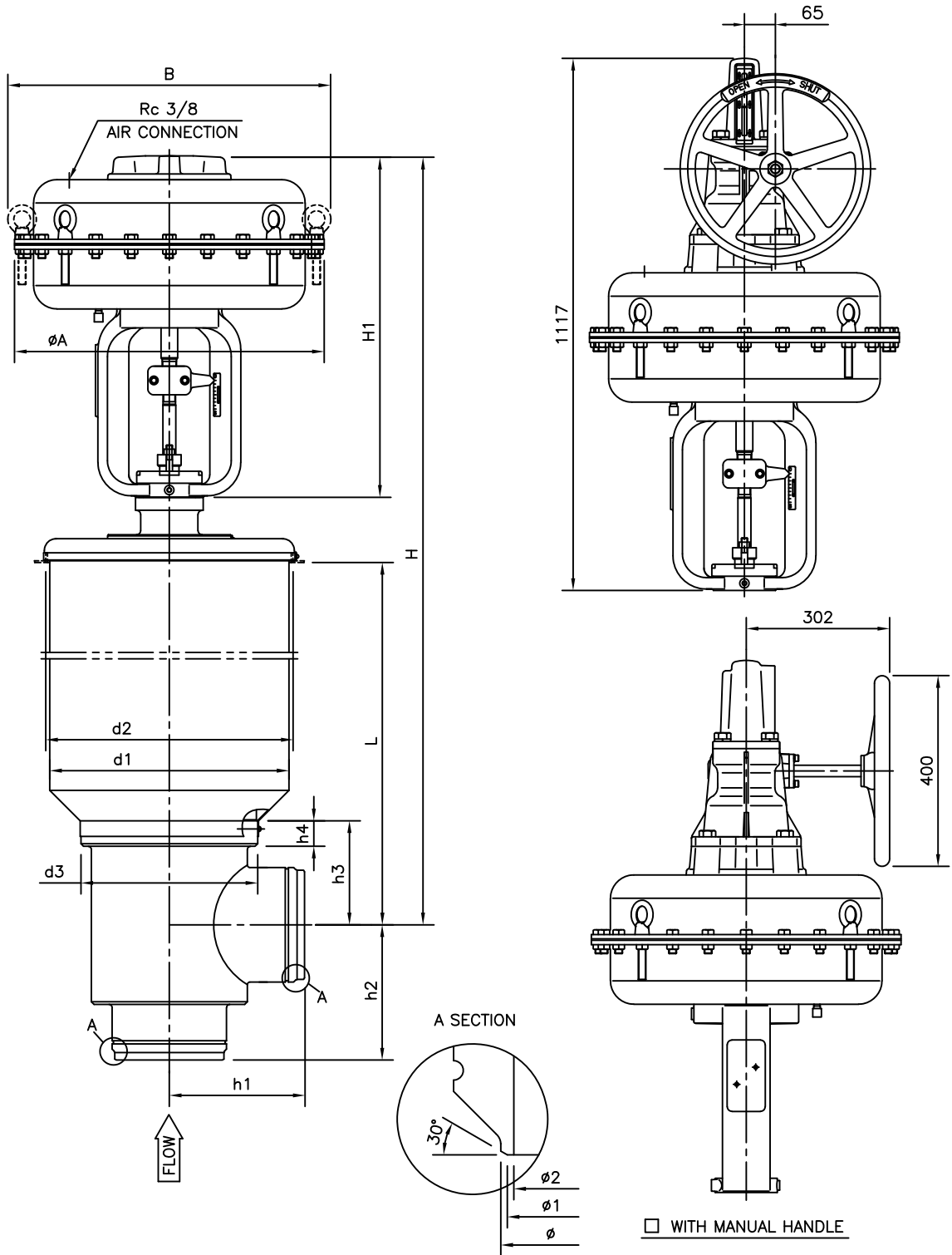
E-VSD-524ELA-R- N
S

REV.

B

KOSO

ANGLE VALVE *Direct Action*



DIMENSIONS

UNIT : mm

VALVE SIZE CODE No.	h1	h2	h3	h4	d1	d2	d3	H			ACTUATOR			
								L=700	L=800	L=900	A	B	H1	CODE No.
5 □ 5" (125A)	200	200	155	35	460	476	240	1690	1790	1890	□ 650	678	717	526SLA
6 □ 6" (150A)	220	220	165	35	460	476	265	1690	1790	1890	□ 650	678	717	526SLA

*FLANGE FOLLOEING TO STANDARD WHICH IS DESCRIBED ON SPECIFICATION SHEET.

NOTE:

DRAWING No.

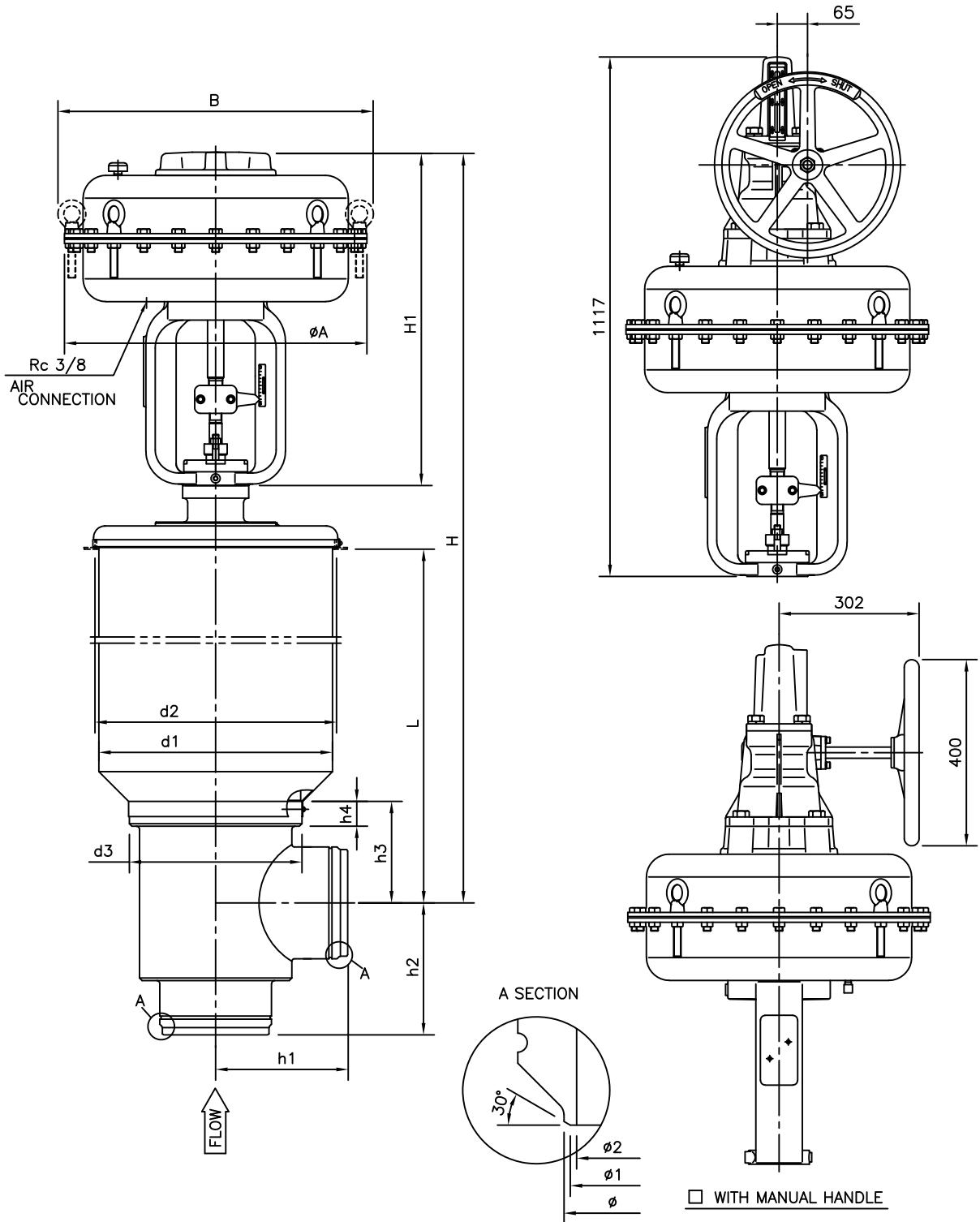
E-VSD-526SLA-D- N
H

REV.

C

KOSO

ANGLE VALVE *Reverse Action*



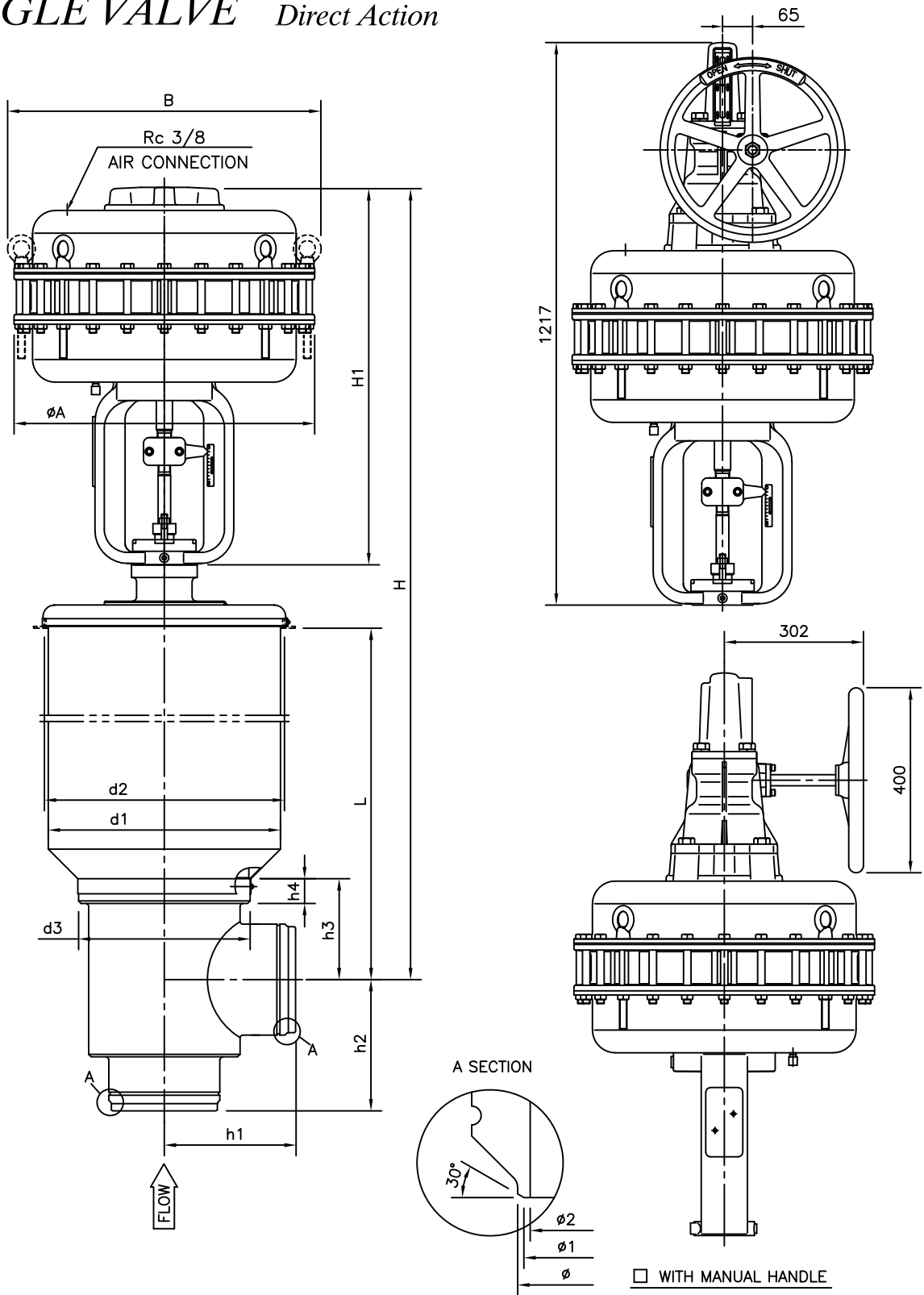
DIMENSIONS UNIT : mm

VALVE SIZE CODE No.	h1	h2	h3	h4	d1	d2	d3	H			ACTUATOR			
								L=700	L=800	L=900	A	B	H1	CODE No.
5 □ 5" (125A)	200	200	155	35	460	476	240	1690	1790	1890	□ 650	678	717	526SLA
6 □ 6" (150A)	220	220	165	35	460	476	265	1690	1790	1890	□ 650	678	717	526SLA

*FLANGE FOLLOEING TO STANDARD WHICH IS DESCRIBED ON SPECIFICATION SHEET.

NOTE:	DRAWING No.	
	E-VSD-526SLA-R- $\begin{matrix} N \\ H \end{matrix}$	
	REV.	KOSO
	C	

ANGLE VALVE *Direct Action*



DIMENSIONS

UNIT : mm

VALVE SIZE CODE No.	h1	h2	h3	h4	d1	d2	d3	H			ACTUATOR			
								L=700	L=800	L=900	A	B	H1	CODE No.
8 □ 8" (200A)	260	260	185	35	460	476	315	1790	1890	1990	□ 650	678	817	526LLA

*FLANGE FOLLOEING TO STANDARD WHICH IS DESCRIBED ON SPECIFICATION SHEET.

NOTE:

DRAWING No.

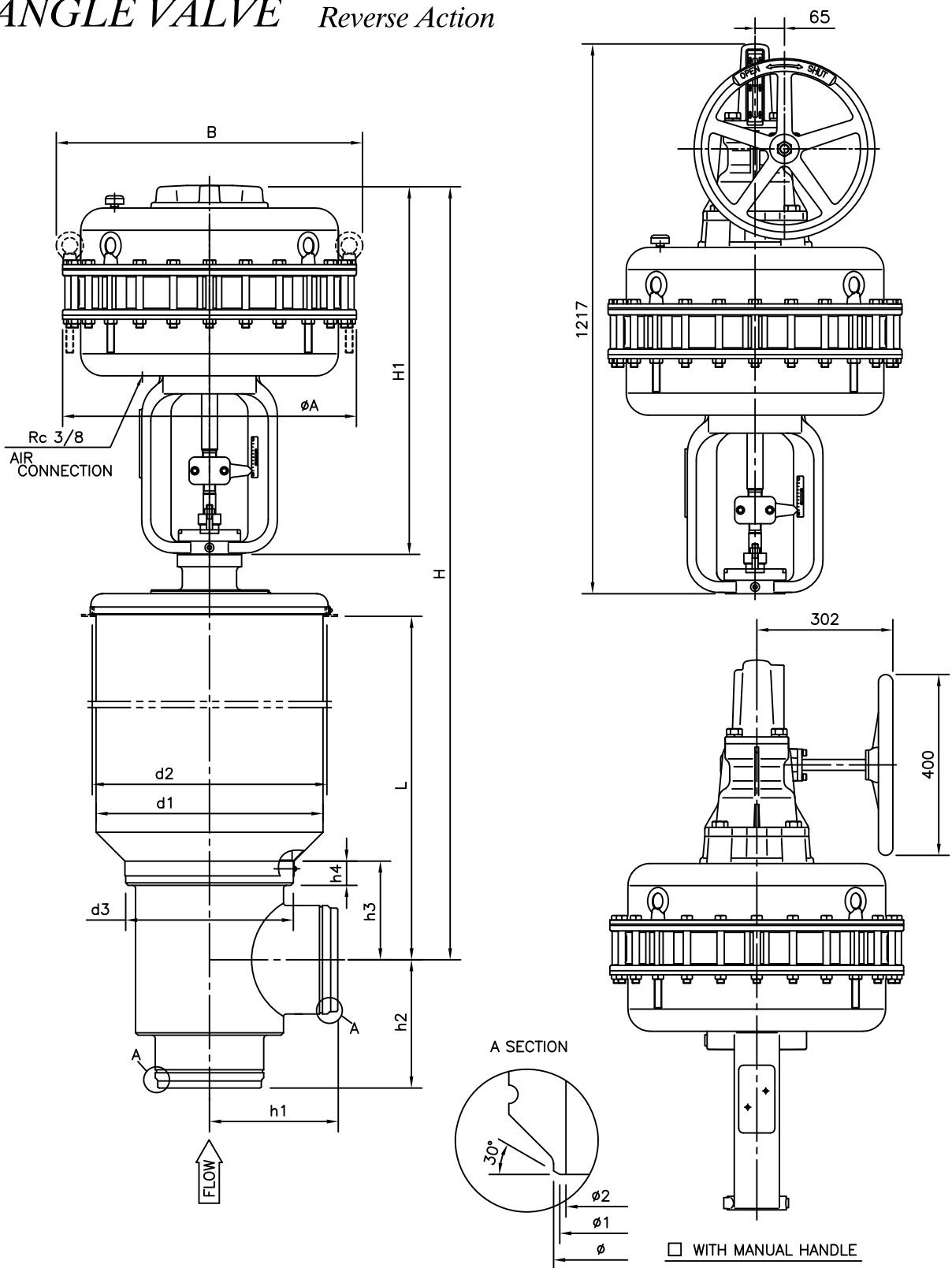
E-VSD-526LLA-D- N
H

REV.

C

KOSO

ANGLE VALVE *Reverse Action*



DIMENSIONS

UNIT : mm

VALVE SIZE CODE No.	h1	h2	h3	h4	d1	d2	d3	H			ACTUATOR			
								L=700	L=800	L=900	A	B	H1	CODE No.
8 □ 8" (200A)	260	260	185	35	460	476	315	1790	1890	1990	□ 650	678	817	526LLA

*FLANGE FOLLOEING TO STANDARD WHICH IS DESCRIBED ON SPECIFICATION SHEET.

NOTE:

DRAWING No.

E-VSD-526LLA-R- N
H

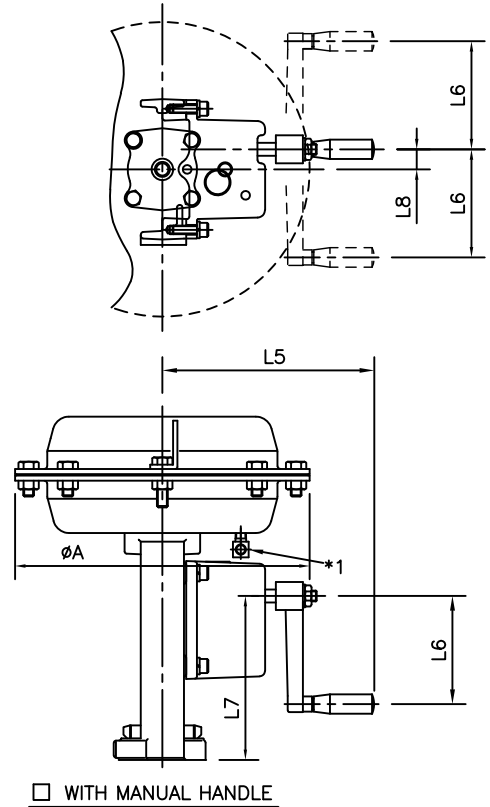
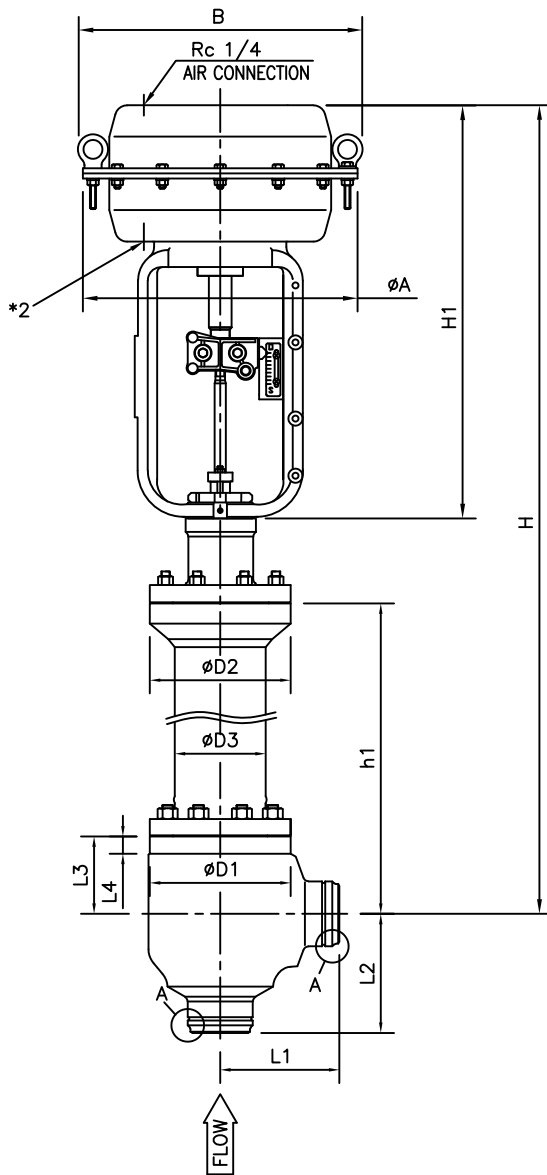
REV.

C

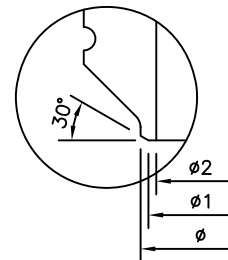
KOSO

ANGLE VALVE *Direct Action*

*1 AIR EXHAUST POSITION FOR $\phi 218$ &270.
*2 AIR EXHAUST POSITION FOR $\phi 350$ &450.



A SECTION



DIMENSIONS

UNIT : mm

VALVE SIZE CODE No.	VALVE SIZE									ACTUATOR								CODE No.							
	L1	L2	L3	L4	D1	D2	D3	h1	H	A	B	H1	WITH MANUAL HANDLE												
	L5	L6	L7	L8																					
1 □ 1" (25A)	100	100	80	30	130	130	60.3	635	1010	□ 218	231	297	196	100	133~113	18.5	5221LA								
									1105									□ 270	283	395	230	100	165~145	27.5	5227LA
									1110									□ 218	231	297	196	100	133~113	18.5	5221LA
93 □ 1.5" (40A)	155	155	126	37	165	165	89	660	1205	□ 270	283	395	230	100	165~145	27.5	5227LA								
									1240									□ 350	367	430	230	100	183~163	27.5	5235LA
									1305									□ 450	472	495	336	160	220~200	32	524SLA
2 □ 2" (50A)	155	155	126	37	165	165	89	660	1205	□ 270	283	395	230	100	165~145	27.5	5227LA								
									1240									□ 350	367	430	230	100	183~163	27.5	5235LA
									1305									□ 450	472	495	336	160	220~200	32	524SLA
3 □ 3" (80A)	155	155	122	32	200	200	114	625	1205	□ 350	367	430	230	100	183~153	27.5	5235LA								
									1270									□ 450	472	495	336	160	220~190	32	524SLA
									1500									□ 450	472	495	336	160	220~180	32	524SLA

*FLANGE FOLLOEING TO STANDARD WHICH IS DESCRIBED ON SPECIFICATION SHEET.

NOTE:

DRAWING No.

E-VSDT-5200LA-D-S^N

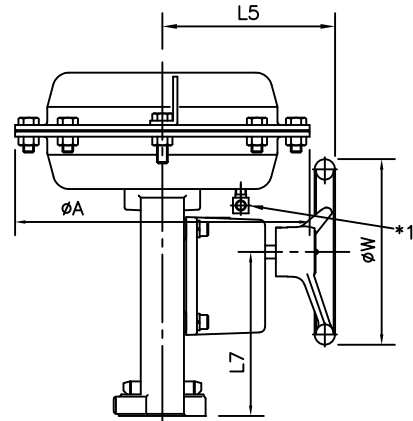
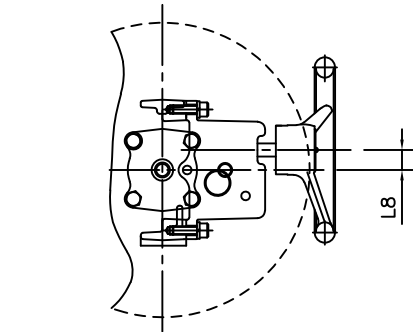
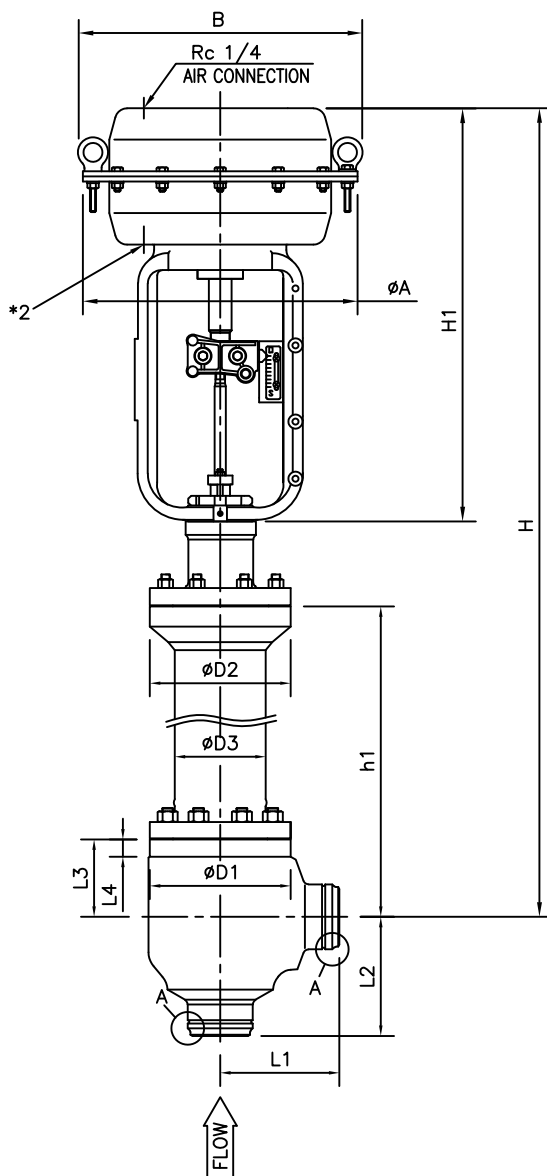
REV.

A

KOSO

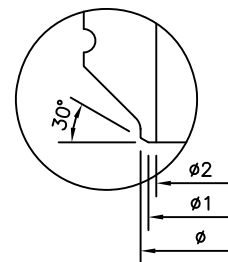
ANGLE VALVE *Direct Action*

*1 AIR EXHAUST POSITION FOR $\phi 218$ &270.
*2 AIR EXHAUST POSITION FOR $\phi 350$ &450.



□ WITH MANUAL HANDLE

A SECTION



DIMENSIONS

UNIT : mm

VALVE SIZE CODE No.	L1	L2	L3	L4	D1	D2	D3	h1	H	ACTUATOR							
										A	B	H1	□ WITH MANUAL HANDLE				CODE No.
													L5	phi W	L7	L8	
1 □ 1" (25A)	100	100	80	30	130	130	60.3	635	1010	□ 218	231	297	154	160	133~113	18.5	5221LA
									1105	□ 270	283	395	210	200	165~145	27.5	5227LA
									1110	□ 218	231	297	154	160	133~113	18.5	5221LA
93 □ 1.5" (40A)	155	155	126	37	165	165	89	660	1205	□ 270	283	395	210	200	165~145	27.5	5227LA
									1240	□ 350	367	430	210	200	183~163	27.5	5235LA
									1305	□ 450	472	495	260	300	220~200	32	524SLA
2 □ 2" (50A)	155	155	126	37	165	165	89	660	1205	□ 270	283	395	210	200	165~145	27.5	5227LA
									1240	□ 350	367	430	210	200	183~163	27.5	5235LA
									1305	□ 450	472	495	260	300	220~200	32	524SLA
3 □ 3" (80A)	155	155	122	32	200	200	114	625	1205	□ 350	367	430	210	200	183~153	27.5	5235LA
									1270	□ 450	472	495	260	300	220~190	32	524SLA
4 □ 4" (100A)	220	220	143	32	260	260	168	815	1500	□ 450	472	495	260	300	220~180	32	524SLA

*FLANGE FOLLOEING TO STANDARD WHICH IS DESCRIBED ON SPECIFICATION SHEET.

NOTE:

DRAWING No.

E-VSDT-5200LA-D-N
P

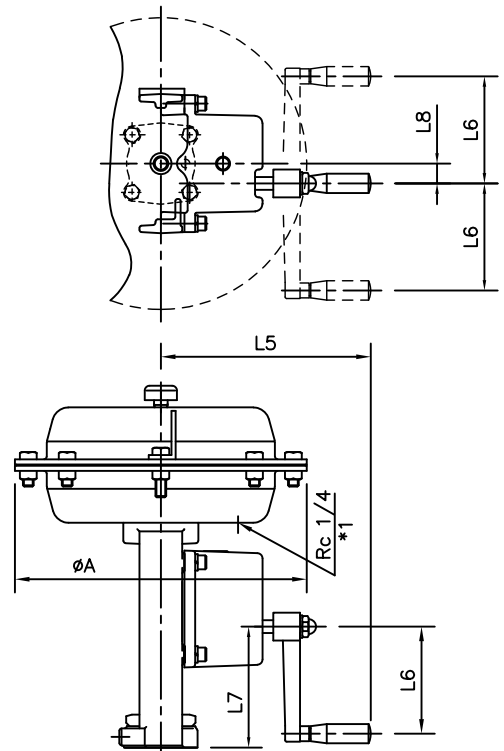
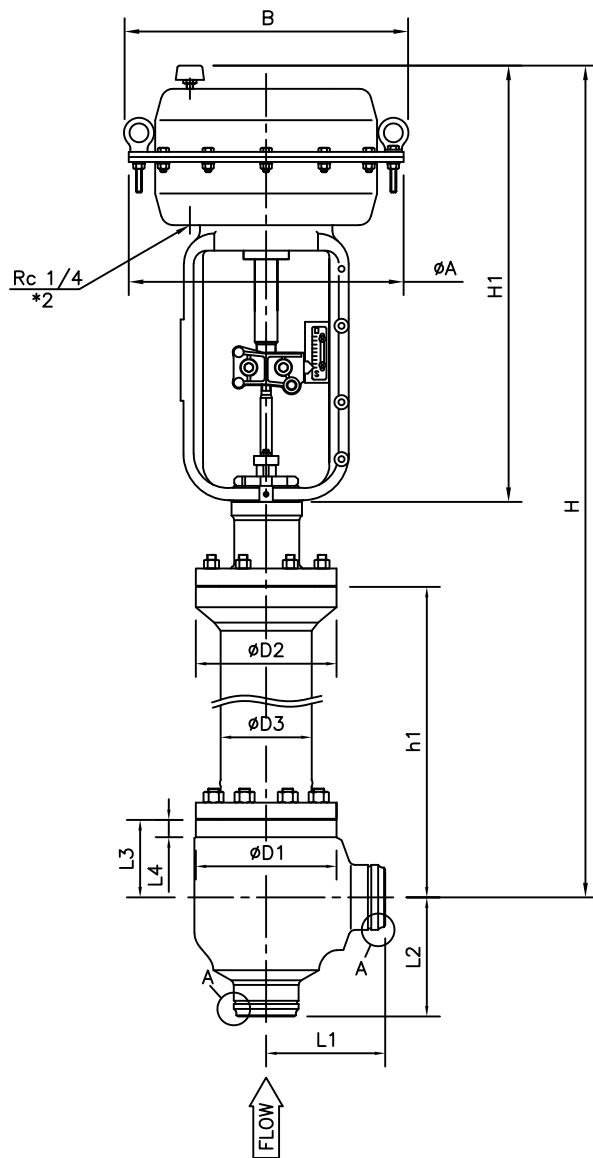
REV.

A

KOSO

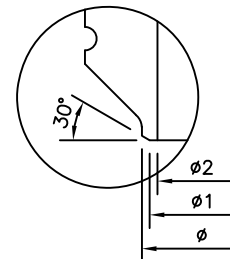
ANGLE VALVE *Reverse Action*

*1 AIR EXHAUST POSITION FOR $\phi 218$ &270.
*2 AIR EXHAUST POSITION FOR $\phi 350$ &450.



□ WITH MANUAL HANDLE

A SECTION



DIMENSIONS

UNIT : mm

VALVE SIZE CODE No.	L1	L2	L3	L4	D1	D2	D3	h1	H	ACTUATOR							
										A	B	H1	□ WIHT MANUAL HANDLE				CODE No.
													L5	L6	L7	L8	
1 □ 1" (25A)	100	100	80	30	130	130	60.3	635	1050	□ 218	231	337	196	100	113~133	18.5	5221LA
									1145	□ 270	283	435	230	100	118~138	27.5	5227LA
									1150	□ 218	231	337	196	100	113~133	18.5	5221LA
93 □ 1.5" (40A)	155	155	126	37	165	165	89	660	1245	□ 270	283	435	230	100	118~138	27.5	5227LA
									1280	□ 350	367	470	230	100	120~140	27.5	5235LA
									1345	□ 450	472	535	336	160	161~181	32	524SLA
									1245	□ 270	283	435	230	100	118~138	27.5	5227LA
2 □ 2" (50A)	155	155	126	37	165	165	89	660	1280	□ 350	367	470	230	100	120~140	27.5	5235LA
									1345	□ 450	472	535	336	160	161~181	32	524SLA
									1245	□ 270	283	435	230	100	118~138	27.5	5227LA
3 □ 3" (80A)	155	155	122	32	200	200	114	625	1245	□ 350	367	470	230	100	120~150	27.5	5235LA
									1310	□ 450	472	535	336	160	161~191	32	524SLA
4 □ 4" (100A)	220	220	143	32	260	260	168	815	1540	□ 450	472	535	336	160	161~201	32	524SLA

*FLANGE FOLLOEING TO STANDARD WHICH IS DESCRIBED ON SPECIFICATION SHEET.

NOTE:

DRAWING No.

E-VSDT-5200LA-R-S^N

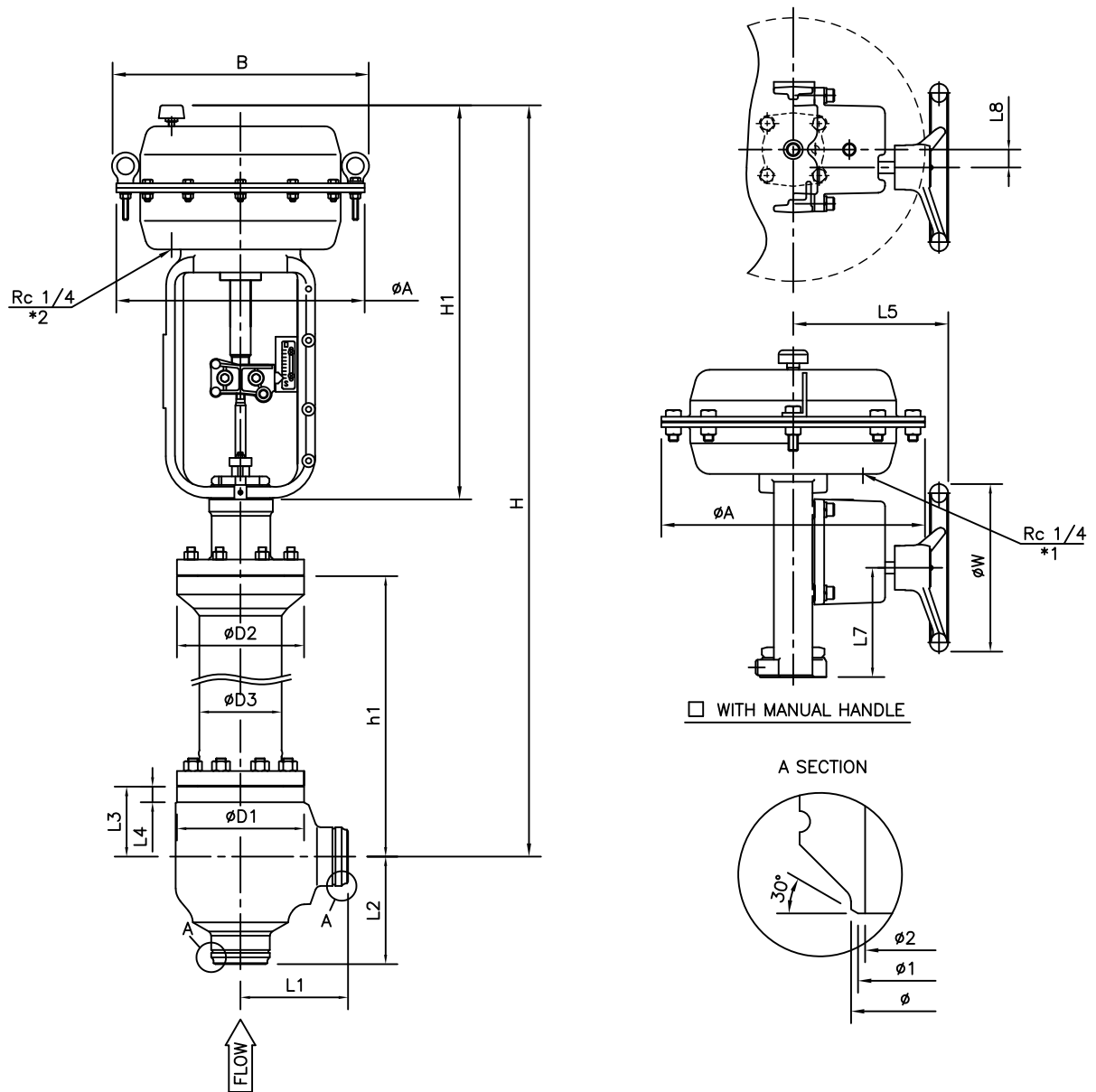
REV.

A

KOSO

ANGLE VALVE *Reverse Action*

*1 AIR EXHAUST POSITION FOR $\phi 218$ &270.
*2 AIR EXHAUST POSITION FOR $\phi 350$ &450.



DIMENSIONS

UNIT : mm

VALVE SIZE CODE No.	VALVE SIZE									ACTUATOR								CODE No.							
	L1	L2	L3	L4	D1	D2	D3	h1	H	A	B	H1	□ WIHT MANUAL HANDLE												
													L5	ϕW	L7	L8									
1 □ 1" (25A)	100	100	80	30	130	130	60.3	635	1050	□ 218	231	337	154	160	113~133	18.5	5221LA								
									1145									□ 270	283	435	210	200	118~138	27.5	5227LA
									1150									□ 218	231	337	154	160	113~133	18.5	5221LA
93 □ 1.5" (40A)	155	155	126	37	165	165	89	660	1245	□ 270	283	435	210	200	118~138	27.5	5227LA								
									1280									□ 350	367	470	210	200	120~140	27.5	5235LA
									1345									□ 450	472	535	260	300	161~181	32	524SLA
									1245									□ 270	283	435	210	200	118~138	27.5	5227LA
2 □ 2" (50A)	155	155	126	37	165	165	89	660	1280	□ 350	367	470	210	200	120~140	27.5	5235LA								
									1345									□ 450	472	535	260	300	161~181	32	524SLA
									1245									□ 270	283	435	210	200	118~138	27.5	5227LA
3 □ 3" (80A)	155	155	122	32	200	200	114	625	1245	□ 350	367	470	210	200	120~150	27.5	5235LA								
									1310									□ 450	472	535	260	300	161~191	32	524SLA
									1310									□ 450	472	535	260	300	161~191	32	524SLA
4 □ 4" (100A)	220	220	143	32	260	260	168	815	1540	□ 450	472	535	260	300	161~201	32	524SLA								

*FLANGE FOLLOEING TO STANDARD WHICH IS DESCRIBED ON SPECIFICATION SHEET.

NOTE:

DRAWING No.

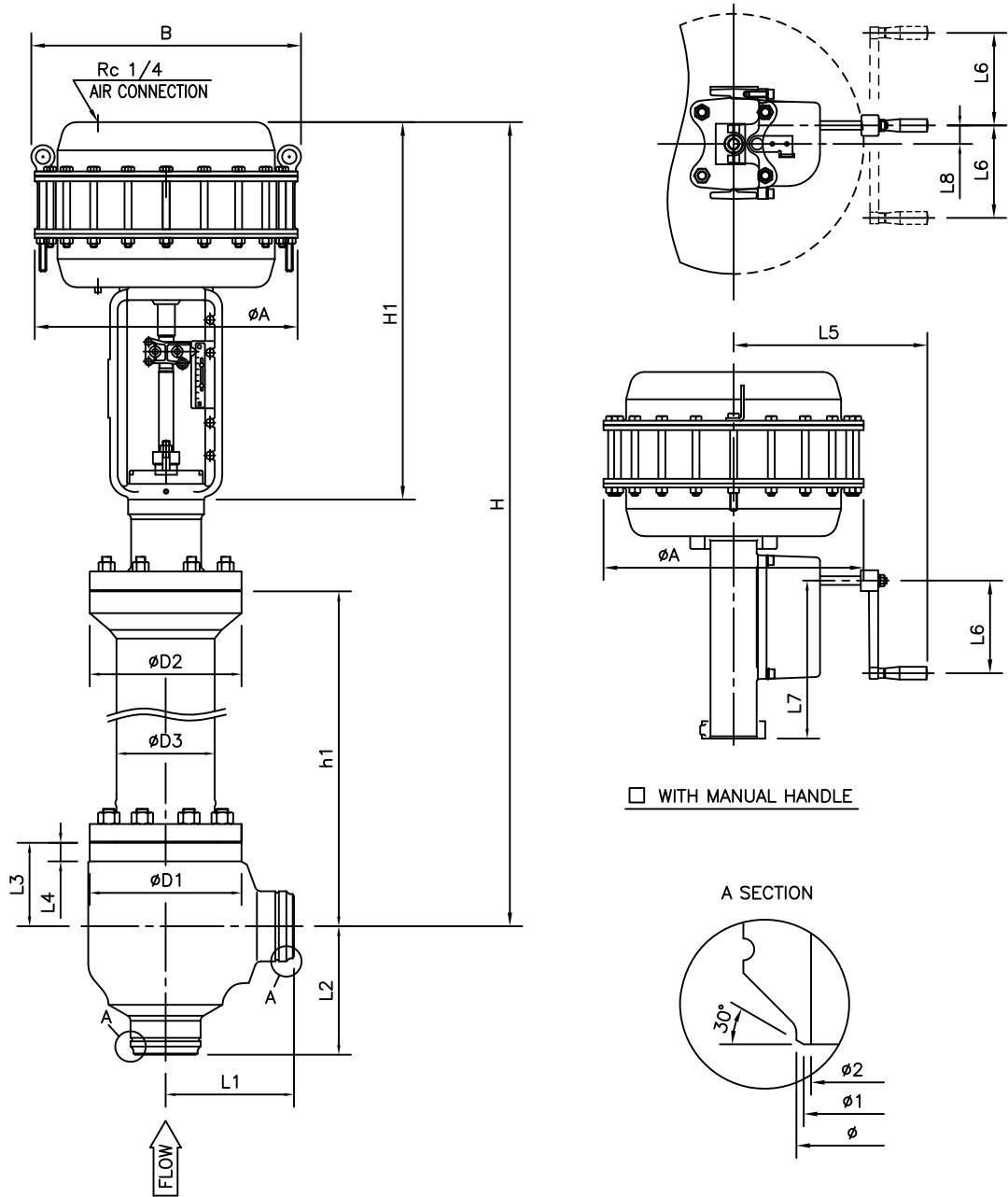
E-VSDT-5200LA-R-N
P

REV.

A

KOSO

ANGLE VALVE *Direct Action*



DIMENSIONS

UNIT : mm

VALVE SIZE CODE No.	L1	L2	L3	L4	D1	D2	D3	h1	H	ACTUATOR				CODE No.			
										A	B	H1	WITH MANUAL HANDLE				
													L5		L6	L7	L8
6 □ (150A)	220	220	160	20	260	200	89	800	1605	□ 450	472	635	336	160	260~210	32	524ELA
8 □ (200A)	260	260	185	50	310	260	108	840	1645	□ 450	472	655	336	160	270~200	32	524ELA

*FLANGE FOLLOEING TO STANDARD WHICH IS DESCRIBED ON SPECIFICATION SHEET.

NOTE:

DRAWING No.

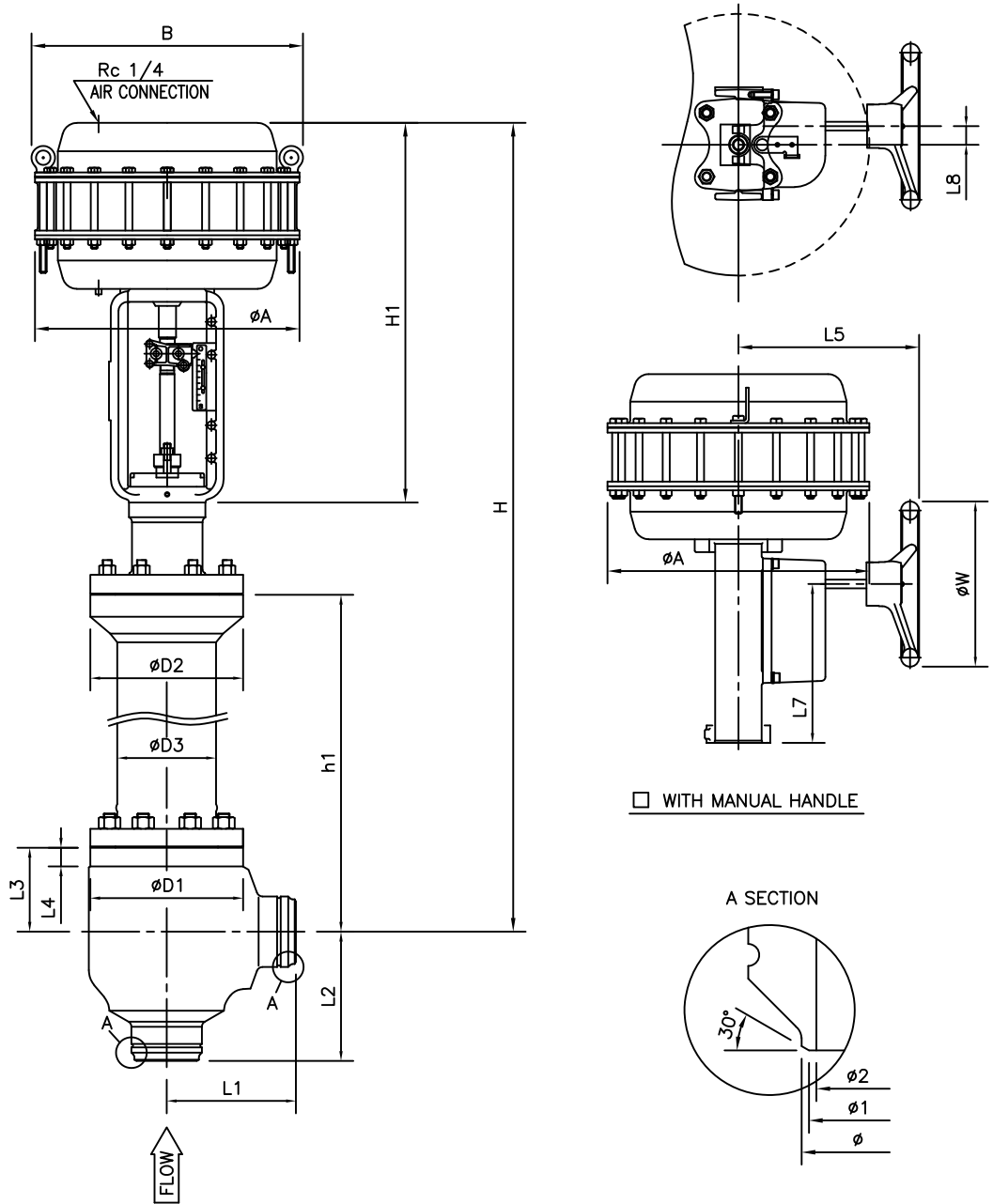
E-VSDT-524ELA-D-S^N

REV.

A

KOSO

ANGLE VALVE *Direct Action*



DIMENSIONS

UNIT : mm

VALVE SIZE CODE No.	L1	L2	L3	L4	D1	D2	D3	h1	H	ACTUATOR				CODE No.			
										A	B	H1	WITH MANUAL HANDLE				
													L5		phi W	L7	L8
6 □ (150A)	220	220	160	20	260	200	89	800	1605	□ 450	472	635	260	300	260~210	32	524ELA
8 □ (200A)	260	260	185	50	310	260	108	840	1645	□ 450	472	655	260	300	270~200	32	524ELA

*FLANGE FOLLOEING TO STANDARD WHICH IS DESCRIBED ON SPECIFICATION SHEET.

NOTE:

DRAWING No.

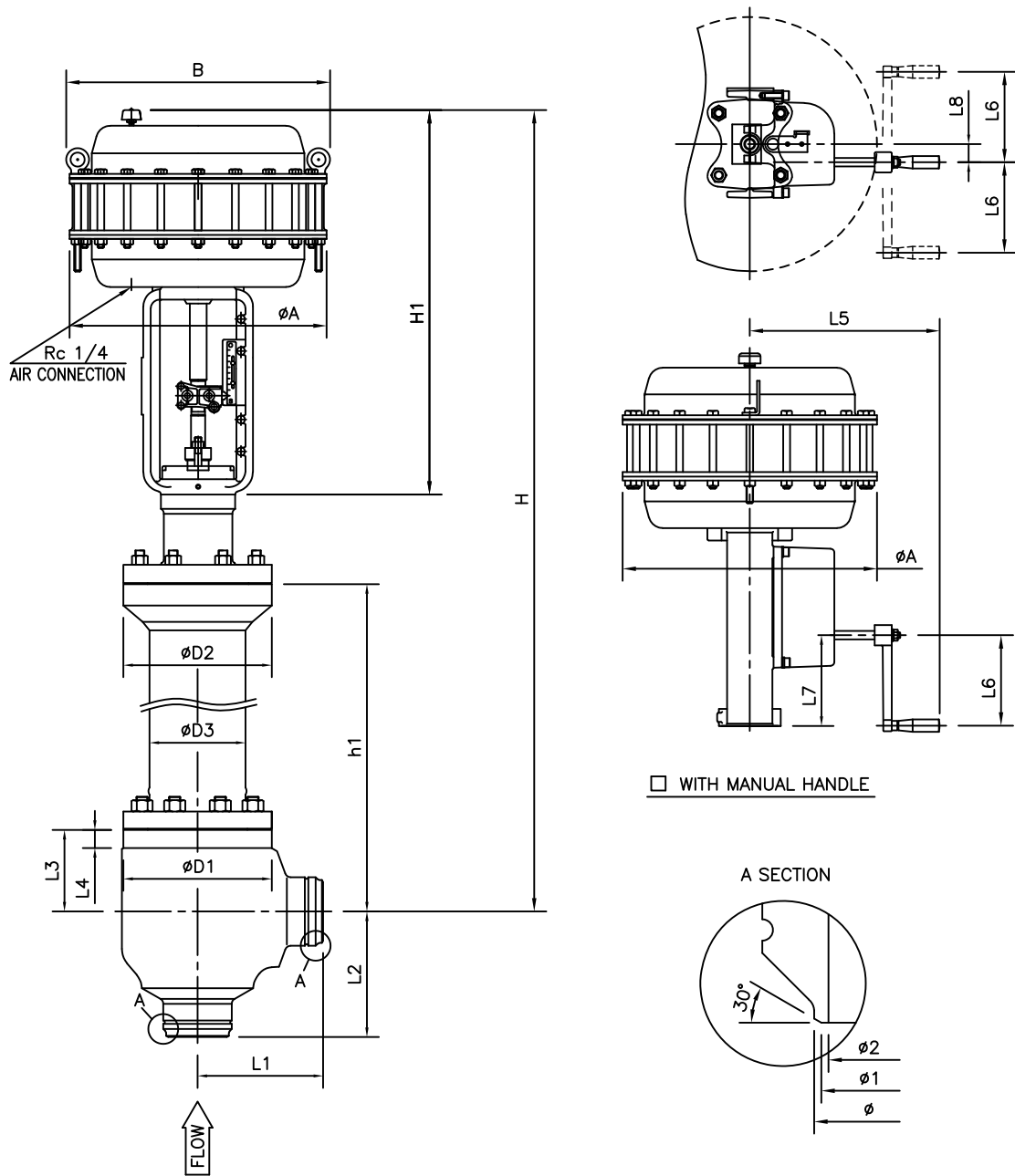
E-VSDT-524ELA-D-N
P

REV.

A

KOSO

ANGLE VALVE *Reverse Action*



DIMENSIONS

UNIT : mm

VALVE SIZE CODE No.	L1	L2	L3	L4	D1	D2	D3	h1	H	ACTUATOR				CODE No.			
										A	B	H1	WITH MANUAL HANDLE				
													L5		L6	L7	L8
6 □ (150A)	220	220	160	20	260	200	89	800	1645	□ 450	472	675	336	160	161~211	32	524ELA
8 □ (200A)	260	260	185	50	310	260	108	840	1685	□ 450	472	695	336	160	181~251	32	524ELA

*FLANGE FOLLOEING TO STANDARD WHICH IS DESCRIBED ON SPECIFICATION SHEET.

NOTE:

DRAWING No.

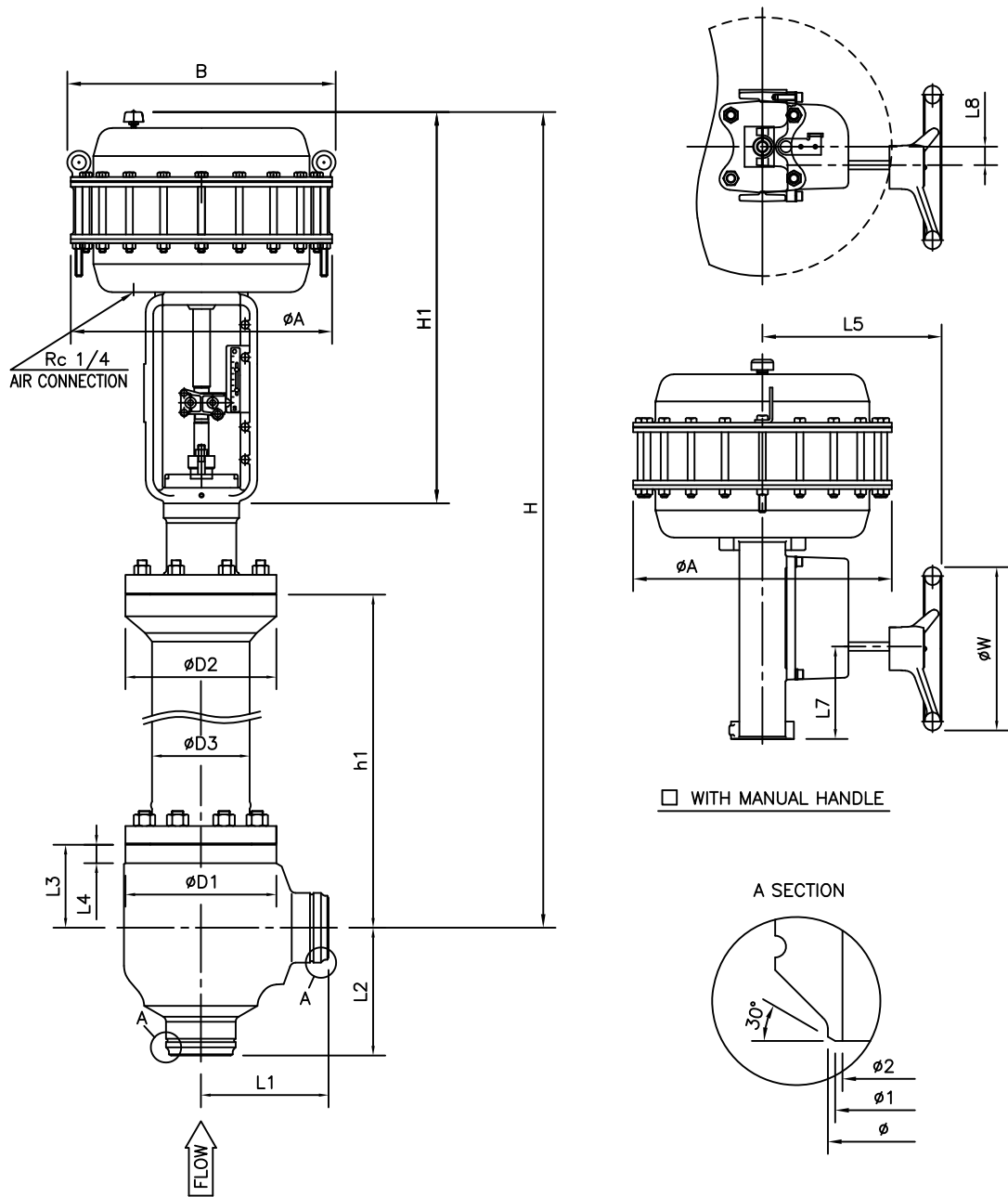
E-VSDT-524ELA-R-S^N

REV.

A

KOSO

ANGLE VALVE *Reverse Action*



DIMENSIONS

UNIT : mm

VALVE SIZE CODE No.	L1	L2	L3	L4	D1	D2	D3	h1	H	ACTUATOR				CODE No.			
										A	B	H1	WITH MANUAL HANDLE				
													L5		φW	L7	L8
6 □ (150A)	220	220	160	20	260	200	89	800	1645	□ 450	472	675	260	300	161~211	32	524ELA
8 □ (200A)	260	260	185	50	310	260	108	840	1685	□ 450	472	695	260	300	181~251	32	524ELA

*FLANGE FOLLOEING TO STANDARD WHICH IS DESCRIBED ON SPECIFICATION SHEET.

NOTE:

DRAWING No.

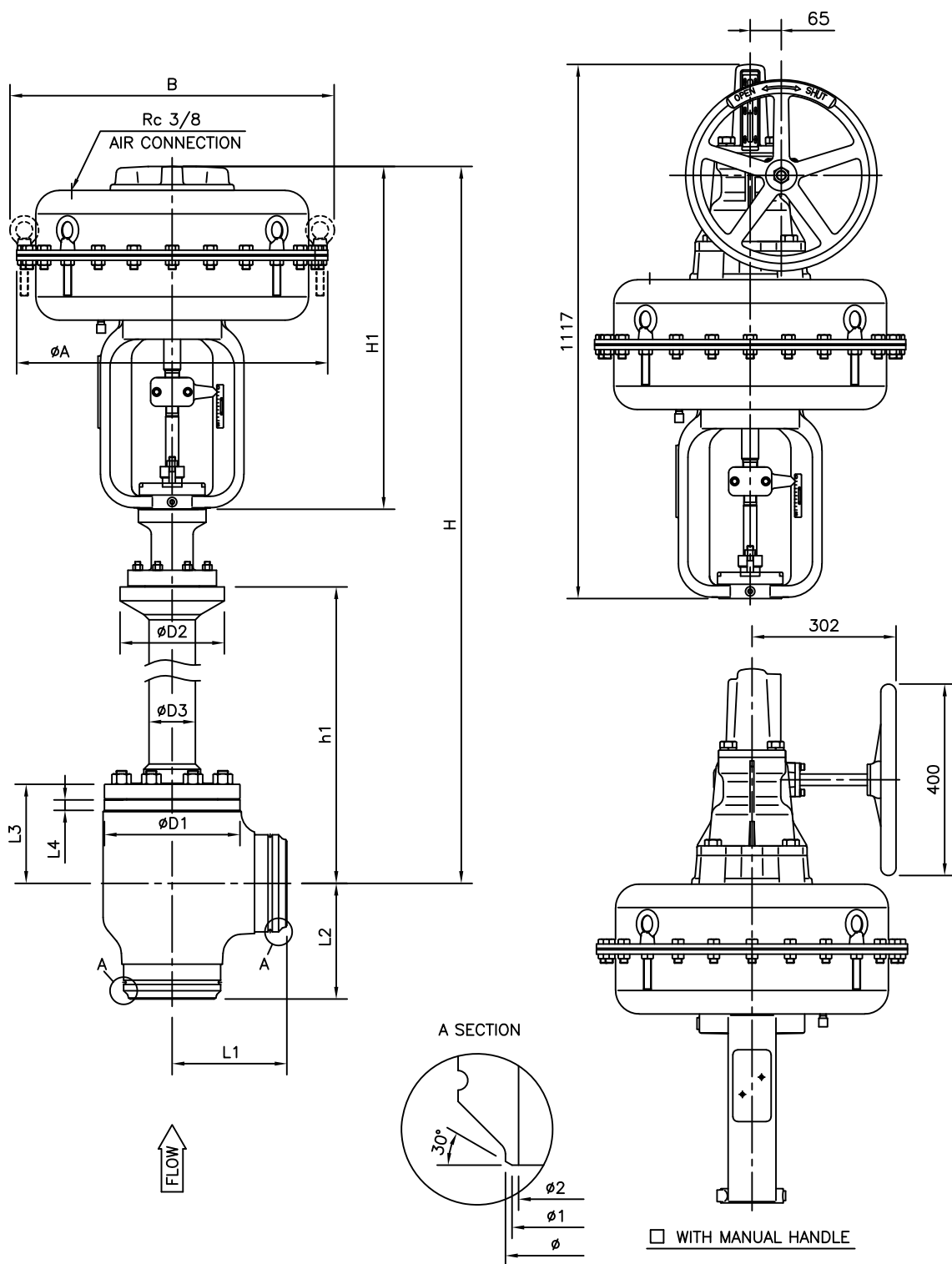
E-VSDT-524ELA-R-N
P

REV.

A

KOSO

ANGLE VALVE *Direct Action*



DIMENSIONS UNIT : mm

VALVE SIZE											ACTUATOR			
	L1	L2	L3	L4	D1	D2	D3	h1	H	A	B	H1	CODE No.	
6" (150A)	220	220	160	20	260	200	89	800	1670	□ 650	678	717	526SLA	

*FLANGE FOLLOEING TO STANDARD WHICH IS DESCRIBED ON SPECIFICATION SHEET.

NOTE:

DRAWING No.

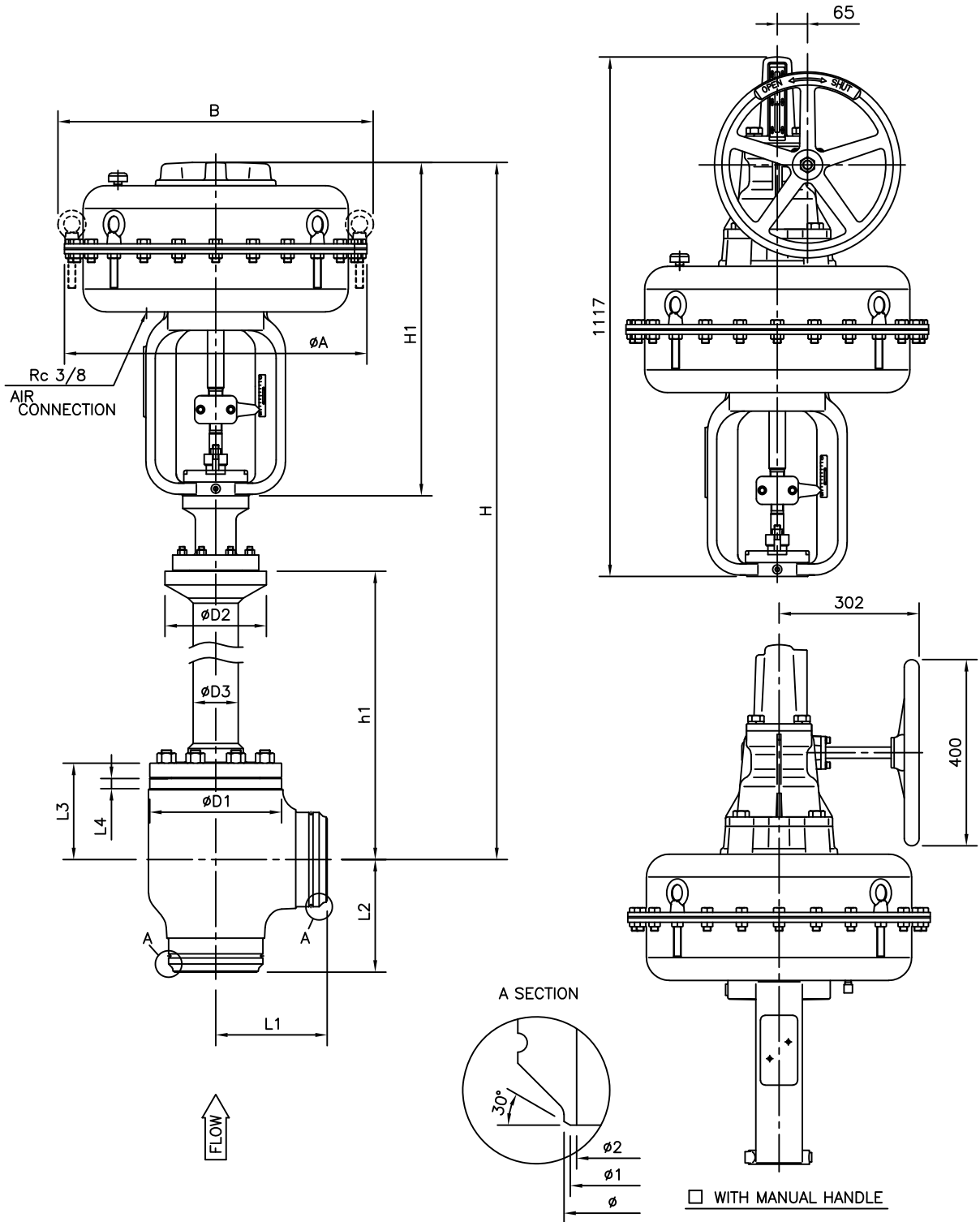
E-VSDT-526SLA-D-N
H

REV.

A

KOSO

ANGLE VALVE *Reverse Action*



DIMENSIONS											UNIT : mm			
VALVE SIZE	L1	L2	L3	L4	D1	D2	D3	h1	H	ACTUATOR				
										A	B	H1	CODE No.	
6" (150A)	220	220	160	20	260	200	89	800	1670	□ 650	678	717	526SLA	

*FLANGE FOLLOEING TO STANDARD WHICH IS DESCRIBED ON SPECIFICATION SHEET.

NOTE:

DRAWING No.

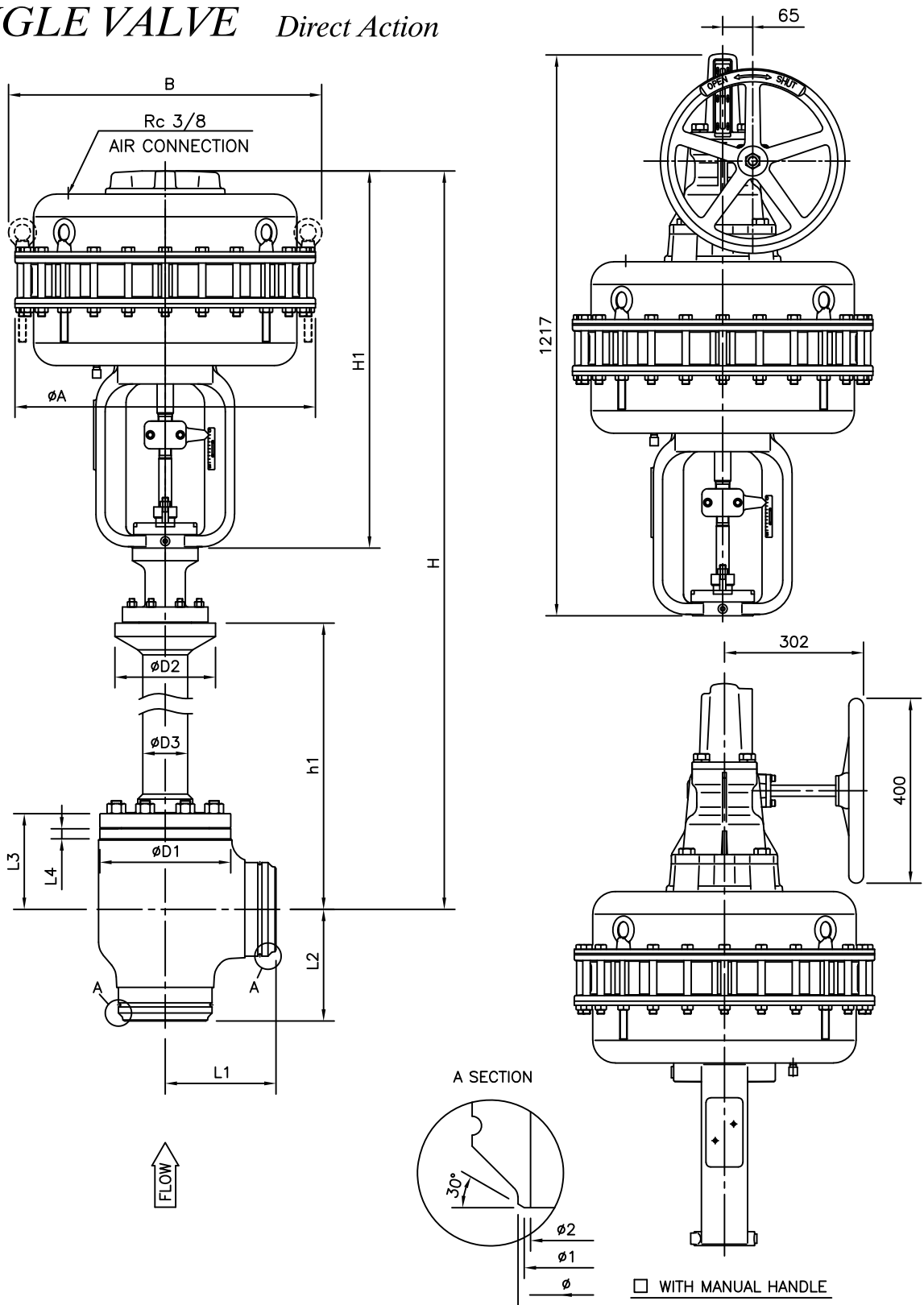
E-VSDT-526SLA-R-N
H

REV.

A

KOSO

ANGLE VALVE *Direct Action*



DIMENSIONS UNIT : mm

VALVE SIZE											ACTUATOR			
	L1	L2	L3	L4	D1	D2	D3	h1	H	A	B	H1	CODE No.	
8" (200A)	260	260	185	50	310	260	108	840	1810	650	678	817	526LLA	

*FLANGE FOLLOEING TO STANDARD WHICH IS DESCRIBED ON SPECIFICATION SHEET.

NOTE:

DRAWING No.

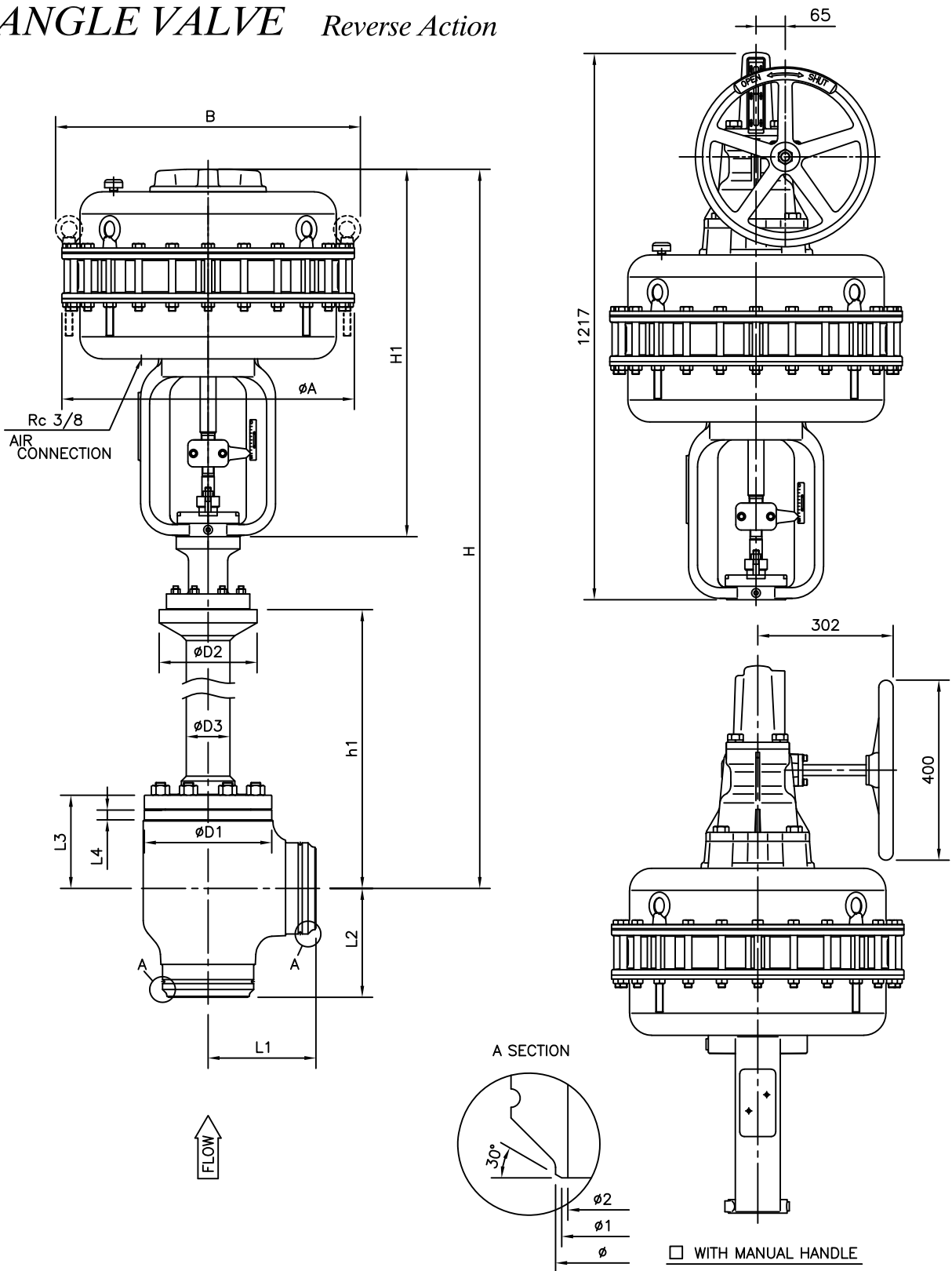
E-VSDT-526LLA-D-N
H

REV.

A

KOSO

ANGLE VALVE *Reverse Action*



DIMENSIONS

UNIT : mm

VALVE SIZE										ACTUATOR			
	L1	L2	L3	L4	D1	D2	D3	h1	H	A	B	H1	CODE No.
CODE No.													
8 □ 8" (200A)	260	260	185	50	310	260	108	840	1810	□ 650	678	817	526LLA

*FLANGE FOLLOEING TO STANDARD WHICH IS DESCRIBED ON SPECIFICATION SHEET.

NOTE:

DRAWING No.

E-VSDT-526LLA-R-N
H

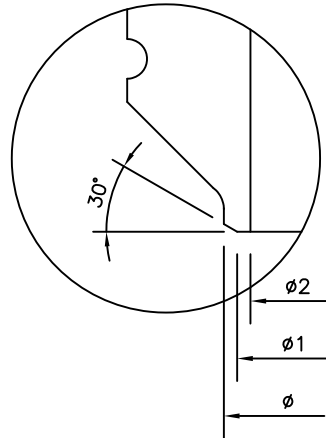
REV.

A

KOSO

ANGLE VALVE

A SECTION



DIMENSIONS

UNIT : mm

CODE No.	VALVE SIZE	PN 1.6MPa			PN 4.0MPa			PN 6.3MPa		
		φ	φ1	φ2	φ	φ1	φ2	φ	φ1	φ2
91	□ 0.75" (20A)	28	24	20	28	23	19	28	23	19
1	□ 1" (25A)	33	29	25	35	29	25	35	29	25
93	□ 1.5" (40A)	48	44	40	50	42	38	50	42	38
2	□ 2" (50A)	58	54	50	60	54	50	60	54	50
94	□ 2.5" (65A)	72	68	64	73	63	59	73	63	59
3	□ 3" (80A)	90	86	82	90	77	73	90	77	73
4	□ 4" (100A)	110	103	102	114	100	96	114	100	96
5	□ 5" (125A)	135	129	125						
6	□ 6" (150A)	160	154	150						
8	□ 8" (200A)	210	204	200						

NOTE:

DRAWING No.

E-VSD

REV.

C

KOSO