

VSA system



Suitable for handling

Features & Strengths

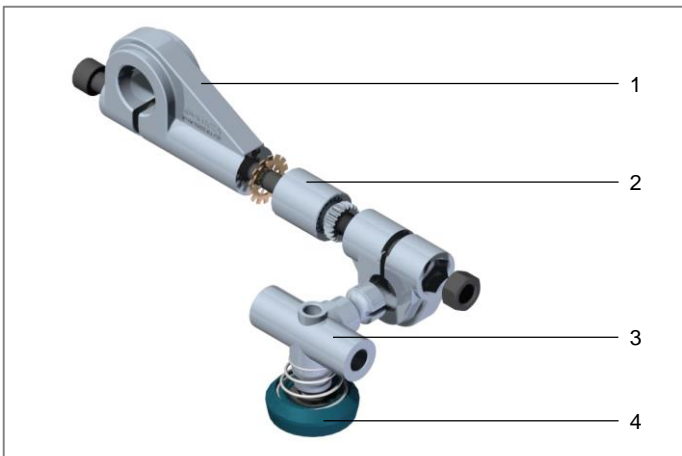
- ▶ Patented design
- ▶ Easily exchangeable rubber part without any tools
- ▶ Less downtime
- ▶ Compact size & Light weight
- ▶ Long life time & Saving cost



Easily exchangeable rubber part without any tools – VSA system

Products Structure

- ▶ Strong and stable structure - [Pipe holder^{1\)}](#)
- ▶ Various [Spacer^{2\)}](#) options for customer's need
- ▶ Various options for application with different [Smart adaptors^{3\)}](#)
- ▶ Easily changeable with different size and material suction cups without any tools – [Smart cups^{4\)}](#)



Products Structure of VMECA VSA system

Applications

- ▶ Automobile industry (Press line)
- ▶ Metal Sheet
- ▶ High speed in operation



VMECA Smart Arm system being used in Automobile (Press line)

Designation Ordering No. for VSA system

Pipe holder	Spacer	T-Adaptor*	Suction cups			Material
			FCF	VBF	VDF*	
VSA01S VSA02S	T5 T15 T20 T30 T70 T100 T140 T170	AB2	CBH1 - 30Ø	CDF1 - 25Ø	CAG1 - 25Ø	A - NBR B - Silicon F - Polyurethane
		AC2	CBA1 - 40Ø	CDG1 - 30Ø	CAH1 - 30Ø	
		AK1		CDH1 - 40Ø	CAA1 - 40Ø	
		AK2				
		AK3				
		AK4				
		AJ1				
		AJ2				
		AJ3				
		AJ4				
		AF2				
		AG2				
		AB3	CBB1 - 50Ø	CDB1 - 50Ø	CAB1 - 50Ø	
		AC3	CBC1 - 60Ø	CDC1 - 60Ø	CAC1 - 60Ø	
		AD1	CBI1 - 70Ø	CDD1 - 80Ø	CAD1 - 80Ø	
		AD2	CBD1 - 80Ø	CDE1 - 100Ø	CAE1 - 100Ø	
		AD3	CBE1 - 100Ø			
		AD4	CBF1 - 125Ø			
		AE1				
		AE2				
		AE3				
		AE4				
		AF3				
		AG3				

Example) VSA01S-T30-AB2-CBA1-F

* On T-Adaptor, top side option is available for less than 40Ø suction cups & bottom side option is available for more than 50Ø suction cups.

* VDF suction cup option is only available for PU material (Polyurethane).

* For detail information, dimension section on request.

Spare part Ordering data for Pipe holder & Spacer

Model	Code	Model	Code
VSA01S	5A41 1000 000 000	T5	5102 1000 000 000
VSA02S	5A41 2000 000 000	T15	5102 2000 000 000
		T20	5102 3000 000 000
		T30	5102 4000 000 000
		T70	5102 5000 000 000
		T100	5102 6000 000 000
		T140	5102 7000 000 000
		T170	5102 8000 000 000

VSA system

Spare part Ordering data for Smart adaptor

Model	Code	Model	Code
AB2	5100 0300 000 000	AB3	5100 0020 000 000
AC2	5100 0310 000 000	AC3	5100 0030 000 000
AK1	5100 0200 000 000	AD1	5100 0040 000 000
AK2	5100 0210 000 000	AD2	5100 0130 000 000
AK3	5100 0220 000 000	AD3	5100 0140 000 000
AK4	5100 0270 000 000	AD4	5100 0150 000 000
AJ1	5100 0240 000 000	AE1	5100 0050 000 000
AJ2	5100 0250 000 000	AE2	5100 0180 000 000
AJ3	5100 0260 000 000	AE3	5100 0190 000 000
AJ4	5100 0280 000 000	AE4	5100 0290 000 000
AF2	5100 0320 000 000	AF3	5100 0090 000 000
AG2	5100 0330 000 000	AG3	5100 0100 000 000

* For detail information, dimension section on request.

Spare part Ordering data for Suction cups

Suction cup material								
A - NBR			B - Silicon			F - Polyurethane		
Description	Code		Description	Code		Description	Code	
CBH1-A FCF30-N	5202 0300 100 000		CBH1-B FCF30-S	5202 0300 200 000		CBH1-F FCF30-PU	5202 0300 800 000	
CBA1-A FCF40-N	5202 0400 100 000		CBA1-B FCF40-S	5202 0400 200 000		CBA1-F FCF40-PU	5202 0400 800 000	
CBB1-A FCF50-N	5202 0500 100 000		CBB1-B FCF50-S	5202 0500 200 000		CBB1-F FCF50-PU	5202 0500 800 000	
CBC1-A FCF60-N	5202 0600 100 000		CBC1-B FCF60-S	5202 0600 200 000		CBC1-F FCF60-PU	5202 0600 800 000	
CBI1-A FCF70-N	5202 0700 100 000		CBI1-B FCF70-S	5202 0700 200 000		CBI1-F FCF70-PU	5202 0700 800 000	
CBD1-A FCF80-N	5202 0800 100 000		CBD1-B FCF80-S	5202 0800 200 000		CBD1-F FCF80-PU	5202 0800 800 000	
CBE1-A FCF100-N	5202 1000 100 000		CBE1-B FCF100-S	5202 1000 200 000		CBE1-F FCF100-PU	5202 1000 800 000	
CBF1-A FCF125-N	5202 1250 100 000		CBF1-B FCF125-S	5202 1250 200 000		CBF1-F FCF125-PU	5202 1250 800 000	
CDF1-A VBF25-N	5203 0250 100 000		CDF1-B VBF25-S	5203 0250 200 000		CDF1-F VBF25-PU	5203 0250 800 000	
CDG1-A VBF30-N	5203 0300 100 000		CDG1-B VBF30-S	5203 0300 200 000		CDG1-F VBF30-PU	5203 0300 800 000	
CDH1-A VBF40-N	5203 0400 100 000		CDH1-B VBF40-S	5203 0400 200 000		CDH1-F VBF40-PU	5203 0400 800 000	
CDB1-A VBF50-N	5203 0500 100 000		CDB1-B VBF50-S	5203 0500 200 000		CDB1-F VBF50-PU	5203 0500 800 000	
CDC1-A VBF60-N	5203 0600 100 000		CDC1-B VBF60-S	5203 0600 200 000		CDC1-F VBF60-PU	5203 0600 800 000	
CDD1-A VBF80-N	5203 0800 100 000		CDD1-B VBF80-S	5203 0800 200 000		CDD1-F VBF80-PU	5203 0800 800 000	
CDE1-A VBF100-N	5203 1000 100 000		CDE1-B VBF100-S	5203 1000 200 000		CDE1-F VBF100-PU	5203 1000 800 000	
-	-		-	-		CAG1-F VDF25-PU	5201 0250 800 000	
-	-		-	-		CAH1-F VDF30-PU	5201 0300 800 000	
-	-		-	-		CAA1-F VDF40-PU	5201 0400 800 000	
-	-		-	-		CAB1-F VDF50-PU	5201 0500 800 000	
-	-		-	-		CAC1-F VDF60-PU	5201 0600 800 000	
-	-		-	-		CAD1-F VDF80-PU	5201 0800 800 000	
-	-		-	-		CAE1-F VDF100-PU	5201 1000 800 000	

* For detail information, dimension section on request.

Spare part Ordering data for Accessory part

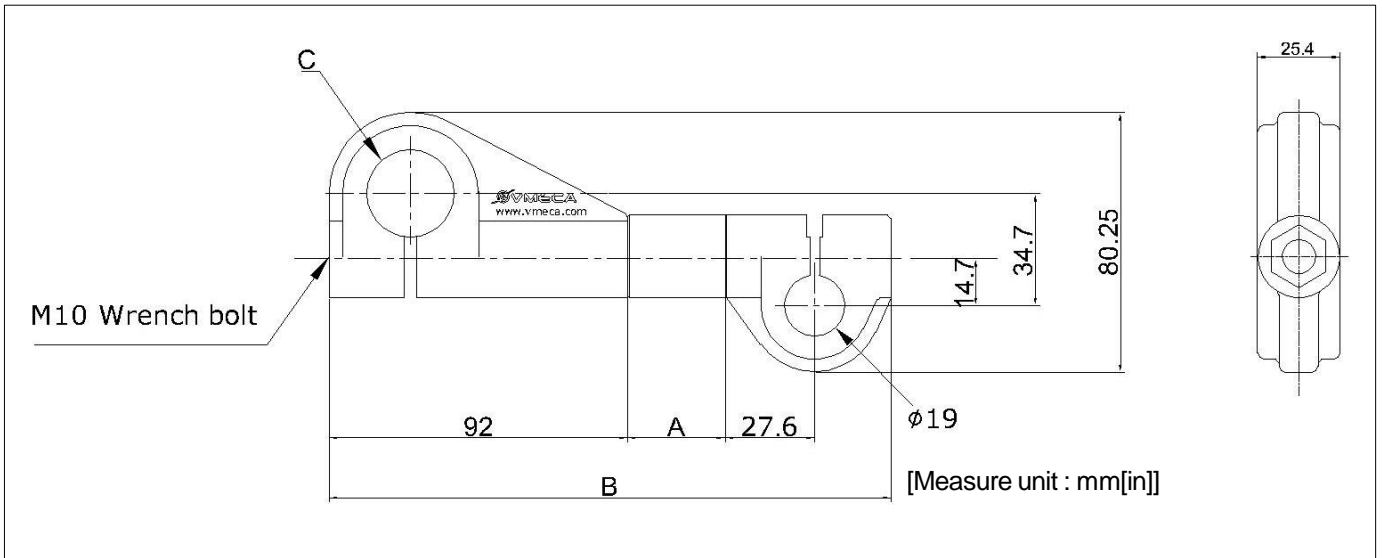
Model	Code	Model	Code
A1	5100 0010 000 000	A3	5100 0070 000 000
A2-1	5100 0060 000 000	A4	5100 0080 000 000
A2-2	5100 0230 000 000		

* For detail information, dimension section on request.

VSA system

Dimensional Data for VSA system - Pipe holder

Pipe holder

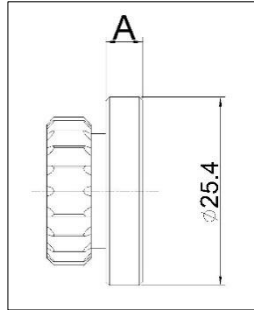
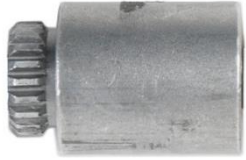


Model	A	B	Ø C	Model	A	B	Ø C
VSA01S-T5	5	175.3	25.2	VSA02S-T5	5	175.3	27.4
VSA01S-T15	15	185.3		VSA02S-T15	15	185.3	
VSA01S-T20	20	190.3		VSA02S-T20	20	190.3	
VSA01S-T30	30	200.3		VSA02S-T30	30	200.3	
VSA01S-T70	70	240.3		VSA02S-T70	70	240.3	
VSA01S-T100	100	270.3		VSA02S-T100	100	270.3	
VSA01S-T140	140	310.3		VSA02S-T140	140	310.3	
VSA01S-T170	170	340.3		VSA02S-T170	170	340.3	

[Measure unit : mm[in]]

Dimensional Data for Spacer

Spacer

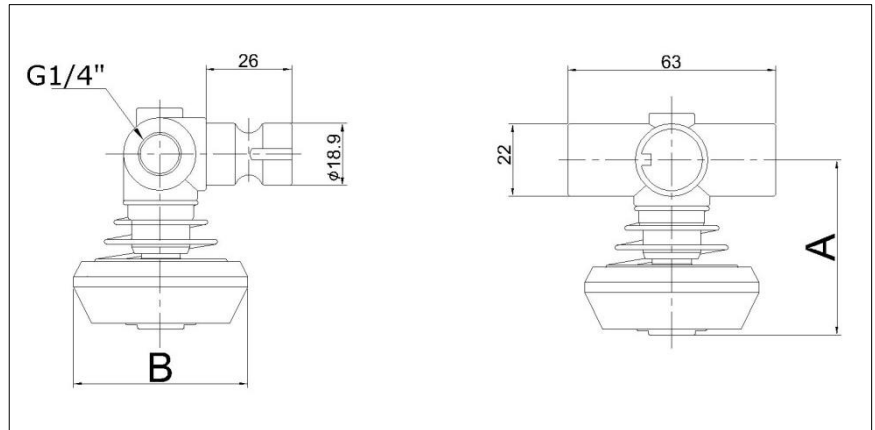


Model	A	Model	A
T5	5	T70	70
T15	15	T100	100
T25	20	T140	140
T30	30	T170	170

[Measure unit : mm[in]]

Dimensional Data for Smart adaptor

AB2 AB3



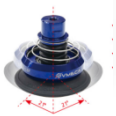
Model	A	Ø B
AB2	41.7	Ø32
AB3	53	Ø52.8

[Measure unit : mm[in]]

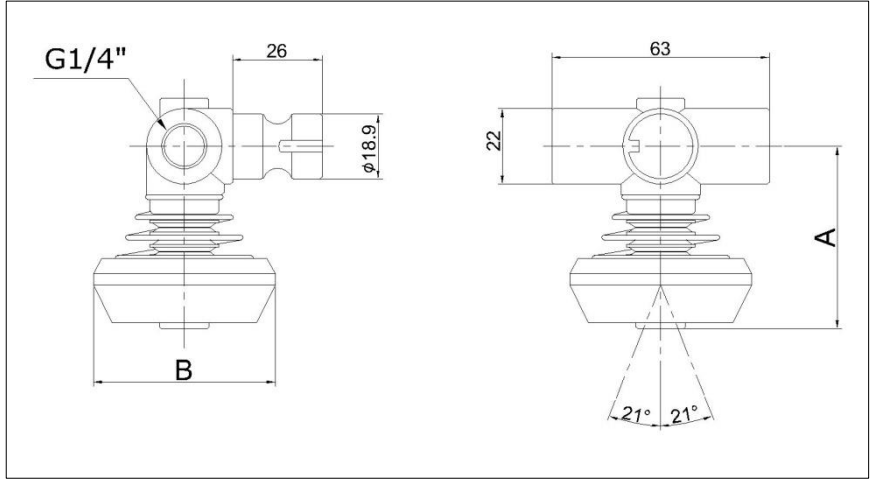
VSA system

Dimensional Data for Smart adaptor

AC2
AC3



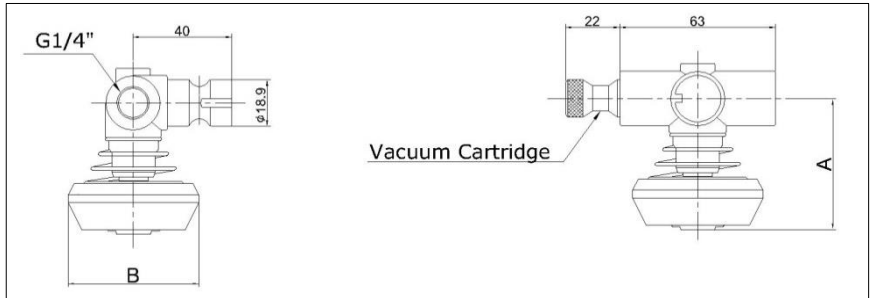
Ball-joint integrated



Model	A	Ø B
AC2	46	Ø32
AC3	53	Ø52.8

[Measure unit : mm[in]]

AF2
AF3



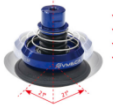
Model	A	Ø B
AF2	41.7	Ø32
AF3	53	Ø52.8

[Measure unit : mm[in]]

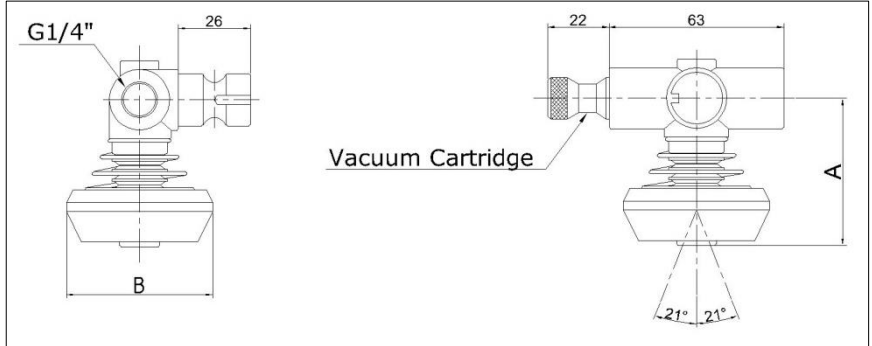
VSA system

Dimensional Data for Smart adaptor

AG2
AG3



Ball-joint integrated

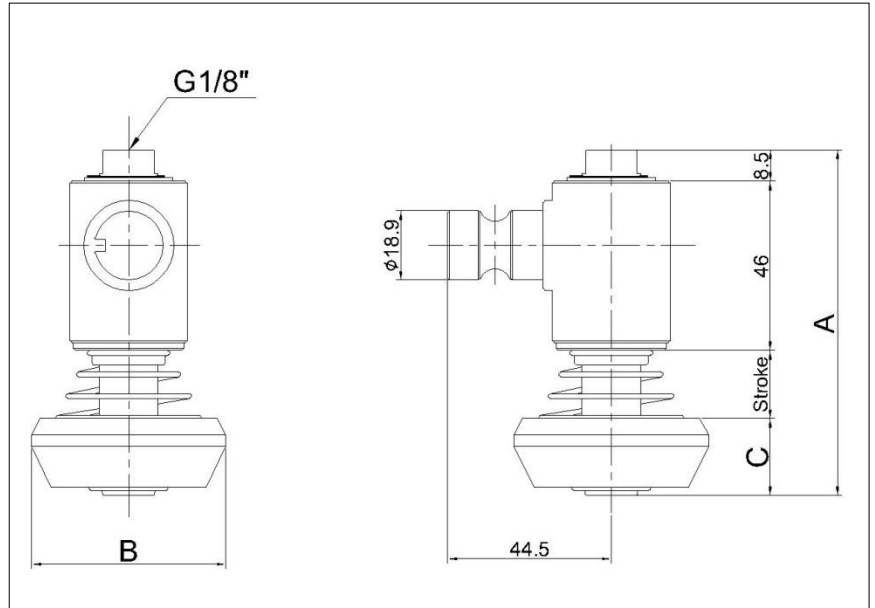


Model	A	Ø B
AG2	46	Ø32
AG3	53	Ø52.8

[Measure unit : mm[in]]

Dimensional Data for Smart adaptor

AK1 **AD1**
AK2 **AD2**
AK3 **AD3**
AK4 **AD4**



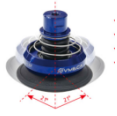
Model	Stroke	A	Ø B	Ø C
AK1	20	91.5	Ø32	17
AK2	30	101.5		
AK3	50	121.5		
AK4	70	141.5		
AD1	20	95.5	Ø52.8	21
AD2	30	105.5		
AD3	50	125.5		
AD4	70	145.5		

[Measure unit : mm[in]]

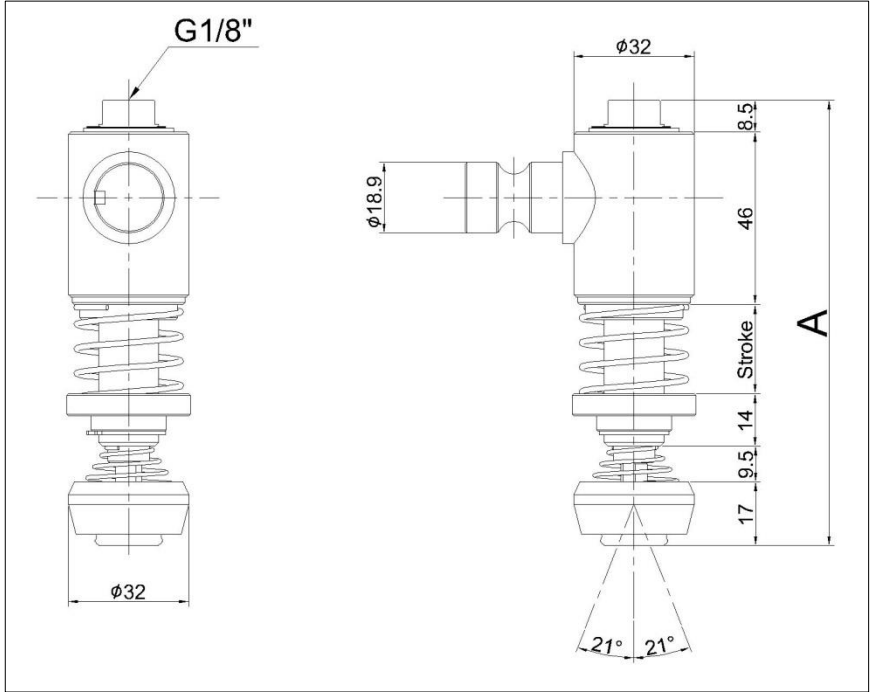
VSA system

Dimensional Data for Smart adaptor

- AJ1
- AJ2
- AJ3
- AJ4



Ball-joint integrated



Model	Stroke	A
AJ1	20	115
AJ2	30	125
AJ3	50	145
AJ4	70	165

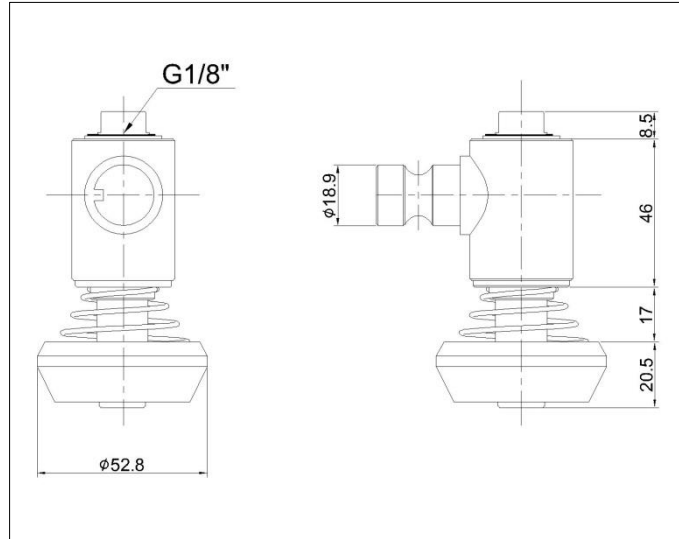
[Measure unit : mm[in]]

Dimensional Data for Smart adaptor

AE1



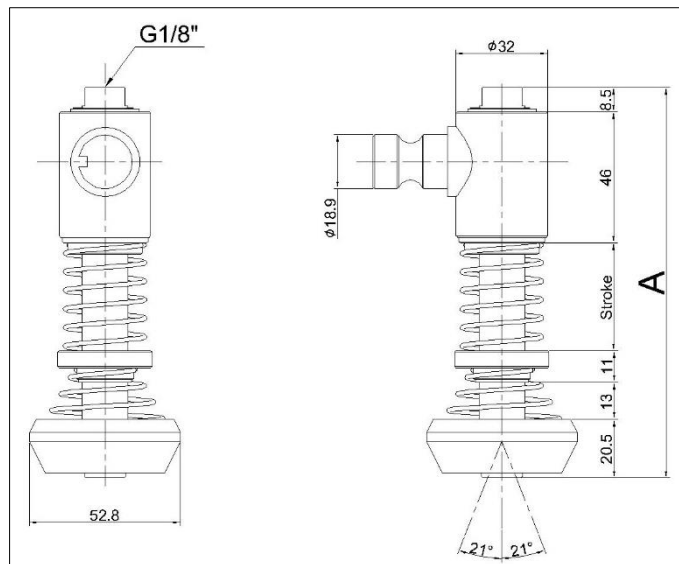
Ball-joint integrated



AE2 AE3 AE4



Ball-joint integrated



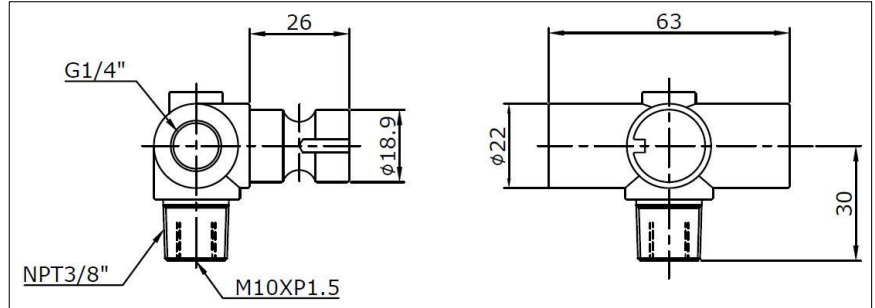
Model	Stroke	A
AE2	30	127.2
AE3	50	147.2
AE4	70	167.2

[Measure unit : mm[in]]

Specifications subject to change without notice.

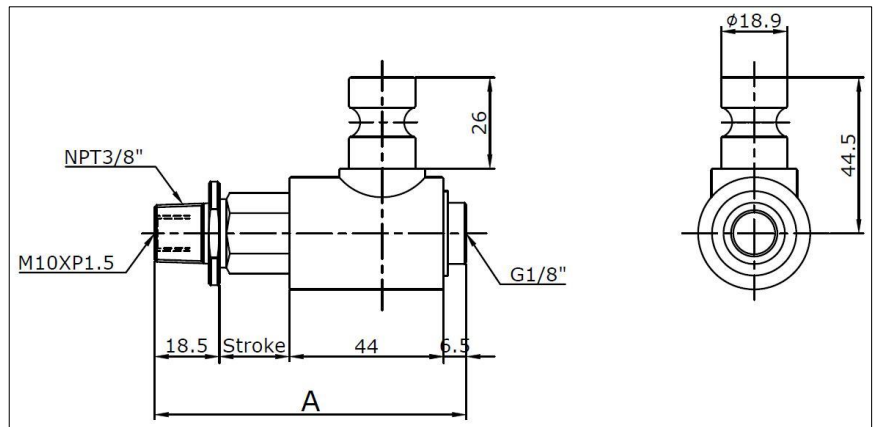
Dimensional Data for Accessory part

A1



[Measure unit : mm[in]]

A2-1 A2-2



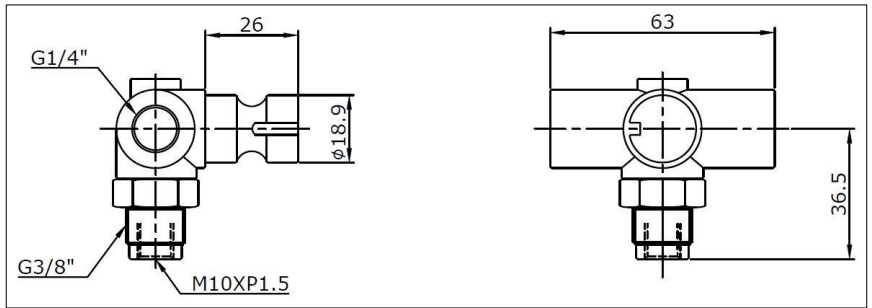
Model	Stroke	A
A2-1	20	89
A2-2	30	99

[Measure unit : mm[in]]

VSA system

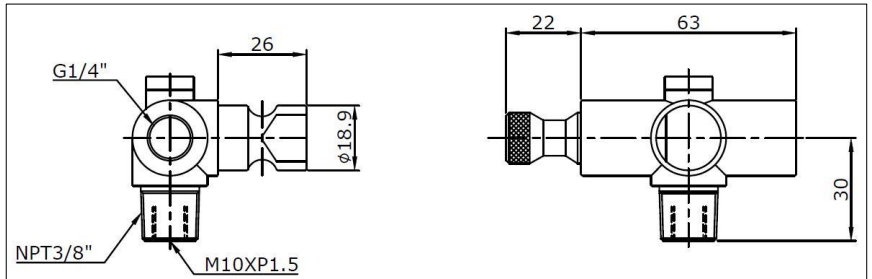
Dimensional Data for Accessory part

A3



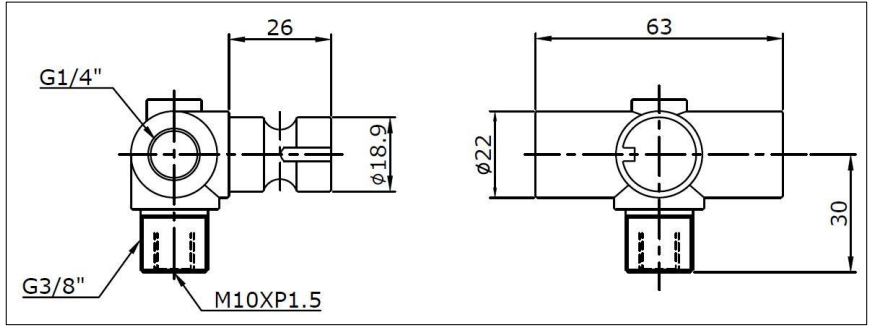
[Measure unit : mm[in]]

A4



[Measure unit : mm[in]]

A5



[Measure unit : mm[in]]

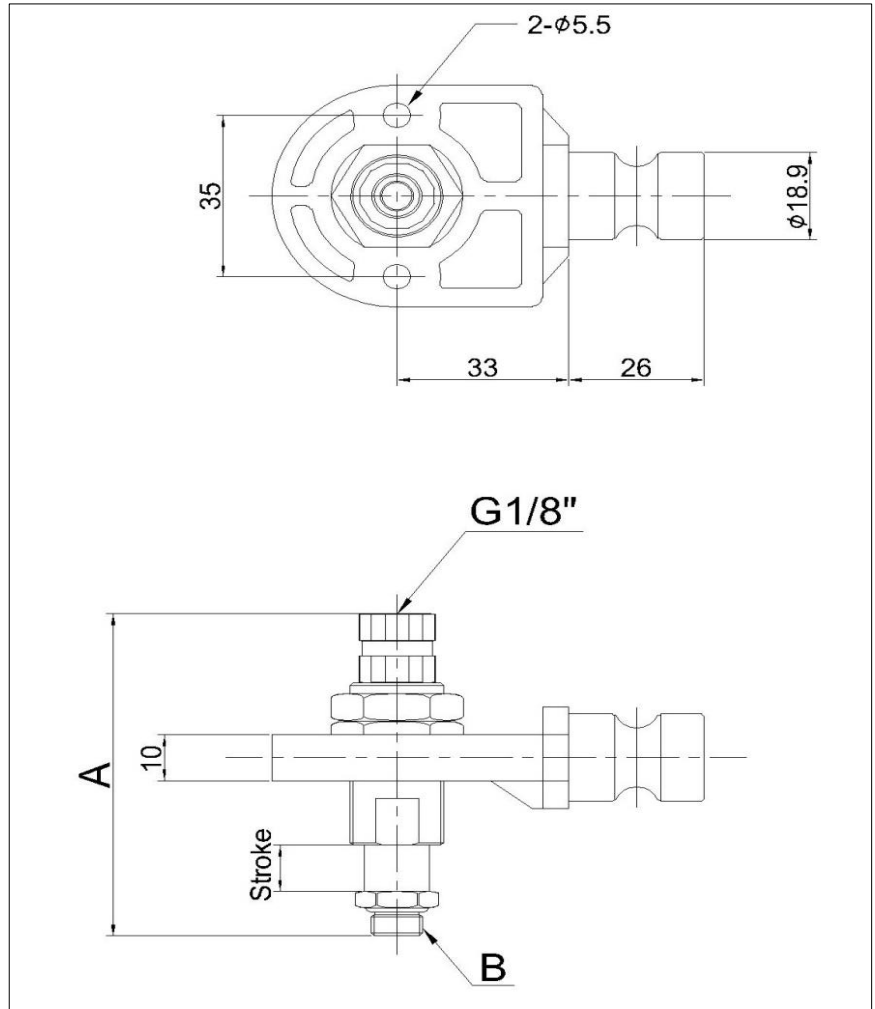
Dimensional Data for Accessory part

TA + Level compensator



- Level Compensator Option

- BA : LSM10F25T18
- BB : LM1030TS
- BC : L1810TS-M10F
- BD : L1810TSE
- BE : L1820TS
- BF : L1830TS
- BG : L1850TS-M10F



Model	Stroke	A	B
AI-BA	10	69.9	G1/8"
AI-BB	20	79.6	G1/8"
AI-BC	30	100	G1/8"
AI-BD	50	132	G1/8"
AI-BE	30	94	M10
AI-BF	25	64.3	M10
AI-BG	10	62.5	G1/8"

[Measure unit : mm[in]]

VSA system

Performance Data (Lifting force) - FCF suction cup

Model	Volume (cm ³)	Lifting Force (kg) - Perpendicular			Lifting Force (kg) - Parallel		
		-20 kPa	-60 kPa	-90 kPa	-20 kPa	-60 kPa	-90 kPa
CBH1	2.0	2	4.6	6.4	0.8	2.0	2.9
CBA1	4.4	2.9	6.9	9.9	2.1	5.0	7.2
CBB1	8	4.2	10.8	15.4	3.7	6.7	8.9
CBC1	14.6	5.6	15.2	22.3	5.5	13.3	16.7
CBI1	20.7	7.6	19.6	28.2	6.3	15.8	20.1
CBD1	36.0	10.3	25.9	34.4	6.7	17.7	23.8
CAE1	58.0	14.7	37.1	50.6	13.6	35.4	43.7
CBF1	115.0	19.4	44.5	57.9	19.1	42.5	64.9

Performance Data (Lifting force) - VBF suction cup

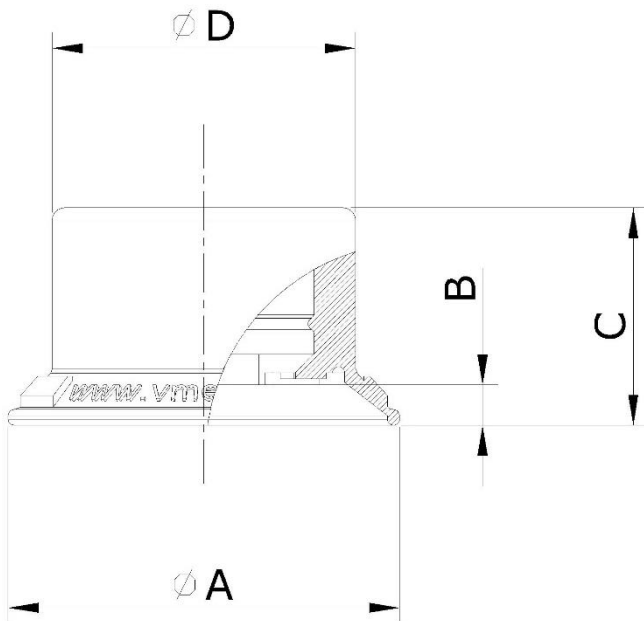
Model	Volume (cm ³)	Lifting Force (kg) - Perpendicular			Lifting Force (kg) - Parallel		
		-20 kPa	-60 kPa	-90 kPa	-20 kPa	-60 kPa	-90 kPa
CDF1	2.6	1.1	3.2	3.8	0.61	1.37	1.89
CDG1	6	1.77	6.26	9.48	0.86	3.09	7.75
CDH1	7.2	2.5	9.66	12.8	1.18	6.5	11.3
CDB1	11	4.18	13.2	16.28	2.09	9.6	14.7
CDC1	22	8.94	16.26	18.54	6.84	12.84	16.92
CDD1	59.5	11.92	21.68	24.72	9.12	17.12	22.56
CDE1	103.5	14.9	27.1	30.9	11.4	21.4	28.2

Performance Data (Lifting force) - VDF suction cup

Model	Volume (cm ³)	Lifting Force (kg) - Perpendicular			Lifting Force (kg) - Parallel		
		-20 kPa	-60 kPa	-90 kPa	-20 kPa	-60 kPa	-90 kPa
CAG1	1.5	1.4	3.0	4.1	0.7	1.9	2.9
CAH1	2.7	1.8	4.4	5.7	1	2.8	3.8
CAA1	7	2.7	6.2	8.3	2.4	4.7	7.1
CAB1	14	4.1	10.1	14	3.5	9.2	18.5
CAC1	24	5.6	13.7	19	4.3	13.8	24.5
CAD1	50.5	8.6	21.2	29.3	7.2	18.5	27
CAE1	94	12.6	30.8	41.7	12.3	28.2	39.6

Dimensional Data for Suction cup – FCF series

FCF Suction cup

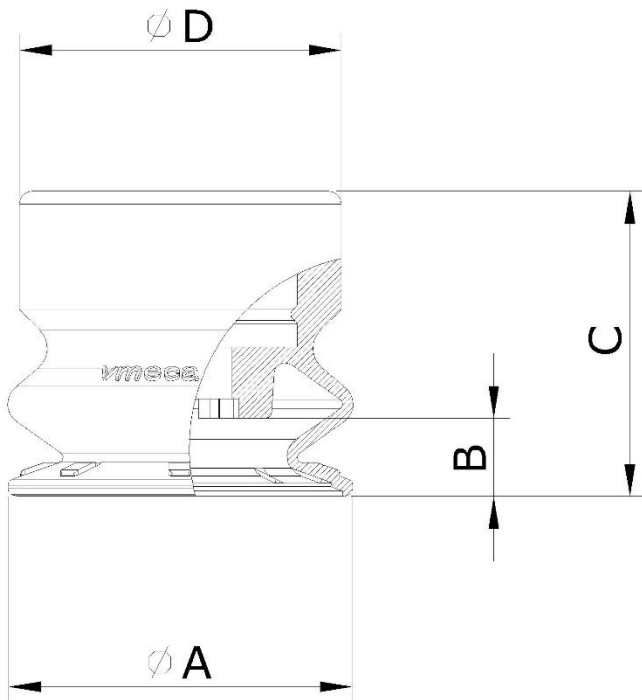


Model	Ø A	B	C	Ø D
CBH1	32	3.3	17.8	24.8
CBA1	42	4	19.5	24.8
CBB1	52	5	23.5	38.5
CBC1	62	6	26.5	38.5
CB1	72	6.5	26.5	38.5
CBD1	82.5	7.5	30	38.5
CAE1	104	9.5	30	38.5
CBF1	128	13	36.5	38.5

[Measure unit : mm[in]]

Dimensional Data for Suction cup – FCF series

VBF Suction cup

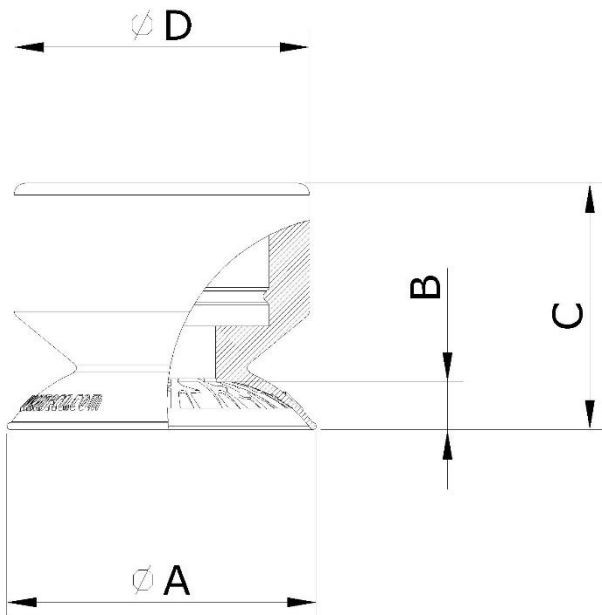


Model	Ø A	B	C	Ø D
CDF1	26.5	6	26.5	24.8
CDG1	32	7	25	24.8
CDH1	42	9.6	27.6	24.8
CDB1	51.5	12.3	32.2	38.8
CDC1	62.8	14.3	34	38.8
CDD1	83	24.6	45.6	38.8
CDE1	102	26.1	49.3	38.8

[Measure unit : mm[in]]

Dimensional Data for Suction cup – FCF series

VDF Suction cup



Model	Ø A	B	C	Ø D
CAG1	26	4	20.7	24.8
CAH1	32.2	4.3	19.8	24.8
CAA1	42.5	6.9	21.6	24.8
CAB1	53	8.4	38.8	24
CAC1	63	10.9	27	38.8
CAD1	83	13.9	30.6	38.8
CAE1	103.7	17.3	33.3	38.8

[Measure unit : mm[in]]