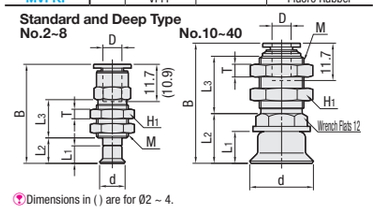
Suction Cup Fittings (With Pads)
Standard / Deep Type

■Fixed Type Up: One-Touch (Shape K)

Type	Accessory		Pad Shape	Pad Material
MVPKN	Suction Cups	VPNT	Standard	Nitrile Rubber
MVPKE		VPUE		Conductive Silicon Rubber
MVPKF		VPUF		Fluoro Rubber
MVFKN		VPFT	Deep	Nitrile Rubber
MVFKF		VPFF		Fluoro Rubber

Standard and Deep Type



Dimensions in ( ) are for Ø2 ~ 4.

M Fitting Material: Brass S Surface Treatment: Electroless Nickel Plating

RoHS 10

Part Number			D	d	L1	Shape K						Unit Price 1 ~ 50 pc(s)		
Type	Pad Material	No.				B	L2	L3	Wrench Flats H1	T	M	Mass g	MVPKN	MVPKE	MVPKF
MVPK (Standard)	N E F	2	4	2	4	28.3	6	10	8	2	M6x0.75	6			
		3	4	3	4	28.3	6	10	8	2	M6x0.75	6			
		4	4	4	4	28.3	6	10	8	2	M6x0.75	6			
		6	6	6	7	32.6	9.5	12	12	3	M10x1.0	12.5			
		8	6	8	5.5	31.1	8	12	12	3	M10x1.0	12.5			
		10	6	10	8	34.1	12	18.5	14	4	M12x1.0	21			
		15	6	15	9	35.1	13	18.5	14	4	M12x1.0	21.5			
		20	6	20	10	37.7	15.6	18	17	4	M14x1.0	36.5			

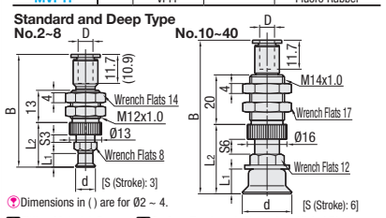
Part Number			D	d	L1	Shape K						Unit Price 1 ~ 30 pc(s)	
Type	Pad Material	No.				B	L2	L3	Wrench Flats H1	T	M	Mass g	MVFKN	MVFKF
MVFK (Deep)	N F	20	6	20	11	38.7	16.6	18	17	4	M14x1.0	36.5		
		25	6	25	12	39.7	17.6	18	17	4	M14x1.0	37		
		30	6	30	14	41.7	19.6	18	17	4	M14x1.0	39		
		40	6	40	17.5	45.2	23.1	18	17	4	M14x1.0	47		

For orders larger than indicated quantity, please check with WOS.

■Spring Type Up: One-Touch (Shape T)

Type	Accessory		Pad Shape	Pad Material
MVPTN	Suction Cups	VPNT	Standard	Nitrile Rubber
MVPTE		VPUE		Conductive Silicon Rubber
MVPTF		VPUF		Fluoro Rubber
MVFTN		VPFT	Deep	Nitrile Rubber
MVFTF		VPFF		Fluoro Rubber

Standard and Deep Type



Dimensions in ( ) are for Ø2 ~ 4.

M Fitting Material: Brass S Surface Treatment: Electroless Nickel Plating

RoHS 10

Part Number			D	d	L1	Shape T				Unit Price 1 ~ 50 pc(s)		
Type	Pad Material	No.				B	L2	Mass g	Spring Max. Load (N)	MVPTN	MVPTE	MVPTF
MVPT (Standard)	N E F	2	4	2	4	43.2	17.5	17	0.9~1.9			
		3	4	3	4	43.2	17.5	17				
		4	4	4	4	43.2	17.5	17				
		6	6	6	7	43.2	19.5	18.5				
		8	6	8	5.5	45.6	18	18.5				
		10	6	10	8	60.1	26	35.5	4.0~7.1			
		15	6	15	9	61.1	27	36				
		20	6	20	10	62.1	28	39.5	7.0~12.6			

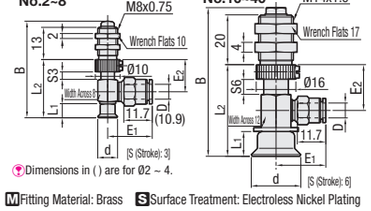
Part Number			D	d	L1	Shape T				Unit Price 1 ~ 30 pc(s)	
Type	Pad Material	No.				B	L2	Mass g	Spring Max. Load (N)	MVFTN	MVFTF
MVFT (Deep)	N F	20	6	20	11	63.1	29	39.5	7.0~12.6		
		25	6	25	12	64.1	30	40			
		30	6	30	14	66.1	32	42.5			
		40	6	40	17.5	69.6	35.5	50.5			

For orders larger than indicated quantity, please check with WOS.

■Spring Type Side: One-Touch (Shape L)

Type	Accessory		Pad Shape	Pad Material
MVPLN	Suction Cups	VPNT	Standard	Nitrile Rubber
MVPLE		VPUE		Conductive Silicon Rubber
MVPLF		VPUF		Fluoro Rubber
MVFLN		VPFT	Deep	Nitrile Rubber
MVFLF		VPFF		Fluoro Rubber

Standard and Deep Type



Dimensions in ( ) are for Ø2 ~ 4.

M Fitting Material: Brass S Surface Treatment: Electroless Nickel Plating

RoHS 10

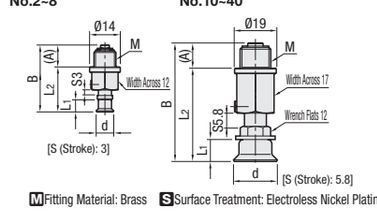
Part Number			D	d	L1	Shape L						Unit Price 1 ~ 50 pc(s)		
Type	Pad Material	No.				B	L2	E1	E2	Mass g	Spring Max. Load (N)	MVPLN	MVPLE	MVPLF
MVPL (Standard)	N E F	2	4	2	4	40	24	16.7	12.5	13.5	0.9~1.9			
		3	4	3	4	40	24	16.7	12.5	13.5				
		4	4	4	4	40	24	16.7	12.5	13.5				
		6	6	6	7	41	25	18.1	13	15.5				
		8	6	8	5.5	39.5	23.5	18.1	13	15.5				
		10	6	10	8	58.1	35	20.1	18.5	47.5	4.0~7.1			
		15	6	15	9	59.1	36	20.1	18.5	48				
		20	6	20	10	60.1	37	20.1	18.5	51.5	7.0~12.6			

Part Number			D	d	L1	Shape L						Unit Price 1 ~ 30 pc(s)	
Type	Pad Material	No.				B	L2	E1	E2	Mass g	Spring Max. Load (N)	MVFLN	MVFLF
MVFL (Deep)	N F	20	6	20	11	61.1	38	20.1	18.5	51.5	7.0~12.6		
		25	6	25	12	62.1	39	20.1	18.5	52			
		30	6	30	14	64.1	41	20.1	18.5	54			
		40	6	40	17.5	67.6	44.5	20.1	18.5	62			

■Direct-Mount Spring Type Screw (Shape S)

Type	Accessory		Pad Shape	Pad Material
MVPSN	Suction Cups	VPNT	Standard	Nitrile Rubber
MVPSE		VPUE		Conductive Silicon Rubber
MVPSF		VPUF		Fluoro Rubber
MVFSN		VPFT	Deep	Nitrile Rubber
MVFSF		VPFF		Fluoro Rubber

Standard and Deep Type



M Fitting Material: Brass S Surface Treatment: Electroless Nickel Plating

RoHS 10

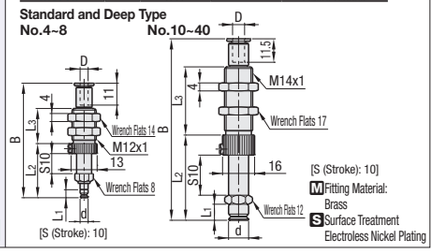
Part Number			d	L1	Shape S						Unit Price 1 ~ 30 pc(s)		
Type	Pad Material	No.			M	(A)	B	L2	Mass g	Spring Max. Load (N)	MVPSN	MVPSE	MVPSF
MVPS (Standard)	N E F	2	2	4	M10x1	9.5	32	22.5	14.5	2.3~3.9			
		3	3	4	M10x1	9.5	32	22.5	14.5				
		4	4	4	M10x1	9.5	32	22.5	14.5				
		6	6	7	M10x1	9.5	32	22.5	14.5				
		8	8	5.5	M10x1	9.5	30.5	21.0	14.5				
		10	10	8	M14x1	11.7	51	39.3	55.5	7.9~15.0			
		15	15	9	M14x1	11.7	52	40.3	56				
		20	20	10	M14x1	11.7	54	42.3	58.5				

Part Number			d	L1	Shape S						Unit Price 1 ~ 30 pc(s)	
Type	Pad Material	No.			M	(A)	B	L2	Mass g	Spring Max. Load (N)	MVFSN	MVFSF
MVFS (Deep)	N F	20	20	11	M14x1	11.7	55	43.3	58.5	7.9~15.0		
		25	25	12	M14x1	11.7	56	44.3	59			
		30	30	14	M14x1	11.7	58	46.3	61			
		40	40	17.5	M14x1	11.7	61.5	49.8	69			

■Spring Type Long Stroke (Shape R)

Type	Accessory		Pad Shape	Pad Material
MVPRN	Suction Cups	VPNT	Standard	Nitrile Rubber
MVPRE		VPUE		Conductive Silicon Rubber
MVPRF		VPUF		Fluoro Rubber
MVFRN		VPFT	Deep	Nitrile Rubber
MVFRF		VPFF		Fluoro Rubber

Standard and Deep Type



[S (Stroke): 10]

M Fitting Material: Brass S Surface Treatment Electroless Nickel Plating

RoHS 10

Part Number			D	d	L1	Shape R					Unit Price 1 ~ 20 pc(s).		
Type	Pad Material	No.				B	L2	L3	Mass g	Spring Max. Load (N)	MVPRN	MVPRE	MVPRF
MVPR (Standard)	N E F	4	4	4	4	57.2	27	17.5	20.5	0.6~1.7			
		6	4	6	7	56.7	26.5	17.5	20	0.8~2.7			
		8	4	8	5.5	55.2	25	17.5	20	0.8~2.7			
		10	6	10	8	64.6	30.5	20	36.5	2.0~5.2			
		15	6	15	9	65.6	31.5	20	37	2.0~5.2			
		20	6	20	10	68.1	34	20	42	3.3~10.0			

Part Number			D	d	L1	Shape R					Unit Price 1 ~ 20 pc(s).	
Type	Pad Material	No.				B	L2	L3	Mass g	Spring Max. Load (N)	MVFRN	MVFRF
MVFR (Deep)	N F	20	6	20	10	69.1	35	20	42	2.0~5.2		
		25	6	25	11	70.1	36	20	42.5	3.3~10.0		
		30	6	30	12	72.1	38	20	44.5	3.3~10.0		
		40	6	40	14	75.6	41.5	20	53	3.3~10.0		

For orders larger than indicated quantity, please check with WOS.

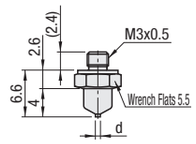
Cautions for installation of Suction Cup Fittings

For Spring Type, mount Fittings without tightening the Shaft parts with spanner, etc. Otherwise, the Shaft key groove may be deformed, and may cause malfunction.

Suction Cup Fittings (With Pads) / Suction Cup Units
Small Type

■Direct Mounting Type Small (Shape J)

Type	Accessory		Pad Shape	Pad Material
MVPJN	Suction Cups	VPJN	Small	Nitrile Rubber
MVPJS		VPJS		Conductive Silicon Rubber
MVPJF		VPJF		Fluoro Rubber



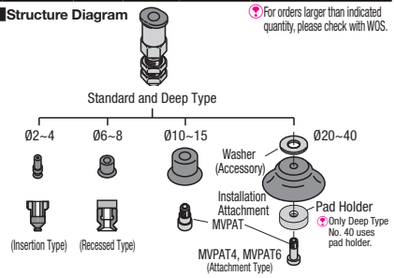
M Fitting Material: Brass S Surface Treatment: Electroless Nickel Plating

RoHS 10

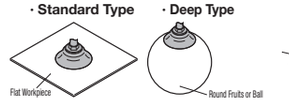
Part Number			d	Unit Price 1 ~ 20 pc(s).		
Type	Pad Material	No.		MVPJN	MVPJS	MVPJF
MVPJ (Small)	N S F	0.7	0.7			
		1	1			
		1.5	1.5			
		2	2			
		3	3			
		4	4			

For orders larger than indicated quantity, please check with WOS.

■Structure Diagram



Example
- Standard Type is suitable for suction on flat workpiece.
- Deep Type is suitable for suction on round objects.



■Applicable spherical surface size list for deep type suction cups

Applicable minimum diameter

Spherical diameter: S (mm)	Ø30	Ø40	Ø50	Ø80
Applicable Pad Sizd : d(mm)	20	25	30	40

■Suction Cup Units RoHS 10

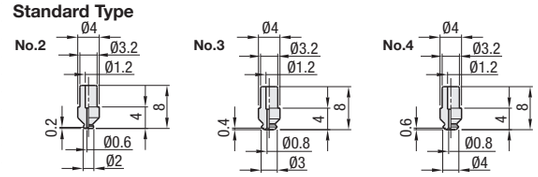
Standard Type

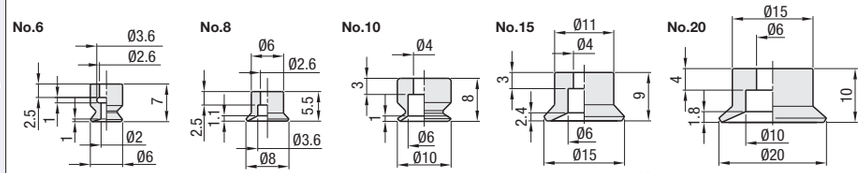
Deep Type

Small Type

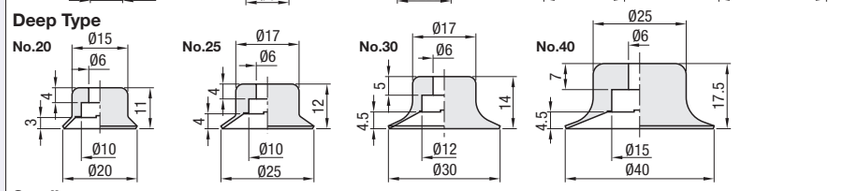
Type	Material	Pad Shape	Hardness	Color
VPNT	Nitrile Rubber	Standard	Shore A50 ~ 60	Black
VPUE	Conductive Silicon Rubber		Shore A60	Black
VPUF	Fluoro Rubber		Shore A50 ~ 60	Gray
VPFT	Nitrile Rubber	Deep	Shore A50 ~ 60	Black
VPFF	Fluoro Rubber		Shore A50 ~ 60	Gray
VPJN	Nitrile Rubber	Small	Shore A55	Black
VPJS	Conductive Silicon Rubber		Shore A60	Black
VPJF	Fluoro Rubber		Shore A55	Gray

Standard Type

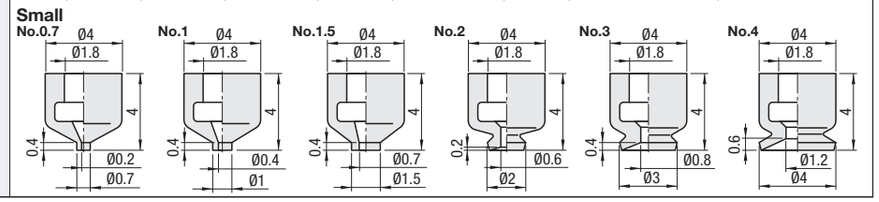




Deep Type



Small



Part Number		Applicable Vacuum Fitting No.	Mounting	VPNT		VPUE		VPUF	
Type	No.			Unit Price 1 ~ 9 pc(s).	Volume Discount Rate 10~20	Unit Price 1 ~ 9 pc(s).	Volume Discount Rate 10~20	Unit Price 1 ~ 9 pc(s).	Volume Discount Rate 10~20
VPNT VPUE VPUF	2	2	Insertion Type						
	3	3							
	4	4	Recessed Type						
	6	6							
	8	8	Attachment Type						
	10	10							
	15	15							
	20	20							

For orders larger than indicated quantity, please check with WOS.

Specifications

Type	VPNT, VPFT, VPJN	VPUE, VPJS	VPUF, VPFF, VPJF
Max. Operating Temp.	110°	180°	230°
Min. Operating Temp.	-30°	-40°	-10°
Weather Resistance	△	◎	○
Ozone Resistance	△	◎	◎
Acid Resistance	△	○	◎
Alkali Resistance	○	◎	×
Oil Resistance (Gasoline, Light Oil)	◎	△	◎
Oil Resistance (Benzene, Toluene)	△	△	◎
Surface Resistivity	-	10^4~10^6Ω/sq	-

Part Number		Applicable Vacuum Fitting MVF□	Mounting	VPFT		VPFF	
Type	No.			Unit Price 1 ~ 9 pc(s).	Volume Discount Rate 10~20	Unit Price 1 ~ 9 pc(s).	Volume Discount Rate 10~20
VPFT VPFF	20	20	Attachment Type				
	25	25					
	30	30					
	40	40					

Not available in combination with vacuum fittings (SRK, SRKN, SRKNS) on **P.1441**.

For orders larger than indicated quantity, please check with WOS.

Ordering Example: Part Number MVPKN4 VPFF30

Part Number		Applicable Vacuum Fitting MVPJ□	VPJN		VPJS		VPJF	
Type	No.		Unit Price 1 ~ 9 pc(s).	Volume Discount Rate 10~20	Unit Price 1 ~ 9 pc(s).	Volume Discount Rate 10~20	Unit Price 1 ~ 9 pc(s).	Volume Discount Rate 10~20
VPJN VPJS VPJF	0.7	0.7						
	1	1						
	1.5	1.5						
	2	2						
	3	3						
	4	4						

For orders larger than indicated quantity, please check with WOS.

Characteristic Data

• Standard and Deep Type