

SUCTION CUPS / Flat Dual Lip Structure

LF Series

Features and Strengths

Excellent lifting force in both horizontal and vertical application

Advantages

Dual lip structure to increase safety caused by lip worn and torn
Stable gripping without sliding and shaking

Application



Recommended Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) - Perpendicular			Lifting Force (Kg) - Parallel			Page
		- 20 kPa	- 60 kPa	- 90 kPa	- 20 kPa	- 60 kPa	- 90 kPa	
LF150	145.00	34.00 / 53.00	51.00 / 79.00	80.00 / 115.00	39.00	43.00	68.00	
LF200	275.00	78.00 / 150.00	115.00 / 154.00	176.00 / 224.00	65.00	98.00	149.00	
LF250	435.00	134.00 / 167.00	199.00 / 251.00	293.00 / 361.00	114.00	168.00	260.00	
LF300	666.00	219.00 / 267.00	327.00 / 384.00	472.00 / 556.00	187.00	278.00	402.00	

※ The lifting force above does not include safety factor

Examples of use

Flat Metal Sheets & Glass, Veneer Sheets, Electronic Components
Marbles

Available size option

Model	Description
LF150	Flat and Dual lip structure suction cup, Ø150
LF200	Flat and Dual lip structure suction cup, Ø200
LF250	Flat and Dual lip structure suction cup, Ø250
LF300	Flat and Dual lip structure suction cup, Ø300

LF150

Features and Strengths

Excellent lifting force in both horizontal and vertical application

Examples of use

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Marbles

Build an Ordering No.



Recommended Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) - Perpendicular		Lifting Force (Kg) - Parallel			
		- 20 kPa	- 60 kPa	- 20 kPa	- 60 kPa	- 90 kPa	- 90 kPa
LF150	145.00	34.00 / 53.00	51.00 / 79.00	80.00 / 115.00	39.00	43.00	68.00

※ The lifting force above does not include safety factor

Material Specifications

Material	Hardness Shore (°)	Color	Temperature (°C)
NBR	60	Black	-20~110
Silicone	55	Red	-70~200
White Silicone	55	Translucent White	-70~200
White Silicone (FDA)	55	Translucent White	-70~200
High temp. Silicone	50	Blue	-70~280
Conductive Silicone	70	Smoky Black	-45~90
Urethane	60	Dark Green	0~100
Mark Free	75	Black	-10~100

Material Resistance

Description	NBR	Silicone	White Silicone	High temp. Silicone	Conductive Silicone	Urethane	Mark Free
Wear Resistance	Excellent	Good	Good	Good	Good	Excellent	Good
Oil	Excellent	Poor	Poor	Poor	Poor	Excellent	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Good	Good	Fair	Good
Acid	Fair	Poor	Poor	Poor	Poor	Poor	Excellent

Dimension

[Unit : mm]



[With 1/2F fitting]

1. Suction cup	Description	Weight (g)	Symbol
	Flat and Dual lip structure suction cup, 150mm diameter, G1/2 female, Nitrile (NBR)	347	LF150-N-12F
	Flat and Dual lip structure suction cup, 150mm diameter, G1/2 female, Silicone	330.1	LF150-S-12F
	Flat and Dual lip structure suction cup, 150mm diameter, G1/2 female, White silicone	337.07	LF150-WS-12F
	Flat and Dual lip structure suction cup, 150mm diameter, G1/2 female, White silicone (FDA)	337.07	LF150-WS-12F (FDA)
	Flat and Dual lip structure suction cup, 150mm diameter, G1/2 female, High temperature silicone	343.63	LF150-HS-12F
	Flat and Dual lip structure suction cup, 150mm diameter, G1/2 female, Conductive silicone	358.83	LF150-CS-12F
	Flat and Dual lip structure suction cup, 150mm diameter, G1/2 female, Urethane	359.49	LF150-U-12F
	Flat and Dual lip structure suction cup, 150mm diameter, G1/2 female, Mark free	374.89	LF150-A-12F

LF200

Features and Strengths

Excellent lifting force in both horizontal and vertical application

Examples of use

Flat Metal Sheets & Glass, Veneer Sheets, Electronic Components Marbles

Build an Ordering No.



Recommended Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) - Perpendicular		Lifting Force (Kg) - Parallel			
		- 20 kPa	- 60 kPa	- 20 kPa	- 60 kPa	- 90 kPa	- 90 kPa
LF200	275.00	78.00 / 150.00	115.00 / 154.00	176.00 / 224.00	65.00	98.00	149.00

※ The lifting force above does not include safety factor

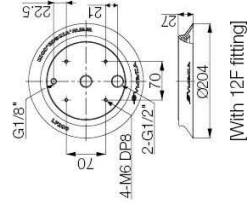
Material Specifications

Material	Hardness Shore (°)	Color	Temperature (°C)
NBR	60	Black	-20~110
Silicone	55	Red	-70~200
White Silicone	55	Translucent White	-70~200
White Silicone (FDA)	55	Translucent White	-70~200
High temp. Silicone	50	Blue	-70~280
Conductive Silicone	70	Smoky Black	-45~90
Urethane	60	Dark Green	0~100
Mark Free	75	Black	-10~100

Material Resistance

Description	NBR	Silicone	White Silicone	High temp. Silicone	Conductive Silicone	Urethane	Mark Free
Wear Resistance	Excellent	Good	Good	Good	Good	Excellent	Good
Oil	Excellent	Poor	Poor	Poor	Poor	Excellent	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Good	Good	Fair	Good
Acid	Fair	Poor	Poor	Poor	Poor	Poor	Excellent

Dimension



1. Suction cup	Description	Weight (g)	Symbol
	Flat and Dual lip structure suction cup, 200mm diameter, G1/2 female, Nitrile (NBR)	767	LF200-N-12F
	Flat and Dual lip structure suction cup, 200mm diameter, G1/2 female, Silicone	729.64	LF200-S-12F
	Flat and Dual lip structure suction cup, 200mm diameter, G1/2 female, White silicone	745.06	LF200-WS-12F
	Flat and Dual lip structure suction cup, 200mm diameter, G1/2 female, White silicone (FDA)	745.06	LF200-WS-12F (FDA)
	Flat and Dual lip structure suction cup, 200mm diameter, G1/2 female, High temperature silicone	793.15	LF200-HS-12F
	Flat and Dual lip structure suction cup, 200mm diameter, G1/2 female, Conductive silicone	759.56	LF200-CS-12F
	Flat and Dual lip structure suction cup, 200mm diameter, G1/2 female, Urethane	794.61	LF200-U-12F
	Flat and Dual lip structure suction cup, 200mm diameter, G1/2 female, Mark free	828.66	LF200-A-12F

LF250

Features and Strengths

Excellent lifting force in both horizontal and vertical application

Examples of use

Flat Metal Sheets & Glass, Veneer Sheets, Electronic Components
Marbles



Build an Ordering No.



: Pre-mounted fitting

1. Suction Cup

1. Suction cup	Description	Weight (g)	Symbol
	Flat and Dual lip structure suction cup, 250mm diameter, G1/2 female, Nitrile (NBR)	1379	LF250-N-12F
	Flat and Dual lip structure suction cup, 250mm diameter, G1/2 female, Silicone	1311.84	LF250-S-12F
	Flat and Dual lip structure suction cup, 250mm diameter, G1/2 female, White silicone	1399.56	LF250-WS-12F
	Flat and Dual lip structure suction cup, 250mm diameter, G1/2 female, White silicone (FDA)	1399.56	LF250-WS-12F (FDA)
	Flat and Dual lip structure suction cup, 250mm diameter, G1/2 female, High temperature silicone	1426.02	LF250-HS-12F
	Flat and Dual lip structure suction cup, 250mm diameter, G1/2 female, Conductive silicone	1365.62	LF250-CS-12F
	Flat and Dual lip structure suction cup, 250mm diameter, G1/2 female, Urethane	1428.64	LF250-U-12F
	Flat and Dual lip structure suction cup, 250mm diameter, G1/2 female, Mark free	1489.87	LF250-A-12F

Recommended Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) - Perpendicular		Lifting Force (Kg) - Parallel			
		- 20 kPa	- 60 kPa	- 20 kPa	- 60 kPa	- 90 kPa	
LF250	435.00	134.00 / 167.00	199.00 / 251.00	293.00 / 361.00	114.00	168.00	260.00

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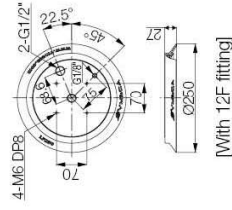
Material Specifications

Material	Hardness Shore (°)	Color	Temperature (°C)
NBR	60	Black	-20~110
Silicone	55	Red	-70~200
White Silicone	55	Translucent White	-70~200
White Silicone (FDA)	55	Translucent White	-70~200
High temp. Silicone	50	Blue	-70~280
Conductive Silicone	70	Smoky Black	-45~90
Urethane	60	Dark Green	0~100
Mark Free	75	Black	-10~100

Material Resistance

Description	NBR	Silicone	White Silicone	High temp. Silicone	Conductive Silicone	Urethane	Mark Free
Wear Resistance	Excellent	Good	Good	Good	Good	Excellent	Good
Oil	Excellent	Poor	Poor	Poor	Poor	Excellent	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Good	Good	Fair	Good
Acid	Fair	Poor	Poor	Poor	Poor	Poor	Excellent

Dimension



[Unit : mm]

LF300

Features and Strengths

Excellent lifting force in both horizontal and vertical application

Examples of use

Flat Metal Sheets & Glass, Veneer Sheets, Electronic Components



Recommended Lifting Force (Max.)

Model	Volume (cm ³)	Lifting Force (Kg) - Perpendicular		Lifting Force (Kg) - Parallel	
		- 20 kPa	- 60 kPa	- 20 kPa	- 90 kPa
LF300	666.00	219.00 / 267.00	327.00 / 384.00	472.00 / 556.00	278.00 / 402.00

※ The lifting force above does not include safety factor

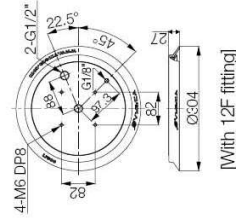
Material Specifications

Material	Hardness Shore (°)	Color	Temperature (°C)
NBR	60	Black	-20~110
Silicone	55	Red	-70~200
White Silicone	55	Translucent White	-70~200
White Silicone (FDA)	55	Translucent White	-70~200
High temp. Silicone	50	Blue	-70~280
Conductive Silicone	70	Smoky Black	-45~90
Urethane	60	Dark Green	0~100
Mark Free	75	Black	-10~100

Material Resistance

Description	NBR	Silicone	White Silicone	High temp. Silicone	Conductive Silicone	Urethane	Mark Free
Wear Resistance	Excellent	Good	Good	Good	Good	Excellent	Good
Oil	Excellent	Poor	Poor	Poor	Poor	Excellent	Excellent
Weather / Ozone	Fair	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Alcohol	Good	Good	Good	Good	Good	Fair	Good
Acid	Fair	Poor	Poor	Poor	Poor	Poor	Excellent

Dimension



[With 12F fitting]

[Unit : mm]

Build an Ordering No.

LF300 - ○ - ○ : Pre-mounted fitting

1. Suction Cup

1. Suction cup	Description	Weight (g)	Symbol
	Flat and Dual lip structure suction cup, 300mm diameter, G1/2 female, Nitrile (NBR)	1991	LF300-N-12F
	Flat and Dual lip structure suction cup, 300mm diameter, G1/2 female, Silicone	1894.03	LF300-S-12F
	Flat and Dual lip structure suction cup, 300mm diameter, G1/2 female, White silicone	1934.05	LF300-WS-12F
	Flat and Dual lip structure suction cup, 300mm diameter, G1/2 female, White silicone (FDA)	1934.05	LF300-WS-12F (FDA)
	Flat and Dual lip structure suction cup, 300mm diameter, G1/2 female, High temperature silicone	2058.89	LF300-HS-12F
	Flat and Dual lip structure suction cup, 300mm diameter, G1/2 female, Conductive silicone	1971.68	LF300-CS-12F
	Flat and Dual lip structure suction cup, 300mm diameter, G1/2 female, Urethane	2062.67	LF300-U-12F
	Flat and Dual lip structure suction cup, 300mm diameter, G1/2 female, Mark free	2151.07	LF300-A-12F