

Magnetic Gripper

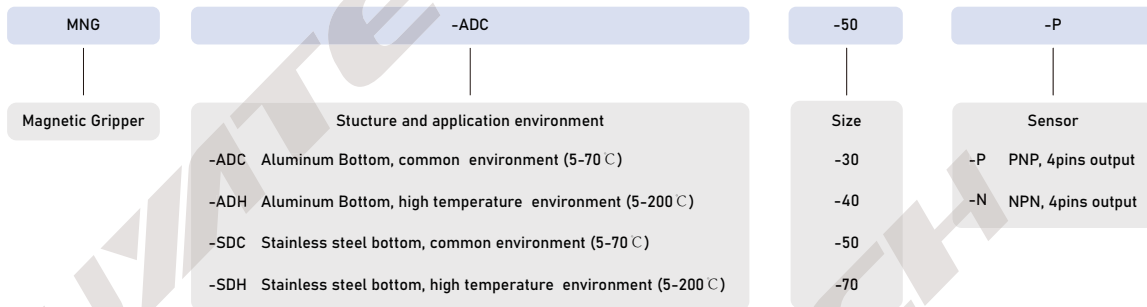


Magnetic Gripper MNG

Applications

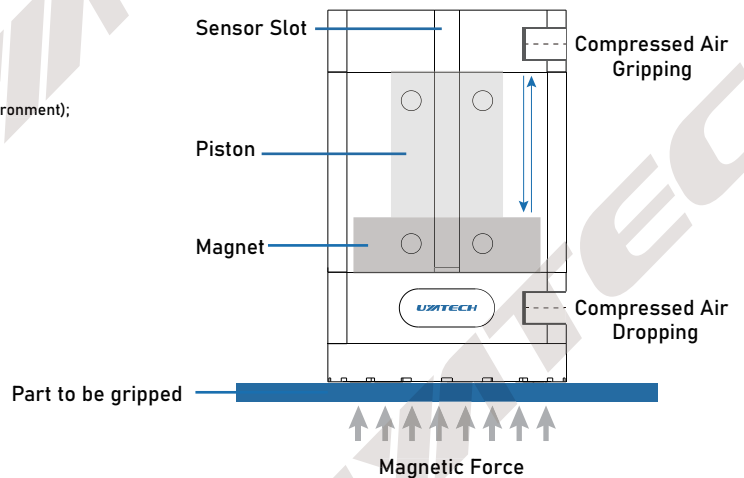
- * Handling of perforated steel plate;
- * Handling of sheet metal with holes and apertures;
- * Handling of ferromagnetic workpieces;
- * Widely used for hot-forming process;
- * Widely used for laser cutting process.

How to order



Features

- Safe gripping by a permanent magnet;
- Compact and lightweight design;
- Easily replaceable friction ring (Common environment and high temperature environment);
- Can be mounted on top or on sides;
- Optional with PNP/NPN two signals sensor (1 for gripping, 1 for dropping)
- No electrical or vacuum required;
- Gripping size for $\phi 30\text{mm}$ to $\phi 70\text{mm}$;
- Thoughtfull air port design, avoid tube interference.



Magnetic Gripper

Technical Data

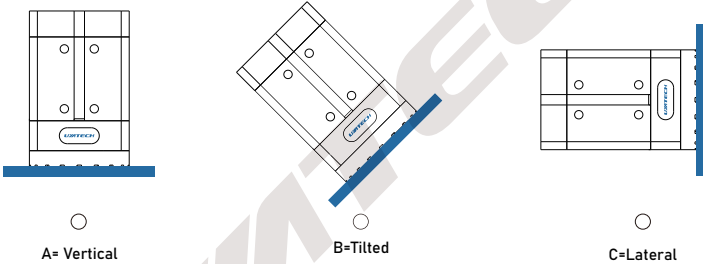
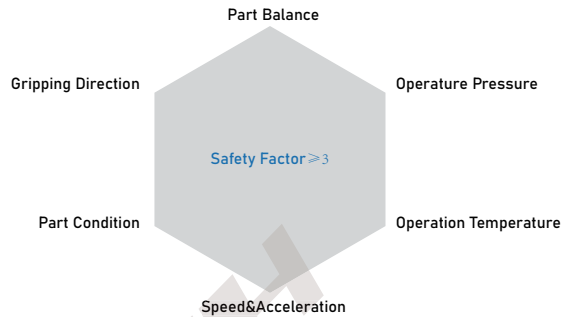
Part No.	Gripping F [N]*	Remaining F [N]	Operation Pressure [bar]	Operation Temperature [°C]	Air Port	Top Mounting	Size	Weight [g]
MNG-ADC-30	39.50	0.35	3.0...6.0	5...70	M5	G1/8	30*30*75mm	170
MNG-ADC-40	118.00	0.35	3.0...6.0	5...70	G1/8	G1/4	40*40*75mm	185
MNG-ADC-50	216.40	0.35	3.0...6.0	5...70	G1/8	G1/4	50*50*78mm	445
MNG-ADC-70	467.50	0.35	3.0...6.0	5...70	G1/8	G1/4	70*70*78mm	900
MNG-ADH-30	39.50	0.35	3.0...6.0	5...200	M5	G1/8	30*30*75mm	170
MNG-ADH-40	118.00	0.35	3.0...6.0	5...200	G1/8	G1/4	40*40*75mm	185
MNG-ADH-50	216.40	0.35	3.0...6.0	5...200	G1/8	G1/4	50*50*78mm	445
MNG-ADH-70	467.50	0.35	3.0...6.0	5...200	G1/8	G1/4	70*70*78mm	900
MNG-SDC-30	39.50	0.35	3.0...6.0	5...70	M5	G1/8	30*30*75mm	181
MNG-SDC-40	118.00	0.35	3.0...6.0	5...70	G1/8	G1/4	40*40*75mm	195
MNG-SDC-50	216.40	0.35	3.0...6.0	5...70	G1/8	G1/4	50*50*78mm	507
MNG-SDC-70	467.50	0.35	3.0...6.0	5...70	G1/8	G1/4	70*70*78mm	999
MNG-SDH-30	39.50	0.35	3.0...6.0	5...200	M5	G1/8	30*30*75mm	181
MNG-SDH-40	118.00	0.35	3.0...6.0	5...200	G1/8	G1/4	40*40*75mm	195
MNG-SDH-50	216.40	0.35	3.0...6.0	5...200	G1/8	G1/4	50*50*78mm	507
MNG-SDH-70	467.50	0.35	3.0...6.0	5...200	G1/8	G1/4	70*70*78mm	999

*Note:

The gripping force is a static value under our test without safety factor based on a low carbon steel plate with a thickness of 3mm. For system configuration, a safety factor S=3 must be applied.

Magnetic Gripper

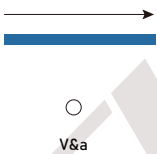
How to Get Best Gripping Force



Gripping Direction:
 * Vertical gripping is the best gripping way.
 * If the gripper is used for tilted or lateral gripping, more safety factor should be applied.



Part Condition:
 * Best part condition is mild steel (C% < 0.25%) with the thickness of 3mm; Gripping force will be lower when C% goes high.
 - Smoth and dry surface is best for gripping. Any debris or oil, water will affect the gripping force.



Speed&Acceleration:
 - High speed will make the whole movement shaking or a danger of part dropping.
 - Sudden speed-up or stop will make the whole movement in a danger of part dropping.



Operation Temperature

Operation Temperature:
 - With FRC-MNG-30/40/50/70 friction ring, gripper can be operated at a common environment(5...70 C)
 - With FRH-MNG-30/40/50/70 friction ring, gripper can be operated at a high temperature environment(5...200 C)
 - Magnetic force will deduce when the temperature is more than 200 C.
 -Less than 5 C may affect the greese inside the gripper.

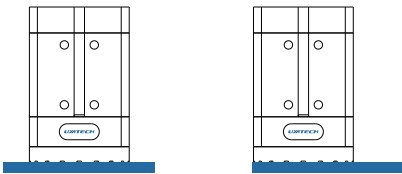
Magnetic Gripper



3.0...6.0bar

Operation Pressure:

* Compressed air should be 3.0...6.0bar, lower or high pressure may affect the reaction time of the gripper.



Always consider part balance when set the gripping position.

Calculation of Gripping Force



$$N * F \geq S M g$$

F= gripping force of single gripper

N= number of magnetic gripper

M= mass of part

g= acceleration of gravity

S= safty factor (must ≥ 3)

Magnetic Gripper

Safety Issues



Take into account attraction and projectile risk within 10cm of the magnetic gripper.



There is a risk of interference with the functioning of active implanted devices, e.g. pacemakers. Maintain a safety distance of at least 25cm.



Take into account the general hazards that can occur when lifting loads. Do not use the magnetic gripper in places where falling loads could injure persons. Provide adequate guards and instructions for the users.



Always set the magnetic gripper to off position in storage.



Credit cards, watches etc. can get irreparably damaged if they come in proximity of the magnetic.

Warranty

The warranty on your magnetic gripper will be void if it has been improperly overhauled, modifications have been made, the label has been removed or if the magnetic gripper is used improperly, incorrectly. If in doubt about maintenance or use, contact UYATECH.

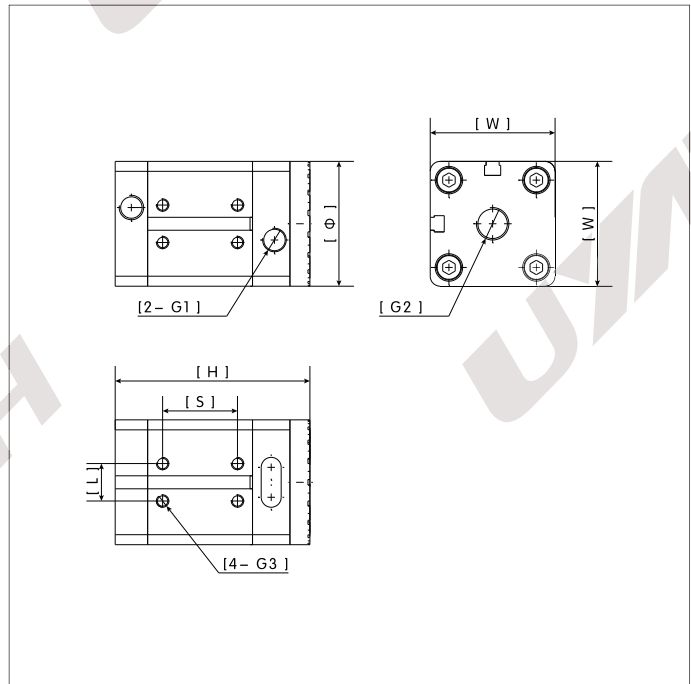
MNG-SDC | Magnetic Gripper



Features

- Material: Aluminum, Stainless steel, NBR
- Operation Temperature: 5...70 C
- Surface Treatment: Anodized with sand blasting, polishing
- Operation Press: 3.0...6.0bar
- Function: Compressed air controls magnet, for handling sheet metal

Dimensions




Ordering Information

Part No.	Ordering Code	Description	φ	W	H	G1	G2	G3	L	S	Weight
MNG-SDC-30	61624101	Size 30	30	30	75	M5	G1/8	M4	13	28	0.19
MNG-SDC-40	61624102	Size 40	40	40	75	G1/8	G1/4	M4	14	28	0.31
MNG-SDC-50	61624103	Size 50	50	50	78	G1/8	G1/4	M5	15	30	0.51
MNG-SDC-70	61624104	Size 70	70	70	78	G1/8	G1/4	M5	34.8	30	0.93


Relative Products

Ball Connector




EFA-MNG-SS

Ball Connector




EFA-MNG-DS

Apple Core Connector



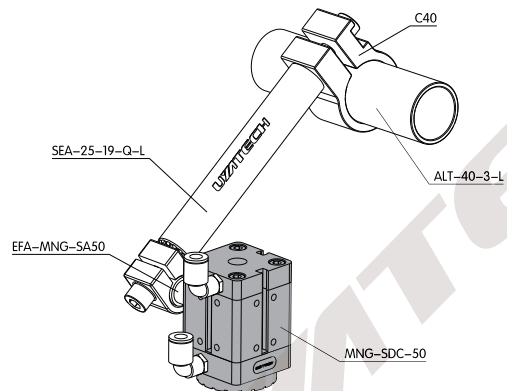
EFA-MNG-SA

Apple Core Connector



EFA-MNG-DA

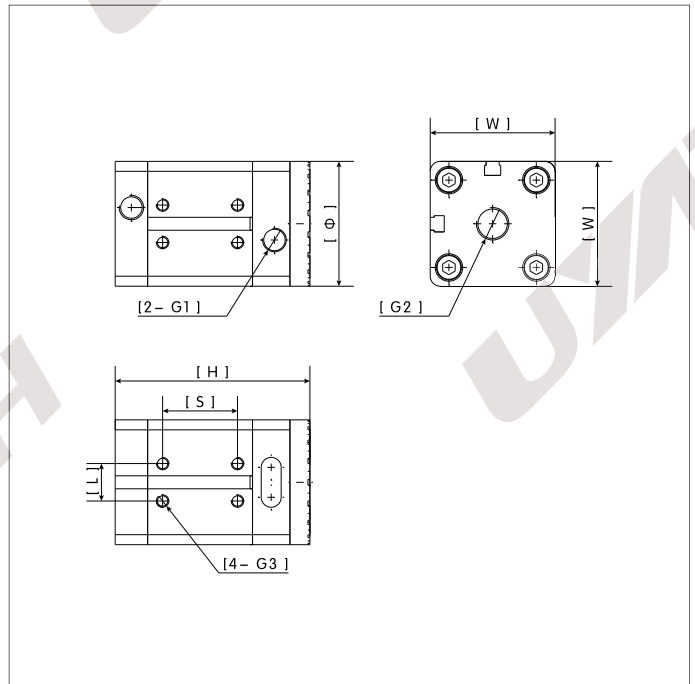
Application



MNG-SDH | Magnetic Gripper



Dimensions



Features

- Material: Aluminum, Stainless steel, High temperature rubber
- Operation Temperature: 5...200 C
- Surface Treatment: Anodized with sand blasting, polishing
- Operation Press: 3.0...6.0bar
- Function: Compressed air controls magnet, for handling sheet metal

Ordering Information

Part No.	Ordering Code	Description	φ	W	H	G1	G2	G3	L	S	Weight
MNG-SDH-30	61624105	Size 30	30	30	75	M5	G1/8	M4	13	28	0.19
MNG-SDH-40	61624106	Size 40	40	40	75	G1/8	G1/4	M4	14	28	0.31
MNG-SDH-50	61624107	Size 50	50	50	78	G1/8	G1/4	M5	15	30	0.51
MNG-SDH-70	61624108	Size 70	70	70	78	G1/8	G1/4	M5	34.8	30	0.93

Relative Products

Apple Core Connector



EFA-MNG-SA

Mtg. for Cylindrial Part



EFA-MNG-RA

Mtg. for Uneven Part



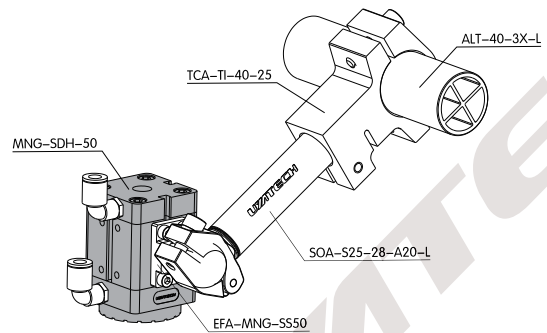
EFA-MNG-UA

Sensor



SEN-MNG...

Appilcation



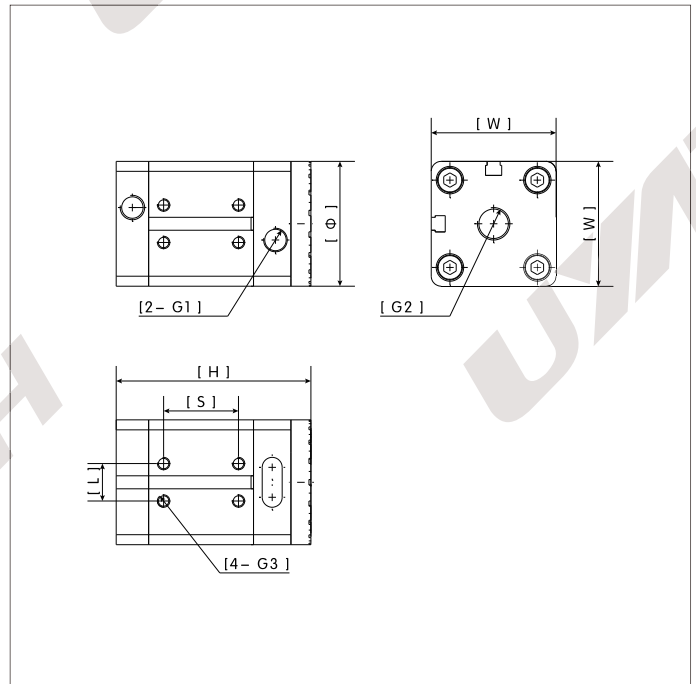
MNG-ADC | Magnetic Gripper



Features

- Material: Aluminum, Stainless steel, NBR
- Operation Temperature: 5...70 C
- Surface Treatment: Anodized with sand blasting
- Operation Press: 3.0...6.0bar
- Function: Compressed air controls magnet, for handling sheet metal

Dimensions



Ordering Information

Part No.	Ordering Code	Description	φ	W	H	G1	G2	G3	L	S	Weight
MNG-ADC-30	61622101	Size 30	30	30	75	M5	G1/8	M4	13	28	0.19
MNG-ADC-40	61622102	Size 40	40	40	75	G1/8	G1/4	M4	14	28	0.31
MNG-ADC-50	61622103	Size 50	50	50	78	G1/8	G1/4	M5	15	30	0.51
MNG-ADC-70	61622104	Size 70	70	70	78	G1/8	G1/4	M5	34.8	30	0.93

Relative Products

Ball Connector

EFA-MNG-SS

Ball Connector

EFA-MNG-DS

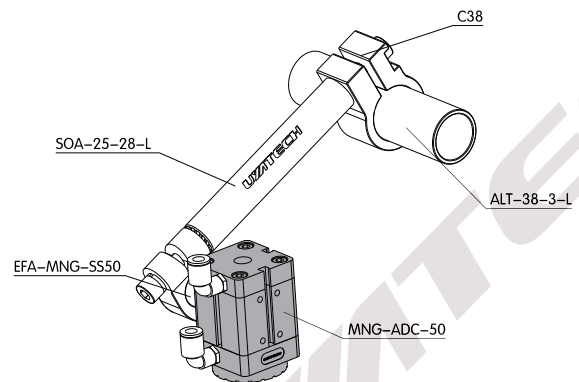
Mtg. for Cylindrial Part

EFA-MNG-RA

Sensor

SEN-MNG...

Appilcation



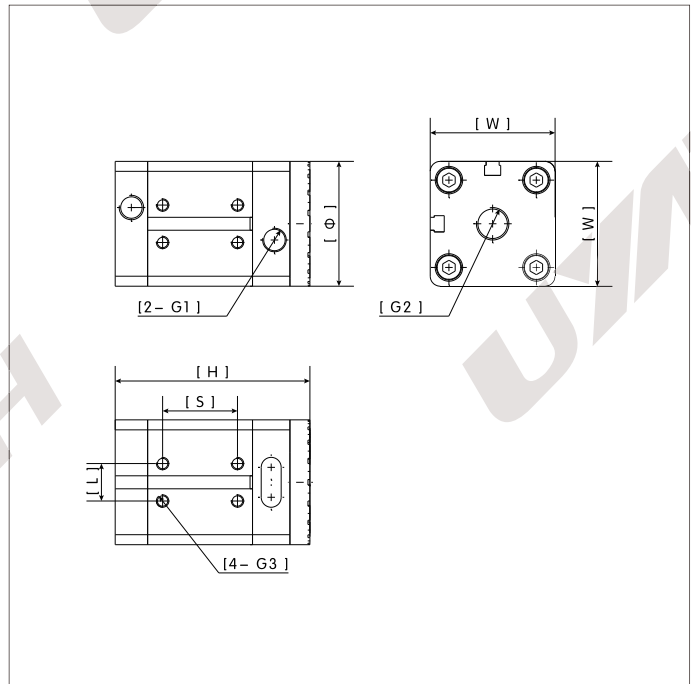
MNG-ADH | Magnetic Gripper



Features

- Material: Aluminum, Stainless steel, High temperature rubber
- Operation Temperature: 5...200 C
- Surface Treatment: Anodized with sand blasting
- Operation Press: 3.0...6.0bar
- Function: Compressed air controls magnet, for handling sheet metal

Dimensions



Ordering Information

Part No.	Ordering Code	Description	φ	W	H	G1	G2	G3	L	S	Weight
MNG-ADH-30	61622105	Size 30	30	30	75	M5	G1/8	M4	13	28	0.19
MNG-ADH-40	61622106	Size 40	40	40	75	G1/8	G1/4	M4	14	28	0.31
MNG-ADH-50	61622107	Size 50	50	50	78	G1/8	G1/4	M5	15	30	0.51
MNG-ADH-70	61622108	Size 70	70	70	78	G1/8	G1/4	M5	34.8	30	0.93

Relative Products

Ball Connector

EFA-MNG-SS

Mtg. for Uneven Part

EFA-MNG-UA

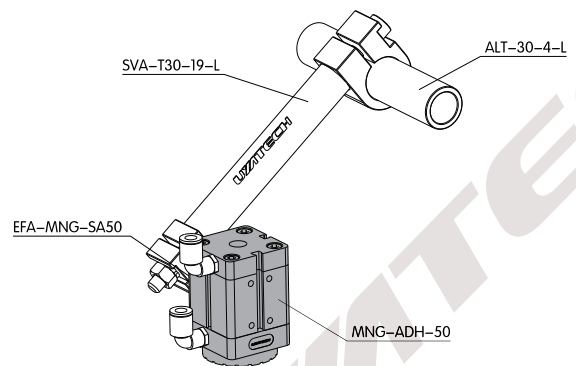
Apple Core Connector

EFA-MNG-SA

Apple Core Connector

EFA-MNG-DA

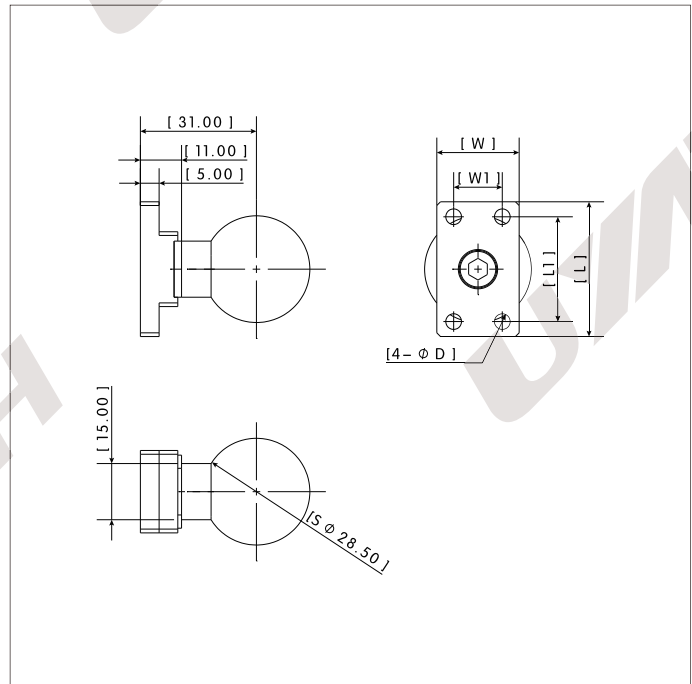
Application



EFA-MNG-SS | Ball Connector



Dimensions



Features

Material: Aluminum

Working Temperature: -20...80°C

Surface Treatment: Anodized with sand blasting

Function: For connecting magnetic gripper

Ordering Information

Part No.	Ordering No.	Description	D	L	W	L1	W1	Weight
EFA-MNG-SS30	61627401	For Size 30 Gripper	4.2	36	22	28	13	0.066
EFA-MNG-SS40	61627402	For Size 40 Gripper	4.2	36	23	28	14	0.067
EFA-MNG-SS50	61627403	For Size 50 Gripper	5.2	40	25	30	15	0.076
EFA-MNG-SS70	61627404	For Size 70 Gripper	5.2	40	45	30	34.8	0.094

Relative Products

SDC Gripper




MNG-SDC

Swivel Arm



SVA-T

SDH Gripper



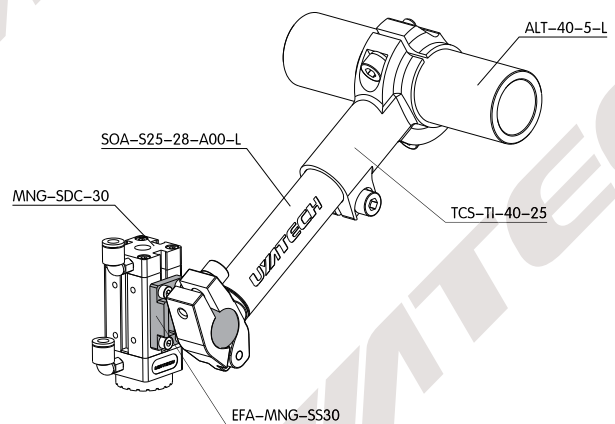
MNG-SDH

Extension Arm



SOA-S

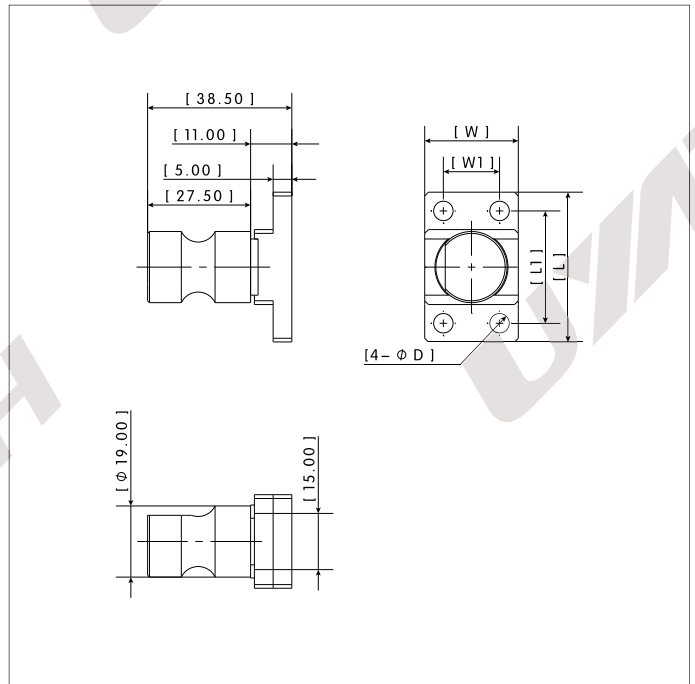
Application



EFA-MNG-SA | Apple Core Connector



Dimensions



Features

Material: Aluminum

Working Temperature: -20...80 C

Surface Treatment: Anodized with sand blasting

Function: For connecting magnetic gripper

Ordering Information

Part No.	Ordering No.	Description	D	L	W	L1	W1	Weight
EFA-MNG-SA30	61627405	For Size 30 Gripper	4.2	36	22	28	13	0.051
EFA-MNG-SA40	61627406	For Size 40 Gripper	4.2	36	23	28	14	0.052
EFA-MNG-SA50	61627407	For Size 50 Gripper	5.2	40	25	30	15	0.061
EFA-MNG-SA70	61627408	For Size 70 Gripper	5.2	40	45	30	34.8	0.076

Relative Products

SDC Gripper



MNG-SDC

SDH Gripper



MNG-SDH

Swivel Arm



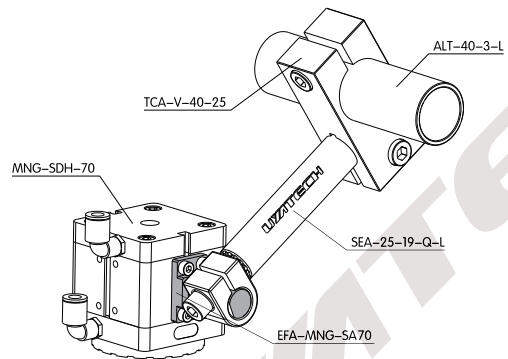
SVA-T

Extension Arm

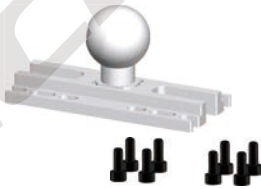


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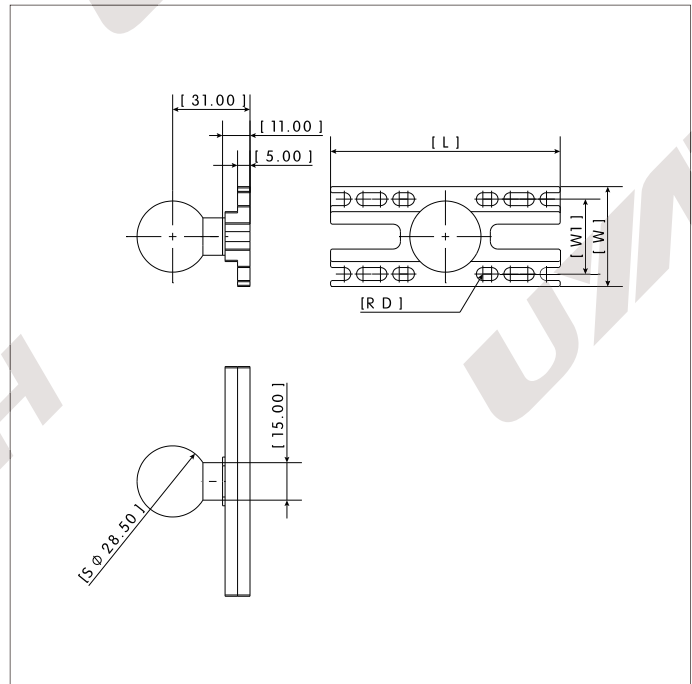
Application



EFA-MNG-DS | Ball Connector



Dimensions



Features

Material: Aluminum

Working Temperature: -20...80 °C

Surface Treatment: Anodized with sand blasting

Function: For connecting 2 magnetic grippers

Ordering Information

Part No.	Ordering No.	Description	D	L	W	W1	Weight
EFA-MNG-DS30	61627409	For Size 30 Gripper	2.1	56	36	28	0.088
EFA-MNG-DS40	61627410	For Size 40 Gripper	2.1	76	36	28	0.098
EFA-MNG-DS50	61627411	For Size 50 Gripper	2.6	92	40	30	0.124
EFA-MNG-DS70	61627412	For Size 70 Gripper	2.6	130	40	30	0.142

Relative Products

SDC Gripper



MNG-SDC

Extension Arm



SOA-S

SDH Gripper



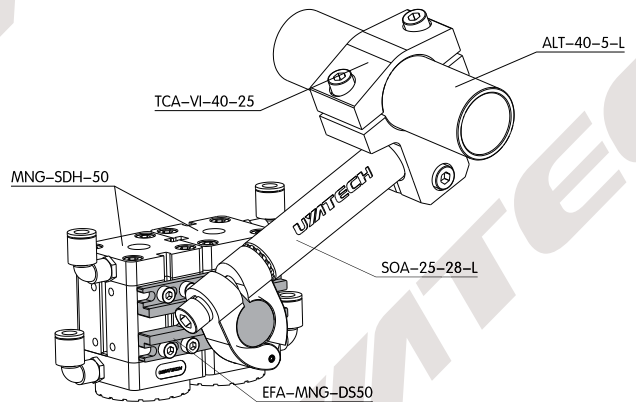
MNG-SDH

Extension Arm

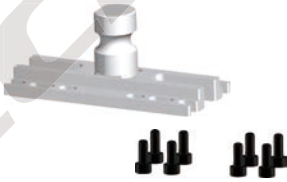


SOA-25-28-L

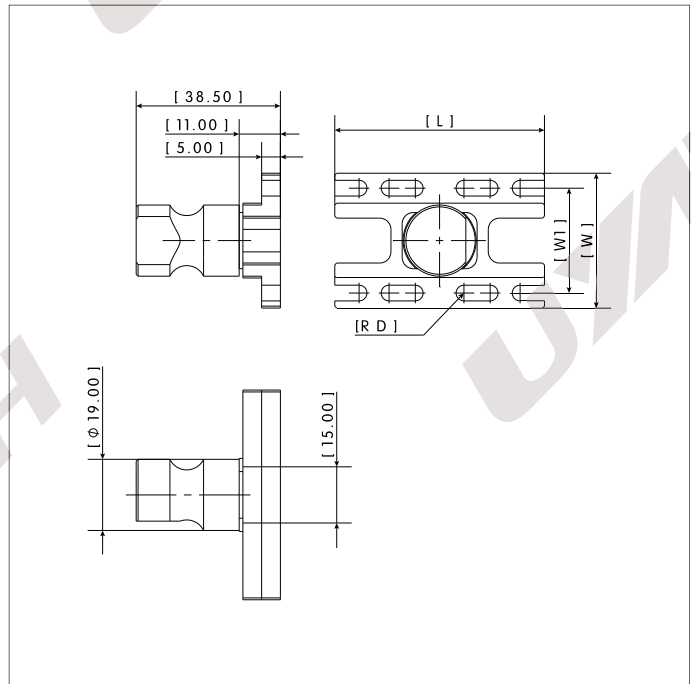
Appilcation



EFA-MNG-DA | Apple Core Connector



Dimensions



Features

Material: Aluminum

Working Temperature: -20...80 °C

Surface Treatment: Anodized with sand blasting

Function: For connecting 2 magnetic grippers

Ordering Information

Part No.	Ordering No.	Description	D	L	W	W1	Weight
EFA-MNG-DA30	61627413	For Size 30 Gripper	2.1	56	36	28	0.069
EFA-MNG-DA40	61627414	For Size 40 Gripper	2.1	76	36	28	0.079
EFA-MNG-DA50	61627415	For Size 50 Gripper	2.6	92	40	30	0.106
EFA-MNG-DA70	61627416	For Size 70 Gripper	2.6	130	40	30	0.125

Relative Products

SDC Gripper

MNG-SDC

Swivel Arm

SVA-T

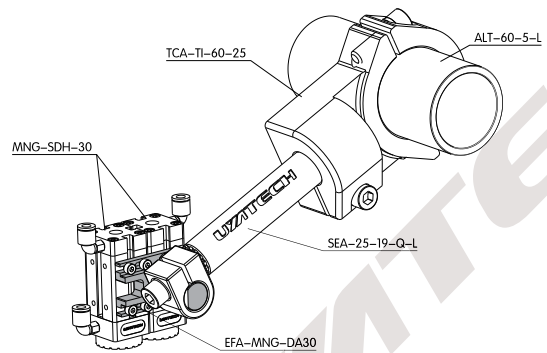
SDH Gripper

MNG-SDH

Extension Arm

SEA-25-19-Q-L

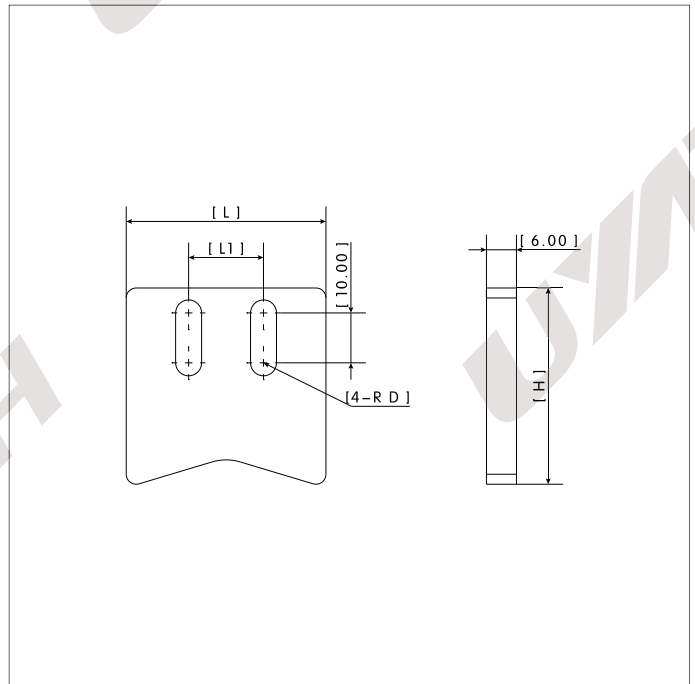
Appilcation



EFA-MNG-RA | Mtg. for Cylindrical Parts



Dimensions



Features

- Material: Steel
- Working Temperature: -20...80 °C
- Surface Treatment: Zinc Anodized
- Function: Mounting with magnetic gripper for handling cylindrical parts

Ordering Information

Part No.	Ordering No.	Description	D	L	H	L1	Weight
EFA-MNG-RA30	61627417	For Size 30 Gripper	2.1	26	37.4	13	0.038
EFA-MNG-RA40	61627418	For Size 40 Gripper	2.1	36	37.7	14	0.055
EFA-MNG-RA50	61627419	For Size 50 Gripper	2.6	40	39.3	15	0.063
EFA-MNG-RA70	61627420	For Size 70 Gripper	2.6	60	39.6	34.8	0.098

Relative Products

SDC Gripper

MNG-SDC

ADC Gripper

MNG-ADC

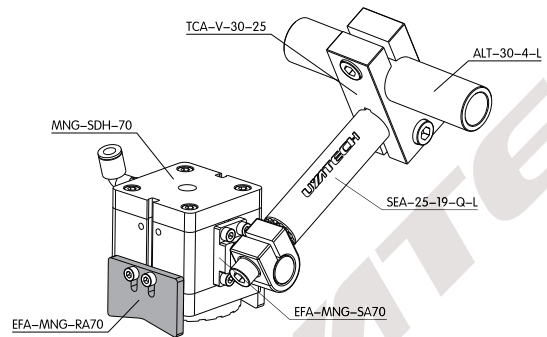
SDH Gripper

MNG-SDH

ADH Gripper

MNG-ADH

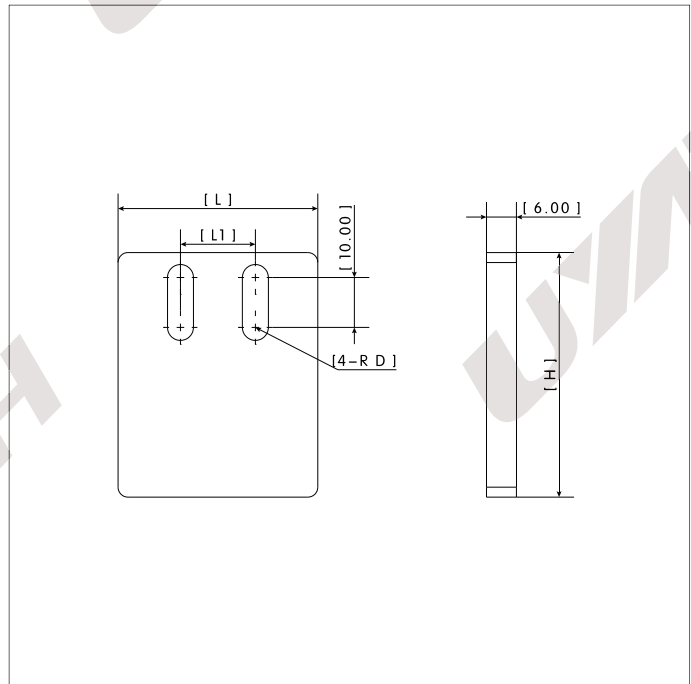
Application



EFA-MNG-UA | Mtg. for Uneven Parts



Dimensions



Features

Material: Steel

Working Temperature: -20...80 C

Surface Treatment: Zinc Anodized

Function: Mounting with magnetic gripper for handling uneven parts

Ordering Information

Part No.	Ordering No.	Description	D	L	H	L1	Weight
EFA-MNG-UA30	61627421	For Size 30 Gripper	2.1	26	47	13	0.052
EFA-MNG-UA40	61627422	For Size 40 Gripper	2.1	36	47	14	0.074
EFA-MNG-UA50	61627423	For Size 50 Gripper	2.6	40	49	15	0.085
EFA-MNG-UA70	61627424	For Size 70 Gripper	2.6	60	49	34.8	0.132

Relative Products

SDC Gripper

MNG-SDC

ADC Gripper

MNG-ADC

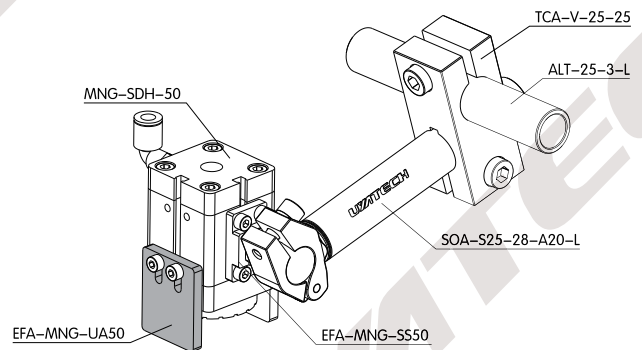
SDH Gripper

MNG-SDH

ADH Gripper

MNG-ADH

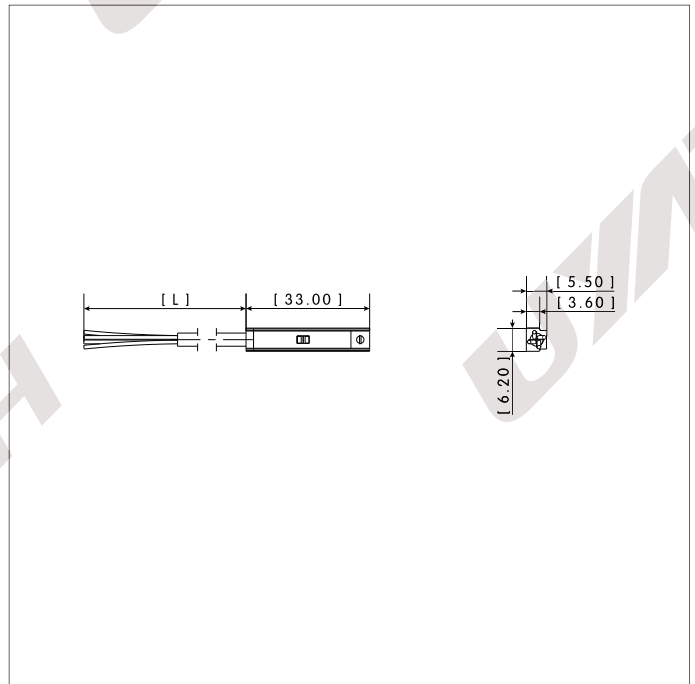
Appilcation



SEN-MNG | Magnetic Gripper Snesor



Dimensions



Features

Material: Steel

Working Temperature: -20...80 °C

Surface Treatment: Zinc Anodized

Function: Mounting with magnetic gripper for handling uneven parts

Ordering Information

Part No.	Ordering No.	Description	L (Cable Length)
SEN-MNG-C-P	74326201	For common environment, PNP signal, 4 pins	2m
SEN-MNG-C-N	74326202	For common environment, NPN signal, 4 pins	2m
SEN-MNG-H-P	74326203	For high temperature environment, PNP signal, 4 pins	2m
SEN-MNG-H-N	74326204	For high temperature environment, PNP signal, 4 pins	2m

Relative Products

SDC Gripper

MNG-SDC

ADC Gripper

MNG-ADC

SDH Gripper

MNG-SDH

ADH Gripper

MNG-ADH

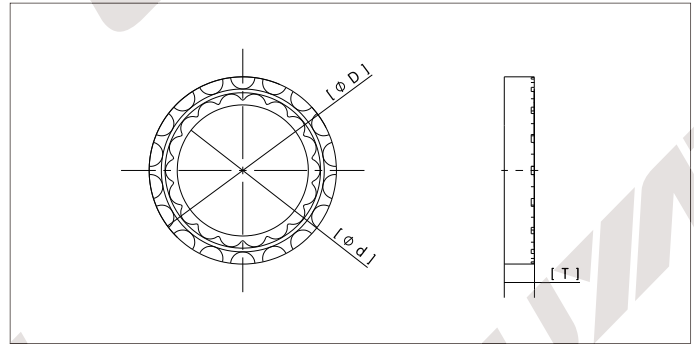
Application

- Cable Information:
- Brown ● - - - - - +
 - Blue ● - - - - - -
 - Black ● - - - - - Signal 1
 - White ○ - - - - - Signal 2
- Light Indicator:
- Green Light On ■ Magnetic Gripping
 - Yellow Light On ■ Magnetic Loosing

FRC-MNG | Friction Ring



Dimensions



Ordering Information

Part No.	Ordering No.	D	d	T	Material	Weight
FRC-MNG-30	33517201	30	22	6.8	NBR	0.001
FRC-MNG-40	33517202	40	30	6.8	NBR	0.002
FRC-MNG-50	33517203	50	35	8	NBR	0.005
FRC-MNG-70	33517204	70	51	8	NBR	0.009
FRH-MNG-30	33517205	30	22	6.8	HTR	0.001
FRH-MNG-40	33517206	40	30	6.8	HTR	0.002
FRH-MNG-50	33517207	50	35	8	HTR	0.005
FRH-MNG-70	33517208	70	51	8	HTR	0.009