

Accessories
for MULTI CUPLA

AUTO CLAMP UNIT for MULTI CUPLA

To retain reaction force of MULTI CUPLA

For MAS Type /
MAT Type /
MALC Type

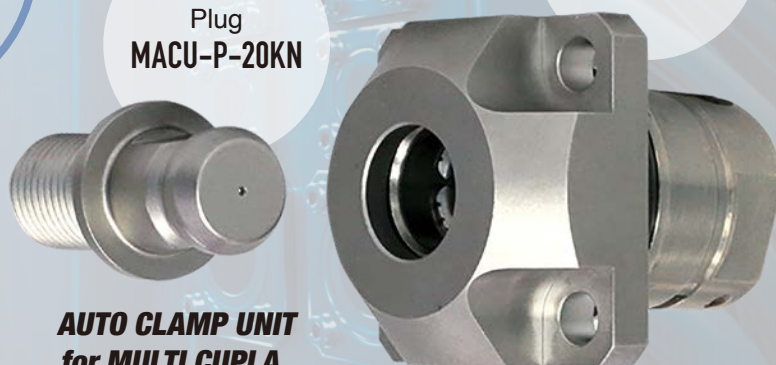
Retains the
reaction force
of MULTI CUPLA
(20 kN per set)

Equipped with
an air-driven
lock/unlock
mechanism

Ready with
mounting hole
for proximity
sensor

No need for external holding
device on the machine side

Socket
MACU-S-20KN

Plug
MACU-P-20KN

**AUTO CLAMP UNIT
for MULTI CUPLA**

*Please prepare a sensor available in the market.

Accessories
for MULTI CUPLA

Adapter for MULTI CUPLA MALC Type

To reduce plate thickness and to simplify the machining of the plate

For MALC Type

MULTI CUPLA MALC Type
Thread screw mount type

By using adapter...

The machining
of the plate is
simplified

The thickness
of the plate is
reduced

**Adapter
for MULTI CUPLA
MALC Type**


For MAS Type /
MAT Type / MALC Type

AUTO CLAMP UNIT for MULTI CUPLA

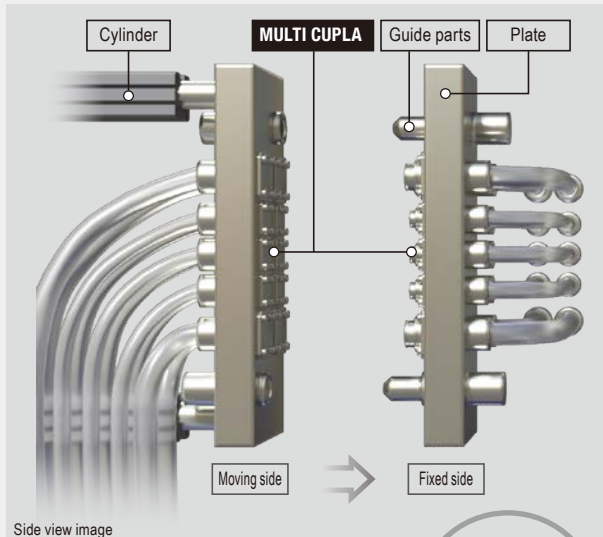
Retains the reaction force of MULTI CUPLA

- Retains the reaction force of MULTI CUPLA (20 kN per set)
- Equipped with a lock/unlock mechanism driven by air
- Ready with mounting hole for proximity sensor

*Please prepare a sensor available in the market.



Retaining by cylinders

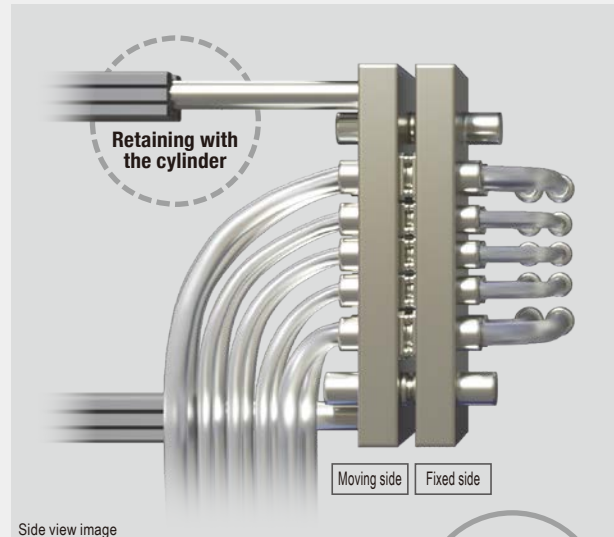


Side view image

Connection force by the cylinder (above picture)

Model: MALC-3S×MALC-3P×6 ports
Model: MALC-4S×MALC-4P×4 ports

Required
connection force
(unpressurized)
2180 N



Side view image

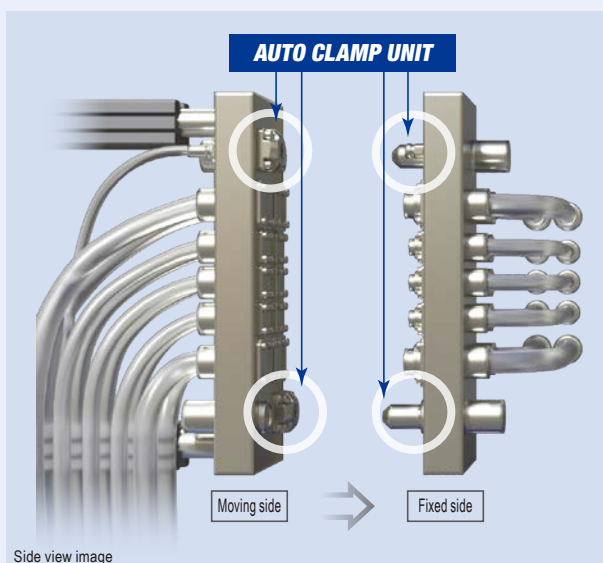
Holding force by the cylinder (above picture)

Model: MALC-3S×MALC-3P×6 ports
Model: MALC-4S×MALC-4P×4 ports

The holding force depends on the size of MULTI CUPLA, the pressure of the fluid, and the number of ports.

Required holding
force after connection
(When the fluid
pressure is 5.0 MPa)
33080 N

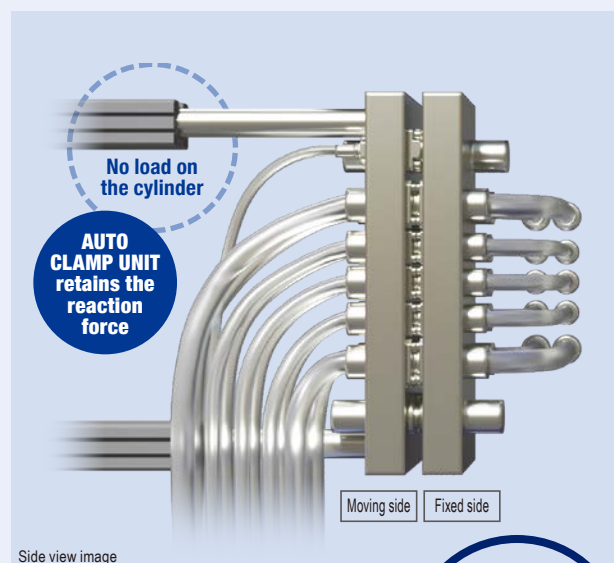
Retaining by AUTO CLAMP UNIT



Side view image

Applicable MULTI CUPLA

MULTI CUPLA MAS Type / MAT Type	MULTI CUPLA MALC-SP Type
MULTI CUPLA MALC-01 Type	MULTI CUPLA MALC-HSP Type



Side view image

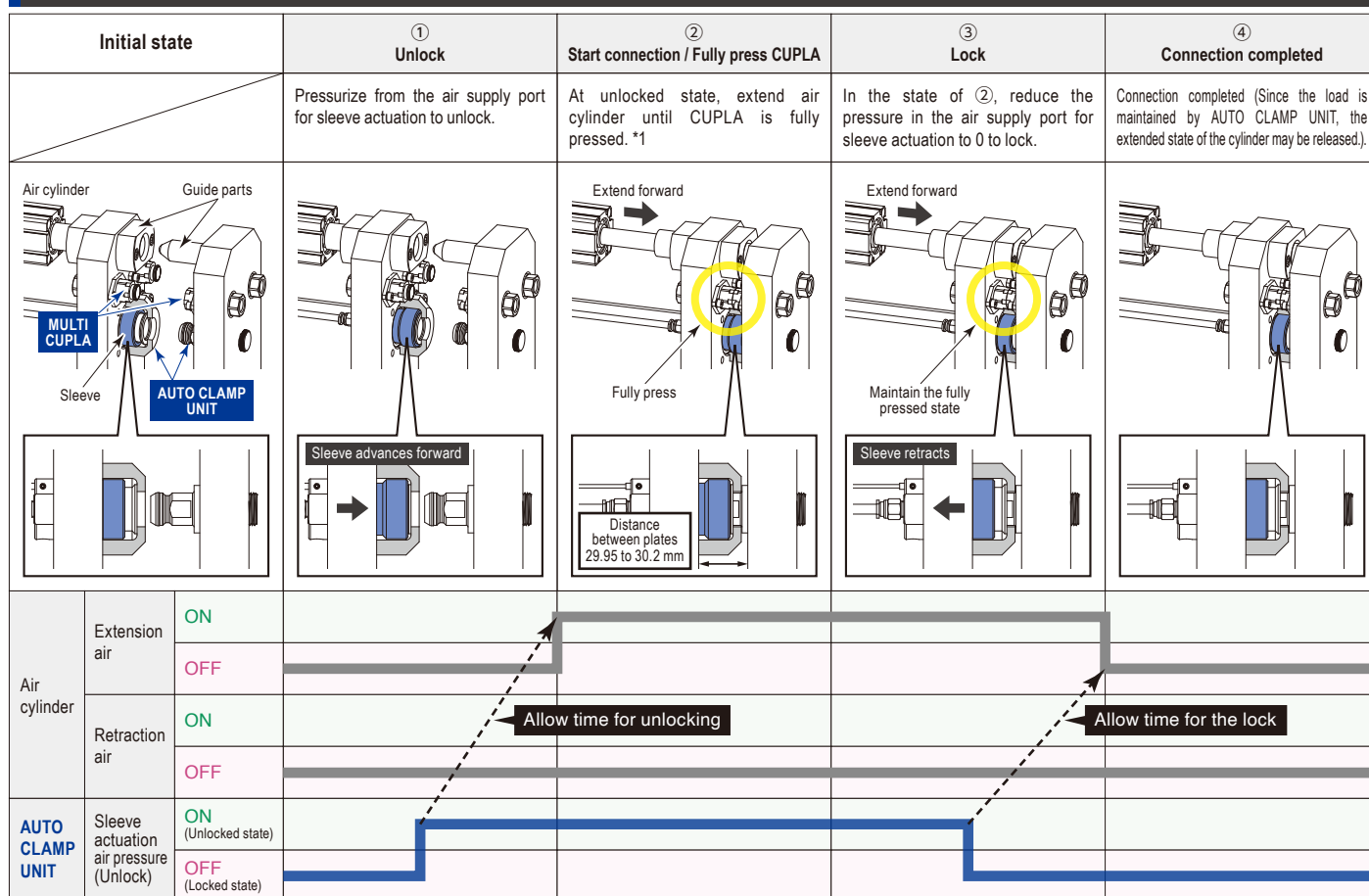
**AUTO CLAMP UNIT retains the
reaction force of MULTI CUPLA**

Please arrange AUTO CLAMP UNIT considering of the holding force and balance.

The holding force
by AUTO CLAMP UNIT
(per 1 set)
**20 kN
(20000 N)**

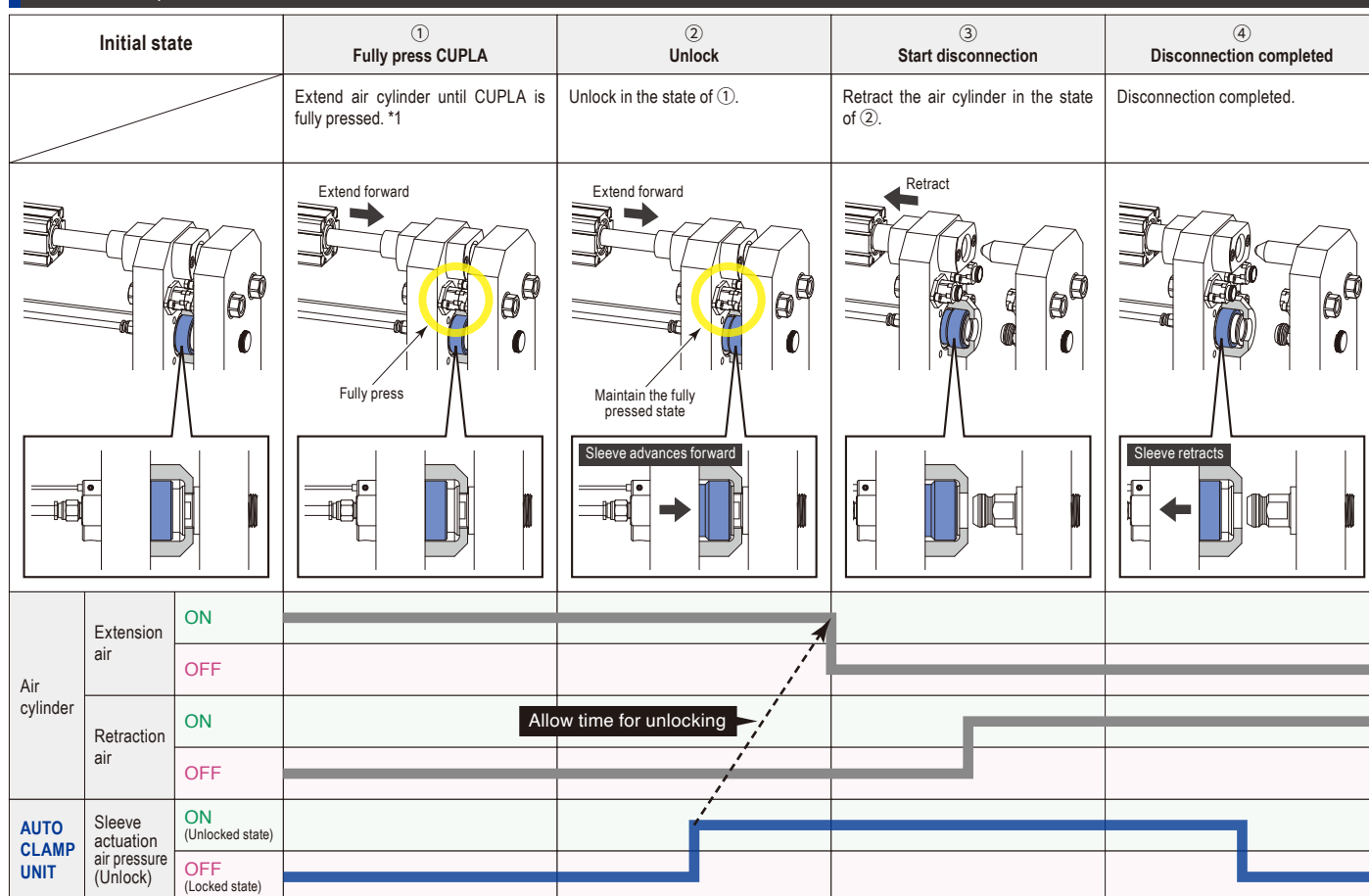
AUTO CLAMP UNIT Operating procedure (The procedure when using an air cylinder for the power mechanism is shown as an example.)

Connection procedure



*1: Be sure to unlock when extending the air cylinder forward. If the air cylinder is extended forward while it is locked, AUTO CLAMP UNIT may be damaged.

Disconnection procedure



*1: To prevent accidental disconnection, the structure is such that the lock will not release unless tensile force is removed. Refer to "Precautions when connecting and disconnecting sockets and plugs" on page 4. Be sure to extend the air cylinder to fully connect CUPLA to remove the tensile force applied to AUTO CLAMP UNIT.

AUTO CLAMP UNIT Proximity sensor installation

By attaching a proximity sensor*, the locked state can be detected.

*Please prepare a sensor available in the market.

Attachable proximity sensor (Shielded type)

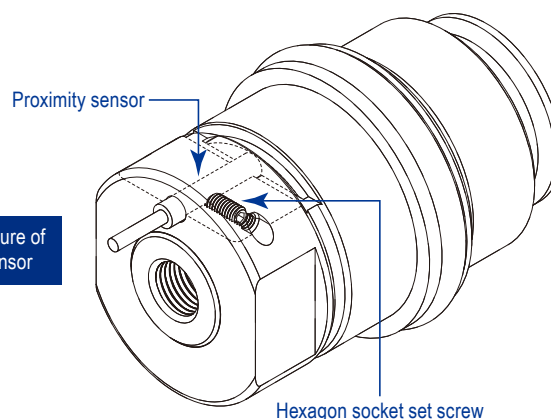
The locked state of this product can be detected by sensing the position of the sleeve by mounting a proximity sensor (Shielded type) available in the market.

Refer to the table below for the proximity sensor, select and check whether it can be used at your end.

Do not use non-shielded proximity sensors. It may not detect the locked state by not being able to detect the sleeve position.

Sensor head dimensions

Outer diameter	3.5 to 4 mm
Length	12.5 mm or more



Installation figure of proximity sensor

How to mount proximity sensor

Mount the proximity sensor before attaching AUTO CLAMP UNIT to the plate.

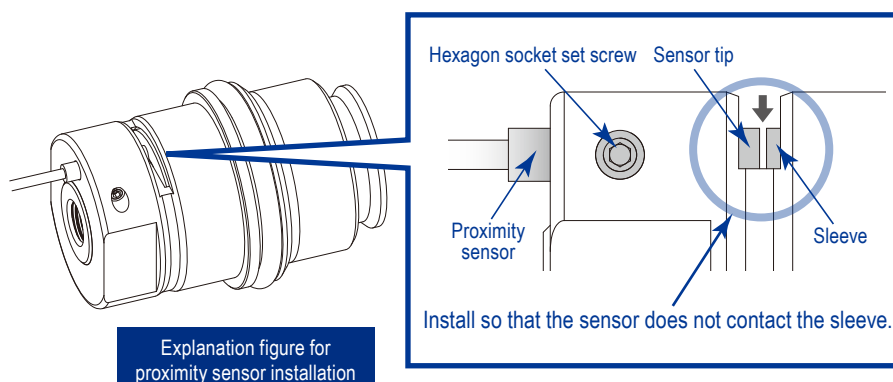
How to mount

Insert the proximity sensor into the mounting part, position the proximity sensor by using shims or spacers so that it does not contact the sleeve (*1), and fix it with the hexagon socket set screw (*2, *3). (Refer to the figure on the right)

- *1: If the proximity sensor is fixed in contact with the sleeve, the sensor may be damaged when the sleeve is activated.
- *2: The hexagon socket set screw for fixing is not included with this product. Please refer to the table below for selection.
- *3: Those that exceed 8 mm in length may interfere with the mounting hole of this product and cannot be mounted.

Specifications for Hexagon socket set screw

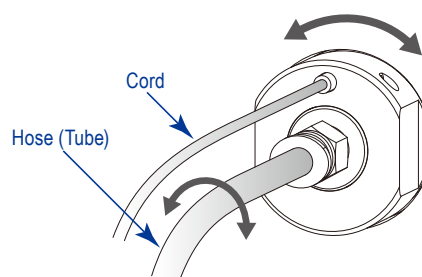
Size (Thread)	M3×0.5
Length	8 mm or less
Tip shape	Recommended by sensor manufacturer
Maximum tightening torque	



Explanation figure for proximity sensor installation

Depending on the piping conditions of the air supply port for sleeve actuation, the socket cover may sway along with the hose or tube during operation of connection and/or disconnection.

To prevent wire breakage, fix the proximity sensor cord in a slack state. (Refer to the figure on the right)

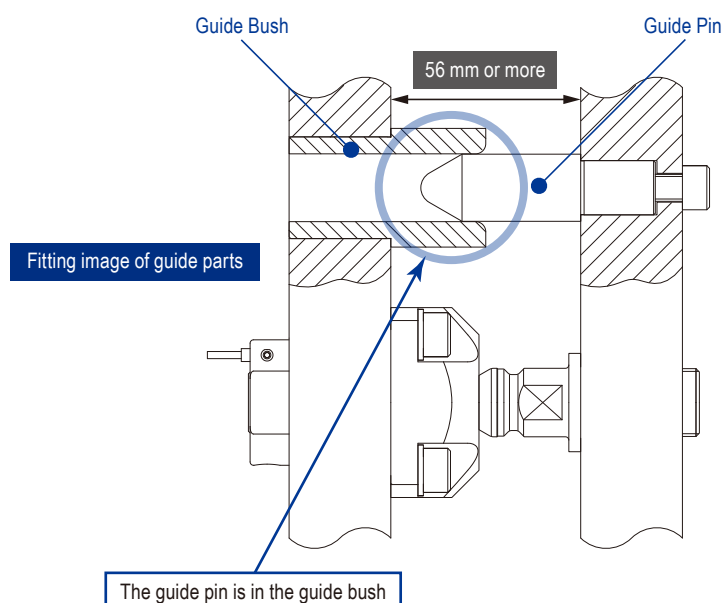


Swaying image of socket cover

AUTO CLAMP UNIT Guide Pin, Guide Bush / Precautions when connecting and disconnecting sockets and plugs**About guide parts**

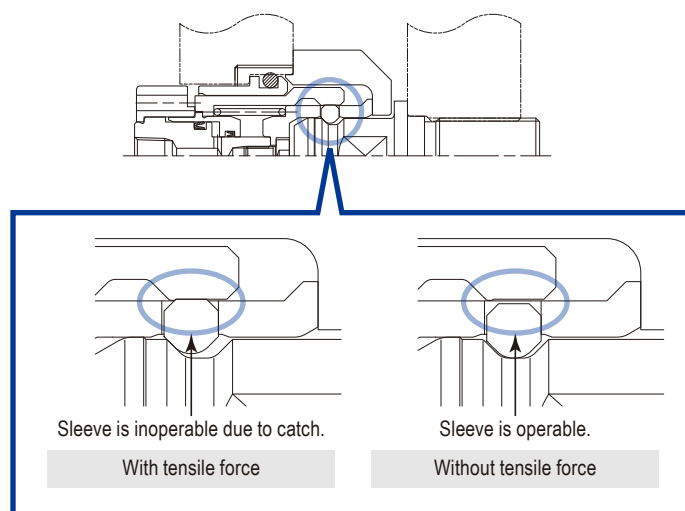
AUTO CLAMP UNIT cannot be used as a guide part for connecting MULTI CUPLA.

To prevent misconnection, be sure to install and use guiding parts such as guide pins and guide bushes. Before connecting the socket and plug (distance between plates is 56 mm or more), make sure that guiding parts such as guide pins and guide bushes are connected and positioned. (Refer to the figure on the right)

**Precautions when connecting and disconnecting sockets and plugs**

In order to prevent unexpected disconnection, when tensile force exists, the locking chuck gets caught in the step of the inner diameter of the sleeve and does not move even when pressurized.

When actuating the sleeve, remove the tensile force applied to this product before doing so.



AUTO CLAMP UNIT Outer dimensions / Applications (thread)

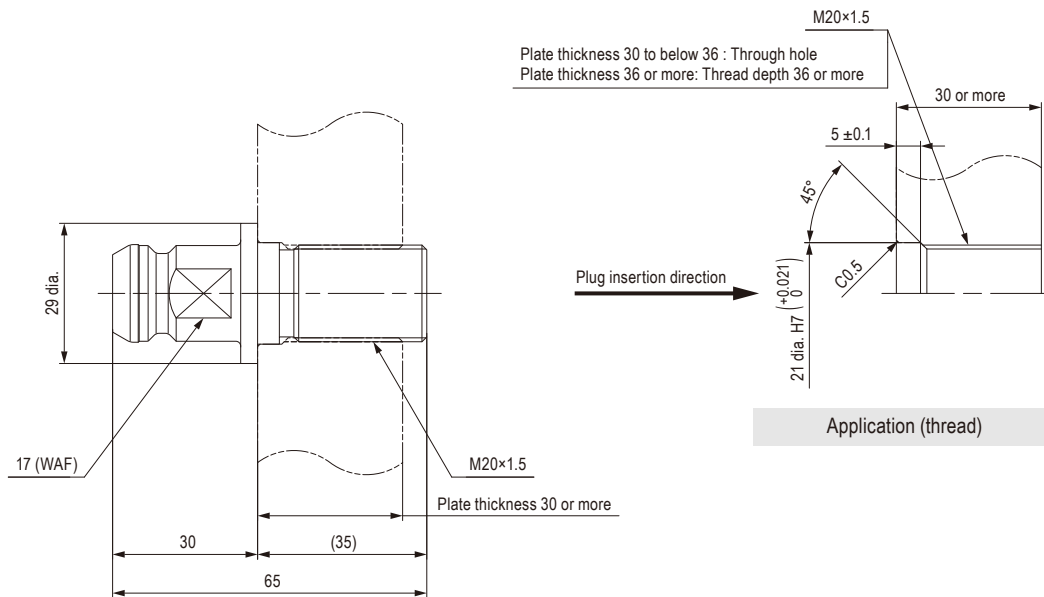
Outer dimensions / Application (thread)

Keep the center axis eccentricity of the Socket and Plug within 0.6 mm diameter. WAF : WAF stands for width across flats.

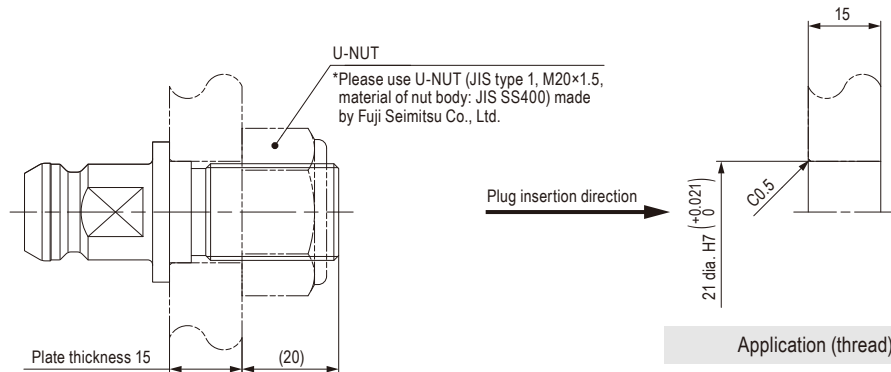
Plug Model: MACU-P-20KN

Mass: 155 g

When the plate thickness is 30 or more



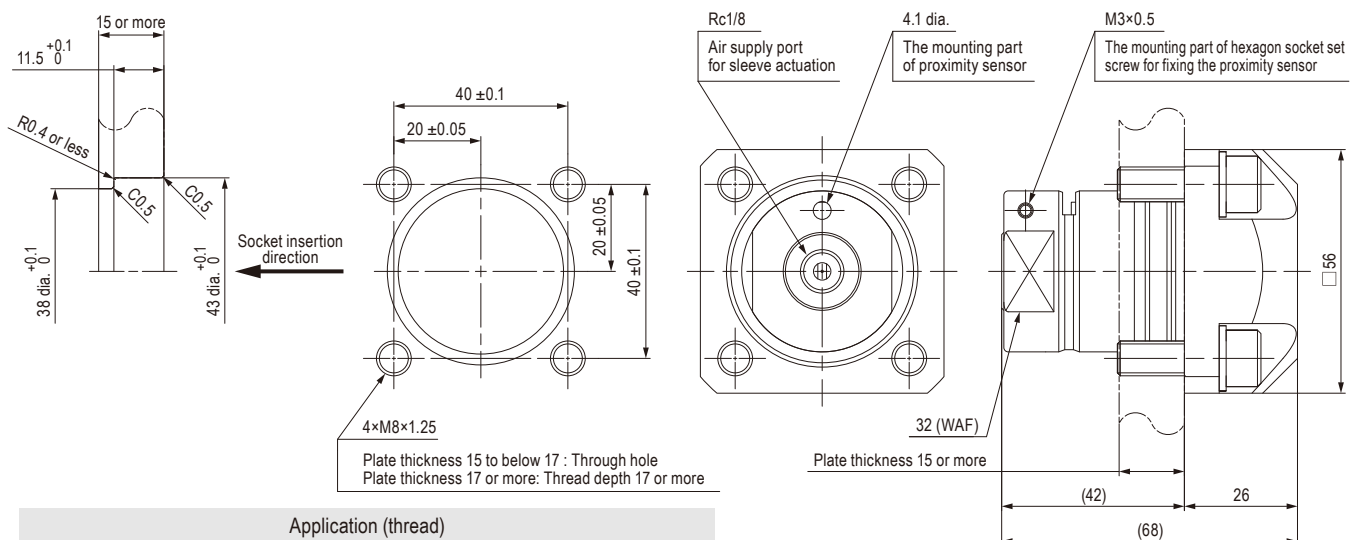
When the plate thickness is 15



Dimensions (mm)

Socket Model: MACU-S-20KN

Mass: 707 g



Dimensions (mm)

AUTO CLAMP UNIT Specifications / Applicable MULTI CUPLA / Safety precautions

Specifications

Model		Socket		Plug
		MACU-S-20KN		MACU-P-20KN
Body material (Surface treatment)		Special steel, Brass (Nickel plated)		Special steel (Nickel plated)
Size (Thread)		Air supply port for sleeve actuation	Hexagon socket head cap screw	M20×1.5
		Rc1/8	M8×1.25	
Maximum acceptable load *1		20 kN		
Allowable eccentricity *2		Within 0.6 mm dia.		
Ambient temperature range *3		0°C to +80°C		
Air supply port for sleeve actuation	Working pressure range *3, 4	0.35 MPa to 0.7MPa, 3.5 kgf/cm ² to 7.0 kgf/cm ² , 3.5 bar to 7.0 bar, 51 PSI to 102 PSI		
	Seal material	Nitrile rubber		
	Applicable fluids *5	Air		

*1: This shows the acceptable value of the load that is constantly applied to one set of AUTO CLAMP UNIT.

*2: The allowable eccentricity shown indicates the eccentricity of the center axes of the socket and plug of AUTO CLAMP UNIT.

The allowable eccentricity of each MULTI CUPLA varies depending on the product. Install within the allowable eccentricity of each product.

*3: The operating speed of the sleeve differs depending on the ambient temperature and the pressure applied to the air supply port.

*4: This indicates the pressure range in which the sleeve actuates when pressurized from the air supply port for sleeve actuation.

*5: Do not use anything other than air as the fluid.

Maximum tightening torque

Nm {kgf·cm}

Size (Thread)	Rc1/8	M8×1.25	M20×1.5
Torque	5 {51}	22 {224}	120 {1224}

Applicable MULTI CUPLA

MAS Type	MAT Type	MALC-01 Type	MALC-SP Type	MALC-HSP Type
----------	----------	--------------	--------------	---------------

Safety precautions

- Read without fail and observe the "Safety Guide" in the Quick Connect Couplings General Catalog.
- For the cautions of the fluid to be used, please contact the manufacturer of the fluid.
- Observe the warnings and cautions below. If not observed, it could result in leakage of the fluid or damage to this product and cause burns, injury to the body by dangerous fluid such as chemical agent or high temperature fluid. It could also result in serious damage to the product or other machinery by the damage of this product. Stop using this product immediately if this happens.

⚠ WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in personal injury or property damage.

⚠ WARNING

- Do not use beyond the maximum acceptable load.
- Do not apply any artificial impact, bend or tension.
- Do not connect or disconnect AUTO CLAMP UNIT while MULTI CUPLA is under dynamic pressure or residual pressure is remaining.

⚠ CAUTION

- After installation, be sure to check the operation of connection and disconnection of this product (Sleeve lock at connection and unlock at disconnection) before using.
- Do not operate the sleeve outside the working pressure range.
- Connect and disconnect according to the appropriate operating procedure (Refer to "Operating procedure" on page 2.).

SAFETY GUIDE

- Only use AUTO CLAMP UNIT within the ambient temperature range.
- This product is a clamping unit for maintaining connection of MULTI CUPLA (see "Applicable MULTI CUPLA" above).
- This product cannot be used as a guide part for connecting MULTI CUPLA. To prevent misconnection, be sure to install and use guiding parts such as guide pins and guide bushes. For the specifications and precautions of MULTI CUPLA, refer to our Quick Connect Couplings General Catalog or the instructions attached to MULTI CUPLA.
- Before connecting the socket and plug (distance between plates is 56 mm or more), make sure that guiding parts such as guide pins and guide bushes are connected and positioned (See "About guide parts" on page 4.).
- Install the socket and plug within ø0.6 mm of eccentricity of their center axes.
- To connect / disconnect this product, fully press MULTI CUPLA (distance between plates 29.95 to 30.2 mm) and pressurize from the air supply port and operate the sleeve. To prevent accidental disconnection, the sleeve does not move even if pressure is applied from the air supply port when tensile force is applied.
- Refer to our Quick Connect Couplings General Catalog and make sure that the total of the holding force when connecting MULTI CUPLA (total of "Minimum load required to maintain connection" described in the catalog) and the tensile force due to the weight (for vertical use) of the connecting mate (Plate, MULTI CUPLA, AUTO CLAMP UNIT, Hose, etc.) does not exceed the maximum acceptable load of AUTO CLAMP UNIT.
- Select the material and thickness of the plate for AUTO CLAMP UNIT and MULTI CUPLA considering of the reaction force received from MULTI CUPLA (=load of MULTI CUPLA at connected state) and tightening torque of the mounting screw.
- When attaching MULTI CUPLA to a plate, consider the counter force of each MULTI CUPLA (= holding force of MULTI CUPLA at connection) in order to prevent poor connection / disconnection of MULTI CUPLA due to inclination or warp of the plate and leakage at connection, and arrange it so that it is not biased from AUTO CLAMP UNIT.
- Apply a fluoropolymer resin sealant tape on male tapered pipe threads to ensure no leak.
- Do not exceed the recommended maximum torque when installing AUTO CLAMP UNIT.
- Do not use AUTO CLAMP UNIT in areas or environment where dust such as sand or metal powder can get into AUTO CLAMP UNIT.
- Do not let paint stick to AUTO CLAMP UNIT.
- Do not drop AUTO CLAMP UNIT.
- Connecting AUTO CLAMP UNIT directly to vibrating or impacting equipment will result in reduced lifetime.
- Do not use this product for any purpose other than maintaining the connection of MULTI CUPLA.
- Do not disassemble AUTO CLAMP UNIT.
- Check AUTO CLAMP UNIT regularly. Stop using immediately if anything unusual is found on AUTO CLAMP UNIT.

For MALC Type

Adapter for MULTI CUPLA MALC Type

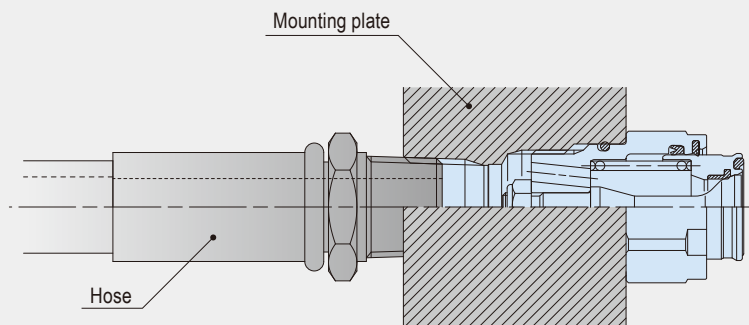
It reduces plate thickness and simplifies the machining of the plate for MULTI CUPLA MALC Type (Thread screw mount type)

- Simplifies the machining of the plate
- Reduces thickness of the plate

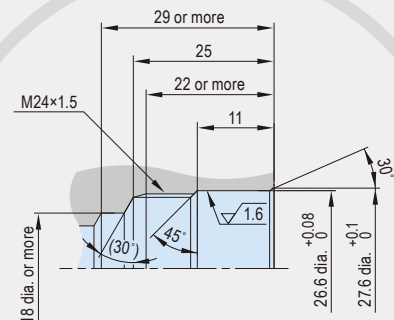


MULTI CUPLA

Installation example of MALC-3S



Adapter for MULTI CUPLA MALC Type (Thread screw mount)



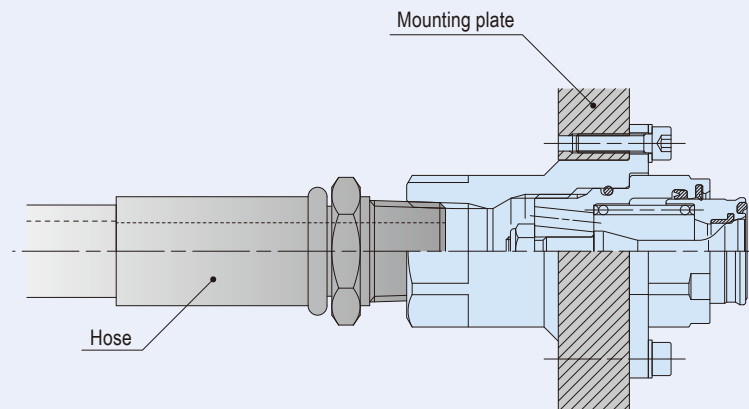
Dimensions for mounting MALC-3S

Dimensions (mm)

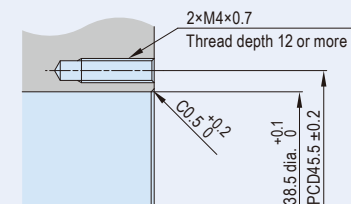


For MALC Type Installation example of adapter

***Reduces total cost
of equipment***



MULTI CUPLA MALC Type
Thread screw mount + Adapter



Dimensions for mounting MALC-3SP-4FAD

Dimensions (mm)

Adapter for MLC Type Specifications

Specifications (MLC-01 Type and MLC-SP Type)

Type (Adapter)		Adapter for MALC-01 Type	Adapter for MALC-SP Type				
Material (Adapter)		Brass	Stainless Steel				
Model (Adapter)		MALC-01SP-2FAD	MALC-1SP-2FAD	MALC-2SP-3FAD	MALC-3SP-4FAD	MALC-4SP-6FAD	MALC-6SP-8FAD
Working pressure range *1, 3	When connected	1.0 MPa, 10 kgf/cm ² , 10 bar, 145 PSI	7.0 MPa, 71 kgf/cm ² , 70 bar, 1015 PSI	5.0 MPa, 51 kgf/cm ² , 50 bar, 725 PSI			
	Individual plug or socket			2.0 MPa, 20 kgf/cm ² , 20 bar, 290 PSI			
Working temperature range *2, *3		-20°C to +80°C	-20°C to +180°C				
Applicable fluids *3		Air, water	Water, air, hydraulic oil				
Allowable eccentricity		1.4 mm dia.	1.4 mm dia.				
Allowable inclination *3		0.5 degrees	0.5 degrees				
Acceptable distance between plates *3		0 to 0.5 mm	0 to 0.5 mm				

*1: This shows the normal allowable fluid pressure under continuous use. Exceeding the working pressure may cause damage and leakage.

*2: This shows the minimum and maximum working temperature range of the seal material used in the product. Continuous use at the minimum or maximum temperature is not recommended. The operable temperature range depends on the operating conditions.

*3: The working pressure, working temperature range, applicable fluid, allowable inclination and acceptable distance between plates conforms to those of MLC Type Thread screw mount type.

Specifications (MLC-HSP Type)

Type (Adapter)		Adapter for MALC-HSP Type					
Material (Adapter)		Steel (Nickel plated)					
Model (Adapter)		MALC-1HSP-2FAD	MALC-2HSP-3FAD	MALC-3HSP-4FAD	MALC-4HSP-6FAD	MALC-6HSP-8FAD	MALC-8HSP-10FAD
Working pressure range *1, 3	When connected	25.0 MPa, 255 kgf/cm ² , 250 bar, 3630 PSI	21.0 MPa, 214 kgf/cm ² , 210 bar, 3050 PSI				
	Individual plug or socket	8.0 MPa, 81 kgf/cm ² , 80 bar, 1160 PSI					
Working temperature range *2, *3		-20°C to +180°C					
Applicable fluids *3		Hydraulic oil					
Allowable eccentricity		1.4 mm dia.					
Allowable inclination *3		0.5 degrees					
Acceptable distance between plates *3		0 to 0.5 mm					

*1: This shows the normal allowable fluid pressure under continuous use. Exceeding the working pressure may cause damage and leakage.

*2: This shows the minimum and maximum working temperature range of the seal material used in the product.

Continuous use at the minimum or maximum temperature is not recommended. The operable temperature range depends on the operating conditions.

*3: The working pressure, working temperature range, applicable fluid, allowable inclination and acceptable distance between plates conforms to those of MLC Type Thread screw mount type.

Maximum Tightening Torque

Nm {kgf·cm}

Model (Adapter)	Maximum Tightening Torque		
	Thread screw mount part	Tapered pipe thread	Hexagon socket head cap screw
MALC-01SP-2FAD	15 {153}	9 {92}	2.7 {28}
MALC-1SP-2FAD	20 {204}	14 {143}	2.7 {28}
MALC-2SP-3FAD	30 {306}	22 {224}	
MALC-3SP-4FAD	35 {357}	60 {612}	
MALC-4SP-6FAD	45 {460}	90 {918}	
MALC-6SP-8FAD	60 {612}	120 {1224}	5.4 {55}
MALC-1HSP-2FAD	30 {306}	28 {286}	2.7 {28}
MALC-2HSP-3FAD	50 {510}	45 {459}	
MALC-3HSP-4FAD	53 {540}	90 {918}	
MALC-4HSP-6FAD	65 {663}	100 {1020}	5.4 {55}
MALC-6HSP-8FAD	80 {816}	180 {1836}	
MALC-8HSP-10FAD	95 {969}	290 {2958}	

Adapter for MALC Type Applicable MULTI CUPLA / Safety precautions

Adapter for MALC Type Applicable MULTI CUPLA

Model (Adapter)	Model of MULTI CUPLA MALC-01 Type (Thread screw mount type)
MALC-01SP-2FAD	MALC-01S
	MALC-01TP

Adapter for MALC-SP Type Applicable MULTI CUPLA

Model (Adapter)	Model of MULTI CUPLA MALC-SP Type (Thread screw mount type)
MALC-1SP-2FAD	MALC-1S
	MALC-1P
MALC-2SP-3FAD	MALC-2S
	MALC-2P
MALC-3SP-4FAD	MALC-3S
	MALC-3P
MALC-4SP-6FAD	MALC-4S
	MALC-4P
MALC-6SP-8FAD	MALC-6S
	MALC-6P

Adapter for MALC-HSP Type Applicable MULTI CUPLA

Model (Adapter)	Model of MULTI CUPLA MALC-HSP Type (Thread screw mount type)
MALC-1HSP-2FAD	MALC-1HS
	MALC-1HP
MALC-2HSP-3FAD	MALC-2HS
	MALC-2HP
MALC-3HSP-4FAD	MALC-3HS
	MALC-3HP
MALC-4HSP-6FAD	MALC-4HS
	MALC-4HP
MALC-6HSP-8FAD	MALC-6HS
	MALC-6HP
MALC-8HSP-10FAD	MALC-8HS
	MALC-8HP

Safety precautions


- Read without fail and observe the "Safety Guide" in the general Quick Connect Couplings Catalog.
- For the cautions of the fluid to be used, please contact the manufacturer of the fluid.
- Observe the warnings and cautions below. If not observed, it could result in leakage of the fluid or damage to this product and cause burns, injury to the body by dangerous fluid such as chemical agent or high temperature fluid. It could also result in serious damage to the product or other machinery by the damage of this product. Stop using this product immediately if this happens. Since this product is used in combination with a MALC Type Thread screw mount type socket/plug, the contents of the assembled product are also included.


WARNING

- Do not use uncoupled socket or plug continuously exceeding its rated working pressure.
- Do not use CUPLA continuously exceeding the rated working pressure.

CAUTION

- When CUPLA is in high temperature state, wear protective equipment such as gloves, etc., and handle with extra care.
- Do not connect or disconnect when CUPLA is in high temperature state.
- Do not strike the tip of an automatic shut-off valve with a hammer or a similar tool.
- Design and keep the fluid flow speed through CUPLA below 8 m/s for liquid use.

 **WARNING** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

 **CAUTION** Indicates a potentially hazardous situation which, if not avoided, may result in personal injury or property damage.

SAFETY GUIDE

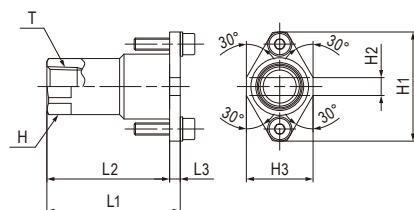
- Only use CUPLA that are within their rated temperature range.
- Keep the center axis eccentricity of the Socket and Plug within 1.4 mm diameter.
- Obliquity of socket and plug must be within 0.5 degrees during connection or disconnection.
- When connecting, connect socket and plug together tightly without a gap. However, it can be used even when the gap is 0.5 mm. If the gap exceeds 0.5 mm the flow will be reduced.
- Select the material and thickness of the plate for CUPLA considering of the reaction force received from CUPLA (=load at connected state) and tightening torque of the hexagon socket head cap screw.
- Apply a fluoropolymer resin sealant tape on male tapered pipe threads to ensure no leak.
- Care must be taken when installing CUPLA not to overtighten or cross thread, this can cause damage and lead to leakage. (Applies to MALC-SP Type CUPLA)
- Install the Adapter onto the Thread screw mount type socket/plug before installing onto the plate.
- The hexagon part or bolt may deform if the Adapter is installed onto the plate in advance.
- Do not exceed the recommended maximum torque when screwing in to the male or female thread of CUPLA for installation.
- Prior to use, always perform a leak test after installing CUPLA.
- Always install a shut-off valve between the pressure source and CUPLA.
- The use of inline filters is strongly advised and recommended.
- Do not use CUPLA in areas or environment where dust such as sand or metal powder can get in to CUPLA.
- Do not let paint stick to CUPLA.
- Be careful not to put scratches or dents on CUPLA.
- Use it in the state that the fluid does not freeze in the case of water. If it freezes, it will cause damage to CUPLA.
- Do not apply any artificial impact or bend.
- Do not drop CUPLA.
- Connecting CUPLA directly to vibrating or impacting equipment will result in reduced lifetime.
- Use only as quick connect couplings for fluid pipelines.
- Do not disassemble CUPLA.
- Check CUPLA regularly. Stop using immediately if anything unusual is found on CUPLA.
- When cleaning CUPLA, care must be taken not to use any material that will affect the seal and body materials.

Adapter for MLC Type Outer dimensions / Applications (MALC-01 Type) / Pressure - Flow Characteristics (MALC-01 Type)

Outer dimensions (MALC-01SP-2FAD Type) WAF : WAF stands for width across flats.

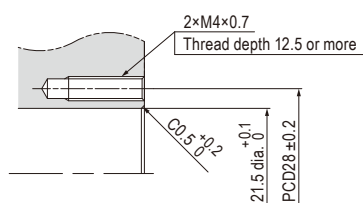
Adapter MALC-01SP-2FAD Type

*Please refer to below for applications of thread.



Model	Mass (g)	Dimensions (mm)							
		L1	L2	L3	øH1	H2	H3	T	H (WAF)
MALC-01SP-2FAD	66	44	(40.5)	3.5	36	(5.9)	22	Rc1/4	Hex.17

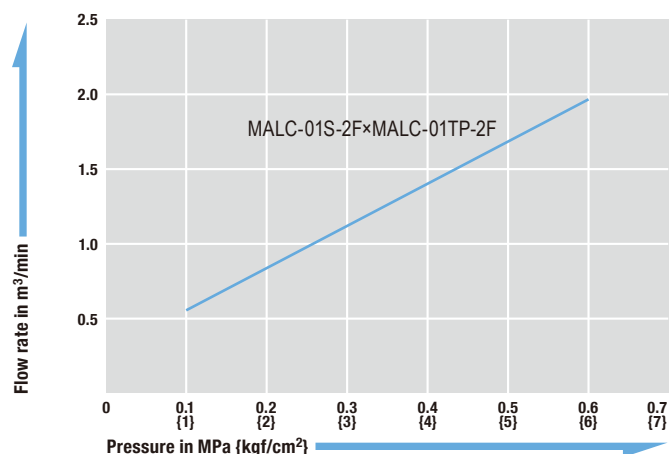
Application of thread (MALC-01SP-2FAD Type)



Dimensions (mm)

Pressure - Flow Characteristics (MALC-01SP-2FAD Type)

[Test conditions] - Fluid: Air

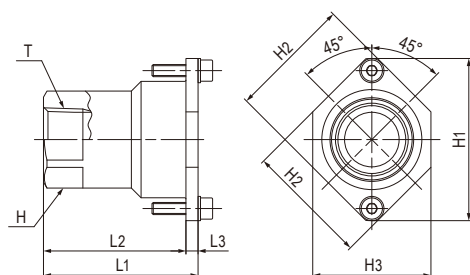


*When adapters are mounted on both MALC-01S and MALC-01TP

Outer dimensions (MALC-1SP-2FAD to MALC-6SP-8FAD Type) WAF : WAF stands for width across flats.

Adapter MALC-1SP-2FAD to MALC-3SP-4FAD Type

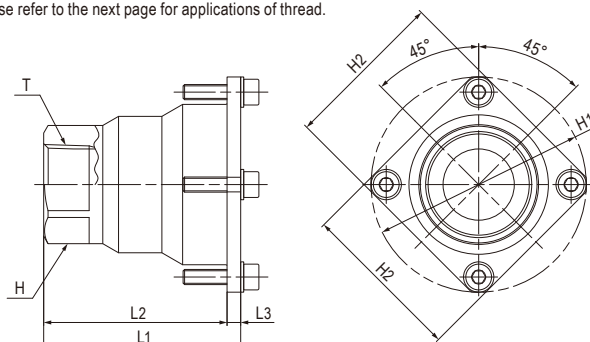
*Please refer to the next page for applications of thread.



Model	Mass (g)	Dimensions (mm)							
		L1	L2	L3	øH1	H2	H3	H (WAF)	T
MALC-1SP-2FAD	93	43	(39.5)	3.5	41.5	32	27	Hex.19	Rc1/4
MALC-2SP-3FAD	140	46	(42.5)	3.5	49	37.5	34.5	Hex.23	Rc3/8
MALC-3SP-4FAD	209	51	(47)	4	53.5	40.5	39	Hex.29	Rc1/2

Adapter MALC-4SP-6FAD, MALC-6SP-8FAD Type

*Please refer to the next page for applications of thread.

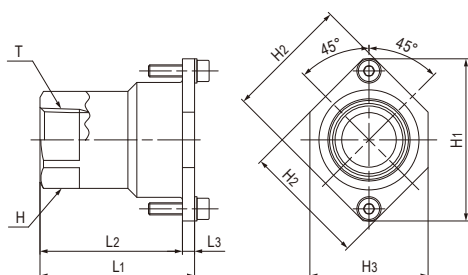


Model	Mass (g)	Dimensions (mm)							
		L1	L2	L3	øH1	H2	H (WAF)	T	
MALC-4SP-6FAD	426	65	(60.5)	4.5	71	53.5	Hex.35	Rc3/4	
MALC-6SP-8FAD	608	78	(73)	5	77.5	60	Hex.41	Rc1	

Outer dimensions (MALC-1HSP-2FAD to MALC-8HSP-10FAD Type) WAF : WAF stands for width across flats.

Adapter MALC-1HSP-2FAD to MALC-3HSP-4FAD Type

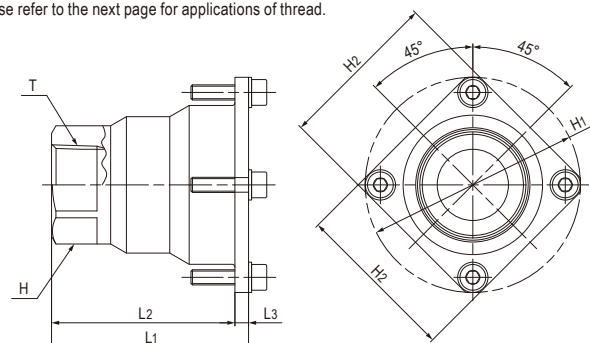
*Please refer to the next page for applications of thread.



Model	Mass (g)	Dimensions (mm)							
		L1	L2	L3	øH1	H2	H3	H (WAF)	T
MALC-1HSP-2FAD	92	43	(39.5)	3.5	41.5	32	27	Hex.19	Rc1/4
MALC-2HSP-3FAD	140	46	(42.5)	3.5	49	37.5	34.5	Hex.23	Rc3/8
MALC-3HSP-4FAD	206	51	(47)	4	53.5	40.5	39	Hex.29	Rc1/2

Adapter MALC-4HSP-6FAD to MALC-8HSP-10FAD Type

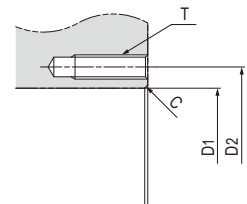
*Please refer to the next page for applications of thread.



Model	Mass (g)	Dimensions (mm)							
		L1	L2	L3	øH1	H2	H (WAF)	T	
MALC-4HSP-6FAD	429	65	(60.5)	4.5	71	53.5	Hex.35	Rc3/4	
MALC-6HSP-8FAD	621	78	(73)	5	77.5	60	Hex.41	Rc1	
MALC-8HSP-10FAD	909	82	(77)	5	82	64.5	Hex.55	Rc1 1/4	

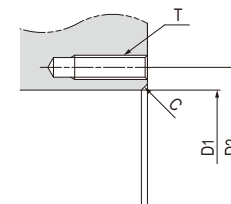
Adapter for MALC Type Applications (MALC-SP, MALC-HSP Type) / Flow Rate - Pressure Loss Characteristics (MALC-SP, MALC-HSP Type)

Applications of thread (MALC-1SP-2FAD to MALC-6SP-8FAD Type)



Model	Dimensions (mm)			
	C	øD1	D2	T
MALC-1SP-2FAD	0.5 ^{+0.2} ₀	26.5 ^{+0.1} ₀	PCD33.5±0.2	2×M4×0.7 Thread depth 12.5 or more
MALC-2SP-3FAD	0.5 ^{+0.2} ₀	34 ^{+0.1} ₀	PCD41±0.2	
MALC-3SP-4FAD	0.5 ^{+0.2} ₀	38.5 ^{+0.1} ₀	PCD45.5±0.2	2×M4×0.7 Thread depth 12 or more
MALC-4SP-6FAD	0.5 ^{+0.2} ₀	53 ^{+0.1} ₀	PCD61±0.2	
MALC-6SP-8FAD	0.5 ^{+0.2} ₀	59.5 ^{+0.1} ₀	PCD67.5±0.2	4×M5×0.8 Thread depth 15 or more

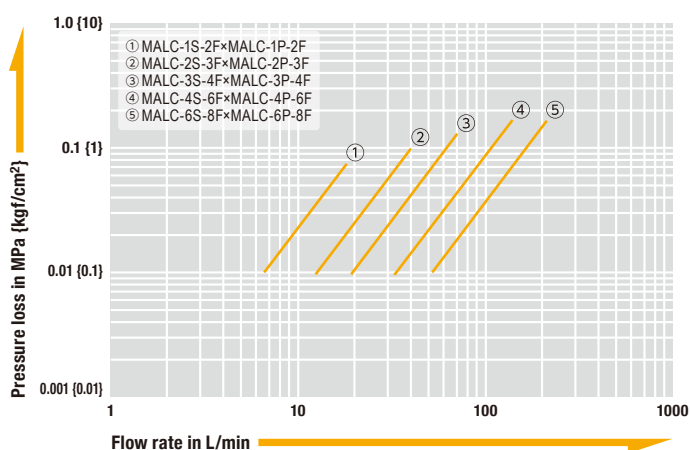
Applications of thread (MALC-1HSP-2FAD to MALC-8HSP-10FAD Type)



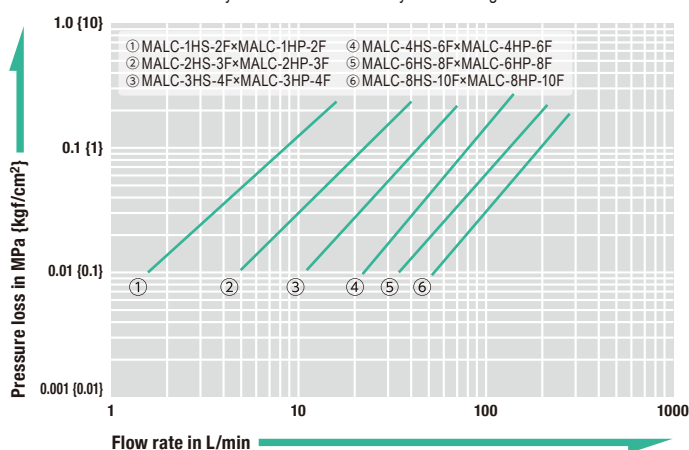
Model	Dimensions (mm)			
	C	øD1	D2	T
MALC-1HSP-2FAD	0.5 ^{+0.2} ₀	26 ^{+0.1} ₀	PCD33.5±0.2	2×M4×0.7 Thread depth 12.5 or more
MALC-2HSP-3FAD	1 ^{+0.2} ₀	33.5 ^{+0.1} ₀	PCD41±0.2	
MALC-3HSP-4FAD	1 ^{+0.2} ₀	38 ^{+0.1} ₀	PCD45.5±0.2	2×M4×0.7 Thread depth 12 or more
MALC-4HSP-6FAD	1 ^{+0.2} ₀	52.5 ^{+0.1} ₀	PCD61±0.2	
MALC-6HSP-8FAD	1 ^{+0.2} ₀	59 ^{+0.1} ₀	PCD67.5±0.2	4×M5×0.8 Thread depth 15.5 or more
MALC-8HSP-10FAD	1 ^{+0.2} ₀	63.5 ^{+0.1} ₀	PCD72±0.2	

Flow Rate - Pressure Loss Characteristics (MALC-1SP-2FAD to MALC-6SP-8FAD Type)

[Test conditions] - Fluid: Water - Temperature: 23°C±5°C



Flow Rate - Pressure Loss Characteristics (MALC-1HSP-2FAD to MALC-8HSP-10FAD Type)

[Test conditions] - Fluid: Hydraulic oil - Temperature: 30°C±5°C
- Fluid viscosity: 32×10⁻⁶ m²/s - Density: 0.87×10³ kg/m³**NITTO KOHKI CO., LTD.**Web www.nitto-kohki.co.jp/e/**Head Office**

9-4, Nakaikagami 2-chome, Ohta-ku, Tokyo 146-8555, Japan

Tel : +81-3-3755-1111 Fax : +81-3-3753-8791

E-mail : overseas@nitto-kohki.co.jp

DISTRIBUTED BY