

Jetstec/// Fluid connector manual

捷科电子科技 /// 流体连接器手册















NEW ENERGY POWER RAIL TRANSIT POWER MILITARY TECHNOLOGY

LEADING SOLUTIONS FOR CONNECTIVITY 连接解决方案领跑者



CONTENTS

◆目录

01	COMPANY PROFILE	01
	公司简介	
[02]	CORPORATE CULTURE	02
	公司文化	
[03]	PRODUCT INTRODUCTION	03
	产品简介	
[04]	PRODUCT SELECTION	04
	产品选型	
[05]	PRODUCT SELECTION	05
	产品选型	
[06]	LTA/LTAX SERIES BAYONET FLUID CONNECTOR	07
	LTA/LTAX系列卡口式流体连接器	
[07]	LTC SERIES PUSH PULL FLUID CONNECTOR	15
	LTC系列推拉式流体连接器	
[08]	LTF/LTFP SERIES BLIND PLUG IN FLUID CONNECTOR	22
	LTF/LTFP系列盲插式流体连接器	
09	TEST CAPABILITY	31
	测试能力	



Henan Jetstec Connect Technology Co.,Ltd.(hereinafter referred to as JETSTEC) specialized in the connection solutions of optical, electrical, liquid connection technologies and cable assembly.

JETSTEC's products are widely used in aviation, aerospace and military field. JETSTEC takes R&D as the leading, adopts the lean production mode of the whole process, whole process and internal vertical integration to provide customers with high-end technology, reliable products, customized solutions and perfect quality assurance. JETSTEC ensures the quality of its products while delivering them to customers quickly, on time, conveniently and safely.

JETSTEC takes " Always providing professional and reliable connectors" as its mission and is committed to becoming the best interconnection solution provider of every customers.











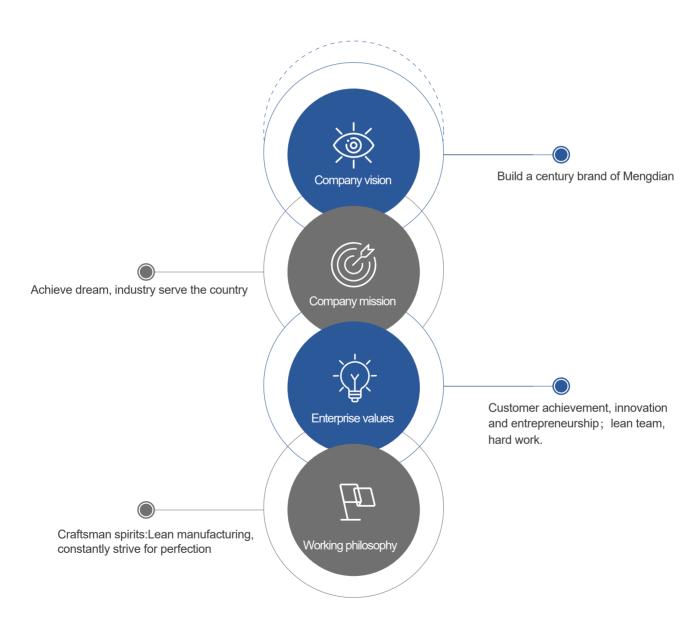




TECHNOLOGY



COMPANY CULTURE





| PRODUCT INTRODUCTION

A fluid connector is a connector that realizes fluid communication or disconnection, its basic function is to quickly connect and disconnect fluid transmission channels (pipes and pipes, between plates, pipes and equipment) without tools, and to ensure that no internal fluid leakage occurs during the connection and disconnection process, this means it has a double sealing function. As an important connection element in the liquid cooling system, fluid connectors, the applicable medium is mostly deionized water, water-glycol coolant, etc, it can also be applied to gases.

Our company has developed three series of fluid connectors: LTA/LTAX series bayonet fluid connectors, LTC series pushpull fluid connectors, LTF/LTFP series blind plug fluid connectors, etc.; they all comply with GJB 9197-2017 Military Radar Liquid Cooling System Self-sealing Quick-change Coupling Specifications and other standard specifications, and they can provide users with a variety of suitable fluid connectors for liquid cooling systems.



























Selection of fluid connector

The choice of fluid connector is related to the heat dissipation efficiency, reliability and maintainability of the liquid cooling system. The following points need to be considered:

Connector diameter

Calculate the required flow rate of the system according to the power consumption of the liquid cooling system, the heat exchange efficiency of the system, the maximum tolerable temperature of the radiated components, the system pressure, the specific heat capacity of the cooling medium, etc. and select the appropriate diameter according to the required flow rate of the system;

Work pressure

The working pressure of the liquid cooling system is generally small(Not more than 1MPa,),If there are special circumstances, please choose carefully;

Working temperature

According to the different working temperature range, select the appropriate cooling medium and select the matching connector type;

Insert locking method

Different locking methods can be selected according to the equipment use environment and maintenance convenience.Blind plug-in fluid connectors are recommended for connection between module boards;For pipe and equipment, pipe and pipe connections, bayonet fluid connectors and push-pull fluid connectors are recommended;

The tail interface form

According to the different installation position of the connector, choose different tail interface forms. There are several types of interfaces such as flange, internal thread, external thread, and barb. There are many thread connection standards, including metric and inch threads, pipe threads, etc.; Sealing methods include 74°, 60°, 24° outer cone and inner cone sealing. The specific interface form can be customized by contacting our company;

Color identification

The bayonet fluid connector has color markings, and users can choose according to their needs. Generally, it is recommended to choose the red connector for the connection position where the internal fluid temperature is relatively high, and the other positions can choose yellow, blue, green, etc.



MATTERS NEEDING ATTENTION

Selection of fluid connectors and matters needing attention/
matters needing attention

01	Before use, check the fluid connector to ensure that the connector is clean and pollution-free;
02	Confirm that the sealing material and main body material of the product match the fluid and environment used;
03	The fluid used is a clean fluid filtered by a filter. The recommended fluid cleanliness is better than GJB420B-9;
04	It is forbidden to exceed the maximum working pressure;
05	It is forbidden to use it outside the applicable working temperature range;
06	When plugging and unplugging, ensure that the plug is aligned with the socket;
07	It is forbidden to plug and unplug products under pressure when the system pressure is higher than 0.3MPa;
08	It is forbidden to disassemble and replace any parts of the fluid connector without permission;
09	Do not excessively bend the hose what connected to the fluid connector;
10	When installing, choose appropriate anti-loose measures;
11	Please do not use it as a link header;
12	It is not recommended to interchange with products other than our company. If you need to interchange, please contact the company.



LTA/LTAX**系列 卡口式**流体连接器





Product appearance 产品外观



Product insertion





Parameter specification 参数规格

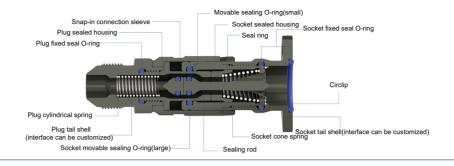
	Product number	LTA-3/LTAX-3	LTA-5/LTAX-5	LTA-8/LTAX-8 L	TA-12/LTAX-12	LTA-15/LTAX-15
	Pressure-resistent properties((Mpa) ≥2.25(Water pressure),≥1.75(Atmospheric pressure)					
	Minimum burst pressure(Mpa)			6		
Performance	Flow coefficientKV(m³/h)	0.22	0.72	2	5.3	6.5
parameter	Maximum working flow(L/min)	2.1	5.9	15	33.9	53
	Maximum leakage -Single insert ar	nd pull(ml) 0.02	0.02	0.03	0.05	0.09
	Maximum insertion force((N)	60	80	90	150	180
	Pressure relief value of self-discha	rging receptacle (code		a.When the socket is dis elief pressure≯0.7Mpa+		pais sealed, and the
Environmental	Minimum temperature			-55 °C		
parameters	Maximum temperature			+95°C		
	Salt spray			≥96H		
Marshautast	Cyclic damp heat test			240H		
Mechanical parameters	vibration G	JB360B-2009 method	214, the connector as	sembly bears 1 MPa p	ressure without leaka	ge
	Shock G	GJB360B-2009 method 214, the connector assembly bears 1 MPa pressure without leakage GJB360B-2009 Method 213, the connector assembly bears 1 MPa pressure without leakage	ige			
	Mechanical life (Durability)			1000 time	es	
Main material	Shell	AL-aluminum alloy hard anodizing, SS-stainless steel passivation, Ti-titanium alloy passivation				
	Grommet	JE-ethylene propyl	ene rubber (-55°C~+1	125°C),JM-fluorosilicon	e rubber (-55°C~+15	5°C)





LTA/LTAX系列卡口式 流体连接器

Product structure



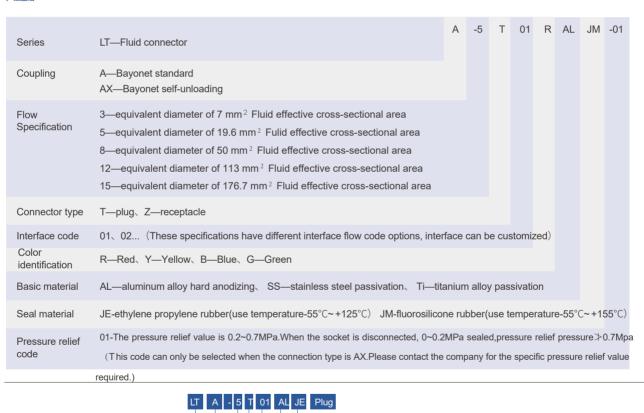
Product type spectrum

Model naming

example

Fluid connector

A-Bayonet standard



EPDM rubber

Plug

-Aluminum alloy hard anodizing

Equivalent diameter of 19.6 mm²Fluid effective cross-sectional area

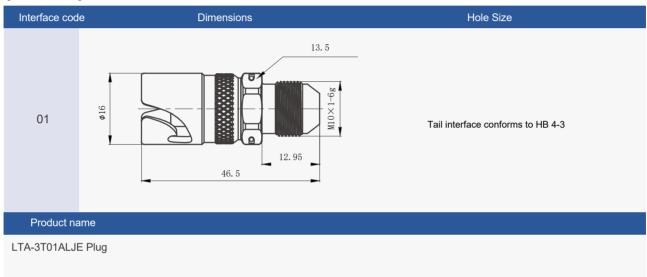




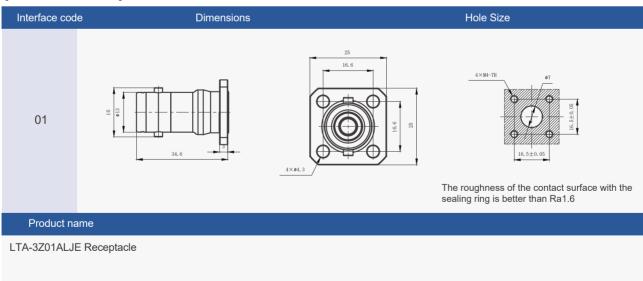
LTA/LTAX系列卡口式 流体连接器

Product selection 产品选型

[LTA-3T PLUG]



[LTA/LTAX-3Z SOCKET]





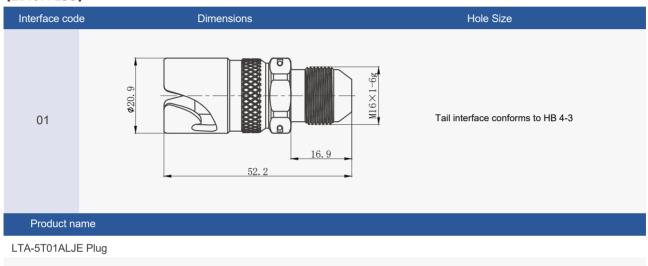
CONNECTED SOLUTIONS LEADER -



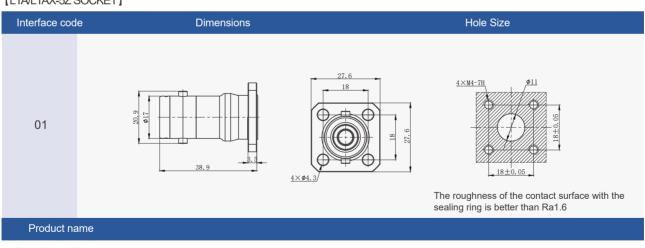
LTA/LTAX系列卡口式 流体连接器

Product selection 产品选型

[LTA-5T PLUG]



[LTA/LTAX-5Z SOCKET]



LTA-5Z01ALJE Receptacle

LTAX-5Z01ALJE Receptacle

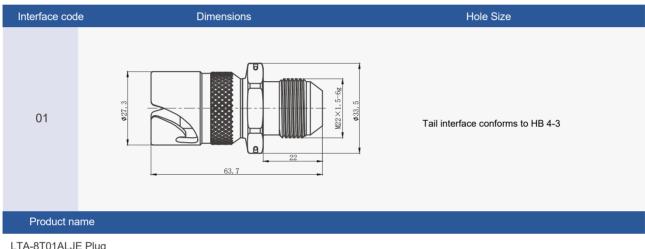




LTA/LTAX系列卡口式 流体连接器

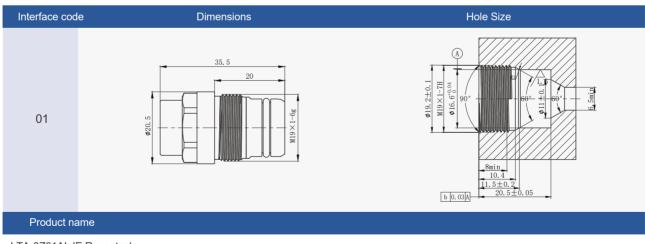
Product selection 产品选型

[LTA-8T PLUG]



LTA-8T01ALJE Plug

[LTA/LTAX-8Z SOCKET]



LTA-8Z01ALJE Receptacle

LTAX-8Z01ALJE Receptacle



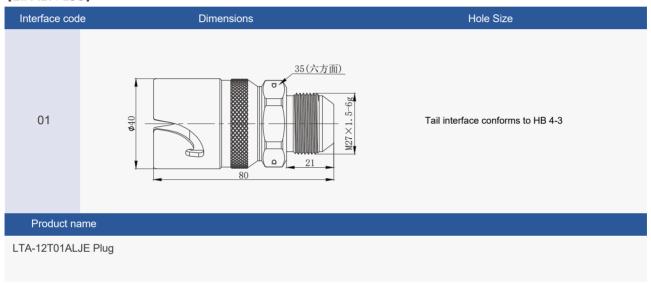
CONNECTED SOLUTIONS LEADER •



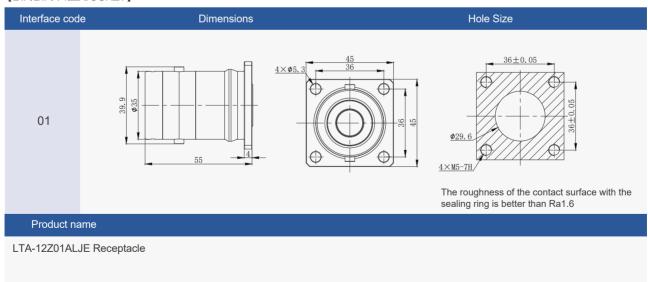
LTA/LTAX系列卡口式 流体连接器

Product selection 产品选型

[LTA-12T PLUG]



[LTA/LTAX-12Z SOCKET]



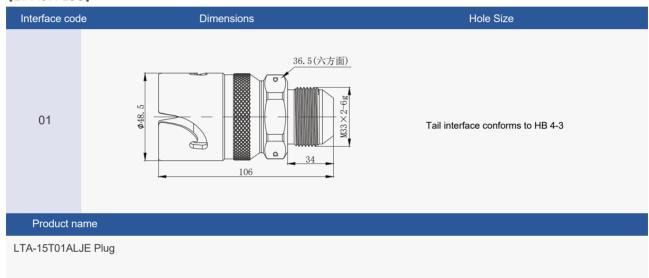




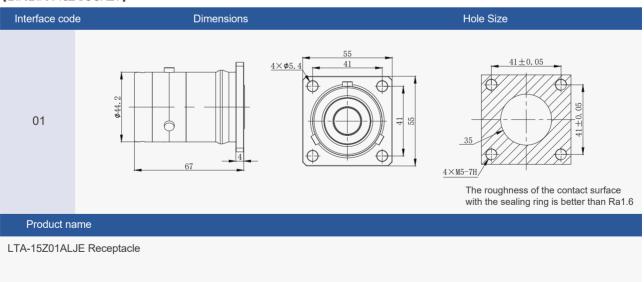
LTA/LTAX系列卡口式 流体连接器

Product selection 产品选型

[LTA-15T PLUG]



[LTA/LTAX-15Z SOCKET]





LTC系列 推拉式流体连接器



LTC系列推拉式 流体连接器

LTC SERIES PUSH PULL FLUID CONNECTOR

Product appearance 产品外观



Product insertion 产品插合示意



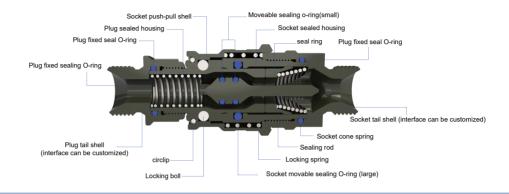
Parameter specification

参数规格	Product number	LTC-5	LTC-8	LTC-10	LTC-12	
	Pressure-resistant properties(Mpa)	oa) ≥2.25 (Water pressure) 、≥1.75 (Atmospheric pressure)				
	Minimum burst pressure(Mpa)		6			
Performance	Flow coefficientKV(m³/h)	0.72	2	4.2	5.3	
parameter	Maximum working flow(L/min)	5.9	15	23.6	33.9	
	Maximum leakage —Single insert(ml) 0.02	0.03	0.03	0.05	
	Maximum insertion force((N)	80	90	110	150	
	Minimum temperature	-55°C				
Environmental	Maximum temperature	+95°C				
parameters	Salt spray		≥96H			
	Cyclic damp heat test		240H			
	vibration (GJB360B-2009 method 214,the connector assembly bears 1 MPa pressure without leakage				
Mechanical parameters	Shock	GJB360B-2009 method 213,the connector assembly bears 1 MPa pressure without leakage				
F	Mechanical life (Durability)	1000 times				
	Shell	AL-aluminum allo	y hard anodized、SS-stair	nless steel passivation		
Main material	Grommet	JE-ethylene propylene rubbe	er(-55°C~+125°C)、JM-fluo	prosilicone rubber(-55°C~	+155°C)	

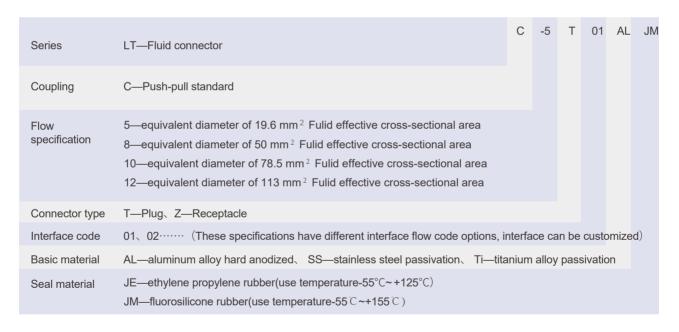


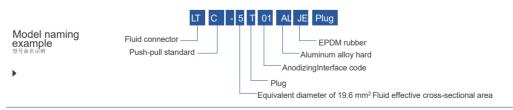
LTC系列推拉式 流体连接器

Product structure 产品结构 ▶



Product type spectrum 产品型谱



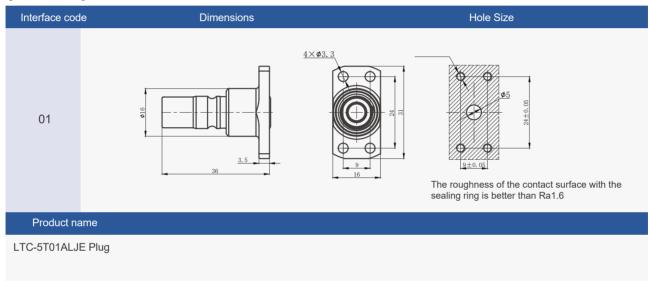




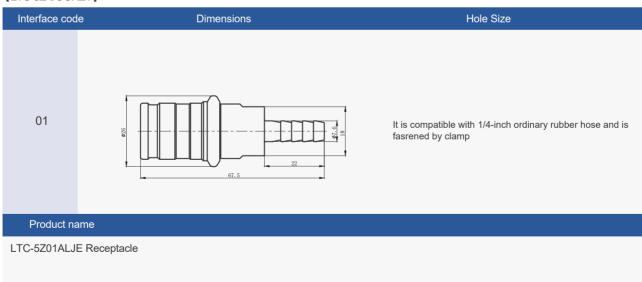
LTC系列推拉式 流体连接器

Product selection 产品选型

[LTC-5T PLUG]



[LTC-5Z SOCKET]





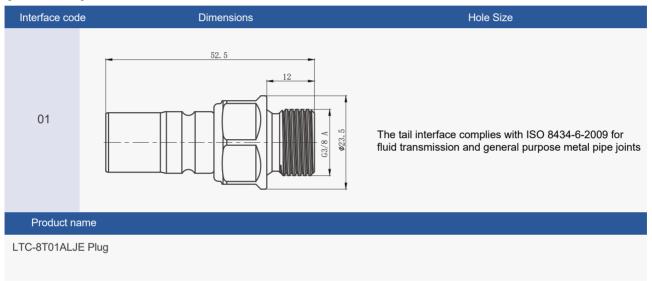
CONNECTED SOLUTIONS LEADER •



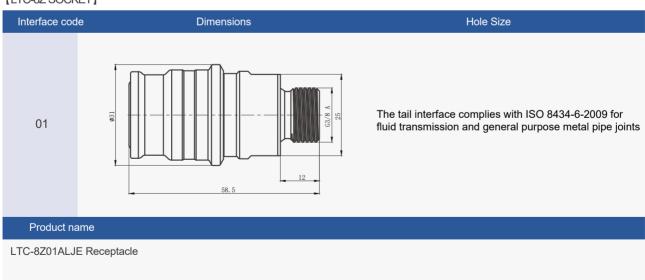
LTC系列推拉式 流体连接器

Product selection 产品选型

[LTC-8T PLUG]



[LTC-8Z SOCKET]



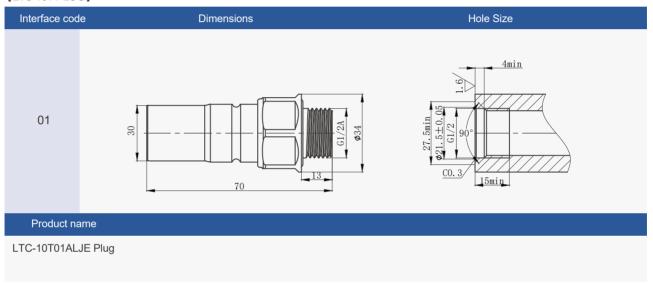




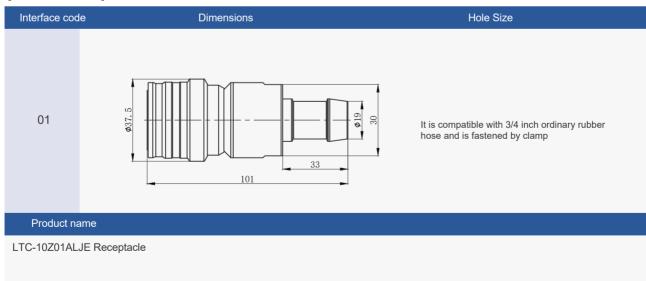
LTC系列推拉式 流体连接器

Product selection 产品选型

[LTC-10T PLUG]



[LTC-10Z SOCKET]





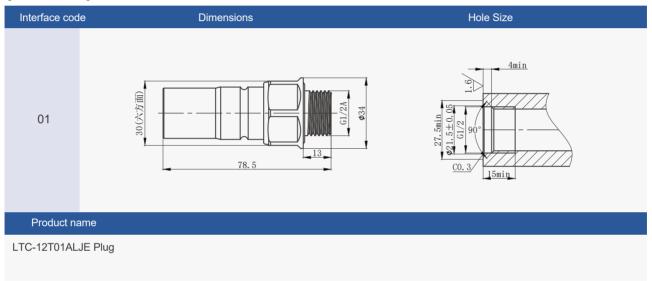
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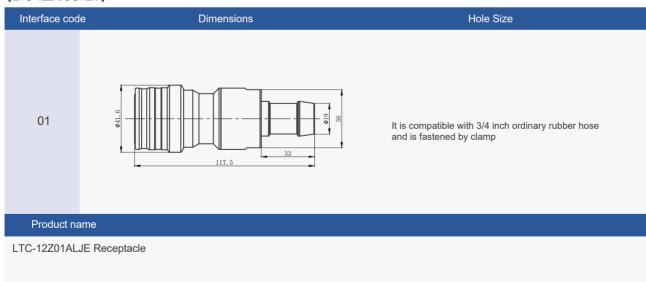
LTC系列推拉式 流体连接器

Product selection 产品选型

[LTC-12T PLUG]



[LTC-12Z SOCKET]





LTF/LTFP系列 盲插式流体连接器





LTF/LTFP系列盲插式 流体连接器

Product appearance _{产品外观}

















Product insertion 产品插合示意







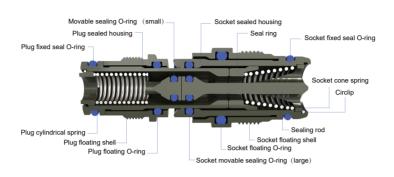
Parameter specification 参数规格

NE						
	Product number	LTF-3/LTFP-3	LTF-5/LTFP-5	LTF-8	LTF-12	
	Pressure-resistant properties(Mpa)	≥2.25 (Water pressure) 、≥1.75 (Atmospheric pressure)				
	Minimum burst pressure(Mpa)	6				
Performance	Flow coefficientKV(m³/h)	0.22	0.72	2	5.3	
parameter	Maximum working flow(L/min)	2.1	5.9	15	33.9	
	Maximum leakage —Single insert and pull(m	0.02	0.02	0.03	0.05	
	Maximum insertion force(N)	60	80	90	150	
	Minimum temperature	-55 °C				
Environmental	Maximum temperature	+95°C				
parameters	Salt spray	≥96H				
	Cyclic damp heat test	240H				
	vibration GJB3	GJB360B-2009 method 214,the connector assembly bears 1 MPa pressure without leakage				
Mechanical	Shock GJB3	GJB360B-2009 method 213,the connector assembly bears 1 MPa pressure without leakage				
parameters	Mechanical life	1000 times				
	Shell	AL-aluminum alloy hard anodized,SS-stainless steel passivation				
Main material	Grommet	JE-ethylene propylene rubber(-55°C \sim +125°C)、JM-fluorosilicone rubber(-55°C \sim +155°C)				

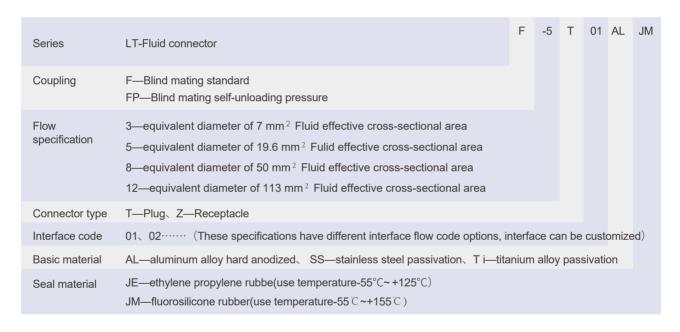


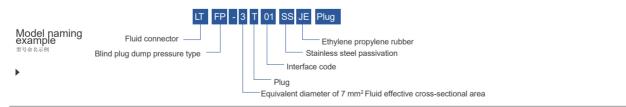
LTF/LTFP系列盲插式 流体连接器

Product structure 产品结构



Product type spectrum 产品型谱







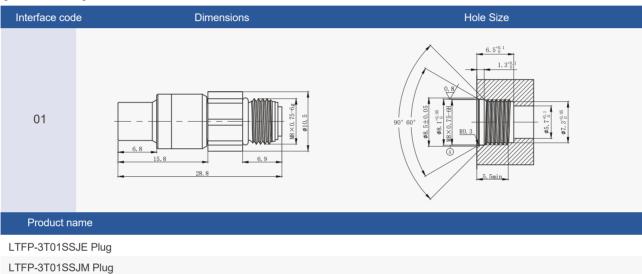
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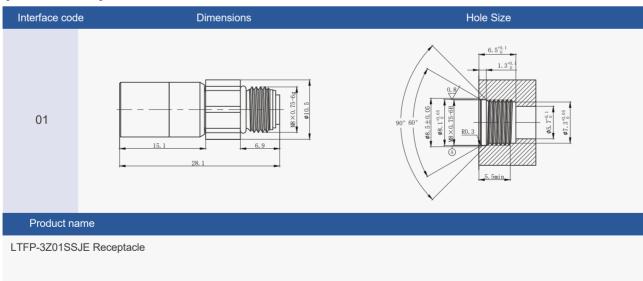
LTF/LTFP系列盲插式 流体连接器

Product selection 产品选型

[LTFP-3T PLUG]



[LTFP-3Z SOCKET]





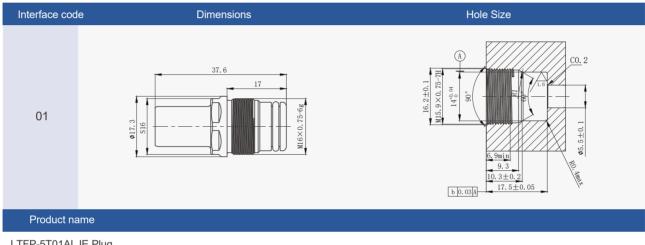


LTF/LTFP系列盲插式 流体连接器

LTF / LTFP SERIES BLIND PLUG IN **FLUID CONNECTOR**

Product selection 产品选型

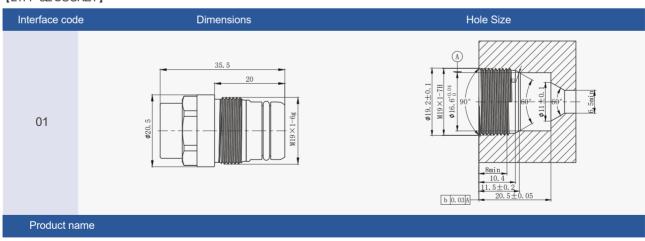
[LTFP-5T PLUG]



LTFP-5T01ALJE Plug

LTFP-5T01SSJE Plug

[LTFP-5Z SOCKET]



LTFP-5Z01ALJE Receptacle

LTFP-5Z01SSJE Receptacle



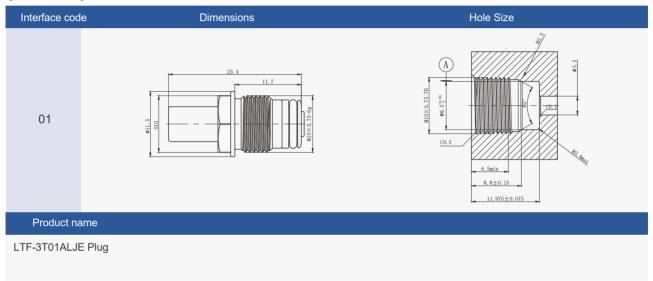
CONNECTED SOLUTIONS LEADER •



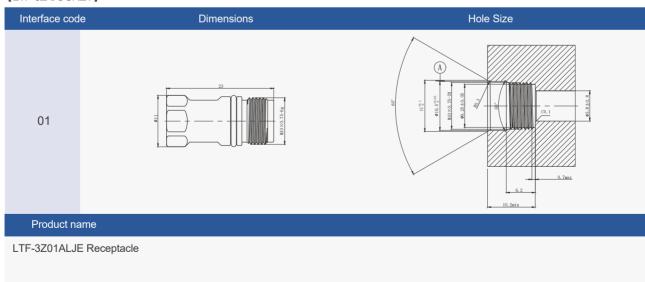
LTF/LTFP系列盲插式 流体连接器

Product selection 产品选型

[LTF-3T PLUG]



[LTF-3Z SOCKET]



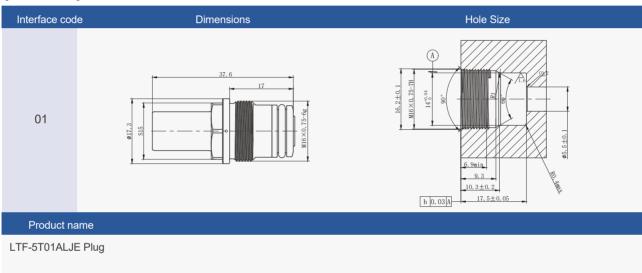


LTF/LTFP系列盲插式 流体连接器

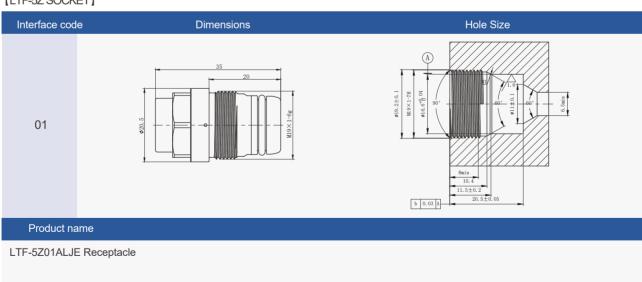
LTF / LTFP SERIES BLIND PLUG IN FLUID CONNECTOR

Product selection 产品选型

[LTF-5T PLUG]



[LTF-5Z SOCKET]





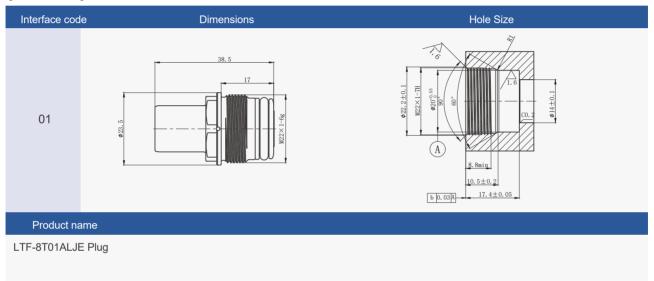
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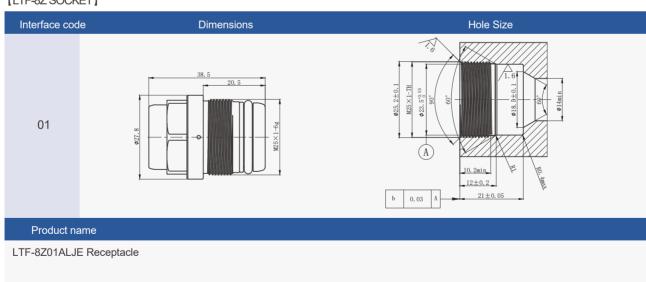
LTF/LTFP系列盲插式 流体连接器

Product selection 产品选型

[LTF-8T PLUG]



[LTF-8Z SOCKET]



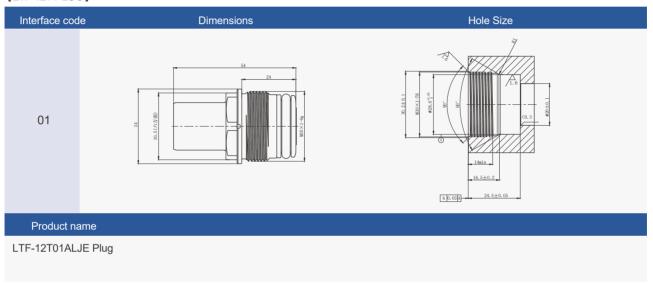




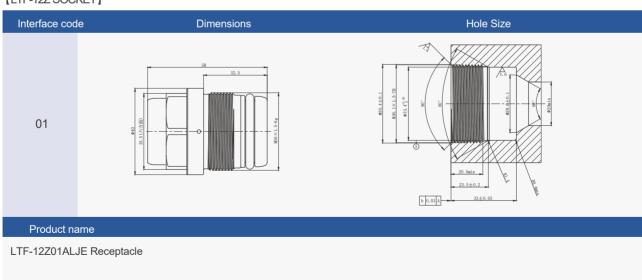
LTF/LTFP系列盲插式 流体连接器

Product selection 产品选型

[LTF-12T PLUG]



[LTF-12Z SOCKET]





CONNECTED SOLUTIONS LEADER •



LTF/LTFP系列盲插式 流体连接器

Installation instructions

[Single side floating blind plug fluid connector] Floating amount:d Mating distance:L Product name Maximum radial floating amount d (mm) Insertion distance L (mm) LTF-3 0.2 26.5±0.3 LTF-5 0.25 41.5±1 LTF-8 0.25 45±1 LTF-12 0.25 66.5±1

【Bilateral floating blind plug fluid connector】 Floating amount:d Mating distance:L Maximum radial floating amount d (mm) Insertion distance L (mm) LTF-5 0.5 21.4±1 LTF-8 0.5 24.5±1 LTF-12 0.5 34±1 LTFP-3 0.5 36.2±0.3 LTFP-5 0.5 21.4±1



TEST CAPABILITY

As an important connecting element in a liquid cooling system, fluid connectors require rigorous testing for their performance indicators. In order to meet the test requirements, the company has established a dedicated fluid connector laboratory. The laboratory can test the following items of fluid connectors: pressure resistance, sealing performance, flow curve measurement, connector leakage, pressure pulse, minimum burst pressure, flow impact, etc. At the same time, the test center can test non-proprietary items such as high temperature, low temperature, temperature shock, damp heat, salt spray, vibration, shock, and mechanical life.

Special equipment for fluid connector Laboratory



Pressure and leak test equipment



Flow-pressure test equipment



Pulse test equipment



Air tightness test equipment



Leakage test equipment





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