Bayonet-Type Fluid Connector(YTA Series)

Product Introduction

●Bayonet locking mechanism enables quick engagement and disengagement via push-pull and twist operations, ensuring ease of use.

●Both engaged and disengaged positions maintain a sealed, leak-free connection for safe and reliable operation.

● The shell material and plating offer excellent wear and corrosion resistance.

●Flat-face contamination-resistant and leak-free structure

●Fluid connectors have various installation forms with pipelines and cold plates, and comply with sealing connection standards.

●For custom tail interface requirements, please. contact the company.

●When over pressure protection is required for equipment, the YTA self-relieving socket is recommended.



YTA series fluid connector



YTA series self-unloading fluid connector socket

Applications and Operating Environment

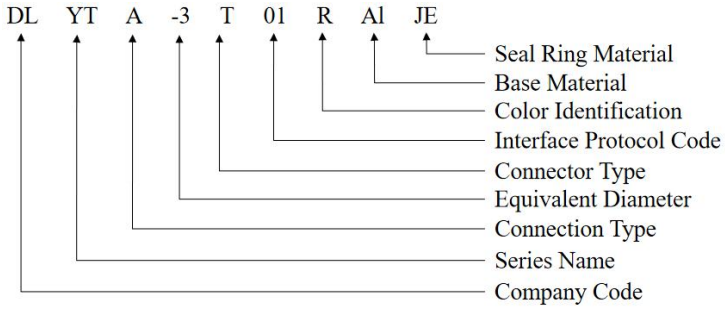
YTA series fluid connectors are designed for airborne, vehicular, marine, and ground-based environments, enabling quick connections between cold plates and pipes, as well as between pipes. They are primarily used in liquid cooling systems for avionics, radar equipment, wind power converters, high-performance servers, and supercomputers.

Technical Performance

--**Operating Temperature**：-55°C to 95°C
--**Operating Pressure**：0~2MPa
--**Service Fluid**：Coolant, Deionized Water, etc.
--**Seal**：High-strength fluorosilicone rubber, EPDM rubber
--**Mechanical life**：1000 plugging cycles
--**Shell Material**：Surface-treated Aluminum Alloy, Stainless Steel
--**Vibration and Shock**：Meet the requirements of airborne, marine, and other applications.
--**Salt Spray Test**：96h

Model naming

The model is composed of the company code， series main name, connection form, equivalent diameter, connector type, interface code, color identification, base material, sealing ring material. The representation method is as follows:



The definitions of each component are detailed in Table 1

table 1

Categorical Features	Code	Meaning
Company code	DL	The manufacturer is DL
Series Name	YT	Fluid Connector
Connection Type	A	Bayonet - fitting
Equivalent Diameter	3	The equivalent diameter of a fluid with an effective cross-sectional area of 7 mm²
	5	The equivalent diameter of a fluid with an effective cross-sectional area of 19.6 mm²
	8	The equivalent diameter of a fluid with an effective cross-sectional area of 50 mm²
	10	The equivalent diameter of a fluid with an effective cross-sectional area of 78.5 mm²
	12	The equivalent diameter of a fluid with an effective cross-sectional area of 113 mm²
	15	The equivalent diameter of a fluid with an effective cross-sectional area of 176.7 mm²
	16	The equivalent diameter of a fluid with an effective cross-sectional area of 201 mm²
	20	The equivalent diameter of a fluid with an effective cross-sectional area of 314 mm²
Connector Type	T	Plug
	Z	Socket
Interface Protocol Code	01... ...	Different interface codes are available for each flow specification, see the external dimensions for details
Color Identification	R	Red
	B	Bule
	G	Green
	Y	Yellow
Base Material	Al	Aluminum Alloy
	SS	Stainless Steel
	Ti	Titanium Alloy
Seal Ring Material	JE	Ethylene Propylene Diene Monomer Rubber (EPDM) (Operating Temperature: -55°C to +125°C)
	JM	Fluorosilicone Rubber (FVMQ) (Service Temperature: -55°C to +155°C)

Model naming example

DL-YTA-8Z01RAlJE

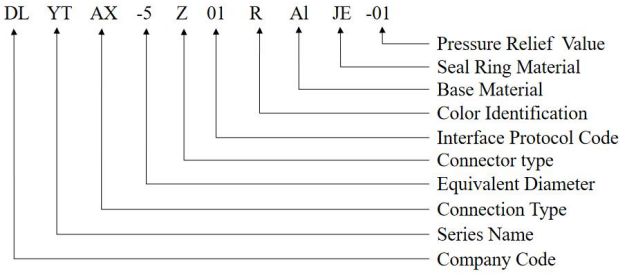
Bayonet-type fluid connector with φ8 equivalent diameter (cross-sectional area: 50 mm²), socket interface, interface code 01, red color, aluminum alloy matrix, selected for Class JE compatible fluid media and operating temperatures.

DL-YTA-5T03YTiJM

Bayonet-type fluid connector with φ5 equivalent diameter (cross-sectional area: 19.6 mm²), plug interface, interface code 03, yellow color, titanium alloy matrix, selected for Class JM compatible fluid media and operating temperatures.

Model naming of Self-relieving Pressure Sockets

The model is composed of the company code, series main name, connection form, equivalent diameter, connector type, interface code, color identification, base material, sealing ring material, pressure relief value. The representation method is as follows:



The definitions of each component are detailed in Table 2

table 2

Categorical Features	Code	Meaning
Company code	DL	The manufacturer is DL
Series Name	YT	Fluid Connector
Connection Type	AX	Bayonet-Type, self-relieving
Equivalent Diameter	3	The equivalent diameter of a fluid with an effective cross-sectional area of 7 mm²
	5	The equivalent diameter of a fluid with an effective cross-sectional area of 19.6 mm²
	8	The equivalent diameter of a fluid with an effective cross-sectional area of 50 mm²
	12	The equivalent diameter of a fluid with an effective cross-sectional area of 113 mm²
	15	The equivalent diameter of a fluid with an effective cross-sectional area of 176.7 mm²
Connector type	Z	Plug
Interface Protocol Code	01... ...	Different interface codes are available for each flow specification, see the external dimensions for details
Color Identification	R	Red
	B	Bule
	G	Green
	Y	Yellow
Base Material	Al	Aluminum Alloy
	SS	Stainless Steel
Seal Ring Material	JE	Ethylene Propylene Diene Monomer Rubber (EPDM) (Operating Temperature: -55°C to +125°C)
	JM	Fluorosilicone Rubber (FVMQ) (Service Temperature: -55°C to +155°C)
Pressure Relief Value	01	Pressure Relief Value: 0.2 to 0.7 MPa, when the self-relieving socket is disconnected, the sealing pressure is 0 to 0.2 MPa, and the pressure relief pressure does not exceed 0.7 MPa.
	02	Pressure Relief Value: 0.8 to 1.6 MPa, when self-relieving socket is disconnected, the sealing pressure is 0 to 0.8 MPa, and the pressure relief pressure does not exceed 1.6 MPa.

Model naming example

DL-YTAX-8Z05RA1JM-01

It represents a bayonet - type fluid connector with a self-relieving function. It has an equivalent diameter of φ8 (cross - sectional area: 50 mm²), and it is a socket. The interface code is 05, and the color is red. The base material is aluminum alloy. It is suitable for the liquid medium and operating temperature of the JM class. The pressure - relief value ranges from 0.2 to 0.7 MPa. That is, when the self-relieving socket is disconnected, it can seal at a pressure of 0 to 0.2 MPa, and the pressure - relief pressure does not exceed 0.7 MPa.

DL-YTAX-12Z03YAlJE-02

It represents a bayonet - type fluid connector with a self-relieving function. It has an equivalent diameter of φ12 (cross - sectional area: 113 mm²), and it is a socket. The interface code is 03, and the color is yellow. The base material is aluminum alloy. It is suitable for the liquid medium and operating temperature of the JE class. The pressure - relief value ranges from 0.8 to 1.6 MPa. That is, when the self-relieving socket is disconnected, it can seal at a pressure of 0 to 0.8 MPa, and the pressure - relief pressure does not exceed 1.6 MPa.