

Ball Valve Selection Guide

From Simple to Complex Designs

Electric, Pneumatic Actuators & Controls

3 and 4 Way Multi-Port Valves

Pipeline Trunnion Type Valves

Custom Designed Ball Valves

Severe Service Metal Seats

Segmented Control Valves

Flush Bottom Tank Valves

Steam Jacketed Valves

Dribble Control Valves

Instrumentation Valves

V-Port Control Valves

Special Alloy Valves

Cavity Filled Valves
Fusible Link Valves

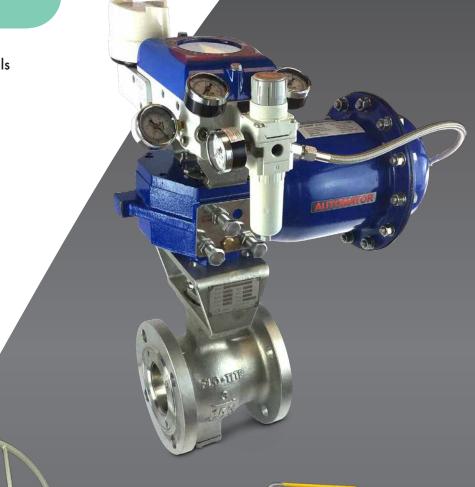
Automated Valves

Cryogenic Valves

PFA Lined Valves

Sanitary Valves

Ceramic Valves













Trunnion Ball Valves

TM Series

Designed and Fabricated for Pipeline Applications. Offering both forged 3-pc and cast 1 & 2 pc body designs.

Applications:

Oil and Pipeline applications and other industrial applications including:

- Natural Gas Storage
- Gas Transmission, Oil Refinery
- **Dryer Service**
- LNG, HRSG
- Skids
- Subsea
- **Natural Gas Compressor Stations**
- Desalination
- **Petrochemical Plants**
- CO₂ Service
- Pipéline
- **Power Generation**

Design Features:

- Full Compliance with API-6D
- ISO 9001, CE & NACE
- Grease Sealant Fitting Standard
- ANSI Class 150, 300, 600, 900, 1500, 2500
- High Temperature Metal Seated
- Piggable Service
- Control Ball Valve
- 3-Way Designs
- Double Block & Bleed
- **Both Cast & Forged**
- Optional: Fully Welded Body Designs
- Custom Designs Welcome!

Engineered Valves for Pipeline and Severe Service Applications



Size Range: 1"-56"

Pressure Rating: ANSI Class 150-2500



Segmented Control Valves

Sentinel Series

Eccentric Ball Available

- Clean or Dirty Liquids
- Fibrous Suspension Applications

Applications:

- **Power Generation**
- **Pulp and Paper**

Design Features:

- ISA \$75.04
- Rugged Uni-body Construction Available in Flanged or Wafer 150, 300, & 600 Lbs
- Metal or Soft Seated

Size Range:

1"-24"

Pressure Ratinas:

Ansi Class 150-600 Flanged: 150, 300, 600 Wafer: 150, 300







Models: **RV-150**

RV-300

Precise Control

TB 68

New! Now available Eccentric Control Valve

High Performance 3-Piece Designs

Multi-Choice Series

Models: 200, 300

This series is our most versatile design. Series 200/300 ball valves are offered in Threaded, Socket Weld, Butt Weld, Flanged End, and Extended Weld Ends. The Valve center body is drilled and tapped for cap screw bolting to assure exact alignment.



Applications:

- Water Services
- Oil and Gas
- Universal Applications

Size Range: 1/4"-4" **Pressure Ratings:**

- $\frac{1}{4}$ "-2½" 1500 psi WOG
- 3"-4" 1250 psi WOG

Design Features:

- Live-loaded stem
- V-Ring stem packing
- Anti-Static grounding device
- ISO-Mount automation pad
- Safety locking handle
- Wide range of seating materials

- V-Ball Control Valves Available
- Cavity Fillers Available
- Carbon, Stainless Steel, Alloy 20 and many other Special Materials
- Secondary Media Containment
- Flush Bottom Tank



ISO Mount

Multi-Choice Weld-In-Place Series

Eliminate Valve disassembly when welded ball valves are required!

Applications:

- Water Services
- Oil and Gas
- Moderate Pressure Applications
- Petrochemical Services

Design Features:

- Safer Installation
- Reduced Liability
- Save Valuable Time
- Reduce Labor Cost
- Assures Fool Proof Installation
- Socket & Butt-Weld Design

Models: 335-SS 235-CS

Models: 325-SS

Size Range: 1/4"-4"

Pressure Ratings:

Size 1/4"-21/2" 1500 psi MAWP/WOG Size 3"-4" 1250 psi MAWP/WOG

TB 46

Tri-Pro Series

High pressure 3-Piece Series built for demanding applications.

Applications:

- Cryo
- Oil and Gas
- High Pressure Applications
- Aviation & Aerospace

Design Features:

- Fire Safe designed to API 607-7
- ANSI B16.34
- Protected seat design
- Captive seats & body seals
- Weld-In-Place socket & butt weld
- Flanged end ANSI Class and 600
- Wide range of seating materials
- Metal seats available in both class V & VI



ISO Mount

Models: HPF50-SS

HPF40-CS

1/2"-4" **Pressure Ratings:**

Reduced Port

Size Range:

1/4"-4"

Full Port

1/4"-3/4" 3000 psi MAWP (Full Bore)

1"-4" 2250 psi MAWP/WOG (Full Bore)

½"-1" 3000 psi MAWP/WOG (Reduced Bore) 11/4"-4" 2250 psi MAWP/WOG (Reduced Bore)

TB 51

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High Performance 3-Piece Designs

Pro-Max Series

Applications:

- Water Services
- Petrochemical
- Oil and Gas
- Food Services
- Heat Exchange
 - Power Generation
 - Universal Applications

Enclosed Bolting

CE Compliance Fire Safe Certified

NACE

ISO 5211 Mounting Pad

Safety Locking Handle

Design Features:

- Flo-Tite Economical 3-pc valve
- Reduced port
- Available with NPT or Socket Weld Ends
- 2000/1500 psi WOG
- RPTFE Seats

Size Range:

1/2"-2"

Pressure Ratings:

½"-1¼" 2000 psi WOG / 150 psi WSP 1½"-2" 1500 psi WOG / 150 psi WSP

Titan Series

Applications:

- Extreme Pressure Applications
- Power Generation
- Water Services
- Petrochemical

Design Features:

- ANSI Class 900 & 1500 Raised Face
- RTJ Flange available (not standard)
- 5000 psi WOG
- V-Port Control Option
- Devlon Seats Standard
- Peak & Metal Seat Options
- Fire Safe API 607-7, API 608

Direct Connect Series

Save Time & Money mounting Actuators directly to the Valves.

Applications:

- Universal Applications
- Low Pressure Steam Applications
- Space Saving
- Water Treatment & Processing

Design Features:

- ISO-5211 Top Works Live-Loaded Stem
- 2-pc body 1000 PSI WOG- (DM85 & DM-V60)
- 2-pc body 2000 PSI WOG Fire Safe Design (DM2000 & DMV2000)
- 2-pc Flanged End (DM F15)
- 3-pc body 1000 PSI WOG (DM100 & DM300 series)
- 3-Way 1000 PSI WOG (DM MPT100)
- Wafer ANSI 150 LB (DM WF150)

Other Direct Connect Products:

- **DM 85** TB 34-19
- **DM 300** TB 35-18
- **DM 15** TB 36-18
- DM-V60 TB 37-18
- DM2000 TB 38-18
- DM MPT 100 TB 102-19



Model:

360

TB 48



Size Range:

1/2"-3"

Pressure Rating: 2000 psi WOG/150 psi WSP

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Flanged End Ball Valves

Full-Flo Series

Uni-Flo Series

ISO Mount

Full Bore

Standard Bore

Full Bore & Reduced Bore

Applications:

API 6D Certified

- Oil & Gas Sector
- Chemical Manufacturing & Processing
- Petrochemical Industry

Power Generation

Floating Ball Valves

Pulp & Paper Production Industry

Cryo



- ISO 5211 Mounting pad
- Safety locking handle
- Anti-Static grounding device
- ANSI Class 150, 300, 600
- Special Metal Seats meeting Class V & VI
- Cavity Fillers sizes ½" 14"
- Fugitive Emissions certified per ISO 15848-1

TB 66

- V-Ball Control Valves
- Fire Safe per API 607 (all valves) & API 6FA (on selected models)
- API 6D logo

EC Series

F15 Size Range:

2"-6"

Model:



Model:

NACE compliance available as option



EZ Series

TB 58



RF-15/RF-150 Size Range:

3"-14"

Pressure Rating: **ANSI 150**

Model:

RF-30 Size Range:

3"-6"

Pressure Rating: ANSI 300



Uni-Flo TB 58

Models:

SF150/SF300



Full-Flo Models:

F150/F300

Size Range:

Full Bore 1/2"-12" Standard Bore 1"-12"

Pressure Ratings:

F150/SF150 ANSI 150 F300/SF300 ANSI 300 All 150 PSI SWP (300 PSI SWP Optional)

Media Containment

Pressure Ratings:

F15 ANSI 150

F30 ANSI 300

Multi-Purpose Secondary Containment

- Help maintain ultra-low fugitive emissions
- Maintenance Repair
- **High Temperature Applications**
- Upgrade standard Ball Valves with a simple low cost device

Award Winning Product

Certified ISO 15848-1:2015 Methane Fugitive Emission Testing











TB 140

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Multi-Port 3&4 Way Ball Valves

Trans-Flo Series

ISO Actuator Mount

Flo-Tite offers a wide selection of multi-port ball valves designed to simplify piping systems, eliminating the need for two or more standard valves. The valve has either one or two pc ball/ stem with a trunnion type Ball Support. T, L, or LL Flow Plans.

Applications:

- Oil and Gas
- Lact Skids
- **Heat Exchange Applications**
- **Water Services**

MODELS AVAILABLES:

- MPF15 ANSI 150 LB Flanged Ends
- MPF30 ANSI 300 LB Flanged Ends
- MPF60 ANSI 600 LB Flanged Ends
- MPT30 ANSI 300 PSI Threaded Ends
- MPC15 ANSI 150 TRI-Clamp Ends
- MPF154 ANSI 150 LB Flanged 4-Way Valves



3/4"-14"



Model: **MPF154** 4-Way TB 90



Model: MPF15 3-Way

TB 90

Ball Porting

Flow Plans:

Multiple Flow Patterns

L-Pattern In-Line Pattern **T-Pattern LL-Pattern**







3-Way Trunnion Designs also Available

MPT-100 Series

Applications:

- Mixing & Blending Services
- Flow & Bypass
- **Diversion Operations**
- Beverage & Food Industry
- Water Treatment & Processing
- **Chemical Production**

Design Features:

- Stainless
- 3-Way Diverting or Mixing
- Standard port design
- Threaded ends/Tri-Clamp
- Optional Brass T + L ports model #355/365

Size Range:

1/4"-2"

Pressure Rating:

800 psi MAWP/WOG



Model: **MPT 100** 3-Way TB 100



3 & 4-Way



Model: **MPT 104** 4-Way **TB 100**

Multi-Port 3&4 Way Ball Valves

Tri-Pro Bottom Flow Series

Applications:

- Oil & Gas
- Lact Skids
- Diversion of Process Fluid
- Heat Exchange
- Water Services
- Power Generation
- Aviation & Aerospace



Size Range: 1/2"-21/2"

Pressure Range: 1500 psi MAWP/WOG

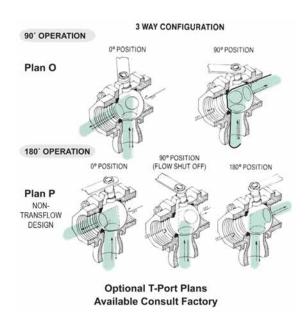
Fire-Safe



TB 98

Design Features:

- 3-Way diverter design
- 1500 psi WOG fire safe type
- Threaded/SW/BW/Flanged



Bottom Entry Series

Applications:

- HVAC Services
- Sanitation & Waste Processing
- Medical & Pharmaceutical Services
- Water Supply & Distribution
- Chemical Manufacturing & Processing

Design Features:

3-Way diverter design

Size Range: 2"-6" Pressure Rating: Class 150/300



TB 96

Many Different Flow Plans Are Available. Ideal replacement for Plug Valves.

7

Unique Application Ball Valves

Cryogenic Design Ball Valves

Applications:

- Low temperature services with temperatures below freezing down to -450°F
- Gases including:
 - » Oxygen
- » Fluorine
- » Nitrogen
- » Helium
- » Hydrogen
- » Methane
- Chilling & Freezing Applications Food Industry
- Biotechnology & Medical Industry
- Aerospace Industry
- Alloy Treatment Service
- Petrochemical Industry

Design Features:

- Available Cryo Bonnet Tall Stems
- One Piece High Strength Stems
- Encapsulated body seals prevent "cold flow"

Size Ranae: 1/4"-12"

Pressure Rating:

2000 psi MAWP/WOG



Model: F150 Cryo TB 138

Flo-Tite offers a complete line of Cryogenic Ball Valves.



SuperAlloys & Ceramic Valves Available



Zirconium Gate Valve



Titanium Knife Gate Valve



Inconel **Butterfly Valve**



Nickel Alloy Gate Valve



Hastelloy **Ball Valve**



Ceramic **Ball Valve**

Flush Bottom Tank Valves

The valve tank pad is welded flush to the tank bottom for unrestricted drainage of tank media. Available with threaded, SW, BW, and flanged ends ANSI 150/300 Lb.

Design Features:

Tank pad 316L-SS

Perfect Adaptor between the tank & the valve body. Minimizes the dead space between the valve ball and the tank.



Size Range:

1"-8"

Pressure Ratings: 1"-2" 1500 WOG

3"-4" 1250 WOG 6"-8" 740 WOG



Model: TK300



Unique Application Ball Valves

Safety Exhaust 3 pc Valve

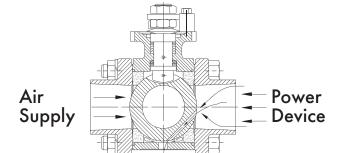
Offers downstream air pressure, "blow-down" design valve with complete serviceability without disturbing the piping system. Size Range:

1/4"-18"

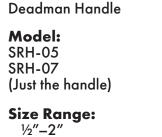
Design Features:

Tank pad 316L-SS

SW/BW/NPT/150RF Flanged



Spring Return Handle



Pressure Rating:

1000 psi MAWP/WOG

Model: **SRH-05**

Requires a Bracket



Valve Can Never be Left in the Wrong Position.

Multi-Choice Sanitary Designs

High Purity Series

Applications:

- **Food Services**
- Pharmaceutical Services
- **Medical Services**
- **Water Services**

Design Features:

- 3 pc Sanitary Ball Valves with True Tube Bore
- Clean-In-Place, Purge Ports
- 20-25 RA standard
- Electropolish, Solution Clean & Bagged, Optional
- All Wetted Parts SS316L
- Cavity Fillers Available
- In-Line Orbital Welding

Size Range: 1/2"-4"

Pressure Ratings:

1000 psi MAWP/WOG 150 psi WSP



Model: S350-SL





Industrial Process Threaded End Designs

Fusion Series

Model: S23 1 pc Seal Welded Body

Model: T23 2 pc Body

Design Features:

The S23 series seal-welded high pressure valves incorporate safety. All welded body assures that the 2 pc body can never be separated.

Anti-Static, Fire Safe, API 608, Steam Seals, Locking Handle.

ISO 5211 Actuator Mounting

Outstanding performance in Steam service

Size Range:

1/4"-4"

Pressure Ratings:

1/4"-2" 2000 psi WOG/250 psi WSP 2½-4" 1500 psi WOG/250 psi WSP



Model: T23 2 pc Body

TB 14

Flotron and Flotron II Series

Applications:

High pressure shut off Valves

Petrochemical

Hydraulic Services

Design Features:

Rugged Construction - Cast Body

Seal Welded Body

Fire Safe Designed to API 607-4

Anti-Static Grounding

Blow-Out Proof Stem Design

Lockable Handles

Model:

Flotron S3000

Seal Weld (1 pc)



1 pc Body

Model:

Flotron II T3000

Full Port (2 pc)

TB 17

Size Range:

1/4"-3"

(2" is not Full Bore)

Pressure Rating:

3000 psi WOG (Flotron Series S3000/T3000 6000 psi WOG (Flotron II Series S6000)

OMNI Series

Applications:

- High Pressure Shut Off Food Industry
- Low Pressure Steam **Applications**
- Energy Generation

Design Features:

- 25% Carbon/PTFE Seats
- Outstanding Low Cost/High Pressure Valve
- Fire Safe Certified API 607-4
- Double Reduced Bore Fire Safe Certified
- 316SS and Carbon Steel
- **Economical Solution**
- 1 pc Body Design



TB 16

Pressure Ratings:

2000 psi MAWP/WOG 175 psi SWP

T12





Industrial Process Threaded End Designs

1000 psi MAWP/WOG

ISO Mount

Model: 390

Size Range:

Pressure Ratina:

11/2"-6"

Econo-Groove Series

Applications:

- **HVAC**
- Plumbing
- Mining
- Waste Water
- Oil Field
- **Power Plants**
- Military

Design Features:

- 3 pc Body Design
- All Stainless Steel Design
- Full Port Design
- Easy Maintenance
- **Blow-Out Proof Stem**
- AWWA C-606 grooved ends

Kompact Series

Applications:

- Skids
- Applications where space is restricted
- **Aviation & Aerospace**
- Paper & Pulp Serives

Design Features:

- **Full Port**
- Full Flanged Wafer
- Compact Design
- Cavity Filled
- Steam Jacket
- V-Port Control

ISO Mount

ISO 5211 **Direct Connect Design**

Model:

TB 56

DM-W150

Size Range: 1/4"-6"

Pressure Rating: Class ANSI 150

TB 111



Model:

190SS

Max-Gear Manual Gear Operators

Designed to be used with quarter turn Butterfly Valves, Plug Valves, and Dampers requiring a Self-Locking Mechanism. Torque Range 2832 in-lbs through 37173 in-lbs

Design Features:

- Long Life Reliability
- Epoxy Coated Housing
- External Fully Adjustable **End Stops**
- Weather Proof Housing
- Rugged Compact Heavy **Duty Construction**

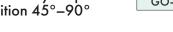
Options:

- Star Drive
- Locking Device
- **Special Coatings**
- Flow Plan Indicators for **Multi-Port Valves**

Chain Wheel Operators

Adjustable Memory Stops in Open Position 45°-90°

Model	Gear Ratio	Torque In-Lbs	Weight Lbs
GO-4.5.6	28:1	2832	11
GO-8.10	41:1	4425	18
GO-12.14	46:1	12391	35
GO-16.18	49:1	22127	57
GO-20	129:1	26552	84
GO-24	158.1	37173	90



Replaceable Drive Insert Design:

Standard gears are fitted with square drive insert or double D, but a variety of other inserts such as key way are also available. Inserts can be easily replaced or remachined as needed.





V-Ball Control Valves

V-Port Control Series

Most of Flo-Tite's High Performance standard ball valves are now available with custom designed V-Cut options such as:

15°, 30°, 60°, 90°, and 120°

Applications:

- Higher Flow Capacities
- Bubble Tight Shut Off
- Precise Flow Control
- Economical Low Operating Cost

Design Features:

- Flanged Type 150, 300, 600 ANSI Class
- Wafer Design 150 LB
- NPT/SW/BW Ends

Available Pressures:

- » Control-Set 2 pc 1000 psi WOG
- » Segmented Design ANSI 150, 300 & 600
- » 3 pc All Types 1000, 2250, & 5000 psi WOG
- » Wafer Design ANSI 150



TB 120











Flo-Tite's Control Ball Valves feature a solid stainless steel ball, not a seat insert like many others.













Economy Design from Flo-Tite

Size Range:

Pressure Rating:

1/4"-2"

Econoflo Series

Reduced Port

Applications:

- Gauge or Drain Services
- Water Treatment
- Compressed Air Lines
- Plumbing Services

Design Features:

- 1 pc Design Valves
- Male X Female Connections/and Female
- Economical Compact Design
- Blow-Out Proof Stem
- Low-Operating Torque







1000 psi MAWP/WOG

Model: T40 MxF



Model: T45 SS

TB 26

EconoChem Series

Models: 110, 120, 130

Design Features:

- 3 pc Body
- Threaded, Socket-Weld, or Butt Weld Ends
- Full Port Design
- RPTFE Seats

UL Certification Available



Model: 110

Size Range: 1/4"-4"

Pressure Ratina: 1000 psi MAWP/WOG

ISO Mount



PFA Lined Valves

Applications:

- **Fertilizers**
- Desalination
- **Bio-Technical**
- Pulp and Paper
- Textile Industry
- Petro-Chemical
- Food Processing
- Semi-Conductors
- Mining and Steel
- Paint and Pigments
- Pharmaceutical Industry
- Chemical Process Industry



1/2"-6"



Size Range: 2"-24"



- Face-to-Face: ASME B16.10
- Actuator Mounting Pad: ISO-5211
- ISO 15848-1 compliant & tested low fugitive emission design

Pressure Rating: 250 psi MAWP/WOG



Size Range: 1/2"-4"



Economy Design from Flo-Tite

Econoflo Series

Models T80/T82

Applications:

- Power Generation
- Chemical Services
- Petrochemical Services
- Universal **Applications**
- Lact Skids

Design Features:

- T80 Ball Valves offer an economical solution for low cost full port stainless steel.
- Full Port
- **Bubble Tight Zero Leakage**
- **Locking Handles**



Size Range: 1/4"-4"

Pressure Ratings:

150 psi SWP

1000 psi MAWP/ WOG

Forged Brass - Threaded & Solder Ends

Models: RB Series T91, T92

Applications:

T91BZ ball valves are ideal utility valves for low pressure applications.

Design Features:

- FM / UL / SR certificates
- **Lead Free Designs**
- **Locking Options**
- **Full Port**

Size Range:

1/4"-4"

Pressure Ratings: 1/4"-2" 600 psi MAWP/WOG 2½"-4" 400 psi MAWP/WOG

150 psi SWP

Model: **T92 BZ TB 31**

Commercial Series

Model: T70

Design Features:

- 2 pc Standard Port
- All 316 Stainless Steel design



Metal Seated Ball Valves

Metal Seated Valves

Applications:

- Abrasive or Corrosive Chemicals
- High Temperature Pressure & Steam
- Hydralic Services
- Slurry Services

- Cryo Applications
- Asphalt Services
- Gas & Oil Services
- Liquid Sulfur
- Steam Services

Design Features:

- Flanged Type 150, 300, 600, 1500, 2500 ANSI Class
- Segmented Design 150, 300, 600 ANSI Class
- 2 & 3 pc 2250, 3000, 6000 psi WOG
- Uni and Bi Directional Flows
- Tungsten Carbide
- Forged Chromium Carbide
- Hard Chrome
- Forged Stainless Steel Balls
- High Temperature Designs up to 1000°F



Surface treatments and coatings to withstand abrasion resistance.







2" Carbon Steel F150 with Steam Jacket



Metal Seats Are Available in Above Models.

Steam Jacket Series

Flo-Tite's valve jackets are designed for chemical service where absolute control of fluids are required within a specified temperature range. With special preparation, these valves can be used for severe and hazardous chemical service.

Design Features:

- Bolt on Jacket
- Clamp on Jacket
- Full Jacket
- Compact Full Jacket

3-Way Bolt Type







Actuation Products





180° Movement

AirCon offers a complete package of Pneumatic, Hydraulic, & Electric Actuators.

All types of controls & accessories for a vast number of special automated applications.

AirCon Series

Designed for quarter-turn ball, butterfly, & plug valves as well as damper applications. Incorporating the latest technology in actuator design.

Design Features:

- Hard anodized aluminum body
- NAMUR interface & ISO 5211 Mounting
- 5° travel stops, optional 90° stops
- Torque range up to 1,565,200 in-lbs
- Optional Stainless Steel, PTFE Coated, Epoxy Coated, Ceramic Coated & Nickel Infused Available
- Specs: CE, ISO, ATEX, SIL3

Smart Positioner VAC V

• Hart, Fieldbus, and Profibus



Easy-Link ISO Mounting Hardware





/alves & controls

VRC Series

- All Specials
- High Chemical Resistance Housing



Electric Actuators



Solenoid Valve

- Direct Design
- 304 Stainless



Max-Seal Butterfly
Valves

Flo-Tite also offers a wide variety of Max-Seal Butterfly Valves.



All Types & Designs





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