715 XS VALVE WITH T15 ELECTRICAL ACTUATOR

FEATURES

The 715XS+TCR 2-way stainless steel ball valve is designed for the automatic shut-off of pipes with non-loaded industrial fluids. It is a full-bore valve with an antistatic device. It is EC-approved. The ISO 5211 mounting pad enables the TCR actuator to be directly assembled. The latter is suitable for S4-30-type light service factors installed indoors or outdoors under shelter. 2-wire wiring - Return via capacitor

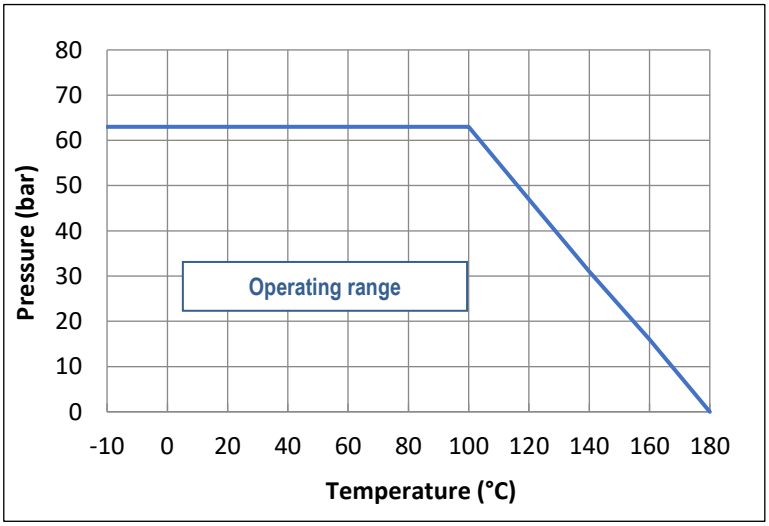
AVAILABLE MODELS

ISO 9001 | 3.1 Cert. | IP 67 | CE 0035

1.4408 stainless steel body.
1/2'' to 1'' diameters.
G thread connections
Supply voltages: 12-24V AC-DC and 110-230 V AC

LIMITS OF USE

Fluid pressure: PS	63 bar (20°C)
Fluid temperature: WT	- 10°C / +180°C
Ambient temperature	- 15°C / + 50°C
Service factor	S4 – 30 %



DIRECTIVES AND MANUFACTURING STANDARDS

OBJECT	Standard	ON	OBJECT	Standard
Pressure Equipment Directive 2014/68/EC	**1/2'' to 1'':** not subject		Final test	NKS 12266
	1''1/4 to 3'': category III	TÜV 0035	Material certificate	NKS 10204
Size	EN 12516-1		Motorisation connection	ISO 5211:
Steel grades	EN 1503-1			

Information given as an indication only, and subject to possible modifications

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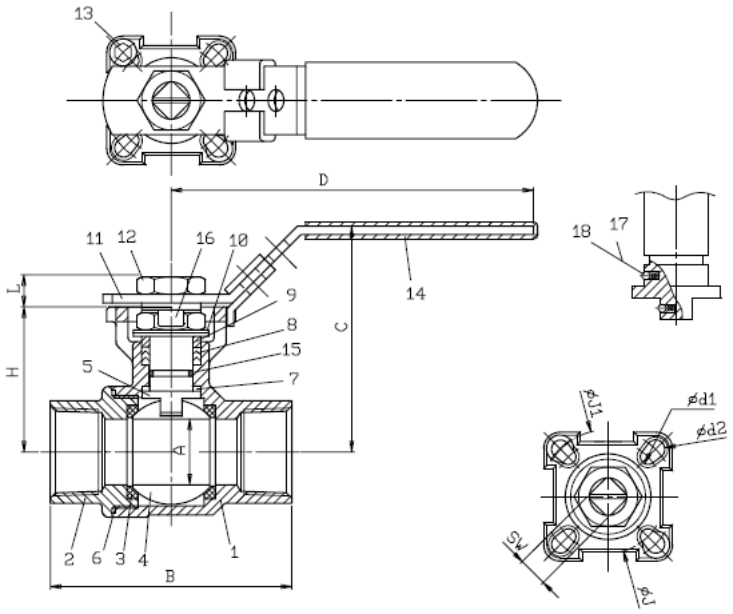
CONSTRUCTION

No.	Name	Material	No.	Name	Material
1	Body	1.4408 SS	11	Lever	304 SS
2	Lateral end	1.4408 SS	12	Nut	304 SS
4	Seats	PTFE + +15% GF	13	Stop	304 SS
5	Stem	316 SS	14	Liner	PVC
6	Body gasket	PTFE	15	O-ring	FKM
7	Washer	PTFE	16	Slide	304 SS
8	Cable gland gasket	PTFE	17	Antistatic device	316 SS
9	Washer	304 SS	18	Spring	316 SS
10	Bellevile washer	301 SS			



DIMENSIONS (mm)

DN	A	B	C	D	H	L	J	J1	d1	d2	SW
1/2"	15	55	70.9	110	42.3	8	42	50	6	7	9
3/4"	20	76	73.4	110	44.9	8	42	50	6	7	9
1"	24.5	83	84.1	135	54	10	42	50	6	7	11
1" 1/4	32	91	89.3	165	59.2	10	50	70	7	9	11
1" 1/2	38	103	109.5	165	71.3	10	50	70	7	9	11
2"	50	120	118.9	165	82.9	14.8	50	70	7	9	14
2"1/2	65	155	155	300	107	17.1	70	102	9	11	17
3"	80	182	165	335	117	17.1	70	102	9	11	17

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T15 ELECTRIC MOTORISATION

The T15 motorisation proposed as standard comprises:

- IP67 plastic housing for actuator and steel gear box,

- a safety coefficient of 1.3 minimum compared to the nominal torque of the valve,

- an upstream / downstream pressure difference ΔP=10 bar max.

The actuator's assembly is direct.

DN	Actuator	Power 110-230V AC	Power 12V DC-24V AC-DC	Time	Standard equipment of the actuator
1/2''	T15	30	20	12s	2-wire wiring - capacitor return NF version perpendicular to the direction of the fluid 2 adjustable limit switches 2 dry auxiliary contacts Thermal protection of the motor Stand-by manual control with key Position visual indicator Electrical connection: 1 x PE M12 + 1.5m cable
3/4''	T15	30	20	12s	
1"	T15	30	20	12s	

For any other operating conditions, please contact us.
* indicative time for actuator running empty

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ASSEMBLY AND MAINTAINANCE INSTRUCTIONS

1 - Installation

1.1 - Checks

- Check that the material of the valve body is chemically compatible with the fluid.
- Check that the pressure and service conditions are compatible with the (P, T) diagram of the valve. See § “Service limits”
- Check that the fluid is clean and free of particles. The latter could scratch the ball and damage the seats, hence causing the valve to leak. If need be, install an upstream filter.
- Check that there is no risk of thermal expansion of the fluid, which could damage the seats. In the open position, a hole at the top of the ball balances the pressures between the body cavity and the flow of the fluid. As an option, we recommend a relief hole upstream of the valve for balancing the pressures for fluids such as ammonia, LPG, chlorine, etc.
- Check that the valve is not used for flow or pressure control since it is not intended for this use and there is a risk of premature wear of the seats, in particular in the event of high pressure and/or temperature. For this special application, preferably use our ‘”V-port” 746XS version with a V-shaped hole in the ball. Please contact us.
- Check that the valve is not used on a gas which might condense at certain times during the process. In such a case, the pressure within the body cavity could become negative, which could lead to a significant deformation of the seats. Please contact us.
- Static electricity: the valve will be supplied with a ball-stem-body internal electrical continuity tester. If the service conditions require the electrical continuity of the installation, check its earthing.
- If the valve is installed in an explosive zone, you must follow the additional “IMEVMATEX” instructions.

1.2 - Storage before installation

- Follow our general “IMESTOCK” instructions for storage.

1.3 - Installation

- Before any installation, isolate the piping upstream and downstream, depressurize the piping and bring the installation to ambient temperature. Carefully clean the piping of any particle (foreign body, dust, rust, etc.) or shavings by water rinsing or air blowing.
- For valves with a size above DN50, plan to use a hoist.
- Remove the protective tips from the valve ends.
- Check the cleanliness of the internal surfaces of the valve and if need be, clean them.
- Direction of mounting: the valves do not have a preferred direction of mounting, unless a relief hole was drilled into the ball.
- Check the perfect alignment and the proper support of the pipe installation upstream and downstream of the valve. Alignment defects cause mechanical deformations which can block the valve or lead to leaks at the body gaskets.
- Check that the standards for the valve internal thread and pipe thread are the same.
- Cover the pipe threads using a sealing material (tow, PTFE tape, sealing glue, etc.) which is suitable for the fluid.
- Screw the tube into the valve end clockwise, as shown in the diagram below.
- Check the sealing of the connection using a suitable test (hydrostatic test or leak detection spray).
- Hydraulic test of the installation:
    - Valves were tested at the factory at 1.5 x WP.
    - If a hydrostatic test is carried out on the installation, do not exceed the authorised pressure.

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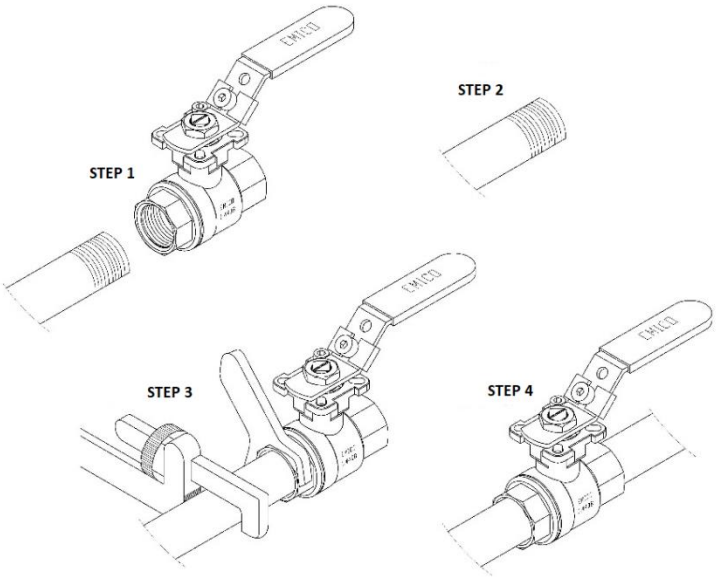


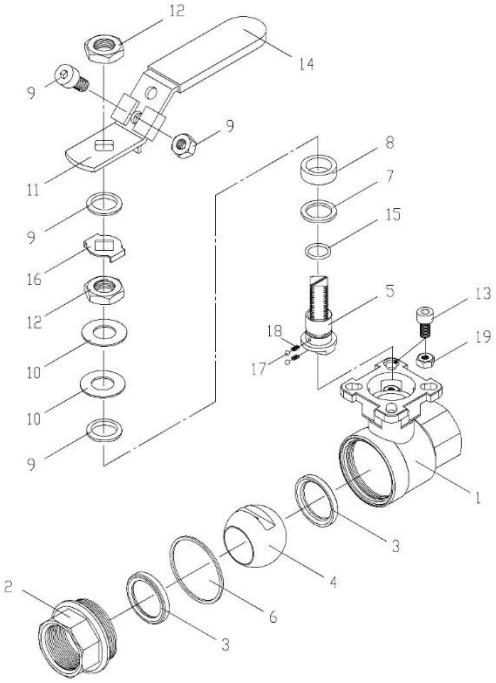
2 - Service

- If a hot fluid flows across the valve, do not touch the valve surface.
- Always operate the valve slowly and smoothly.
- Opening clockwise, closing anti-clockwise.

3 - Servicing

3.1 - Frequency of servicing

- The servicing frequency depends upon the use of the valve, of the type of fluid, of its velocity, of its frequency of operation, of the cycles of rise and fall in pressure and temperature.
- Before any intervention, isolate the upstream and downstream pipe installation using the valves provided for this purpose. Depressurize the pipe installation and bring it to ambient temperature.
- If the lever has to be removed, do that before disassembling the body.
- To remove the central body, unscrew the lateral end (item 2).
- To remove the ball from the body, turn the stem by a quarter turn.



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3.2 – Inspecting the state of the valve and possible repair

- Check the state of the ball (Item 4): it has to be clean and unscratched. If the cleaning or polishing is not possible, replace it (see the § on spare parts).
- Check the state of the seats (3.1 and 3.2): they must not be deformed, nor scratched, nor worn, or dirty. Otherwise, replace them with parts from the gasket kit.
- Check the state of the packing gland (7.8 and 9): no leak should be found at the stem and the rings should not be excessively worn. If need be, replace the gaskets.
- Check the state of the body gasket (6.1 and 6.2). Replace it, if need be.
- Reassemble the different parts of the valve, following the tightening torques shown in the table below.
- Check that the stem manoeuvring is smooth. Perform about ten manoeuvres.

TABLE OF THE TIGHTENING TORQUES OF THE TIE-BOLTS AND OF THE LEVER NUT

DN	Lever nut (Nm)
1/4'' – 6	4
3/8'' – 10	4
1/2'' - 15	4
3/4'' - 20	4
1'' - 25	4.5
1''1/4 - 32	4.5
1''1/2 - 40	5.5
2'' - 50	5.5
2''1/2 - 65	7
3'' - 80	7
4 '' - 100	7

SPARE PARTS

DN	Gasket kit	Ball	Lever
Reference mark	**6-7-8-15**	**4**	**11**
1/2'' - 15	Please contact us.	980032	982802
3/4'' - 20	Please contact us.	980033	982802
1'' - 25	Please contact us.	980034	982804
1''1/4 - 32	Please contact us.	980035	982804
1''1/2 - 40	Please contact us.	980036	982806
2'' - 50	Please contact us.	980037	982806
2''1/2 - 65	Please contact us.	Please contact us.	982808
3'' - 80	Please contact us.	Please contact us.	982808
4 '' - 100	Please contact us.	Please contact us.	982808

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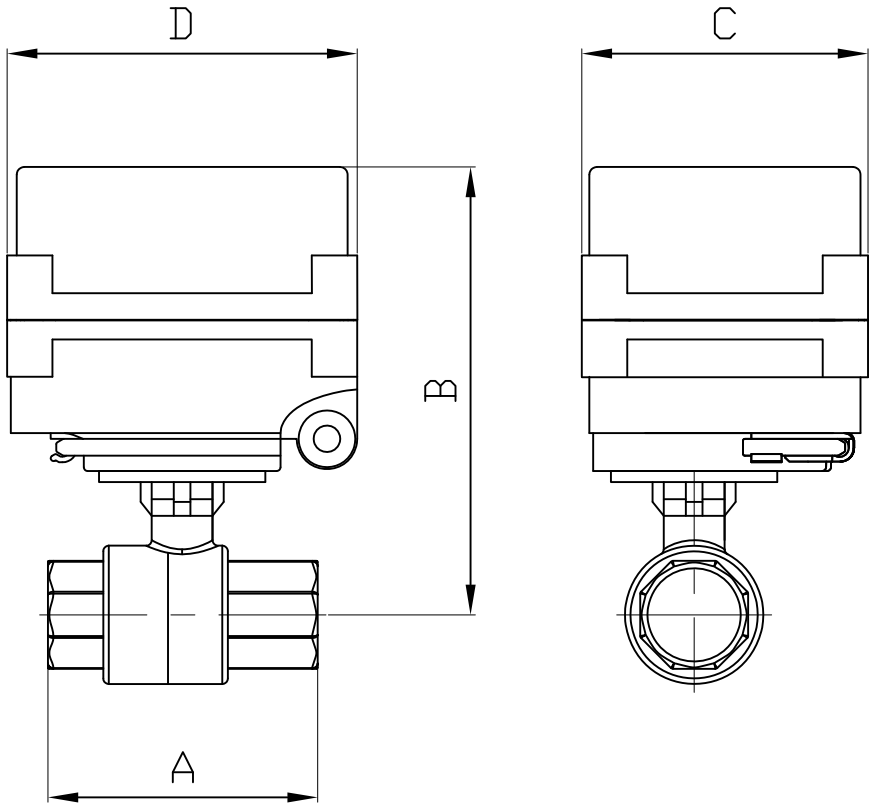

DN	1/2"	3/4"	1"
SERVO	T15	T15	T15
A	57	71	83
B	122.7	125.2	133.4
C	75.7	75.7	75.7
D	92.6	92.6	92.6
KG	0.93	1.04	1.4

Informations données à titre indicatif et sous réserve de modifications éventuelles
data subject to alteration

Ech:/	Date :05/09/2019	Dessiné par : E.D.	Tolérances générales : +/- 0.2	Modifications	Date	REV.
ROBINET A TOURNANT SPHERIQUE 715 XS/BALL VALVE 715XS + SERVOMOTEUR T15/ELECTRIC ACTUATOR T15				Matiére :		
				Poids (Kg) :		
SECTORIEL	45, Rue du Ruisseau 38297 SAINT QUENTIN FALLAVIER			Traitement : SANS		
				Plan n° Ens 1376		

T15 ELECTRICAL ACTUATOR

FEATURES

The ultra-compact T15 electric actuator is intended for motorising under on/off operation the ¼ turn valves with a torque of at most 10 Nm. It is supplied via 2 wires and return to position using a capacitor. With a compact construction and plastic housing, it is especially well suited for motorising small diameter ball valves. IP67 leak-tightness: for indoor use and possibly outdoors under shelter.

AVAILABLE MODELS

Supply voltages: 230V AC and 12-24V AC-DC

LIMITS OF USE

IP Code	IP 67
Ambient temperature	-15°C / +50°C
Service factor	S4 – 30%

MECHANICAL FEATURES

Gear box	treated steel pinions
Torque	15 Nm
Angle of rotation	90° +/- 2°
Manoeuvring time	12 s
ISO 5211:	F03 / F05 – star 11
Declutching	Without
Override control	Using a hex key
Weight	1.000 kg

IP 67 ISO 9001 CE

2 fils RC

ELECTRICAL FEATURES

Power	230 V AC: 30 W	24 V AC: 20 W
Overheating	Thermal protection	
Limit switches	2 adjustable switches	
Auxiliary switches	2 dry contacts	
Anti-condensation	Without	
Electrical connection	PE M12 + 1.5 m cable	

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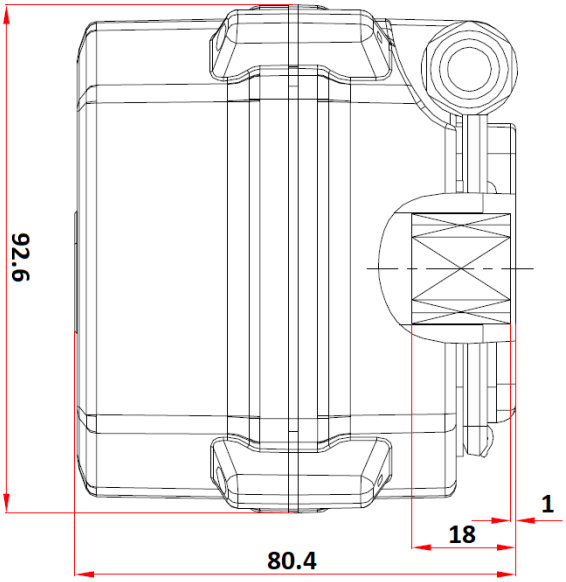
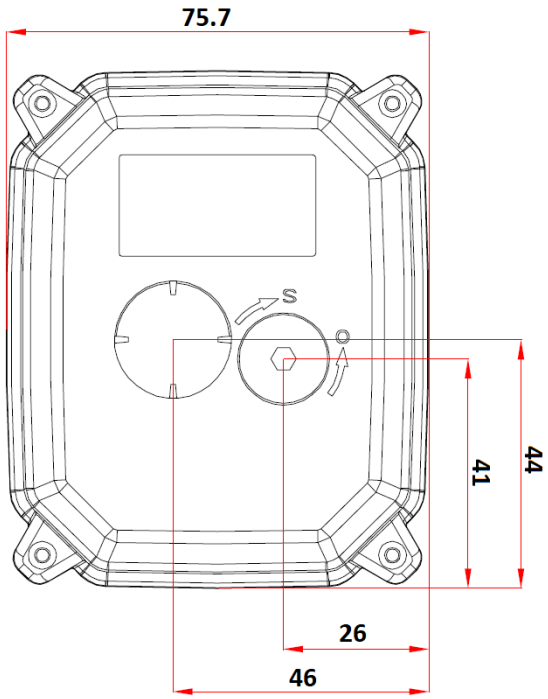
T15 ELECTRICAL ACTUATOR

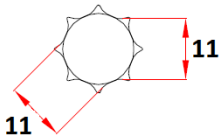
CONSTRUCTION

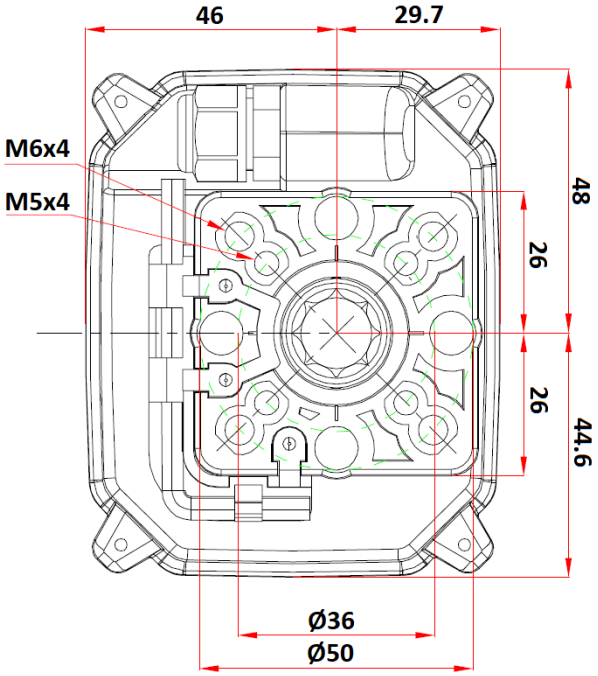
	Housing	PA Plastic		Limit switch A	Steel
	Gear box	Treated steel		Limit switch B	Steel
	ISO mounting pad	Steel		Condenser	
	Limit cams	Steel		Position indicator	

DIMENSIONS (mm)









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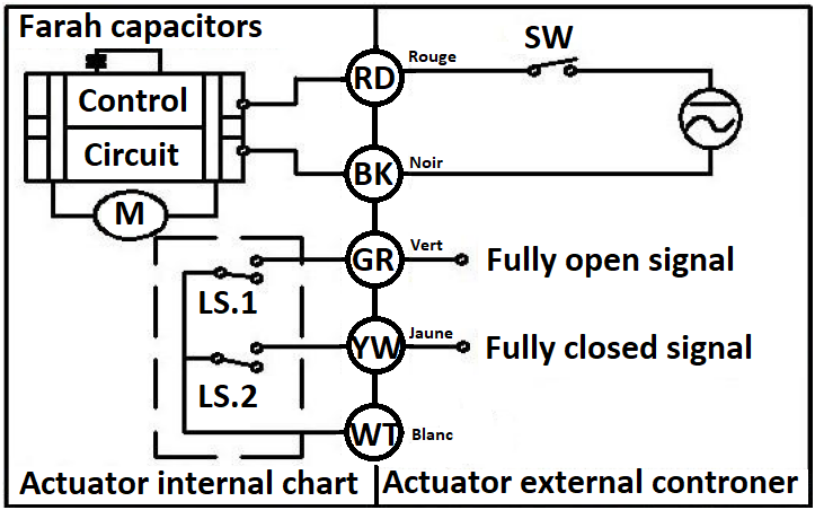
WIRING DIAGRAM

	Wire	Wiring
RD	red	Common
BK	black	Phase
GR	Green	Auxiliary switch “O”
YW	yellow	Auxiliary switch “F”
WT	White	Common contact



SWITCH SETTING

The cams are attached to the drive stem

2. Clockwise rotation = valve closing. The micro-switch stops the actuator.

3. Anti-clockwise rotation = valve opening. The micro-switch stops the actuator.

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