Metal Tube Rotameter

m³/h
Metal Tube Variable Area Rotameter
LZD-25/M10/ESK-Z/L
Flow 0.000m³/h
00000018.1013 m³
21.30℃ 1.0kPa
Ex
Liquid
P:1.6MPa
PN10K
Q&T Instrument Co.,Ltd
NO:18020600

New High-tech Enterprise

CE

Ex-proof

ISO

Apply to complex and harsh environment of variety industries

Special for low flowrate (Liquid mini.16L/H, Gas mini.0.5M^3/H) and various harsh medium

Widely used for industries, such as chemical, petroleum, pharmacy, food, paper

making, sewage treatment, metallurgy,etc.

Model#:QTLZD

m³/h
Metal Tube Variable Area Rotameter
00000018
21.30℃
Q&T Instrument Co.,Ltd

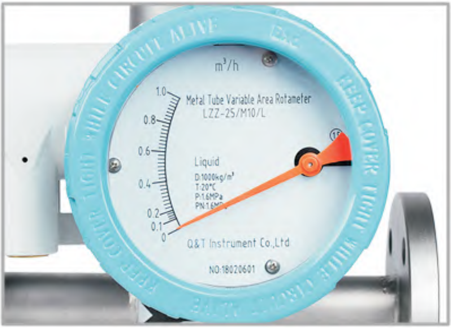
Model#:QTLZZ

DETAILS

All metal structure design
Suitable to high pressure (Maxi.25Mpa),high temperature(Maxi.300℃) or strong corrosive medium

Optional material for
measuring part:
Stainless steel, Titanium,
Hastelloy, PTFE, FEP, etc.

Variety Display

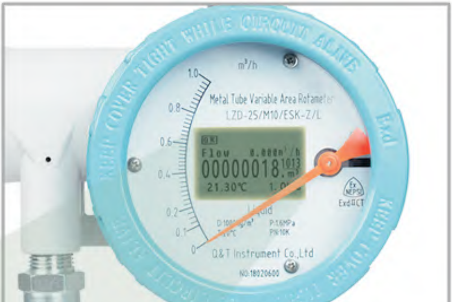

KEEP COVER TIGHT WHILE CIRCUIT ALIVE
Exd
m³/h
1.0
0.8
0.6
0.4
0.2
0.1
0
Metal Tube Variable Area Rotameter
LZZ-25/M10/L
Liquid
D:1000kg/m³
T:20℃
P:1.6MPa
Q&T Instrument Co.,Ltd
NO:18020601

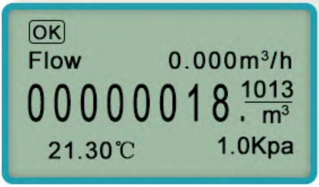
Local indicator

High resolution
More accurate
High visibility
Durable use

Muti-line LCD display

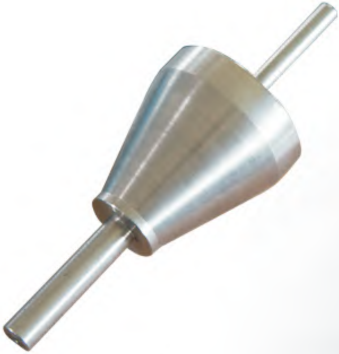
Pointer indication+
LCD display
High visibility
4~20mA output


KEEP COVER TIGHT WHILE CIRCUIT ALIVE
Exd
m³/h
1.0
0.8
0.6
0.4
0.2
0.1
0
Metal Tube Variable Area Rotameter
LZD-25/M10/ESK-Z/L
Flow 0.000m³/h
00000018.
21.30℃
Liquid
P:1.6MPa
PN:10K
Q&T Instrument Co.,Ltd
NO:18020600
ExdⅡCT


OK
Flow
0.000m³/h
00000018.1013
m³
21.30℃
1.0Kpa

Display flow rate(m^3/h)
Totalizer(m^3)
Medium temperature(℃)
Pressure(Kpa)

Float



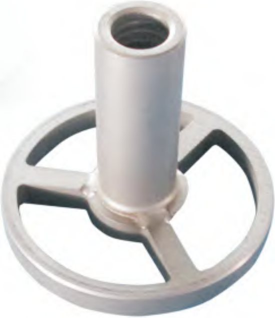
Embedded stainless steel float

Optional material:
Stainless steel (304 or 316), Titanium, Hastelloy, PTFE, FEP, etc.

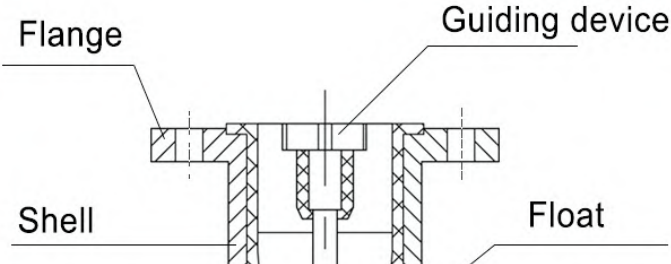
Float Stop Shaft

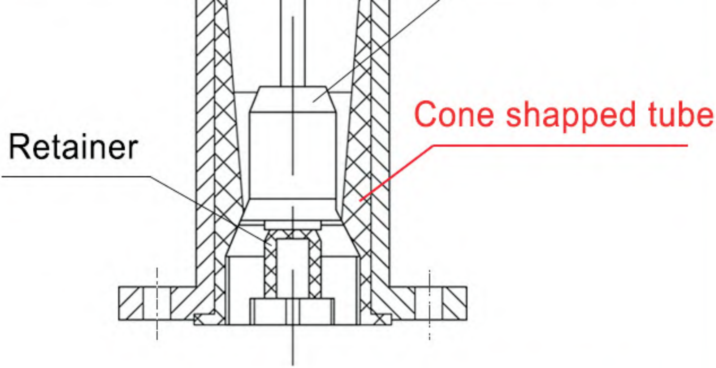
Prevent the float starying from the right path and guarantee the measuring accuracy

Float stop shaft & guiding device



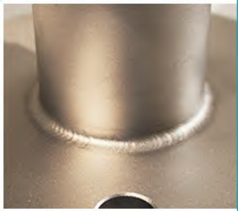
Cone tube design

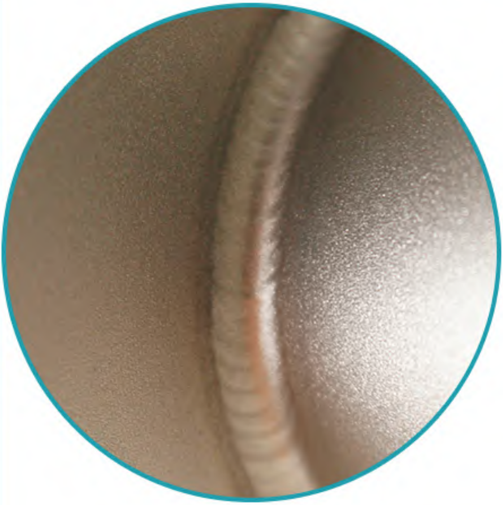

Flange
Guiding device
Shell
Float


Retainer
Cone shapped tube

Metal tube rotameter adopts the cone-shape design, reducing flow area, reducing error, making the measurement more accurate !

Welding procedure





Uniform welding

Full weld

More safety

More beautiful

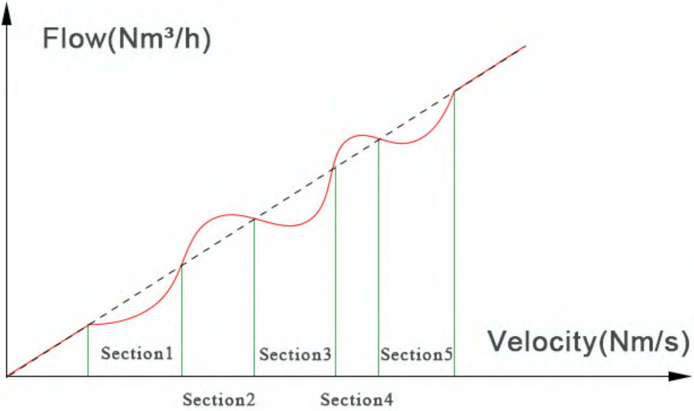
Various output option

Output option:

- DC 4~20mA
- DC 4~20mA + HART
- DC 4~20mA + RS485
- DC 4~20mA + Alarm

Note:Default DC 4~20mA output

Segment Correction



Metal Tube Rotameter can be divided into maxi.12 sections for correction, this operation will make measuring more accurate.

Metal Tube Rotameter Technical Parameter

Measuring range	Water (20℃) 16~150000 l/h. Air(0.1013MPa 20℃) 0.5~4000 m^3/h.
Range ratio	10:1(Special type 20:1).
Accuracy class	2.5(Special type 1.5% or 1.0%).
Working pressure	DN15~DN50 PN16MPa (Special type 25MPa). DN80~DN150 PN10MPa (Special type 16MPa). Pressure rating of jacket 1.6MPa.

Medium temperature	Normalized type -80℃~+220℃. High-temperature type 300℃. Lined with FEP type ≤85℃.
Ambient temperature	-40℃~+120℃(Remote display without LCD≤85℃). (Remote display with LCD≤70℃).
Dielectric viscosity	1/4″ NPT, 3/8″ NPT 1/2″ NPT≤5mPa.s 3/4″ NPT,1″ NPT ≤250mPa.s
Output	Standard signal: two-wire system 4 ~ 20mA (with HART communication). Standard signal: three-wire system 0 ~ 10mA. Alarm signal:1.Two-way relay output. 2.One-way or two-approach switches . Pulse signal output: 0-1KHz isolated output.
Process connection	Standard type:24VDC±20%. AC type:220VAC(85~265VAC) (optional).
Connection mode	Flange Thread Tri-clamp
Levels of protection	IP65/IP67.
Ex-mark	Intrinsically safe:ExiaIICT3~6. Exd type:ExdIICT4~6.

Metal Tube Rotameter Model Selection

PHLZ	X	X	X	X	X	X	X	X	X
Indicator	Code								
Local indicator	Z								
LCD indicator with ouput	D								
Norminal diameter		Code							
DN15		-15							
DN20		-20							
DN25		-25							
DN40		-40							
DN50		-50							
DN80		-80							
DN100		-100							
DN150		-150							
Structure			Code						
Bottom-top			/						
Left-right (horizontal)			H1						
Right-left (horizontal)			H2						
Side-side			AA						
Bottom -side			LA						
Thread connection			S						
Tri-clamp			M						
Body material				Code					
304SS				R4					
316LSS				R6L					
Hastelloy C				Hc4					
Titanium				Ti					
Liner F46(PTFE)				F					
Monel				M					

Indicator type	Code
Iinear indicator(pointer indication)	M7
Nonlinear indicator(LCD Display)	M9

Combination function(only for LCD display)	Code
24VDC with 4~20mA output	S
24VDC with HART communication	Z
Battery power	D

Additional function	Code
Measuring tube with thermal preservation / heat insulation jacket	T
Measure medium temperature higher than 120·C	HT

Ex-proof:	Code
With	W
Without	N

Alarm	Code
One alarm	K1
Two alarm	K2
None	N

Metal Tube Rotameter Flow Range

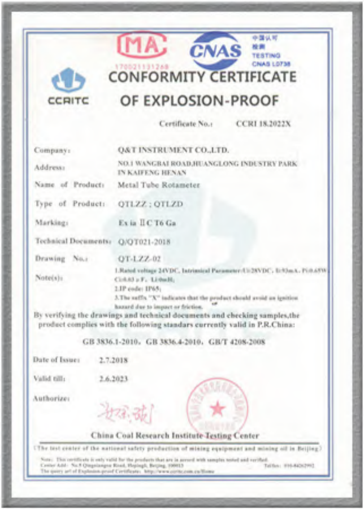
Float material：1□：0Cr18Ni9 00Cr17Ni14Mo2 Hastelloy 2□：FEP

Diameter DN		Water (20℃) L/h		Air 0.1013MPa 20℃ Nm3/h	Standard type The maximum pressure loss KPa	
		1□	2□	1□	Water	Air
15	*	16	-	0.5	2.0	7.0
	*	25	16	0.7	2.3	7.2
		40	25	1.1	2.5	7.3
		63	40	1.8	2.5	7.5
		100	63	2.8	2.5	7.8
		160	100	4.8	2.6	8.0
		250	160	7.0	2.7	10.0
		400	250	10.0	2.9	10.8
		600	400	16.0	3.4	14
20		600	400	16	4.0	7.0
		1000	600	30	4.1	8.0
		1600	1000	45	4.4	12.0
		2500	1600	70	5.2	19.0
		4000	2500	110	7.0	25.0
		6000	4000	180	12.5	33.0

25	600	400	16	4.0	7.0
	1000	600	30	4.1	8.0
	1600	1000	45	4.4	12.0
	2500	1600	70	5.2	19.0
	4000	2500	110	7.0	25.0
	6000	4000	180	12.5	33.0
32	1000	600	30	4.1	8.0
	1600	1000	45	4.4	12.0
	2500	1600	70	5.2	19.0
	4000	2500	110	7.0	25.0
	6000	4000	180	12.5	33.0
	10000		250	12.5	33.0
40	2500	1600	70	5.2	19.0
	4000	2500	110	7.0	25.0
	6000	4000	180	12.5	33.0
	10000		250	12.5	33.0
50	6000	4000	180	4.7	8.0
	10000	6000	250	5.1	15.0
	16000	10000	400	6.2	22.0
	25000	16000	600	8.0	35.0
65	16000	10000	400	6.2	22.0
	25000	16000	600	8.0	35.0
80	25000	16000	1000	5.3	15.0
	40000	25000	1200	7.8	22.0
	60000	40000	1600	8.3	25.0
100	60000	40000	1800	11.4	35.0
	100000	60000	3000	16.7	45.0
125	100000	40000	3000	11.4	42.0
	125000	50000	3000	11.4	47.0
150	150000	100000	4000	17.0	47.0

Notes：In addition to the above general specifications，* Special specifications all can be customized according to customer demand.

Certificates



CMA
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CNAS
中国认可
检测
TESTING
CNAS L0738

CCRITC

CONFORMITY CERTIFICATE OF EXPLOSION-PROOF

Certificate No.: CCRI 18.2022X

Company:	Q&T INSTRUMENT CO.,LTD.
Address:	NO.1 WANGBAI ROAD,HUANGLONG INDUSTRY PARK IN KAIFENG HENAN
Name of Product:	Metal Tube Rotameter
Type of Product:	QTLZZ ; QTLZD
Marking:	Ex ia ⅡC T6 Ga
Technical Documents:	Q/QT021-2018
Drawing No.:	QT-LZZ-02
Note(s):	1.Rated voltage 24VDC, Intrinsical Parameter:Ui:28VDC, Ii:93mA, Pi:0.65W; Ci:0.03 μF, Li:0mH; 2.IP code: IP65; 3.The suffix "X" indicates that the product should avoid an ignition hazard due to impact or friction.

By verifying the drawings and technical documents and checking samples,the product complies with the following standars currently valid in P.R.China:

GB 3836.1-2010, GB 3836.4-2010, GB/T 4208-2008

Date of Issue: 2.7.2018

Valid till: 2.6.2023

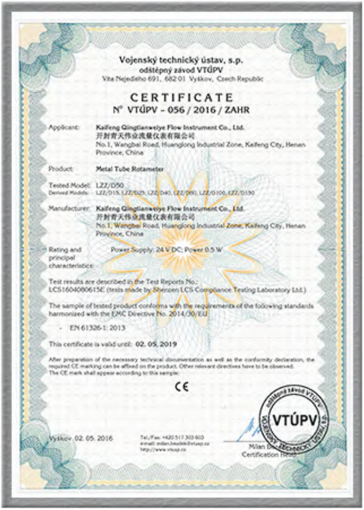
Authorize:

China Coal Research Institute Testing Center

(The test center of the national safety production of mining equipment and mining oil in Beijing)

Note: This certificate is only valid for the products that are in accord with samples tested and verified.
Center Add: No.5 Qingniangou Road, Hepingli, Beijing, 100013 Tel/fax: 010-84262992
The query url of Explosion-proof Certificate: http://www.ccritc.com.cn/Home

Metal tube rotameter explosion proof



Vojenský technický ústav, s.p.
odštěpný závod VTÚPV
Víta Nejedlého 691, 682 01 Vyškov, Czech Republic

CERTIFICATE
N° VTÚPV – 056 / 2016 / ZAHR

Applicant:	Kaifeng Qingtianweiye Flow Instrument Co., Ltd. 开封青天伟业流量仪表有限公司 No.1, Wangbai Road, Huanglong Industrial Zone, Kaifeng City, Henan Province, China
Product:	Metal Tube Rotameter
Tested Model:	LZZ/D50
Derived Models:	LZZ/D15, LZZ/D25, LZZ/D40, LZZ/D80, LZZ/D100, LZZ/D150
Manufacturer:	Kaifeng Qingtianweiye Flow Instrument Co., Ltd. 开封青天伟业流量仪表有限公司 No.1, Wangbai Road, Huanglong Industrial Zone, Kaifeng City, Henan Province, China
Rating and principal characteristics:	Power Supply: 24 V DC; Power 0.5 W

Test results are described in the Test Reports No.: LCS160408061 5E (tests made by Shenzen LCS Compliance Testing Laboratory Ltd.)

The sample of tested product conforms with the requirements of the following standards harmonized with the EMC Directive No. 2014/30/EU

- EN 61326-1: 2013

This certificate is valid until: **02. 05. 2019**

After preparation of the necessary technical documentation as well as the conformity declaration, the required CE marking can be affixed on the product. Other relevant directives have to be observed. The CE mark shall appear according to this sample:

CE

Vyškov 02. 05. 2016

Tel./Fax: +420 517 303 603
email: milan.beodek@vtuep.cz
http://www.vtuep.cz

Milan B
Certification Head

VTÚPV

Metal tube rotameter CE

德意志联邦共和国
商标注册证书
企业法人营业执照

Enterprise Certificates

More than 100 patents

Packaging Of Products

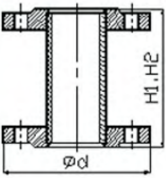
Products ready for packing

ECO Packing

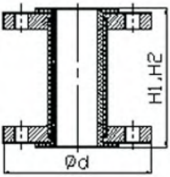
Products are multi-packaging, shockproof and anti-fall, ensure the safe delivery

Enter the finished product warehouse and wait for transportation

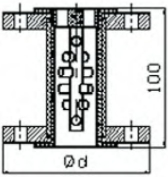
Metal Tube Rotameter Installation Condition



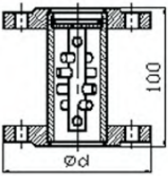
Straight pipe section



Straight pipe section lined with FEP



Filter lined with FEP



Filter

Caliber	DN15	DN25	DN50	DN80	DN100	DN150
Front straight pipe section H1≥(mm)	75	125	250	400	500	750
Back straight pipe section H2≥(mm)	250	250	250	250	250	250
φd(mm)	95	115	165	200	220	285

Note: straight pipe section and magnetic filter are connected with DIN PN16 flange, special standard is specified by user.

Q&T
Instrument Co.,Ltd
Henan Shengtian Precision M & C Co.,Ltd
PHILEMON
STCK
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Rich experiences in exhibition

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Kaifeng Qingtianweiye Flow Instrument Co.,Ltd
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Trade Show

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