

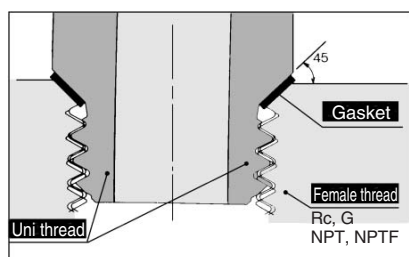
# Uni One-touch Fittings

## Series KQ2

Applicable Tubing: Metric Size

Connection Thread: Rc, G, NPT, NPTF

**New-stand male thread for piping that reduces the screw-in time by 1/3.**

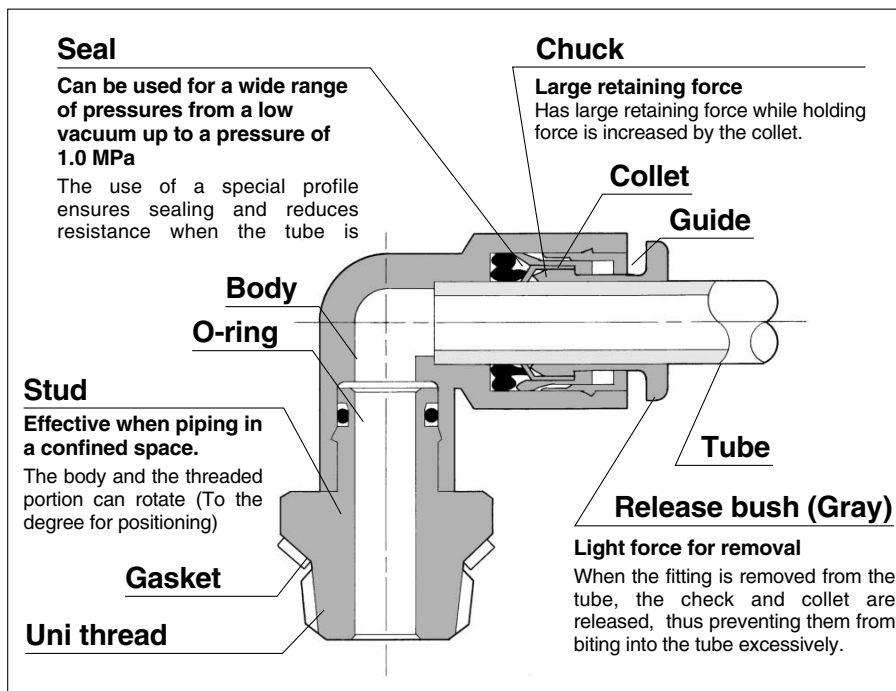


### Uni thread ridge shape

A gasket made of a stainless sheet covered with laminated NBR on both sides is seated on the chamfer of a female thread for a perfect sealing construction irrespective of the difference in thread diameters due to the difference in the types of female threads, variation in tolerance, or difference in the size of chamfer. (It is applicable to any female thread with an ordinary chamfer.)

**A ridge shape has been created as a Uni thread for common applications for Rc, G, NPT and NPTF.**

**The male thread for piping drastically cuts piping man-hours.**



### Applicable Tubing

Tubing material	Nylon, Soft nylon, Polyurethane
Tubing O.D.	ø4, ø6, ø8, ø10, ø12, ø16

### Product's Color

Series	Body	Release button
Series KQ2	White	Light gray
Series KQ	Black	Blue


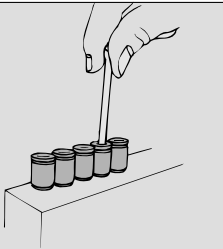

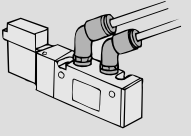





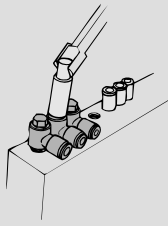

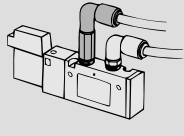








### Specifications

Fluid	Air/Water <sup>Note)</sup>
Maximum operating pressure	1.0 MPa
Operating vacuum pressure	-100 kPa
Proof pressure	3.0 MPa
Ambient and fluid temperature	-5 to 60°C, Water: 0 to 40°C (No freezing)

Note) Applicable for general industrial water. Please consult with SMC if using for other kinds of fluid. Also, the surge pressure must be under the maximum operating pressure.

### Principal Parts Material

Body	C3604BD, PBT
Stud	C3604BD (Thread portion)
Chuck	Stainless steel 304
Guide	Stainless steel 304, C3604BD, POM
Collet, Release button	POM
Seal, O-ring	NBR
Gasket	Stainless steel 304, NBR

Model	
<b>Hex. socket head male connector</b> <b>KQ2S</b> P. 36 	Internal hex. allows thread connection by using an allen wrench for confined spaces. 
<b>45° male elbow</b> <b>KQ2K</b> P. 36 	Use to pipe in 45° direction from female thread. Model in-between of male connector and male elbow. 
<b>Male connector</b> <b>KQ2H</b> P. 34 	Use to pipe in the same direction from female thread. Most general style. 
<b>Branch "Y"</b> <b>KQ2U</b> P. 35 	Use to branch line in the same direction from female thread. 
<b>Universal male elbow</b> <b>KQ2V</b> P. 36 	Universal male elbow allows thread connection by using a socket wrench for confined spaces. 
<b>Extended male elbow</b> <b>KQ2W</b> P. 36 	Basically, it is used together with male elbow. Different point is that it is used for fittings to avoid with interfering with each other by making the piping two-level. 
<b>Male elbow</b> <b>KQ2L</b> P. 34 	Use to pipe at right angles to female thread. Most general style. 
<b>Male run tee</b> <b>KQ2Y</b> P. 35 	Use to branch line in the same direction from female thread and in 90° direction. 
<b>Male branch tee</b> <b>KQ2T</b> P. 34 	Use to branch line from female thread in both 90° directions. 
<b>Gasket</b> <b>KQG</b> P. 36 	Thread seal 

- K
- M
- H
- D
- MS
- T
- VMG

## How to Order

**KQ 2 H 06 U01**

One-touch fittings

Product's color

Symbol	Body	Release button
2	White	Light gray
Nil	Black	Blue

Applicable tubing O.D.

04	ø4
06	ø6
08	ø8
10	ø10
12	ø12
16	ø16

Port size

Thread connection	U01	Uni 1/8
	U02	Uni 1/4
	U03	Uni 3/8
	U04	Uni 1/2

Model

H	Male connector	T	Male branch tee
S	Hex. socket head male connector	Y	Male run tee
L	Male elbow	U	Branch
K	45° male elbow		
V	Universal male elbow		
W	Extended male elbow		

### How to Order Gasket

**KQG U01**

Gasket for Uni One-touch fittings

Applicable port size

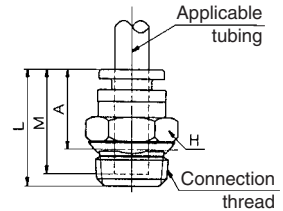
U01	Uni 1/8
U02	Uni 1/4
U03	Uni 3/8
U04	Uni 1/2

# Series KQ2

## <Metric size> Male Connector: KQ2H



Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	L	A*	M	Effective area (mm <sup>2</sup> )		Weight (g)
							Nylon	Urethane	
4	1/8	KQ2H04-U01	10	18.5	13.5	16	5.6	5.6	5
	1/4	KQ2H04-U02	14	16.5	10.5				10
6	1/8	KQ2H06-U01	12	19.5	14.5	17	13.1	13.1	5
	1/4	KQ2H06-U02	14		13				10
	3/8	KQ2H06-U03	17	17.5	11.5				16
8	1/8	KQ2H08-U01	14	25	20.5	18.5	26.1	18.0	11
	1/4	KQ2H08-U02		21.5	15.5				27
	3/8	KQ2H08-U03	17	19.5	13.5				33
10	1/8	KQ2H10-U01	17	28	23	21	41.5	29.5	17
	1/4	KQ2H10-U02			22				17
	3/8	KQ2H10-U03	24	18	14				
	1/2	KQ2H10-U04	22	22	14				28
12	1/4	KQ2H12-U02	19	30.5	24.5	22	58.3	46.1	22
	3/8	KQ2H12-U03		25.5	19.5				16
	1/2	KQ2H12-U04	22	24.5	16.5				28
16	3/8	KQ2H16-U03	24	33.5	27.5	24	81	(81)	39
	1/2	KQ2H16-U04		28.5	20.5				113

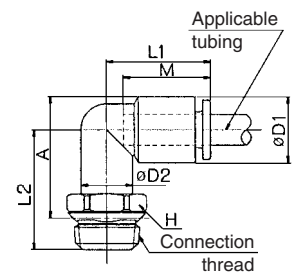


\* Reference dimensions after Uni thread installation. Note) Dimensions in ( ) are the case of soft nylon tubing.

## <Metric size> Male Elbow: KQ2L



Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	øD1	øD2	L1	L2	A*	M	Effective area (mm <sup>2</sup> )		Weight (g)
										Nylon	Urethane	
4	1/8	KQ2L04-U01	10	10.4	10	18	20	20.5	16	4.2	4.2	8
	1/4	KQ2L04-U02	14				22	21.5				14
6	1/8	KQ2L06-U01	10	12.8	10	20	21.5	23.5	17	11.4	11.4	9
	1/4	KQ2L06-U02	14				23	23				15
	3/8	KQ2L06-U03	17				24	24.5				23
8	1/8	KQ2L08-U01	12	15.2	12	23	22.5	25.5	18.5	21.6	14.9	11
	1/4	KQ2L08-U02	14				24.5	26				16
	3/8	KQ2L08-U03	17				25.5	27				24
10	1/8	KQ2L10-U01	17	18.5	17	26.5	25	29.5	21	35.2	25.0	24
	1/4	KQ2L10-U02					26.5	30				21
	3/8	KQ2L10-U03	27				30.5	25				
	1/2	KQ2L10-U04	22				30	31.5				45
12	1/4	KQ2L12-U02	17	20.9	17	28.5	27	31.5	22	50.2	39.7	23
	3/8	KQ2L12-U03					28	32.5				27
	1/2	KQ2L12-U04	22				31	33.5				48
16	3/8	KQ2L16-U03	22	26.5	21	33	33	35	24	71	(71)	49
	1/2	KQ2L16-U04					35	35				100

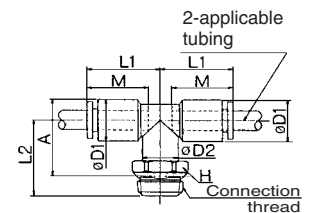


\* Reference dimensions after Uni thread installation. Note) Dimensions in ( ) are the case of soft nylon tubing.

## <Metric size> Male Branch Tee: KQ2T



Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	øD1	øD2	L1	L2	A*	M	Effective area (mm <sup>2</sup> )		Weight (g)
										Nylon	Urethane	
4	1/8	KQ2T04-U01	10	10.4	10	18	20	21.5	16	6.0	6.0	9
	1/4	KQ2T04-U02	14				22	21.5				15
6	1/8	KQ2T06-U01	10	12.8	10	20	21.5	23.5	17	13.9	13.9	11
	1/4	KQ2T06-U02	14				23	23				17
	3/8	KQ2T06-U03	17				24	24.5				26
8	1/8	KQ2T08-U01	12	15.2	12	23	22.5	26	18.5	26.3	18.2	15
	1/4	KQ2T08-U02	14				24.5	26				20
	3/8	KQ2T08-U03	17				25.5	27				28
10	1/8	KQ2T10-U01	17	18.5	17	26.5	25	29.5	21	40.8	29.0	30
	1/4	KQ2T10-U02					26.5	30				27
	3/8	KQ2T10-U03	27				30.5	31				
	1/2	KQ2T10-U04	22				30	31.5				51
12	1/4	KQ2T12-U02	17	20.9	17	28.5	27	31.5	22	57.2	45.2	31
	3/8	KQ2T12-U03					28	32.5				34
	1/2	KQ2T12-U04	22				31	33.5				54
16	3/8	KQ2T16-U03	22	26.9	21	33	33	35	24	71	(71)	62
	1/2	KQ2T16-U04					35	35				100

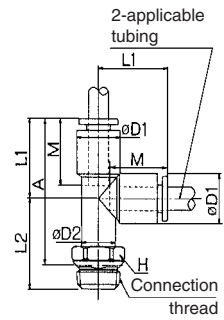


\* Reference dimensions after Uni thread installation. Note) Dimensions in ( ) are the case of soft nylon tubing.

## <Metric size> Male Run Tee: KQ2Y



Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	øD1	øD2	L1	L2		A	M	Effective area (mm <sup>2</sup> )		Weight (g)
											Nylon	Urethane	
4	1/8	KQ2Y04-U01	10	10.4	10	18	20	34	16	6.4	6.4	9	
	1/4	KQ2Y04-U02	14				22	34.5				15	
6	1/8	KQ2Y06-U01	10	12.8	10	20	21.5	37.5	17	13.4	13.4	11	
	1/4	KQ2Y06-U02	14				23	37				17	
	3/8	KQ2Y06-U03	17				24	38				26	
8	1/8	KQ2Y08-U01	12	15.2	12	23	22.5	41.5	18.5	25.6	17.7	15	
	1/4	KQ2Y08-U02	14				25.5	42.5				19	
	3/8	KQ2Y08-U03	17				25.5	42.5				28	
10	1/8	KQ2Y10-U01	17	18.5	17	26.5	25	46.5	21	40.0	28.4	30	
	1/4	KQ2Y10-U02					26.5	47.5				27	
	3/8	KQ2Y10-U03					27	48				31	
	1/2	KQ2Y10-U04					22	30				49	51
12	1/4	KQ2Y12-U02	17	20.9	17	28.5	27	49.5	22	57.4	45.4	31	
	3/8	KQ2Y12-U03					28	50.5				35	
	1/2	KQ2Y12-U04					22	31				51.5	55
16	3/8	KQ2Y16-U03	22	26.5	21	33	40.5	66	24	81	(81)	61	
	1/2	KQ2Y16-U04					63	113				(113)	62

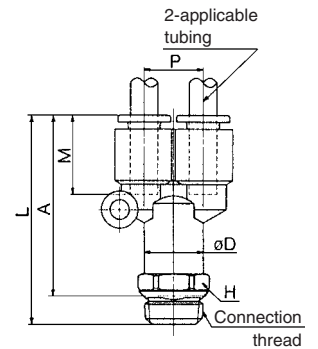


\* Reference dimensions after Uni thread installation. Note) Dimensions in ( ) are the case of soft nylon tubing.

## <Metric size> Branch: KQ2U



Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	øD	L	P	A*	M	Effective area (mm <sup>2</sup> )		Weight (g)	
									Nylon	Urethane		
4	1/8	KQ2U04-U01	11	10.4	40	10.4	36	16	4.2	4.2	11	
	1/4	KQ2U04-U02	14		42						16	
6	1/8	KQ2U06-U01	13	12.8	43.5	12.8	39	17	13.4	13.4	14	
	1/4	KQ2U06-U02	14		45						18	
	3/8	KQ2U06-U03	17		46						26	
8	1/8	KQ2U08-U01	17	15.2	50.5	15.2	46	18.5	25.6	17.7	27	
	1/4	KQ2U08-U02			52						46	25
	3/8	KQ2U08-U03			51.5						45.5	28
10	1/4	KQ2U10-U02	19	18.5	57.5	18.5	51.5	21	40	28.4	38	
	3/8	KQ2U10-U03			59						51	36
	1/2	KQ2U10-U04			22						59	51
12	1/4	KQ2U12-U02	22	20.9	61	20.9	55	22	57.4	45.4	53	
	3/8	KQ2U12-U03			62.5						54.5	52
	1/2	KQ2U12-U04			62.5						54.5	52

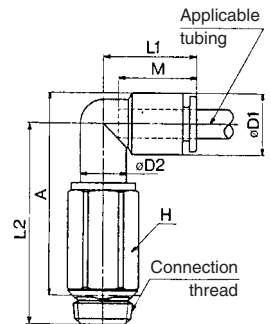


\* Reference dimensions after Uni thread installation.

## <Metric size> Extended Male Elbow: KQ2W



Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	øD1	øD2	L1	L2		A*	M	Effective area (mm <sup>2</sup> )		Weight (g)
											Nylon	Urethane	
4	1/8	KQ2W04-U01	10	10.4	10	18	34.5	35.5	16	4.0	4.0	16	
	1/4	KQ2W04-U02	14				37	38.5				26	
6	1/8	KQ2W06-U01	10	12.8	10	20	38.5	41	17	10.9	10.9	18	
	1/4	KQ2W06-U02	14				40.5	42				29	
	3/8	KQ2W06-U03	17				41.5	42				40	
8	1/8	KQ2W08-U01	12	15.2	12	23	43.5	46.5	18	20.5	14.2	28	
	1/4	KQ2W08-U02	14				45.5	47				35	
	3/8	KQ2W08-U03	17				46	48				46	
10	1/4	KQ2W10-U02	17	18.5	17	26.5	52.5	56	21	33.5	23.8	67	
	3/8	KQ2W10-U03					54.5	56				57	
	1/2	KQ2W10-U04					22	54.5				56	98
12	1/4	KQ2W12-U02	17	20.9	17	28.5	54	58.5	22	47.7	37.7	69	
	3/8	KQ2W12-U03					54	58.5				59	
	1/2	KQ2W12-U04					22	56				56	99



\* Reference dimensions after Uni thread installation.

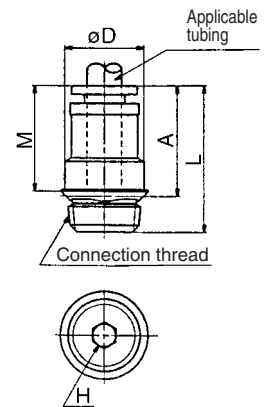
- K
- M
- H
- D
- MS
- T
- VMG

# Series KQ2

## <Metric size> Hexagon Socket Head Male Connector: KQ2S



Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	øD	L	A*	M	Effective area (mm <sup>2</sup> )		Weight (g)
								Nylon	Urethane	
4	1/8	KQ2S04-U01	3	10	23.5	18.5	16	4.1	3.6	7
6	1/8	KQ2S06-U01	4	11.8	24	19	17	10.0	9.9	9
	1/4	KQ2S06-U02		18		10.7		10.0	12	
8	1/8	KQ2S08-U01	5	14	27.5	22.5	18.5	17.2	16.2	12
	1/4	KQ2S08-U02	28		22	14				
	3/8	KQ2S08-U03	17		27.5	21.5		24		
10	1/8	KQ2S10-U01	5	17	30	25	21	17.2	10.0	18
	1/4	KQ2S10-U02	29		23	17				
	3/8	KQ2S10-U03	8		28.5	22.5		19		
	1/2	KQ2S10-U04	21		29	21		36		
12	1/4	KQ2S12-U02	8	19	30.5	25	22	46.0	44.5	20
	3/8	KQ2S12-U03	9		31	22		22		
	1/2	KQ2S12-U04	21		28.5	20.5		30		

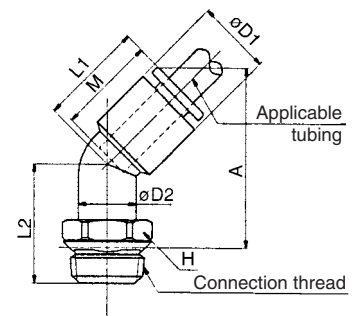


\* Reference dimensions after Uni thread installation.

## <Metric size> 45° Male Elbow: KQ2K



Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	øD1	øD2	L1	L2	A*	M	Effective area (mm <sup>2</sup> )		Weight (g)
										Nylon	Urethane	
4	1/8	KQ2K04-U01	10	10.4	10	17	18.5	30	16	3.4	3.4	6
	1/4	KQ2K04-U02	14				20.5	30.5				13
6	1/8	KQ2K06-U01	10	12.8	10	18	18.5	31	17	8.7	8.7	7
	1/4	KQ2K06-U02	14				20.5	32				13
	3/8	KQ2K06-U03	17				21.5	32				23
8	1/8	KQ2K08-U01	12	15.2	12	20.5	20	35	18.5	19.7	13.6	11
	1/4	KQ2K08-U02	14				22	36				15
	3/8	KQ2K08-U03	17				23	36				24
10	1/8	KQ2K10-U01	17	18.5	17	24	22	38	21	21.6	14.9	24
	1/4	KQ2K10-U02					23.5	40.5				21
	3/8	KQ2K10-U03					24	41				25
	1/2	KQ2K10-U04					22	27				42
12	1/4	KQ2K12-U02	17	20.9	17	25	24	42	22	44.5	35.1	23
	3/8	KQ2K12-U03					24.5	42.5				27
	1/2	KQ2K12-U04					22	27.5				43.5

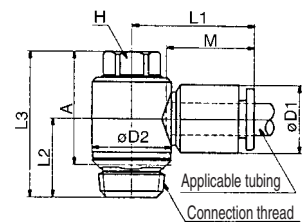


\* Reference dimensions after Uni thread installation.

## <Metric size> Universal Male Elbow: KQ2V



Applicable tubing O.D. (mm)	Connection thread Uni One-touch fittings	Model	H (width across flats)	øD1	øD2	L1	L2	L3	A*	M	Effective area (mm <sup>2</sup> )		Weight (g)
											Nylon	Urethane	
4	1/8	KQ2V04-U01	8	10.4	13.4	22	13.5	25.5	20.5	16	2.9	2.9	12
6	1/8	KQ2V06-U01	8	12.8	13.4	24	13.5	25.5	20.5	17	7.5	7.5	13
	1/4	KQ2V06-U02	10		15.4	23.5	15.5	28	22				21
8	1/8	KQ2V08-U01	12	15.2	17.6	28.5	14.5	27.5	22.5	18.5	11.2	24	22
	1/4	KQ2V08-U02	16.5		29.5	23.5	30	25					
	3/8	KQ2V08-U03	14		20.6	27.5	18.5	34	28				36
10	1/4	KQ2V10-U02	14	18.5	20.6	31	18.5	34	28	21	27	20.3	35
	3/8	KQ2V10-U03											38
12	3/8	KQ2V12-U03	17	20.9	25.2	34	20	36.5	30.5	22	39	30.8	52
	1/2	KQ2V12-U04					22.5	39.5	31.5				62

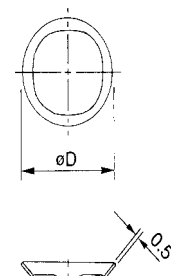


\* Reference dimensions after Uni thread installation.

## <Metric size> Gasket: KQG



Connection thread Uni One-touch fittings	Model	øD	Weight (g)
1/8	KQG-U01	11.8	0.12
1/4	KQG-U02	15.3	0.19
3/8	KQG-U03	18.7	0.23
1/2	KQG-U04	23.4	0.34



## ⚠ Precautions

**Be sure to read before handling.**  
**Refer to pages 15-18-3 to 15-18-4 for Safety Instructions and Common Precautions on the products mentioned in this catalog, and refer to pages 15-1-10 to 15-1-11 for Precautions on every series.**

### Handling and Precautions

#### ⚠ Caution

1. First tighten by hand, then use a proper wrench, which could be suitable for the hexagon across flats on the body to tighten with the proper tightening torque given below.

#### Connecting Female Thread: Rc, NPT, NPTF

Nominal size of Uni thread	Recommended tightening torque (N·m)	Approx. spanner tightening angle after tightened by hand
1/8	5 to 7	30 to 60
1/4	11 to 13	30 to 60
3/8	14 to 16	15 to 45
1/2	20 to 22	15 to 30

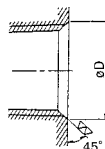
#### Connecting Female Thread: G

Nominal size of Uni thread	Recommended tightening torque (N·m)	Approx. spanner tightening angle after tightened by hand
1/8	3 to 4	30 to 45
1/4	4 to 5	15 to 30
3/8	8 to 9	15 to 30
1/2	14 to 15	15 to 30

2. Gasket can be recycled 6 to 10 times. It can be replaced easily when it has sustained damage. A broken gasket can be removed by holding and then turning in the same direction of loosening the thread. If it is difficult to remove, cut it with nippers, etc. In such a case, use caution not to scratch seat face because the seat face of 45° gasket of fitting is the sealing face.
3. Please consult with SMC if using for other fluids than air.
4. Other precautions on handling, etc. are the same as those of One-touch fittings.

#### Chamfered area for female thread (Recommended value)

By chamfering as shown in the following table, machining of threads is easier and effective for burr prevention, too.



Female thread size	Chamfered port size øD (Recommended value)	
	Rc, G	NPT, NPTF
1/8	10.2 to 11.8	10.5 to 11.8
1/4	13.6 to 15.8	14.1 to 15.8
3/8	17.1 to 19.4	17.4 to 19.4
1/2	21.4 to 25.1	21.7 to 25.1

K□

M□

H□

D□

MS

T□

VMG