

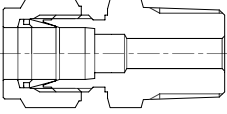
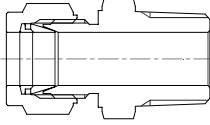
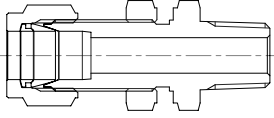
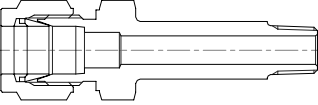
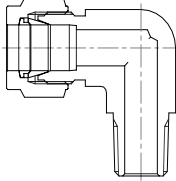
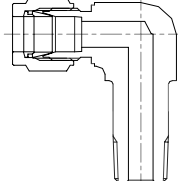
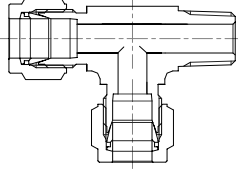
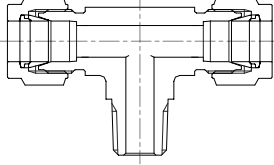
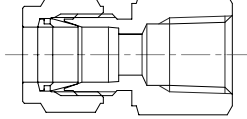
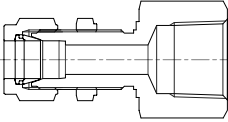
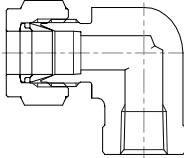
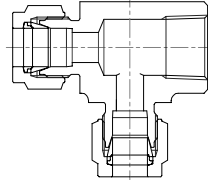
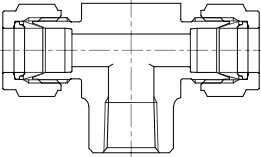
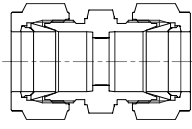
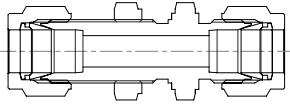
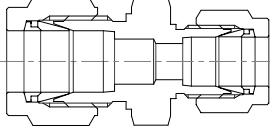
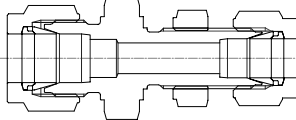
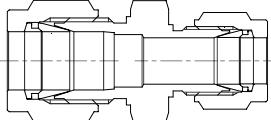
**DOUBLE FERRULE TYPE  
TUBE FITTINGS**

**D I M E N S I O N  
S H E E T**

**M E T R I C   S E R I E S**

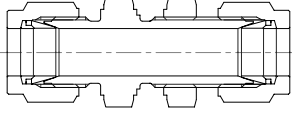
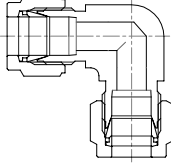
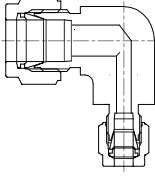
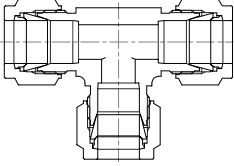
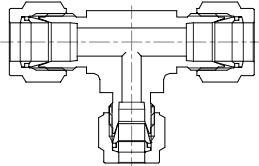
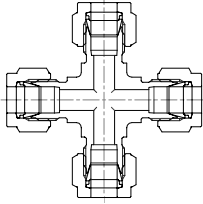
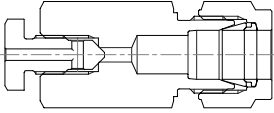
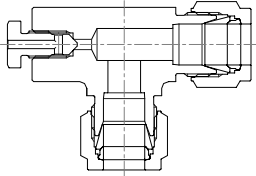
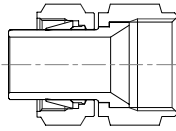
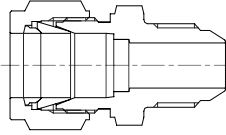
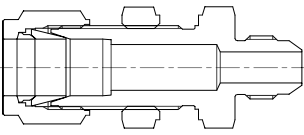
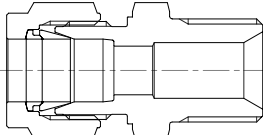
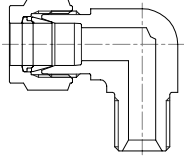
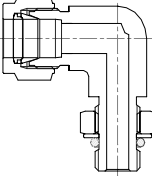
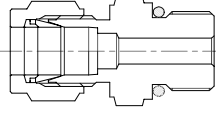
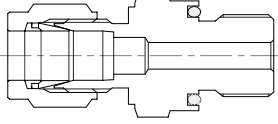
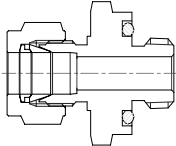
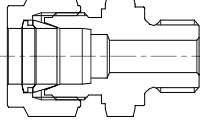
Brass and Stainless Steel Tube

## Visual Index

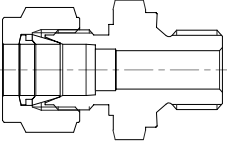
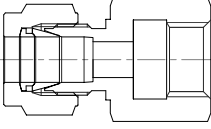
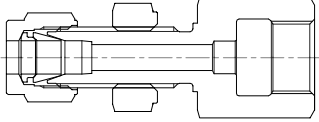
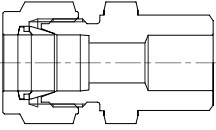
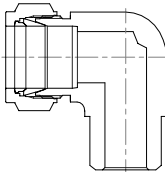
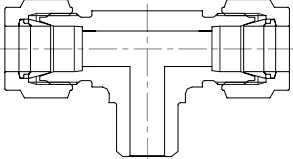
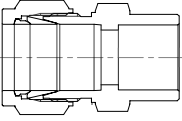
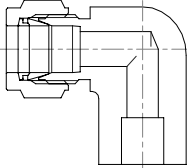
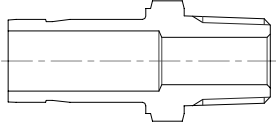
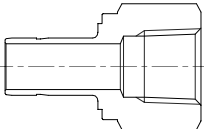

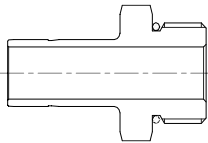
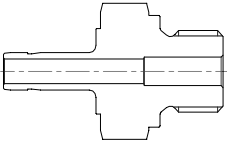
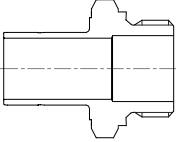
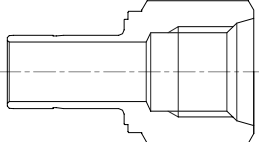
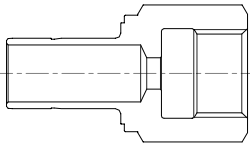
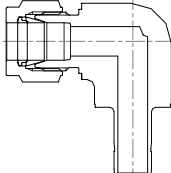
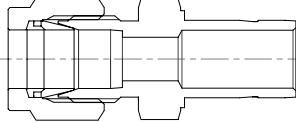
<b>5</b>	<b>MDCT</b> Male Connector	<b>6</b>	<b>MDCTZ</b> Male Connector/Bored thru	<b>7</b>	<b>MDSC</b> Bulkhead Male Connector
					
<b>8</b>	<b>MDCC</b> Long Male Connector	<b>9</b>	<b>MDLN</b> Male Elbow	<b>10</b>	<b>MDLL</b> Long Male Elbow
					
<b>11</b>	<b>MDTK</b> Male Run Tee	<b>12</b>	<b>MDTN</b> Male Branch Tee	<b>13</b>	<b>MDSA</b> Female Connector
					
<b>14</b>	<b>MDSS</b> Bulkhead Female Connector	<b>15</b>	<b>MDLF</b> Female Elbow	<b>16</b>	<b>MDTF</b> Female Run Tee
					
<b>17</b>	<b>MDTH</b> Female Branch Tee	<b>18</b>	<b>MDUA</b> Union	<b>18</b>	<b>MDSU</b> Bulkhead Union
					
<b>19</b>	<b>MDUR</b> Reducing Union	<b>21</b>	<b>MDSUR</b> Bulkhead Reducing Union	<b>21</b>	<b>MDURZ</b> Reducing Union/Bored thru
					

Please be advised that the contents of this catalogue may be revised without notice when improvements or modifications are made on the items.

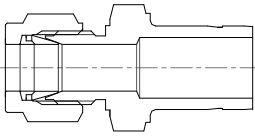
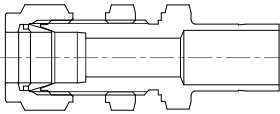

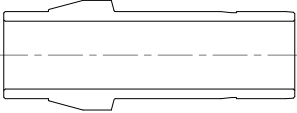
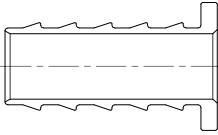
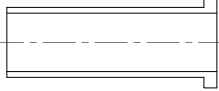
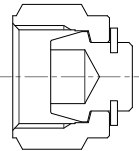
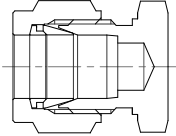
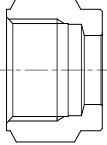


## Visual Index

<p><b>22</b> <b>MDSUZ</b> Bulkhead Reducing Union /Bored thru</p> 	<p><b>22</b> <b>MDLA</b> Union Elbow</p> 	<p><b>23</b> <b>MDLR</b> Reducing Union Elbow</p> 
<p><b>24</b> <b>MDTA</b> Union Tee</p> 	<p><b>24</b> <b>MDTR</b> Reducing Union Tee</p> 	<p><b>25</b> <b>MDXA</b> Union Cross</p> 
<p><b>25</b> <b>MDEA</b> Union with Vent plug</p> 	<p><b>25</b> <b>MDET</b> Union Tee with Vent plug</p> 	<p><b>26</b> <b>MDAN</b> BI-LOK to AN Adapter</p> 
<p><b>26</b> <b>MDUC</b> AN Union</p> 	<p><b>27</b> <b>MDUE</b> AN Bulkhead Union</p> 	<p><b>27</b> <b>MDUD</b> Male connector for 30° Hose adapter</p> 
<p><b>28</b> <b>MDLD</b> Male Elbow for 30° Hose adapter</p> 	<p><b>28</b> <b>MDLO</b> Positional Male Elbow</p> 	<p><b>29</b> <b>MDCU</b> O-seal Male Connector for straight thread</p> 
<p><b>31</b> <b>MDCO</b> O-ring seal Male Connector for straight thread</p> 	<p><b>32</b> <b>MDCM</b> O-ring seal Male Connector for tapered thread</p> 	<p><b>32</b> <b>MDCQ</b> Bonded seal Male Connector for straight thread</p> 

## Visual Index

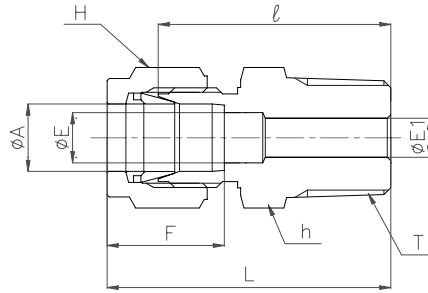
<p><b>33</b> <b>MDCJ</b> Gasket seal Male Connector for straight thread</p> 	<p><b>34</b> <b>MDGA</b> Gauge Connector</p> 	<p><b>34</b> <b>MDGB</b> Bulkhead Gauge Connector</p> 
<p><b>35</b> <b>MDCB</b> Male pipe weld Connector</p> 	<p><b>36</b> <b>MDLB</b> Male pipe weld Elbow</p> 	<p><b>37</b> <b>MDTB</b> Male pipe weld Tee</p> 
<p><b>38</b> <b>MDCW</b> Tube socket weld Union</p> 	<p><b>38</b> <b>MDLW</b> Tube socket weld Elbow</p> 	<p><b>39</b> <b>MDHA</b> Male Adapter</p> 
<p><b>40</b> <b>MDHC</b> Female Adapter</p> 	<p><b>40</b> <b>MDHO</b> O-ring seal Male Adapter for straight thread</p> 	<p><b>41</b> <b>MDHB</b> O-ring seal Male Adapter for straight thread</p> 
<p><b>42</b> <b>MDHQ</b> Bonded seal Male Adapter for straight thread</p> 	<p><b>42</b> <b>MDHJ</b> Gasket seal Male Adapter for straight thread</p> 	<p><b>43</b> <b>MDHF</b> O-ring seal Gauge Adapter</p> 
<p><b>43</b> <b>MDHG</b> Gauge Adapter</p> 	<p><b>43</b> <b>MDLH</b> Male Elbow Adapter</p> 	<p><b>44</b> <b>MDRE</b> Reducer</p> 

## Visual Index

<p><b>46</b> <b>MDREZ</b> Reducer / Bored thru</p> 	<p><b>46</b> <b>MDSE</b> Bulkhead Reducer</p> 	<p><b>47</b> <b>MDPC</b> Port Connector</p> 
<p><b>47</b> <b>MDPC</b> Reducing Port Connector</p> 	<p><b>47</b> <b>DTI</b> Insert (Saw)</p> 	<p><b>47</b> <b>DTIP</b> Insert (Plain)</p> 
<p><b>48</b> <b>MDBA</b> Plug</p> 	<p><b>48</b> <b>MDCA</b> Cap</p> 	<p><b>49</b> <b>MDNA</b> Nut</p> 
<p><b>49</b> <b>DOF</b> Front Ferrule</p> 	<p><b>49</b> <b>DOB</b> Back Ferrule</p> 	<p><b>50</b> <b>Tube end dimensional data</b></p>

# MDCT

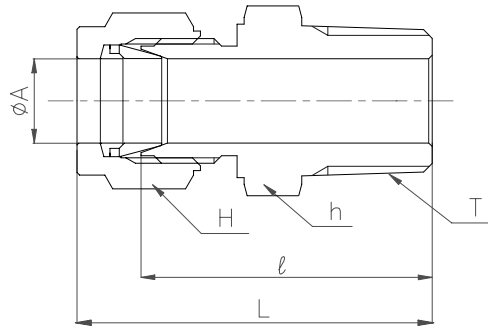
**Male Connector**  
Connects metric tube to female tapered pipe thread



Part No.		A	T	E	E <sub>1</sub>	h	H	ℓ	L	F	
ANSI	NPT	ISO/JIS R	mm	NPT/R	mm	mm	HEX	HEX	mm	mm	mm
MDCT	3M-2	MDCT 3M-R2	3	1/8	2.4	4.8	12	12	23.9	30.6	13.0
MDCT	3M-4	MDCT 3M-R4	3	1/4	2.4	4.8	14	12	29.2	35.9	13.0
MDCT	4M-2	MDCT 4M-R2	4	1/8	2.7	4.8	12	13	24.8	31.6	13.9
MDCT	4M-4	MDCT 4M-R4	4	1/4	2.7	4.8	14	13	30.0	36.8	13.9
		MDCT 4M-R6	4	3/8	2.7	10.4	19	13	32.2	39.0	13.9
MDCT	6M-2	MDCT 6M-R2	6	1/8	4.8	4.8	14	14	26.2	33.7	15.4
MDCT	6M-4	MDCT 6M-R4	6	1/4	4.8	4.8	14	14	30.9	38.4	15.4
MDCT	6M-6	MDCT 6M-R6	6	3/8	4.8	4.8	19	14	32.8	40.3	15.4
MDCT	6M-8	MDCT 6M-R8	6	1/2	4.8	4.8	22	14	37.3	44.8	15.4
MDCT	6M-16		6	1	4.8	4.8	36	14	46.8	54.3	15.4
MDCT	8M-2	MDCT 8M-R2	8	1/8	6.4	4.8	17	17	27.5	35.0	16.3
MDCT	8M-4	MDCT 8M-R4	8	1/4	6.4	6.4	17	17	32.0	39.5	16.3
MDCT	8M-6	MDCT 8M-R6	8	3/8	6.4	6.4	19	17	33.6	41.1	16.3
MDCT	8M-8	MDCT 8M-R8	8	1/2	6.4	6.4	22	17	38.0	45.5	16.3
MDCT	8M-12	MDCT 8M-R12	8	3/4	6.4	6.4	27	17	40.9	48.4	16.3
MDCT	10M-2	MDCT 10M-R2	10	1/8	7.9	4.8	19	19	29.3	37.1	17.3
MDCT	10M-4	MDCT 10M-R4	10	1/4	7.9	7.1	19	19	33.3	41.1	17.3
MDCT	10M-6	MDCT 10M-R6	10	3/8	7.9	7.9	19	19	34.1	41.9	17.3
MDCT	10M-8	MDCT 10M-R8	10	1/2	7.9	7.9	22	19	38.9	46.7	17.3
MDCT	10M-12	MDCT 10M-R12	10	3/4	7.9	7.9	27	19	41.5	49.3	17.3
MDCT	10M-16		10	1	7.9	7.9	36	19	48.1	55.9	17.3
MDCT	12M-4	MDCT 12M-R4	12	1/4	9.5	7.1	22	22	33.3	43.5	22.9
MDCT	12M-6	MDCT 12M-R6	12	3/8	9.5	9.5	22	22	34.3	44.5	22.9
MDCT	12M-8	MDCT 12M-R8	12	1/2	9.5	9.5	22	22	38.9	49.1	22.9
MDCT	12M-12	MDCT 12M-R12	12	3/4	9.5	9.5	27	22	41.7	51.9	22.9
MDCT	12M-16		12	1	9.5	9.5	36	22	47.0	57.2	22.9
MDCT	15M-4	MDCT 15M-R4	15	1/4	12.0	7.1	24	27	34.8	44.8	24.3
MDCT	15M-6	MDCT 15M-R6	15	3/8	12.0	10.4	24	27	35.8	45.8	24.3
MDCT	15M-8	MDCT 15M-R8	15	1/2	12.0	12.0	24	27	39.8	49.8	24.3
MDCT	15M-12	MDCT 15M-R12	15	3/4	12.0	12.0	27	27	41.8	51.8	24.3
MDCT	16M-4	MDCT 16M-R4	16	1/4	12.7	7.1	24	27	34.8	45.0	24.5
MDCT	16M-6	MDCT 16M-R6	16	3/8	12.7	10.4	24	27	35.8	46.0	24.5
MDCT	16M-8	MDCT 16M-R8	16	1/2	12.7	12.7	24	27	39.8	50.0	24.5
MDCT	16M-12	MDCT 16M-R12	16	3/4	12.7	12.7	27	27	41.8	52.0	24.5
MDCT	18M-4	MDCT 18M-R4	18	1/4	15.1	7.1	27	30	36.7	46.9	24.5
MDCT	18M-6	MDCT 18M-R6	18	3/8	15.1	10.4	27	30	37.7	47.9	24.5
MDCT	18M-8	MDCT 18M-R8	18	1/2	15.1	12.7	27	30	41.7	51.9	24.5
MDCT	18M-12	MDCT 18M-R12	18	3/4	15.1	15.1	27	30	43.7	53.9	24.5
MDCT	18M-16	MDCT 18M-R16	18	1	15.1	15.1	36	30	48.3	58.5	24.5
MDCT	20M-8	MDCT 20M-R8	20	1/2	16.5	12.7	30	30	41.2	51.4	24.5
MDCT	20M-12	MDCT 20M-R12	20	3/4	16.5	16.5	30	30	43.2	53.4	24.5
MDCT	20M-16	MDCT 20M-R16	20	1	16.5	16.5	36	30	48.4	58.6	24.5
MDCT	22M-6	MDCT 22M-R6	22	3/8	18.3	10.4	32	32	37.2	47.4	26.1
		MDCT 22M-R8	22	1/2	18.3	12.7	32	32	41.2	51.4	26.1
MDCT	22M-12	MDCT 22M-R12	22	3/4	18.3	18.3	32	32	43.2	53.4	26.1
		MDCT 25M-R6	25	3/8	22.5	10.4	36	41	41.7	54.2	31.6
		MDCT 25M-R8	25	1/2	22.5	12.7	36	41	45.7	58.2	31.6
MDCT	25M-12	MDCT 25M-R12	25	3/4	22.5	18.3	36	41	47.7	60.2	31.6
MDCT	25M-16	MDCT 25M-R16	25	1	22.5	22.5	36	41	50.7	63.2	31.6

# MDCTZ

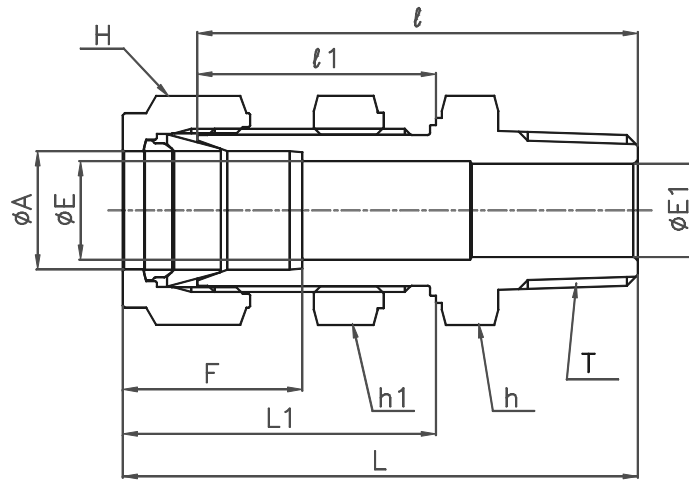
Male Connector / Bored thru  
Connects metric tube to female tapered pipe thread



Part No.		A	T	h	H	l	L
ANSI NPT	ISO/JIS R	mm	NPT/R	HEX	HEX	mm	mm
MDCTZ 3M-2	MDCTZ 3M-R2	3	1/8	12	12	23.9	30.6
MDCTZ 3M-4	MDCTZ 3M-R4	3	1/4	14	12	29.2	35.9
MDCTZ 4M-2	MDCTZ 4M-R2	4	1/8	12	13	24.8	31.6
MDCTZ 4M-4	MDCTZ 4M-R4	4	1/4	14	13	30.0	36.8
MDCTZ 4M-6	MDCTZ 4M-R6	4	3/8	19	13	32.2	39.0
MDCTZ 6M-2	MDCTZ 6M-R2	6	1/8	14	14	26.2	33.7
MDCTZ 6M-4	MDCTZ 6M-R4	6	1/4	14	14	30.9	38.4
MDCTZ 6M-6	MDCTZ 6M-R6	6	3/8	19	14	32.8	40.3
MDCTZ 6M-8	MDCTZ 6M-R8	6	1/2	22	14	37.3	44.8
MDCTZ 8M-4	MDCTZ 8M-R4	8	1/4	17	17	32.0	39.5
MDCTZ 8M-6	MDCTZ 8M-R6	8	3/8	19	17	33.6	41.1
MDCTZ 8M-8	MDCTZ 8M-R8	8	1/2	22	17	38.0	45.5
MDCTZ 8M-12	MDCTZ 8M-R12	8	3/4	27	17	40.9	48.4
MDCTZ 10M-6	MDCTZ 10M-R6	10	3/8	19	19	34.1	41.9
MDCTZ 10M-8	MDCTZ 10M-R8	10	1/2	22	19	38.9	46.7
MDCTZ 10M-12	MDCTZ 10M-R12	10	3/4	27	19	41.5	49.3
MDCTZ 12M-6	MDCTZ 12M-R6	12	3/8	22	22	34.3	44.5
MDCTZ 12M-8	MDCTZ 12M-R8	12	1/2	22	22	38.9	49.1
MDCTZ 12M-12	MDCTZ 12M-R12	12	3/4	27	22	41.7	51.9
MDCTZ 15M-8	MDCTZ 15M-R8	15	1/2	24	27	39.8	49.8
MDCTZ 15M-12	MDCTZ 15M-R12	15	3/4	27	27	41.8	51.8
MDCTZ 16M-12	MDCTZ 16M-R12	16	3/4	27	27	41.8	52.0
MDCTZ 18M-12	MDCTZ 18M-R12	18	3/4	27	30	43.7	53.9
MDCTZ 20M-12	MDCTZ 20M-R12	20	3/4	30	30	43.2	53.4
MDCTZ 20M-16	MDCTZ 20M-R16	20	1	36	30	48.4	58.6
MDCTZ 22M-16	MDCTZ 22M-R16	22	1	36	32	48.4	58.6
MDCTZ 25M-16	MDCTZ 25M-R16	25	1	36	41	50.7	63.2

# MDSC

**Bulkhead Male Connector**  
Connects metric tube to female tapered pipe thread

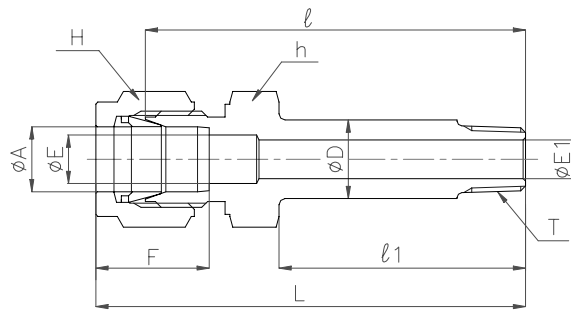


Part No.		A	T	E	E <sub>1</sub>	h	H	l	l <sub>1</sub>	L	L <sub>1</sub>	F	Panel	
ANSI NPT	ISO/JIS R	mm	NPT/R	mm	mm	HEX	HEX	mm	mm	mm	mm	mm	Hole	Thick
MDSC 3M-2	MDSC 3M-R2	3	1/8	2.4	4.8	14	12	39.5	24.4	46.2	31.1	13.0	8.3	12.7
MDSC 4M-2	MDSC 4M-R2	4	1/8	2.7	4.8	14	13	42.5	25.5	49.3	32.3	13.9	9.9	10.4
MDSC 6M-2	MDSC 6M-R2	6	1/8	4.8	4.8	17	14	43.0	26.0	50.5	33.5	15.4	11.5	9.7
MDSC 6M-4	MDSC 6M-R4	6	1/4	4.8	4.8	17	14	46.0	26.0	53.5	33.5	15.4	11.5	9.7
MDSC 8M-4	MDSC 8M-R4	8	1/4	6.4	6.4	19	17	51.0	28.5	58.5	36.0	16.3	13.1	11.4
MDSC 8M-6	MDSC 8M-R6	8	3/8	6.4	10.4	19	17	52.0	28.5	59.5	36.0	16.3	13.1	11.4
MDSC 10M-4	MDSC 10M-R4	10	1/4	7.9	7.1	22	19	52.0	29.5	59.8	37.3	17.3	16.3	11.6
MDSC 10M-6	MDSC 10M-R6	10	3/8	7.9	7.9	22	19	52.0	29.5	59.8	37.3	17.3	16.3	11.6
		10	3/8	7.9	7.9	22	19	53.0	29.5	60.8	37.3	17.3	16.3	11.6
MDSC 10M-8	MDSC 10M-R8	10	1/2	7.9	12.7	22	19	56.5	29.5	64.3	37.3	17.3	16.3	11.6
MDSC 12M-6	MDSC 12M-R6	12	3/8	9.5	10.4	24	22	55.5	32.0	65.7	42.2	22.9	19.4	13.1
MDSC 12M-8	MDSC 12M-R8	12	1/2	9.5	12.0	24	22	59.0	32.0	69.7	42.2	22.9	19.4	13.1



# MDCC

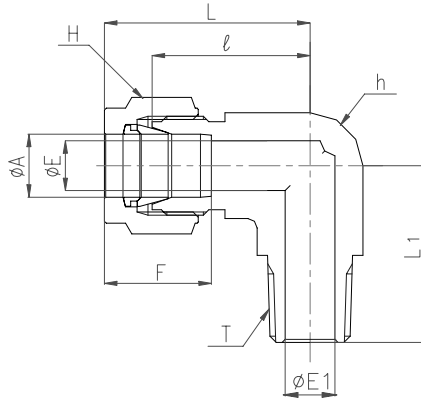
Long Male Connector  
Connects metric tube to female ISO tapered thread



Part No.	A	T	E	E <sub>1</sub>	D	h	H	$\ell$	$\ell_1$	L	F
	mm	R	mm	mm	mm	HEX	HEX	mm	mm	mm	mm
MDCC 6M-R2	6	1/8	4.8	4.8	10.5	14	14	56.6	40.4	64.1	15.4
MDCC 8M-R2	8	1/8	6.4	4.8	10.5	17	17	59.2	41.7	66.7	16.3
MDCC 8M-R4	8	1/4	6.4	6.4	14.0	17	17	65.3	47.3	72.8	16.3
MDCC 10M-R2	10	1/8	7.9	4.8	10.5	19	19	63.1	43.8	70.9	17.3
MDCC 10M-R4	10	1/4	7.9	7.9	14.0	19	19	68.0	48.7	75.8	17.3
MDCC 10M-R8	10	1/2	7.9	12.7	22.0	24	19	78.0	57.4	85.8	17.3
MDCC 12M-R2	12	1/8	9.5	4.0	10.5	22	22	66.4	47.0	76.6	22.9
MDCC 12M-R4	12	1/4	9.5	7.1	14.0	22	22	70.4	51.0	80.6	22.9
MDCC 12M-R6	12	3/8	9.5	8.0	17.5	22	22	71.4	52.0	81.6	22.9
MDCC 15M-R2	15	1/8	12.0	4.0	10.5	24	27	69.4	48.6	79.4	24.3
MDCC 15M-R4	15	1/4	12.0	7.1	14.0	24	27	73.4	52.6	83.4	24.3
MDCC 15M-R6	15	3/8	12.0	10.4	17.5	24	27	74.4	53.6	84.4	24.3
MDCC 16M-R6	16	3/8	12.7	10.4	17.5	24	27	74.4	53.6	84.6	24.5
MDCC 16M-R8	16	1/2	12.7	12.7	22.0	24	27	79.3	58.5	89.5	24.5
MDCC 18M-R2	18	1/8	15.1	4.0	10.5	27	30	73.2	50.5	83.4	24.5
MDCC 18M-R4	18	1/4	15.1	7.1	14.0	27	30	77.2	54.5	87.4	24.5
MDCC 18M-R6	18	3/8	15.1	10.4	17.5	27	30	78.2	55.5	88.4	24.5
MDCC 20M-R8	20	1/2	16.5	12.7	22.0	30	30	83.6	61.4	93.8	24.5
MDCC 20M-R12	20	3/4	16.5	16.5	27.5	30	30	86.9	64.7	97.1	24.5

# MDLN

**Male Elbow**  
Connects metric tube to female tapered pipe thread

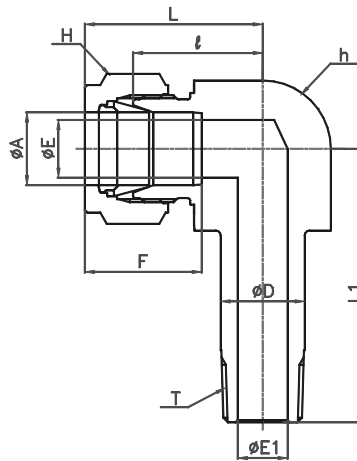


[Note] E :European Standard

Part No.		A	T	E	E1	h	H	ℓ	L	L1	F
ANSI NPT	ISO/JIS R	mm	NPT/R	mm	mm	Flat	HEX	mm	mm	mm	mm
MDLN 3M-2	MDLN 3M-R2	3	1/8	2.4	4.8	12	12	16.8	23.5	18.5	13.0
MDLN 3M-4	MDLN 3M-R4	3	1/4	2.4	7.1	14	12	18.3	25.0	24.0	13.0
MDLN 4M-2	MDLN 4M-R2	4	1/8	2.7	4.8	12	13	19.0	25.8	19.0	13.9
MDLN 4M-4	MDLN 4M-R4	4	1/4	2.7	7.1	14	13	19.0	25.8	24.0	13.9
MDLN 4M-6	MDLN 4M-R6	4	3/8	2.7	10.4	17	13	21.5	28.3	28.5	13.9
MDLN 6M-2	MDLN 6M-R2	6	1/8	4.8	4.8	12	14	22.4	29.9	20.6	15.4
	MDLN 6M-R2E	6	1/8	4.8	4.8	12	14	19.6	27.1	18.8	15.4
MDLN 6M-4	MDLN 6M-R4	6	1/4	4.8	7.1	14	14	22.4	29.9	25.4	15.4
MDLN 6M-4E		6	1/4	4.8	7.1	14	14	19.6	27.1	23.4	15.4
MDLN 6M-6	MDLN 6M-R6	6	3/8	4.8	10.4	17	14	24.0	31.5	28.5	15.4
	MDLN 6M-R6E	6	3/8	4.8	10.4	17	14	22.4	29.9	26.2	15.4
MDLN 6M-8	MDLN 6M-R8	6	1/2	4.8	12.7	24	14	26.2	33.7	33.5	15.4
MDLN 6M-12	MDLN 6M-R8	6	3/4	4.8	12.7	27	14	28.2	35.7	35.5	15.4
	MDLN 6M-R12	6	3/4	4.8	12.7	27	14	28.2	35.7	37.5	15.4
MDLN 8M-2	MDLN 8M-R2	8	1/8	6.4	4.8	14	17	22.5	30.0	20.5	16.3
MDLN 8M-4	MDLN 8M-R4	8	1/4	6.4	7.1	14	17	22.5	30.0	25.5	16.3
MDLN 8M-6	MDLN 8M-R6	8	3/8	6.4	10.4	17	17	24.0	31.5	28.5	16.3
	MDLN 8M-R6E	8	3/8	6.4	10.4	17	17	23.1	30.6	26.2	16.3
MDLN 8M-8	MDLN 8M-R8	8	1/2	6.4	12.7	24	17	26.2	33.7	33.5	16.3
MDLN 10M-2	MDLN 10M-R2	10	1/8	7.9	4.8	17	19	25.4	33.2	24.4	17.3
MDLN 10M-4	MDLN 10M-R4	10	1/4	7.9	7.1	17	19	25.4	33.2	28.4	17.3
MDLN 10M-6	MDLN 10M-R6	10	3/8	7.9	10.4	17	19	25.4	33.2	28.5	17.3
	MDLN 10M-R6E	10	3/8	7.9	10.4	17	19	23.9	31.7	26.2	17.3
MDLN 10M-8	MDLN 10M-R8	10	1/2	7.9	12.7	24	19	26.2	34.0	33.5	17.3
MDLN 12M-2	MDLN 12M-R2	12	1/8	9.5	4.8	22	22	27.0	37.2	25.5	22.9
MDLN 12M-4	MDLN 12M-R4	12	1/4	9.5	7.1	22	22	27.0	37.2	29.5	22.9
MDLN 12M-6	MDLN 12M-R6	12	3/8	9.5	10.4	22	22	27.0	37.2	29.5	22.9
MDLN 12M-8	MDLN 12M-R8	12	1/2	9.5	12.7	24	22	27.0	37.2	34.0	22.9
MDLN 12M-12	MDLN 12M-R8	12	3/4	9.5	18.3	27	22	28.2	38.4	35.5	22.9
	MDLN 12M-R12	12	3/4	9.5	18.3	27	22	28.2	38.4	37.5	22.9
MDLN 15M-4	MDLN 15M-R4	15	1/4	12.0	7.1	24	27	28.0	38.0	34.0	24.3
MDLN 15M-6	MDLN 15M-R6	15	3/8	12.0	10.4	24	27	28.0	38.0	35.3	24.3
MDLN 15M-8	MDLN 15M-R8	15	1/2	12.0	12.7	24	27	28.0	38.0	35.3	24.3
MDLN 15M-12	MDLN 15M-R8	15	3/4	12.0	18.3	27	27	28.2	38.2	35.5	24.3
	MDLN 15M-R12	15	3/4	12.0	18.3	27	27	28.2	38.2	37.5	24.3
MDLN 16M-4	MDLN 16M-R4	16	1/4	12.7	7.1	24	27	28.0	38.2	34.0	24.5
MDLN 16M-6	MDLN 16M-R6	16	3/8	12.7	10.4	24	27	28.0	38.2	35.3	24.5
MDLN 16M-8	MDLN 16M-R8	16	1/2	12.7	12.7	24	27	28.0	38.2	35.3	24.5
MDLN 16M-12	MDLN 16M-R8	16	3/4	12.7	18.3	27	27	28.2	38.4	35.5	24.5
	MDLN 16M-R12	16	3/4	12.7	18.3	27	27	28.2	38.4	37.5	24.5

Part No.		A	T	E	E <sub>1</sub>	h	H	ℓ	L	L <sub>1</sub>	F
ANSI NPT	ISO/JIS R	mm	NPT/R	mm	mm	Flat	HEX	mm	mm	mm	mm
MDLN 18M-4	MDLN 18M-R4	18	1/4	15.1	6.0	27	30	28.2	38.4	30.5	24.5
MDLN 18M-6	MDLN 18M-R6	18	3/8	15.1	10.4	27	30	28.2	38.4	31.5	24.5
MDLN 18M-8	MDLN 18M-R8	18	1/2	15.1	12.7	27	30	28.2	38.4	35.5	24.5
MDLN 18M-12		18	3/4	15.1	18.3	27	30	28.2	38.4	35.5	24.5
	MDLN 18M-R12	18	3/4	15.1	18.3	27	30	28.2	38.4	37.5	24.5
MDLN 20M-8	MDLN 20M-R8	20	1/2	16.5	12.7	30	30	32.5	42.7	42.2	24.5
MDLN 20M-12	MDLN 20M-R12	20	3/4	16.5	18.3	30	30	32.5	42.7	42.2	24.5
MDLN 22M-6	MDLN 22M-R6	22	3/8	18.3	10.4	30	32	32.5	42.7	38.2	26.1
MDLN 22M-8	MDLN 22M-R8	22	1/2	18.3	12.7	30	32	32.5	42.7	42.2	26.1
MDLN 22M-12	MDLN 22M-R12	22	3/4	18.3	18.3	30	32	32.5	42.7	42.2	26.1
MDLN 25M-12	MDLN 25M-R12	25	3/4	22.5	18.3	36	41	36.0	48.5	46.0	31.6
MDLN 25M-16	MDLN 25M-R16	25	1	22.5	22.5	36	41	36.0	48.5	46.0	31.6

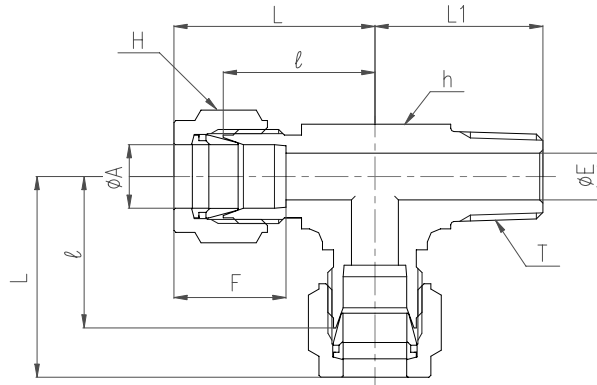
	<b>D L L-M</b>	<b>Long Male Elbow</b> Connects metric tube to female tapered pipe thread
--	----------------	--



Part No.	A	T	E	E <sub>1</sub>	D	h(Flat)		H	ℓ	L	L <sub>1</sub>	F
	mm	R	mm	mm	mm	in	mm	HEX	mm	mm	mm	mm
DLL 6M-R2	6	1/8	4.8	4.8	10.5	5/8	15.9	14	22.4	29.9	40.4	15.4
DLL 10M-R4	10	1/4	7.9	7.1	14.0	13/16	20.6	19	24.5	32.3	54.1	17.3

# MDTK

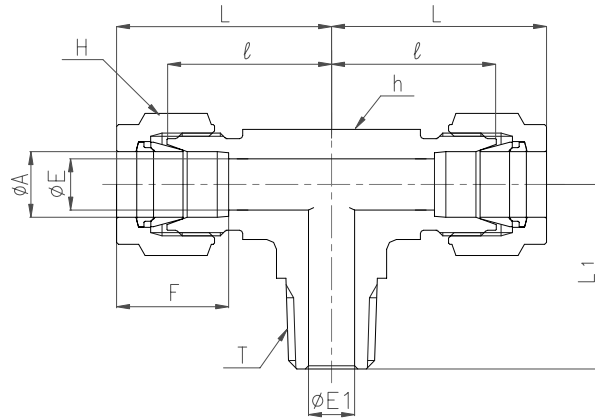
**Male Run Tee**  
Connects metric tube to female tapered pipe thread



Part No.		A	T	E	E <sub>1</sub>	h	H	ℓ	L	L <sub>1</sub>	F
ANSI NPT	ISO/JIS R	mm	NPT/R	mm	mm	Flat	HEX	mm	mm	mm	mm
MDTK 3M-2	MDTK 3M-R2	3	1/8	2.4	4.0	12	12	16.8	23.5	18.5	13.0
MDTK 3M-4	MDTK 3M-R4	3	1/4	2.4	7.1	14	12	18.3	25.0	24.0	13.0
MDTK 4M-2	MDTK 4M-R2	4	1/8	2.7	4.8	12	13	19.0	25.8	19.0	13.9
MDTK 4M-4	MDTK 4M-R4	4	1/4	2.7	7.1	14	13	19.0	25.8	24.0	13.9
MDTK 6M-2	MDTK 6M-R2	6	1/8	4.8	4.8	12	14	22.4	29.9	20.6	15.4
MDTK 6M-4	MDTK 6M-R4	6	1/4	4.8	7.1	14	14	22.4	29.9	25.4	15.4
MDTK 6M-6	MDTK 6M-R6	6	3/8	4.8	10.4	17	14	24.0	31.5	28.5	15.4
MDTK 6M-8	MDTK 6M-R8	6	1/2	4.8	12.7	24	14	26.2	33.7	33.5	15.4
MDTK 8M-2	MDTK 8M-R2	8	1/8	6.4	4.8	14	17	22.5	30.0	20.5	16.3
MDTK 8M-4	MDTK 8M-R4	8	1/4	6.4	7.1	14	17	22.5	30.0	25.5	16.3
MDTK 8M-6	MDTK 8M-R6	8	3/8	6.4	10.4	17	17	24.0	31.5	28.5	16.3
MDTK 8M-8	MDTK 8M-R8	8	1/2	6.4	12.7	24	17	26.2	33.7	33.5	16.3
MDTK 10M-2	MDTK 10M-R2	10	1/8	7.9	4.8	17	19	25.4	33.2	24.4	17.3
MDTK 10M-4	MDTK 10M-R4	10	1/4	7.9	7.1	17	19	25.4	33.2	28.4	17.3
MDTK 10M-6	MDTK 10M-R6	10	3/8	7.9	10.4	17	19	25.4	33.2	28.5	17.3
MDTK 10M-8	MDTK 10M-R8	10	1/2	7.9	12.7	24	19	26.2	34.0	33.5	17.3
MDTK 12M-2	MDTK 12M-R2	12	1/8	9.5	4.8	22	22	27.0	37.2	25.5	22.9
MDTK 12M-4	MDTK 12M-R4	12	1/4	9.5	7.1	22	22	27.0	37.2	29.5	22.8
MDTK 12M-6	MDTK 12M-R6	12	3/8	9.5	10.4	22	22	27.0	37.2	29.5	22.8
MDTK 12M-8	MDTK 12M-R8	12	1/2	9.5	12.7	24	22	27.0	37.2	34.0	22.8
MDTK 12M-12		12	3/4	9.5	18.3	27	22	28.2	38.4	35.5	22.8
	MDTK 12M-R12	12	3/4	9.5	18.3	27	22	28.2	38.4	37.5	22.8
MDTK 15M-6	MDTK 15M-R6	15	3/8	12.0	10.4	24	27	28.0	38.0	35.3	24.3
MDTK 15M-8	MDTK 15M-R8	15	1/2	12.0	12.0	24	27	28.0	38.0	35.3	24.3
MDTK 16M-6	MDTK 16M-R6	16	3/8	12.7	10.4	24	27	28.0	38.2	35.3	24.5
MDTK 16M-8	MDTK 16M-R8	16	1/2	12.7	12.7	24	27	28.0	38.2	35.3	24.5
MDTK 16M-12		16	3/4	12.7	18.3	27	27	28.2	38.4	35.5	24.5
	MDTK 16M-R12	16	3/4	12.7	18.3	27	27	28.2	38.4	37.5	24.5
MDTK 18M-6	MDTK 18M-R6	18	3/8	15.1	10.4	27	30	28.2	38.4	31.5	24.5
MDTK 18M-8	MDTK 18M-R8	18	1/2	15.1	12.7	27	30	28.2	38.4	35.5	24.5
MDTK 18M-12		18	3/4	15.1	18.3	27	30	28.2	38.4	35.5	24.5
	MDTK 18M-R12	18	3/4	15.1	18.3	27	30	28.2	38.4	37.5	24.5
MDTK 20M-8	MDTK 20M-R8	20	1/2	16.5	12.7	30	30	32.5	42.7	42.2	24.5
MDTK 20M-12	MDTK 20M-R12	20	3/4	16.5	18.3	30	30	32.5	42.7	42.2	24.5
MDTK 20M-16	MDTK 20M-R16	20	1	16.5	22.5	30	30	32.5	42.7	46.0	24.5
MDTK 22M-8	MDTK 22M-R8	22	1/2	18.3	12.7	30	32	32.5	42.7	42.2	26.1
MDTK 22M-12	MDTK 22M-R12	22	3/4	18.3	18.3	30	32	32.5	42.7	42.2	26.1
MDTK 25M-12	MDTK 25M-R12	25	3/4	22.5	18.3	36	41	36.0	48.5	46.0	31.6
MDTK 25M-16	MDTK 25M-R16	25	1	22.5	22.5	36	41	36.0	48.5	46.0	31.6

# MDTN

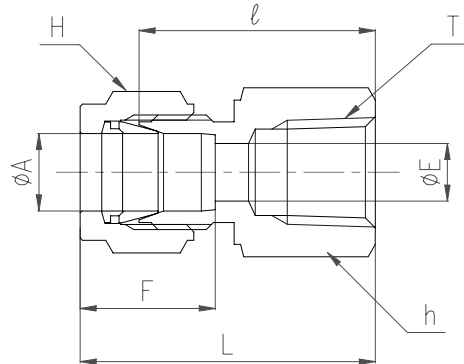
**Male Branch Tee**  
Connects metric tube to female tapered pipe thread



Part No.		A	T	E	E1	h	H	$l$	L	L1	F
ANSI NPT	ISO/JIS R	mm	NPT/R	mm	mm	Flat	HEX	mm	mm	mm	mm
MDTN 3M-2	MDTN 3M-R2	3	1/8	2.4	4.8	12	12	16.8	23.5	18.5	13.0
MDTN 3M-4	MDTN 3M-R4	3	1/4	2.4	7.1	14	12	18.3	25.0	24.0	13.0
MDTN 4M-2	MDTN 4M-R2	4	1/8	2.7	4.8	12	13	19.0	25.8	19.0	13.9
MDTN 4M-4	MDTN 4M-R4	4	1/4	2.7	7.1	14	13	19.0	25.8	24.0	13.9
MDTN 6M-2	MDTN 6M-R2	6	1/8	4.8	4.8	12	14	22.4	29.9	20.6	15.4
MDTN 6M-4	MDTN 6M-R4	6	1/4	4.8	7.1	14	14	22.4	29.9	25.4	15.4
MDTN 6M-6	MDTN 6M-R6	6	3/8	4.8	10.4	17	14	24.0	31.5	28.5	15.4
MDTN 6M-8	MDTN 6M-R8	6	1/2	4.8	12.7	24	14	26.2	33.7	33.5	15.4
MDTN 8M-2	MDTN 8M-R2	8	1/8	6.4	4.8	14	17	22.5	30.0	20.5	16.3
MDTN 8M-4	MDTN 8M-R4	8	1/4	6.4	7.1	14	17	22.5	30.0	25.5	16.3
MDTN 8M-6	MDTN 8M-R6	8	3/8	6.4	10.4	17	17	24.0	31.5	28.5	16.3
MDTN 8M-8	MDTN 8M-R8	8	1/2	6.4	12.7	24	17	26.2	33.7	33.5	16.3
MDTN 10M-2	MDTN 10M-R2	10	1/8	7.9	4.8	17	19	25.4	33.2	24.4	17.3
MDTN 10M-4	MDTN 10M-R4	10	1/4	7.9	7.1	17	19	25.4	33.2	28.4	17.3
MDTN 10M-6	MDTN 10M-R6	10	3/8	7.9	10.4	17	19	25.4	33.2	28.5	17.3
MDTN 10M-8	MDTN 10M-R8	10	1/2	7.9	12.7	24	19	26.2	34.0	33.5	17.3
MDTN 12M-2	MDTN 12M-R2	12	1/8	9.5	4.8	22	22	27.0	37.2	25.5	22.9
MDTN 12M-4	MDTN 12M-R4	12	1/4	9.5	7.1	22	22	27.0	37.2	29.5	22.9
MDTN 12M-6	MDTN 12M-R6	12	3/8	9.5	10.4	22	22	27.0	37.2	29.5	22.9
MDTN 12M-8	MDTN 12M-R8	12	1/2	9.5	12.7	24	22	27.0	37.2	34.0	22.9
MDTN 12M-12	MDTN 12M-R12	12	3/4	9.5	18.3	27	22	28.2	38.4	35.5	22.9
		12	3/4	9.5	18.3	27	22	28.2	38.4	37.5	22.9
MDTN 15M-6	MDTN 15M-R6	15	3/8	12.0	10.4	24	27	28.0	38.0	35.3	24.3
MDTN 15M-8	MDTN 15M-R8	15	1/2	12.0	12.7	24	27	28.0	38.0	35.3	24.3
MDTN 16M-4	MDTN 16M-R4	16	1/4	12.7	7.1	24	27	28.0	38.2	34.0	24.5
MDTN 16M-6	MDTN 16M-R6	16	3/8	12.7	10.4	24	27	28.0	38.2	35.3	24.5
MDTN 16M-8	MDTN 16M-R8	16	1/2	12.7	12.7	24	27	28.0	38.2	35.3	24.5
MDTN 16M-12	MDTN 16M-R12	16	3/4	12.7	18.3	27	27	28.2	38.4	35.5	24.5
		16	3/4	12.7	18.3	27	27	28.2	38.4	37.5	24.5
MDTN 18M-6	MDTN 18M-R6	18	3/8	15.1	10.4	27	30	28.2	38.4	31.5	24.5
MDTN 18M-8	MDTN 18M-R8	18	1/2	15.1	12.7	27	30	28.2	38.4	35.5	24.5
MDTN 18M-12	MDTN 18M-R12	18	3/4	15.1	18.3	27	30	28.2	38.4	37.5	24.5
MDTN 20M-8	MDTN 20M-R8	20	1/2	16.5	12.7	30	30	32.5	42.7	42.2	24.5
MDTN 20M-12	MDTN 20M-R12	20	3/4	16.5	18.3	30	30	32.5	42.7	42.2	24.5
	MDTN 20M-R16	20	1	16.5	22.5	36	30	34.0	44.2	46.0	24.5
MDTN 22M-8	MDTN 22M-R8	22	1/2	18.3	12.7	30	32	32.5	42.7	42.2	26.1
MDTN 22M-12	MDTN 22M-R12	22	3/4	18.3	18.3	30	32	32.5	42.7	42.2	26.1
MDTN 25M-12	MDTN 25M-R12	25	3/4	22.5	18.3	36	41	36.0	48.5	46.0	31.6
MDTN 25M-16	MDTN 25M-R16	25	1	22.5	22.5	36	41	36.0	48.5	46.0	31.6

# M D S A

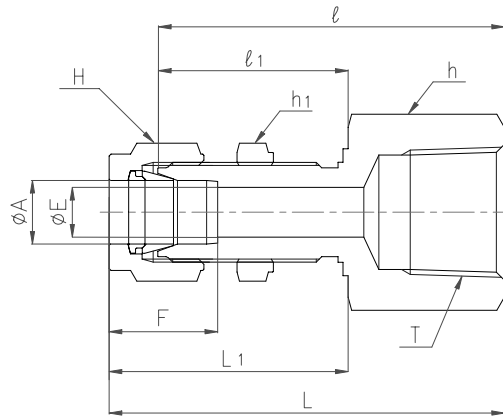
**Female Connector**  
Connects metric tube to male tapered pipe thread



Part No.		A	T	E	h	H	l	L	F
ANSI NPT	ISO/JIS Rc	mm	NPT/Rc	mm	HEX	HEX	mm	mm	mm
MDSA 2M-2	MDSA 2M-R2	2	1/8	1.3	14	12	22.2	27.8	11.1
MDSA 3M-2	MDSA 3M-R2	3	1/8	2.4	14	12	23.3	30.0	13.0
MDSA 3M-4	MDSA 3M-R4	3	1/4	2.4	19	12	28.0	34.4	13.0
MDSA 4M-2	MDSA 4M-R2	4	1/8	2.7	14	13	24.0	30.8	13.9
MDSA 4M-4	MDSA 4M-R4	4	1/4	2.7	19	13	28.6	35.4	13.9
MDSA 6M-2	MDSA 6M-R2	6	1/8	4.8	14	14	24.6	32.1	15.4
MDSA 6M-4	MDSA 6M-R4	6	1/4	4.8	19	14	29.4	36.9	15.4
MDSA 6M-6	MDSA 6M-R6	6	3/8	4.8	22	14	32.1	39.6	15.4
MDSA 6M-8	MDSA 6M-R8	6	1/2	4.8	27	14	36.6	44.1	15.4
MDSA 8M-2	MDSA 8M-R2	8	1/8	6.4	17	17	28.4	35.9	16.3
MDSA 8M-4	MDSA 8M-R4	8	1/4	6.4	19	17	30.3	37.8	16.3
MDSA 8M-6	MDSA 8M-R6	8	3/8	6.4	22	17	32.1	39.6	16.3
MDSA 8M-8	MDSA 8M-R8	8	1/2	6.4	27	17	37.4	44.9	16.3
MDSA 10M-4	MDSA 10M-R4	10	1/4	7.9	19	19	30.2	38.0	17.3
MDSA 10M-6	MDSA 10M-R6	10	3/8	7.9	22	19	33.7	41.5	17.3
MDSA 10M-8	MDSA 10M-R8	10	1/2	7.9	27	19	37.4	45.2	17.3
MDSA 10M-12	MDSA 10M-R12	10	3/4	7.9	32	19	40.9	48.7	17.3
MDSA 12M-2	MDSA 12M-R2	12	1/8	9.5	22	22	30.0	40.2	22.9
MDSA 12M-4	MDSA 12M-R4	12	1/4	9.5	22	22	32.6	42.8	22.9
MDSA 12M-6	MDSA 12M-R6	12	3/8	9.5	22	22	32.9	43.1	22.9
MDSA 12M-8	MDSA 12M-R8	12	1/2	9.5	27	22	36.6	46.8	22.9
MDSA 12M-12	MDSA 12M-R12	12	3/4	9.5	32	22	40.9	51.1	22.9
MDSA 15M-6	MDSA 15M-R6	15	3/8	12.0	24	27	32.9	42.9	24.3
MDSA 15M-8	MDSA 15M-R8	15	1/2	12.0	27	27	37.4	47.4	24.3
MDSA 16M-6	MDSA 16M-R6	16	3/8	12.7	24	27	32.9	43.1	24.5
MDSA 16M-8	MDSA 16M-R8	16	1/2	12.7	27	27	37.4	47.6	24.5
MDSA 16M-12	MDSA 16M-R12	16	3/4	12.7	32	27	40.9	51.1	24.5
MDSA 16M-16	MDSA 16M-R16	16	1	12.7	41	27	47.0	57.2	24.5
MDSA 18M-4	MDSA 18M-R4	18	1/4	15.1	27	30	33.0	43.2	24.5
MDSA 18M-6	MDSA 18M-R6	18	3/8	15.1	27	30	33.4	43.6	24.5
MDSA 18M-8	MDSA 18M-R8	18	1/2	15.1	27	30	37.4	47.6	24.5
MDSA 18M-12	MDSA 18M-R12	18	3/4	15.1	32	30	40.9	51.1	24.5
MDSA 20M-6	MDSA 20M-R6	20	3/8	16.5	30	30	36.0	46.2	24.5
MDSA 20M-8	MDSA 20M-R8	20	1/2	16.5	30	30	39.9	50.1	24.5
MDSA 20M-12	MDSA 20M-R12	20	3/4	16.5	32	30	40.9	51.1	24.5
	MDSA 20M-R16	20	1	16.5	41	30	46.5	56.7	24.5
MDSA 22M-12	MDSA 22M-R12	22	3/4	18.3	32	32	40.9	51.1	24.5
MDSA 25M-8	MDSA 25M-R8	25	1/2	22.5	36	41	43.0	55.5	31.6
MDSA 25M-12	MDSA 25M-R12	25	3/4	22.5	36	41	45.0	57.5	31.6
MDSA 25M-16	MDSA 25M-R16	25	1	22.5	41	41	50.8	63.3	31.6

# MDSS

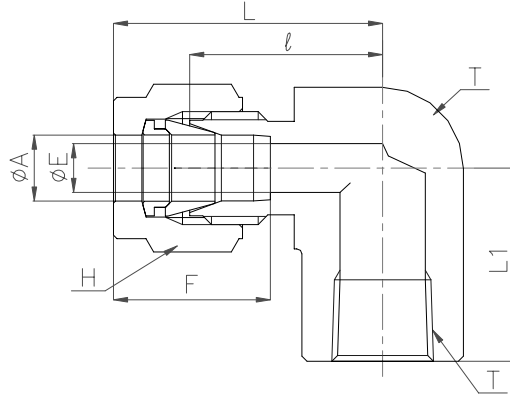
**Bulkhead Female Connector**  
Connects metric tube to male tapered thread



Part No.		A	T	E	h	h1	H	l	l1	L	L1	F	Panel	
ANSI NPT	ISO/JIS Rc	mm	NPT/Rc	mm	HEX	HEX	HEX	mm	mm	mm	mm	mm	Hole	Thick
MDSS 3M-2	MDSS 3M-R2	3	1/8	2.4	14	14	12	38.5	24.4	45.2	31.1	13.0	8.3	12.7
	MDSS 3M-R4	3	1/4	2.4	19	14	12	43.5	24.4	50.2	31.1	13.0	8.3	12.7
MDSS 4M-2	MDSS 4M-R2	4	1/8	2.7	14	14	13	39.7	25.5	46.5	32.3	13.9	9.9	10.4
	MDSS 4M-R4	4	1/4	2.7	19	14	13	44.5	25.5	51.3	32.3	13.9	9.9	10.4
MDSS 6M-2	MDSS 6M-R2	6	1/8	4.8	17	17	14	40.4	26.0	47.9	33.5	15.4	11.5	9.7
	MDSS 6M-R4	6	1/4	4.8	19	17	14	45.0	26.0	52.5	33.5	15.4	11.5	9.7
MDSS 6M-6	MDSS 6M-R6	6	3/8	4.8	22	17	14	47.8	26.0	55.3	33.5	15.4	11.5	9.7
	MDSS 6M-R8	6	1/2	4.8	27	17	14	52.3	26.0	59.8	33.5	15.4	11.5	9.7
MDSS 8M-2	MDSS 8M-R2	8	1/8	6.4	19	19	17	43.0	28.5	50.5	36.0	16.3	13.1	11.4
	MDSS 8M-R4	8	1/4	6.4	19	19	17	47.7	28.5	55.2	36.0	16.3	13.1	11.4
MDSS 8M-6	MDSS 8M-R6	8	3/8	6.4	22	19	17	49.5	28.5	57.0	36.0	16.3	13.1	11.4
	MDSS 8M-R8	8	1/2	6.4	27	19	17	54.8	28.5	62.3	36.0	16.3	13.1	11.4
MDSS 10M-2	MDSS 10M-R2	10	1/8	7.9	22	22	19	44.0	29.5	51.8	37.3	17.3	16.3	11.6
	MDSS 10M-R4	10	1/4	7.9	22	22	19	47.8	29.5	55.6	37.3	17.3	16.3	11.6
MDSS 10M-6	MDSS 10M-R6	10	3/8	7.9	22	22	19	51.3	29.5	59.1	37.3	17.3	16.3	11.6
	MDSS 10M-R8	10	1/2	7.9	27	22	19	55.2	29.5	63.0	37.3	17.3	16.3	11.6
MDSS 12M-4	MDSS 12M-R4	12	1/4	9.5	24	24	22	52.6	32.0	62.8	42.2	22.9	19.4	13.1
	MDSS 12M-R6	12	3/8	9.5	24	24	22	53.6	32.0	63.8	42.2	22.9	19.4	13.1
MDSS 12M-8	MDSS 12M-R8	12	1/2	9.5	27	24	22	56.7	32.0	66.9	42.2	22.9	19.4	13.1
	MDSS 12M-R12	12	3/4	9.5	32	24	22	61.0	32.0	71.2	42.2	22.9	19.4	13.1
MDSS 16M-8	MDSS 16M-R8	16	1/2	12.7	27	27	27	58.0	32.5	68.2	42.7	24.5	22.6	12.0
MDSS 18M-8	MDSS 18M-R8	18	1/2	15.1	30	30	30	60.5	32.5	70.7	42.7	24.5	25.8	16.7
MDSS 20M-6	MDSS 20M-R6	20	3/8	16.5	32	32	30	61.4	37.3	71.6	47.5	24.5	27.0	16.7
	MDSS 20M-R8	20	1/2	16.5	32	32	30	65.3	37.3	75.5	47.5	24.5	27.0	16.7
MDSS 20M-12	MDSS 20M-R12	20	3/4	16.5	32	32	30	66.3	37.3	76.5	47.5	24.5	27.0	16.7
MDSS 25M-12	MDSS 25M-R12	25	3/4	22.5	41	41	41	76.0	45.2	88.5	57.7	31.6	33.7	20.0
	MDSS 25M-16	25	1	22.5	41	41	41	81.7	45.2	94.2	57.7	31.6	33.7	20.0

# MDLF

**Female Elbow**  
Connects metric tube to male tapered pipe thread

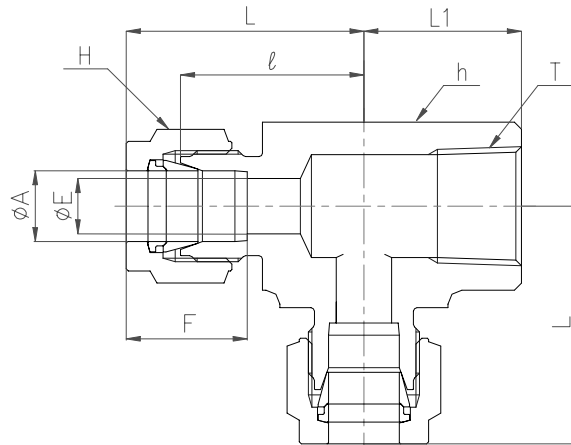


Part No.		A	T	E	h	H	ℓ	L	L <sub>1</sub>	F
ANSI NPT	ISO/JIS Rc	mm	NPT/Rc	mm	Flat	HEX	mm	mm	mm	mm
MDLF 3M-2	MDLF 3M-R2	3	1/8	2.4	17	12	20.0	26.7	19.0	13.0
MDLF 3M-4	MDLF 3M-R4	3	1/4	2.4	22	12	21.4	28.1	22.5	13.0
MDLF 4M-2	MDLF 4M-R2	4	1/8	2.7	17	13	21.0	27.8	19.0	13.9
MDLF 4M-4	MDLF 4M-R4	4	1/4	2.7	22	13	22.4	29.2	22.5	13.9
MDLF 6M-2	MDLF 6M-R2	6	1/8	4.8	17	14	21.0	28.5	19.0	15.4
MDLF 6M-4	MDLF 6M-R4	6	1/4	4.8	22	14	22.4	29.9	22.5	15.4
MDLF 6M-6	MDLF 6M-R6	6	3/8	4.8	24	14	26.2	33.7	22.5	15.4
MDLF 6M-8	MDLF 6M-R8	6	1/2	4.8	27	14	28.0	35.5	28.5	15.4
MDLF 8M-2	MDLF 8M-R2	8	1/8	6.4	17	17	22.5	30.0	19.0	16.3
MDLF 8M-4	MDLF 8M-R4	8	1/4	6.4	22	17	23.9	31.4	22.5	16.3
MDLF 8M-6	MDLF 8M-R6	8	3/8	6.4	24	17	26.2	33.7	22.5	16.3
MDLF 8M-8	MDLF 8M-R8	8	1/2	6.4	27	17	28.0	35.5	28.5	16.3
MDLF 10M-4	MDLF 10M-R4	10	1/4	7.9	22	19	25.0	32.8	22.5	17.3
MDLF 10M-6	MDLF 10M-R6	10	3/8	7.9	24	19	26.2	34.0	22.5	17.3
MDLF 10M-8	MDLF 10M-R8	10	1/2	7.9	27	19	28.0	35.8	28.5	17.3
MDLF 12M-4	MDLF 12M-R4	12	1/4	9.5	22	22	27.0	37.2	22.5	22.9
MDLF 12M-6	MDLF 12M-R6	12	3/8	9.5	24	22	27.0	37.2	22.5	22.9
MDLF 12M-8	MDLF 12M-R8	12	1/2	9.5	27	22	28.0	38.2	28.5	22.9
MDLF 15M-6	MDLF 15M-R6	15	3/8	12.0	24	27	28.0	38.0	27.0	24.3
MDLF 15M-8	MDLF 15M-R8	15	1/2	12.0	27	27	28.0	38.0	28.5	24.3
MDLF 15M-12	MDLF 15M-R12	15	3/4	12.0	36	27	32.5	42.5	32.5	24.3
MDLF 16M-6	MDLF 16M-R6	16	3/8	12.7	24	27	28.0	38.2	27.0	24.5
MDLF 16M-8	MDLF 16M-R8	16	1/2	12.7	27	27	28.0	38.2	28.5	24.5
MDLF 16M-12	MDLF 16M-R12	16	3/4	12.7	36	27	32.5	42.7	32.5	24.5
MDLF 18M-4	MDLF 18M-R4	18	1/4	15.1	27	30	28.0	38.2	27.0	24.5
MDLF 18M-6	MDLF 18M-R6	18	3/8	15.1	27	30	28.0	38.2	28.5	24.5
MDLF 18M-8	MDLF 18M-R8	18	1/2	15.1	27	30	28.0	38.2	28.5	24.5
MDLF 18M-12	MDLF 18M-R12	18	3/4	15.1	36	30	32.5	42.7	32.5	24.5
MDLF 20M-8	MDLF 20M-R8	20	1/2	16.5	30	30	32.5	42.7	32.5	24.5
MDLF 20M-12	MDLF 20M-R12	20	3/4	16.5	36	30	32.5	42.7	32.5	24.5
MDLF 22M-12	MDLF 22M-R12	22	3/4	18.3	36	32	32.5	42.7	32.5	26.1
MDLF 25M-8	MDLF 25M-R8	25	1/2	22.5	36	41	36.0	48.5	32.5	31.6
MDLF 25M-12	MDLF 25M-R12	25	3/4	22.5	36	41	36.0	48.5	36.0	31.6
MDLF 25M-16	MDLF 25M-R16	25	1	22.5	46	41	40.0	52.5	38.1	31.6



# MDTF

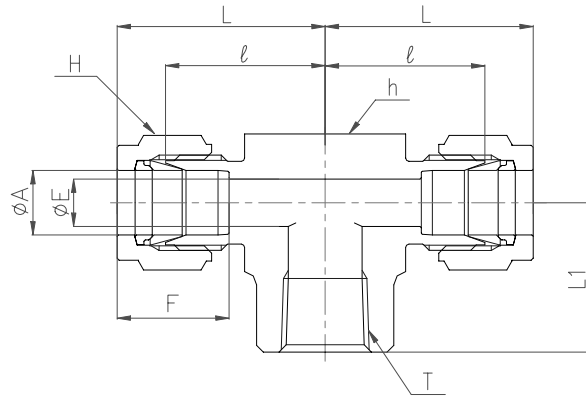
**Female Run Tee**  
Connects metric tube to male tapered pipe thread



Part No.		A	T	E	h	H	ℓ	L	L <sub>1</sub>	F
ANSI NPT	ISO/JIS Rc	mm	NPT/Rc	mm	Flat	HEX	mm	mm	mm	mm
MDTF 3M-2	MDTF 3M-R2	3	1/8	2.4	17	12	20.0	26.7	19.0	13.0
MDTF 3M-4	MDTF 3M-R4	3	1/4	2.4	22	12	21.4	28.1	22.5	13.0
MDTF 4M-2	MDTF 4M-R2	4	1/8	2.7	17	13	21.0	27.8	19.0	13.9
MDTF 4M-4	MDTF 4M-R4	4	1/4	2.7	22	13	22.4	29.2	22.5	13.9
MDTF 6M-2	MDTF 6M-R2	6	1/8	4.8	17	14	21.0	28.5	19.0	15.4
MDTF 6M-4	MDTF 6M-R4	6	1/4	4.8	22	14	22.4	29.9	22.5	15.4
MDTF 6M-6	MDTF 6M-R6	6	3/8	4.8	24	14	26.2	33.7	22.5	15.4
MDTF 8M-4	MDTF 8M-R4	8	1/4	6.4	22	17	23.9	31.4	22.5	16.3
MDTF 8M-6	MDTF 8M-R6	8	3/8	6.4	24	17	26.2	33.7	22.5	16.3
MDTF 8M-8	MDTF 8M-R8	8	1/2	6.4	27	17	28.0	35.5	28.5	16.3
MDTF 10M-4	MDTF 10M-R4	10	1/4	7.9	22	19	25.0	32.8	22.5	17.3
MDTF 10M-6	MDTF 10M-R6	10	3/8	7.9	24	19	26.2	34.0	22.5	17.3
MDTF 10M-8	MDTF 10M-R8	10	1/2	7.9	27	19	28.0	35.8	28.5	17.3
MDTF 12M-4	MDTF 12M-R4	12	1/4	9.5	22	22	27.0	37.2	22.5	22.9
MDTF 12M-6	MDTF 12M-R6	12	3/8	9.5	24	22	27.0	37.2	22.5	22.9
MDTF 12M-8	MDTF 12M-R8	12	1/2	9.5	27	22	28.0	38.2	28.5	22.9
MDTF 15M-6	MDTF 15M-R6	15	3/8	12.0	24	27	28.0	38.0	27.0	24.3
MDTF 15M-8	MDTF 15M-R8	15	1/2	12.0	27	27	28.0	38.0	28.5	24.3
MDTF 15M-12	MDTF 15M-R12	15	3/4	12.0	36	27	32.5	42.5	32.5	24.3
MDTF 16M-4	MDTF 16M-R4	16	1/4	12.7	24	27	28.0	38.2	27.0	24.5
MDTF 16M-6	MDTF 16M-R6	16	3/8	12.7	24	27	28.0	38.2	27.0	24.5
MDTF 16M-8	MDTF 16M-R8	16	1/2	12.7	27	27	28.0	38.2	28.5	24.5
MDTF 16M-12	MDTF 16M-R12	16	3/4	12.7	36	27	32.5	42.7	32.5	24.5
MDTF 18M-8	MDTF 18M-R8	18	1/2	15.1	27	30	28.0	38.2	28.5	24.5
MDTF 18M-12	MDTF 18M-R12	18	3/4	15.1	36	30	32.5	42.7	32.5	24.5
MDTF 20M-8	MDTF 20M-R8	20	1/2	16.5	30	30	32.5	42.7	32.5	24.5
MDTF 20M-12	MDTF 20M-R12	20	3/4	16.5	36	30	32.5	42.7	32.5	24.5
MDTF 22M-12	MDTF 22M-R12	22	3/4	18.3	36	32	32.5	42.7	32.5	26.1
MDTF 25M-8	MDTF 25M-R8	25	1/2	22.5	36	41	36.0	48.5	32.5	31.6
MDTF 25M-12	MDTF 25M-R12	25	3/4	22.5	36	41	36.0	48.5	36.0	31.6

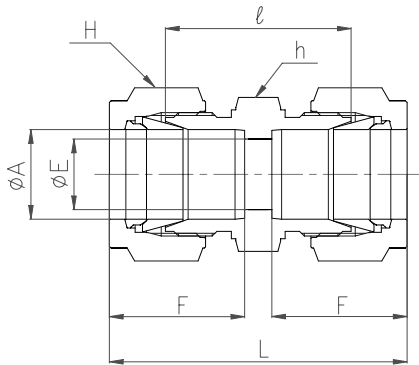
# MDTH

Female Branch Tee  
Connects metric tube to male tapered pipe thread



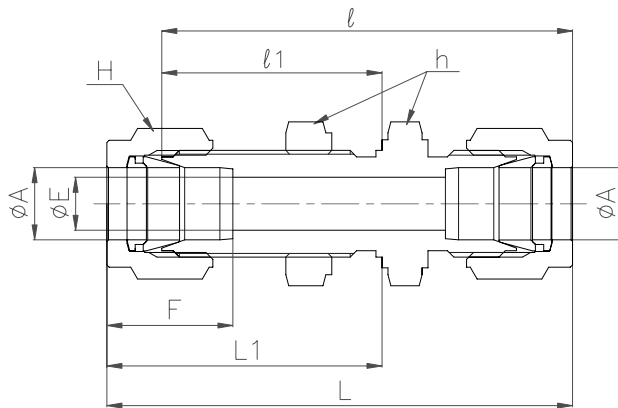
Part No.		A	T	E	h	H	ℓ	L	L <sub>1</sub>	F
ANSI NPT	ISO/JIS Rc	mm	NPT/Rc	mm	Flat	HEX	mm	mm	mm	mm
MDTH 3M-2	MDTH 3M-R2	3	1/8	2.4	17	12	20.0	26.7	19.0	13.0
MDTH 3M-4	MDTH 3M-R4	3	1/4	2.4	22	12	21.4	28.1	22.5	13.0
MDTH 4M-2	MDTH 4M-R2	4	1/8	2.7	17	13	21.0	27.8	19.0	13.9
MDTH 4M-4	MDTH 4M-R4	4	1/4	2.7	22	13	22.4	29.2	22.5	13.9
MDTH 6M-2	MDTH 6M-R2	6	1/8	4.8	17	14	21.0	28.5	19.0	15.4
MDTH 6M-4	MDTH 6M-R4	6	1/4	4.8	22	14	22.4	29.9	22.5	15.4
MDTH 6M-6	MDTH 6M-R6	6	3/8	4.8	24	14	26.2	33.7	22.5	15.4
MDTH 8M-4	MDTH 8M-R4	8	1/4	6.4	22	17	23.9	31.4	22.5	16.3
MDTH 8M-6	MDTH 8M-R6	8	3/8	6.4	24	17	26.2	33.7	22.5	16.3
MDTH 8M-8	MDTH 8M-R8	8	1/2	6.4	27	17	28.0	35.5	28.5	16.3
MDTH 10M-4	MDTH 10M-R4	10	1/4	7.9	22	19	25.0	32.8	22.5	17.3
MDTH 10M-6	MDTH 10M-R6	10	3/8	7.9	24	19	26.2	34.0	22.5	17.3
MDTH 10M-8	MDTH 10M-R8	10	1/2	7.9	27	19	28.0	35.8	28.5	17.3
MDTH 12M-4	MDTH 12M-R4	12	1/4	9.5	22	22	27.0	37.2	22.5	22.9
MDTH 12M-6	MDTH 12M-R6	12	3/8	9.5	24	22	27.0	37.2	22.5	22.9
MDTH 12M-8	MDTH 12M-R8	12	1/2	9.5	27	22	28.2	38.2	28.5	22.9
MDTH 15M-6	MDTH 15M-R6	15	3/8	12.0	24	27	28.0	38.0	27.0	24.3
MDTH 15M-8	MDTH 15M-R8	15	1/2	12.0	27	27	28.0	38.0	28.5	24.3
MDTH 15M-12	MDTH 15M-R12	15	3/4	12.0	36	27	32.5	42.5	32.5	24.3
MDTH 16M-4	MDTH 16M-R4	16	1/4	12.7	24	27	28.0	38.2	27.0	24.5
MDTH 16M-6	MDTH 16M-R6	16	3/8	12.7	24	27	28.0	38.2	27.0	24.5
MDTH 16M-8	MDTH 16M-R8	16	1/2	12.7	27	27	28.0	38.2	28.5	24.5
MDTH 16M-12	MDTH 16M-R12	16	3/4	12.7	36	27	32.5	42.7	32.5	24.5
MDTH 18M-6	MDTH 18M-R6	18	3/8	15.1	27	30	28.0	38.2	27.0	24.5
MDTH 18M-8	MDTH 18M-R8	18	1/2	15.1	27	30	28.0	38.2	28.5	24.5
MDTH 18M-12	MDTH 18M-R12	18	3/4	15.1	36	30	32.5	42.7	32.5	24.5
MDTH 20M-8	MDTH 20M-R8	20	1/2	16.5	30	30	32.5	42.7	32.5	24.5
MDTH 20M-12	MDTH 20M-R12	20	3/4	16.5	36	30	32.5	42.7	32.5	24.5
MDTH 22M-8	MDTH 22M-R8	22	1/2	18.3	30	32	32.5	42.7	32.5	26.1
MDTH 22M-12	MDTH 22M-R12	22	3/4	18.3	36	32	32.5	42.7	32.5	26.1
MDTH 25M-6	MDTH 25M-R6	25	3/8	22.5	36	41	36.0	48.5	32.5	31.6
MDTH 25M-12	MDTH 25M-R12	25	3/4	22.5	36	41	36.0	48.5	36.0	31.6

	MDUA	Union Connects metric tubes
--	------	--------------------------------



Part No.	A	E	h	H	l	L	F
	mm	mm	HEX	HEX	mm	mm	mm
MDUA 2M	2	1.3	12	12	21.2	32.4	11.1
MDUA 3M	3	2.4	12	12	23.4	36.8	13.0
MDUA 4M	4	2.7	12	13	25.0	38.6	13.9
MDUA 6M	6	4.8	14	14	27.3	42.3	15.4
MDUA 8M	8	6.4	17	17	29.4	44.4	16.3
MDUA 10M	10	7.9	19	19	32.0	47.6	17.3
MDUA 12M	12	9.5	22	22	32.0	52.4	22.9
MDUA 15M	15	12.0	24	27	33.5	53.5	24.3
MDUA 16M	16	12.7	24	27	33.5	53.9	24.5
MDUA 18M	18	15.1	27	30	34.5	54.9	24.5
MDUA 20M	20	16.5	30	30	35.9	56.3	24.5
MDUA 22M	22	18.3	32	32	35.9	56.3	26.1
MDUA 25M	25	22.5	36	41	41.8	66.8	31.6

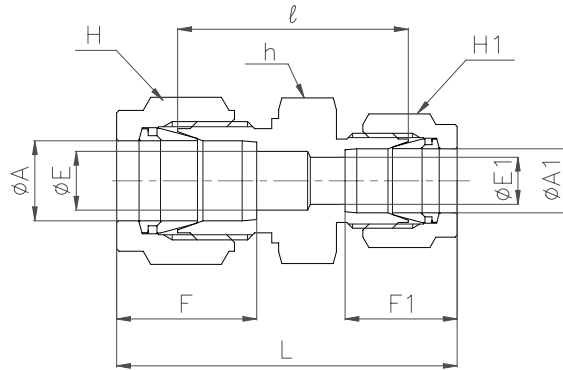
	MDSU	Bulkhead Union Connects metric tubes
--	------	---



Part No.	A	E	h	H	l	l <sub>1</sub>	L	L <sub>1</sub>	F	Panel	
	mm	mm	HEX	HEX	mm	mm	mm	mm	mm	hole	thick
MDSU 3M	3	2.4	14	12	39.6	24.4	53.0	31.1	13.0	8.3	12.7
MDSU 4M	4	2.7	14	13	42.1	25.5	55.7	32.3	13.9	9.9	10.4
MDSU 6M	6	4.8	17	14	43.9	26.0	58.9	33.5	15.4	11.5	9.7
MDSU 8M	8	6.4	19	17	47.2	28.5	62.2	36.0	16.3	13.1	11.4
MDSU 10M	10	7.9	22	19	49.5	29.5	65.1	37.3	17.3	16.3	11.6
MDSU 12M	12	9.5	24	22	52.4	32.0	72.8	42.2	22.9	19.4	13.1
MDSU 15M	15	12.0	27	27	54.1	32.5	74.1	42.5	24.3	22.6	12.0
MDSU 16M	16	12.7	27	27	54.1	32.5	74.5	42.7	24.5	22.6	12.0
MDSU 18M	18	15.1	30	30	56.5	32.5	76.9	42.7	24.5	25.8	16.7
MDSU 20M	20	16.5	32	30	60.7	37.3	81.1	47.5	24.5	27.0	16.7
MDSU 22M	22	18.3	36	32	67.2	37.3	87.6	47.5	26.1	29.0	16.7
MDSU 25M	25	22.5	41	41	73.4	45.2	98.4	57.7	31.6	33.7	20.0

# MDUR

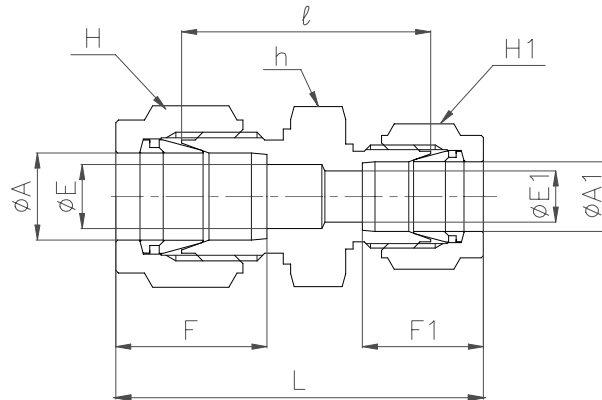
Reducing Union  
Connects metric tube to fractional tube



Part No.	A	A <sub>1</sub>		E	E <sub>1</sub>	h	H	H <sub>1</sub>		ℓ	L	F	F <sub>1</sub>
	mm	in	mm	mm	mm	HEX	HEX	in	HEX	mm	mm	mm	mm
MDUR 3M-2	3	1/8	3.18	2.3	2.3	12	12	7/16	11.11	23.5	36.9	13.0	13.0
MDUR 4M-2	4	1/8	3.18	2.7	2.3	12	13	7/16	11.11	24.0	37.5	13.9	13.0
MDUR 4M-4	4	1/4	6.35	2.7	4.8	12	13	9/16	14.29	26.0	40.3	13.9	15.4
MDUR 4M-6	4	3/8	9.53	2.7	7.1	17	13	11/16	17.46	27.5	41.8	13.9	17.0
MDUR 6M-2	6	1/8	3.18	4.8	2.3	14	14	7/16	11.11	25.7	39.9	15.4	13.0
MDUR 6M-4	6	1/4	6.35	4.8	4.8	14	14	9/16	14.29	27.3	42.3	15.4	15.4
MDUR 6M-6	6	3/8	9.53	4.8	7.1	17	14	11/16	17.46	29.0	44.0	15.4	17.0
MDUR 8M-2	8	1/8	3.18	6.4	2.3	17	17	7/16	11.11	27.0	41.2	16.3	13.0
MDUR 8M-4	8	1/4	6.35	6.4	4.8	17	17	9/16	14.29	28.6	43.6	16.3	15.4
MDUR 8M-6	8	3/8	9.53	6.4	7.1	17	17	11/16	17.46	29.5	44.5	16.3	17.0
MDUR 8M-8	8	1/2	12.7	6.4	10.4	22	17	7/8	22.23	30.0	47.8	16.3	23.0
MDUR 10M-2	10	1/8	3.18	7.9	2.3	19	19	7/16	11.11	28.0	42.5	17.3	13.0
MDUR 10M-4	10	1/4	6.35	7.9	4.8	19	19	9/16	14.29	29.6	44.9	17.3	15.4
MDUR 10M-6	10	3/8	9.53	7.9	7.1	19	19	11/16	17.46	32.0	47.3	17.3	17.0
MDUR 10M-8	10	1/2	12.7	7.9	10.4	22	19	7/8	22.23	32.0	50.1	17.3	23.0
MDUR 12M-4	12	1/4	6.35	9.5	4.8	22	22	9/16	14.29	30.5	48.2	22.9	15.4
MDUR 12M-6	12	3/8	9.53	9.5	7.1	22	22	11/16	17.46	32.0	49.7	22.9	17.0
MDUR 12M-8	12	1/2	12.7	9.5	10.4	22	22	7/8	22.23	32.0	52.5	22.9	23.0
MDUR 12M-12	12	3/4	19.05	9.5	15.8	27	22	1-1/8	28.58	33.3	53.8	22.9	24.6
MDUR 16M-4	16	1/4	6.35	12.7	4.8	24	27	9/16	14.29	31.9	49.6	24.5	15.4
MDUR 16M-8	16	1/2	12.7	12.7	10.4	24	27	7/8	22.23	33.5	54.0	24.5	23.0
MDUR 16M-10	16	5/8	15.88	12.7	12.7	24	27	1	25.4	33.5	54.0	24.5	24.6
MDUR 16M-12	16	3/4	19.05	12.7	15.8	27	27	1-1/8	28.58	33.5	54.0	24.5	24.6
MDUR 18M-12	18	3/4	19.05	15.1	15.8	27	30	1-1/8	28.58	33.3	53.8	24.5	24.6
MDUR 20M-12	20	3/4	19.05	16.5	15.8	30	30	1-1/8	28.58	35.1	55.6	24.5	24.6

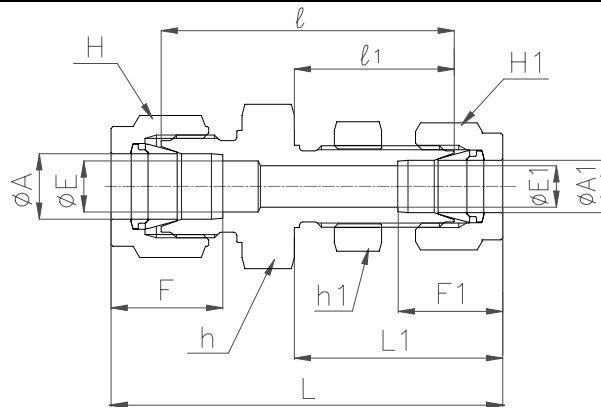
# MDUR

Reducing Union  
Connects metric tubes



Part No.	A	A <sub>1</sub>	E	E <sub>1</sub>	h	H	H <sub>1</sub>	ℓ	L	F	F <sub>1</sub>
	mm	mm	mm	mm	HEX	HEX	HEX	mm	mm	mm	mm
MDUR 3M-2M	3	2	2.4	1.3	12	12	12	22.7	35.0	13.0	11.1
MDUR 4M-3M	4	3	2.7	2.4	12	13	12	24.6	38.1	13.9	13.0
MDUR 6M-3M	6	3	4.8	2.4	14	14	12	25.7	39.9	15.4	13.0
MDUR 6M-4M	6	4	4.8	2.7	14	14	13	26.6	40.9	15.4	13.9
MDUR 8M-3M	8	3	6.4	2.4	17	17	12	27.0	41.2	16.3	13.0
MDUR 8M-4M	8	4	6.4	2.7	17	17	13	28.0	42.3	16.3	13.9
MDUR 8M-6M	8	6	6.4	4.8	17	17	14	28.6	43.6	16.3	15.4
MDUR 10M-3M	10	3	7.9	2.4	19	19	12	28.0	42.5	17.3	13.0
MDUR 10M-4M	10	4	7.9	2.7	19	19	13	29.0	43.6	17.3	13.9
MDUR 10M-6M	10	6	7.9	4.8	19	19	14	29.6	44.9	17.3	15.4
MDUR 10M-8M	10	8	7.9	6.4	19	19	17	30.7	46.0	17.3	16.3
MDUR 12M-3M	12	3	9.5	2.4	22	22	12	29.1	46.0	22.9	13.0
MDUR 12M-4M	12	4	9.5	2.7	22	22	13	30.0	47.0	22.9	13.9
MDUR 12M-6M	12	6	9.5	4.8	22	22	14	30.7	48.4	22.9	15.4
MDUR 12M-8M	12	8	9.5	6.4	22	22	17	31.2	48.9	22.9	16.3
MDUR 12M-10M	12	10	9.5	7.9	22	22	19	32.0	50.0	22.9	17.3
MDUR 15M-10M	15	10	12.0	7.9	24	27	19	33.0	50.8	24.3	17.3
MDUR 15M-12M	15	12	12.0	9.5	24	27	22	33.0	53.2	24.3	22.9
MDUR 16M-4M	16	4	12.7	2.7	24	27	13	32.8	49.8	24.5	13.9
MDUR 16M-8M	16	8	12.7	6.4	24	27	17	32.8	50.5	24.5	16.3
MDUR 16M-10M	16	10	12.7	7.9	24	27	19	33.5	51.5	24.5	17.3
MDUR 16M-12M	16	12	12.7	9.5	24	27	22	33.0	53.4	24.5	22.9
MDUR 16M-15M	16	15	12.7	12.0	24	27	27	33.5	53.7	24.5	24.3
MDUR 18M-10M	18	10	15.1	7.9	27	30	19	34.1	52.1	24.5	17.3
MDUR 18M-12M	18	12	15.1	9.5	27	30	22	34.3	54.7	24.5	22.9
MDUR 20M-10M	20	10	16.5	7.9	30	30	19	35.7	53.7	24.5	17.3
MDUR 20M-12M	20	12	16.5	9.5	30	30	22	35.9	56.3	24.5	22.9
MDUR 20M-16M	20	16	16.5	12.7	30	30	27	35.9	56.3	24.5	24.5
MDUR 20M-18M	20	18	16.5	15.1	30	30	30	35.9	56.3	24.5	24.5
MDUR 25M-12M	25	12	22.5	9.5	36	41	22	39.4	62.1	31.6	22.9
MDUR 25M-16M	25	16	22.5	12.7	36	41	27	39.4	62.1	31.6	24.5
MDUR 25M-20M	25	20	22.5	16.5	36	41	30	39.4	62.1	31.6	24.5

	MDSUR	Bulkhead Reducing Union Connects fractional tubes
--	-------	--

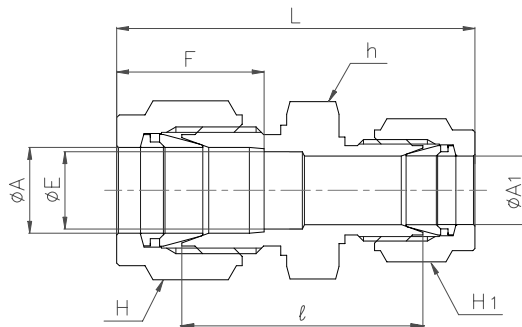


Part No.	A	A <sub>1</sub>	E	E <sub>1</sub>	h	h <sub>1</sub>	H	H <sub>1</sub>	l	l <sub>1</sub>	L	L <sub>1</sub>	F	F <sub>1</sub>	Panel	
	mm	mm	mm	mm	HEX	HEX	HEX	HEX	mm	mm	mm	mm	mm	mm	Hole	Thick
MDSUR 3M-4	3	1/4	2.4	4.8	17	5/8	12	9/16	42.3	26.0	56.5	33.5	13.0	15.4	11.5	10.2
MDSUR 4M-2	4	1/8	2.7	2.3	14	11/16	13	7/16	42.3	24.6	55.8	31.3	13.9	13.0	8.3	12.7
MDSUR 6M-4	6	1/4	4.8	4.8	17	7/8	14	9/16	43.4	26.0	58.4	33.5	15.4	15.4	11.5	10.2

	MDSUR	Bulkhead Reducing Union Connects metric tubes
--	-------	--

Part No.	A	A <sub>1</sub>	E	E <sub>1</sub>	h	h <sub>1</sub>	H	H <sub>1</sub>	l	l <sub>1</sub>	L	L <sub>1</sub>	F	F <sub>1</sub>	Panel	
	mm	mm	mm	mm	HEX	HEX	HEX	HEX	mm	mm	mm	mm	mm	mm	Hole	Thick
MDSUR 3M-4M	3	4	2.4	2.7	14	14	12	13	41.1	25.5	54.6	32.3	13.0	13.9	9.9	10.4
MDSUR 3M-6M	3	6	2.4	4.8	17	17	12	14	42.3	26.0	56.5	33.5	13.0	15.4	11.5	9.7
MDSUR 6M-4M	6	4	4.8	2.7	14	14	14	13	43.4	25.5	57.7	32.3	15.4	13.9	9.9	10.4
MDSUR 8M-10M	8	10	6.4	7.9	22	22	17	19	48.9	29.5	64.2	37.3	16.3	17.3	16.3	11.6
MDSUR 10M-6M	10	6	7.9	4.8	19	17	19	14	46.3	26.0	61.6	33.5	17.3	15.4	11.5	9.7
MDSUR 10M-8M	10	8	7.9	6.4	19	19	19	17	48.5	28.5	63.8	36.0	17.3	16.3	13.1	11.4

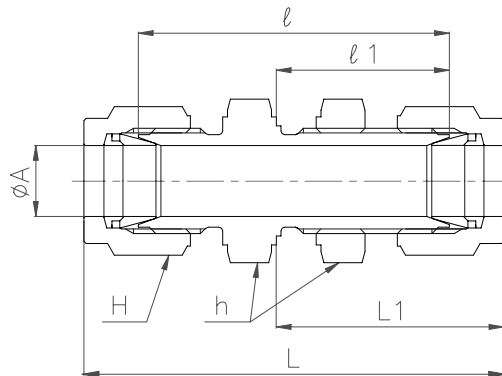
	MDURZ	Reducing Union / Bored through Connects Metric tubes
--	-------	---



Part No.	A	A <sub>1</sub>	E	h	H	H <sub>1</sub>	l	L	F
	mm	mm	mm	HEX	HEX	HEX	mm	mm	mm
MDURZ 8M-4M	8	4	6.4	17	17	13	28.0	42.3	16.3
MDURZ 10M-4M	10	4	7.9	19	19	13	29.0	43.6	17.3
MDURZ 10M-6M	10	6	7.9	19	19	14	29.6	44.9	17.3

# MDSUZ

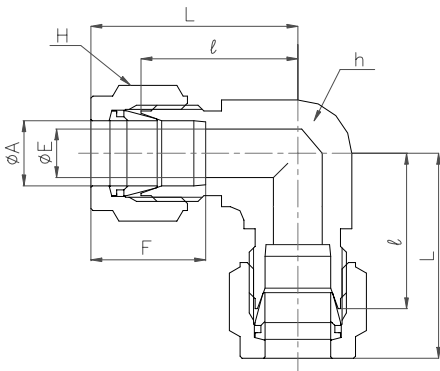
**Bulkhead Union / Bored through**  
Connects metric tubes



Part No.	A	h	H	$l$	$l_1$	L	L <sub>1</sub>	Panel	
	mm	HEX	HEX	mm	mm	mm	mm	Hole	Thick
MDSUZ 3M	3	14	12	39.6	24.4	53.0	32.1	8.3	12.7
MDSUZ 4M	4	14	13	42.1	25.5	55.7	32.3	9.9	10.4
MDSUZ 6M	6	17	14	43.9	26.0	58.9	33.5	11.5	9.7
MDSUZ 8M	8	19	17	47.2	28.5	62.2	36.0	13.1	11.4
MDSUZ 10M	10	22	19	49.5	29.5	65.1	37.3	16.3	11.6
MDSUZ 12M	12	24	22	52.4	32.0	72.8	42.2	19.4	13.1
MDSUZ 15M	15	27	27	54.1	32.5	74.1	42.5	22.6	12.0
MDSUZ 16M	16	27	27	54.1	32.5	74.5	42.7	22.6	12.0
MDSUZ 18M	18	30	30	56.5	32.5	76.9	42.7	25.8	16.7
MDSUZ 20M	20	32	30	60.7	37.3	81.1	47.5	27.0	16.7
MDSUZ 22M	22	36	32	67.2	37.3	87.6	47.5	29.0	16.7
MDSUZ 25M	25	41	41	73.4	45.2	98.4	57.7	33.7	20.0

# MDLA

**Union Elbow**  
Connects metric tubes

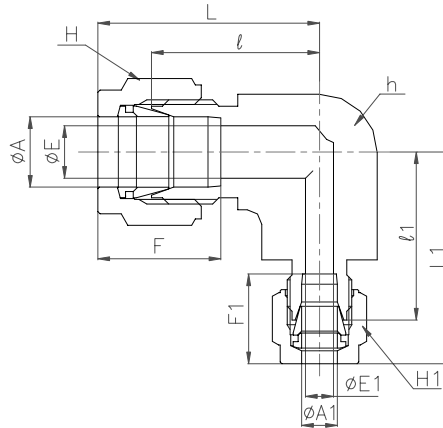


Part No.	A	E	h	H	$l$	L	F
	mm	mm	Flat	HEX	mm	mm	mm
MDLA 3M	3	2.4	12	12	16.8	23.5	13.0
MDLA 4M	4	2.7	12	13	19.0	25.8	13.9
MDLA 6M	6	4.8	12	14	22.2	29.7	15.4
MDLA 6M E	6	4.8	12	14	19.6	27.1	15.4
MDLA 8M	8	6.4	14	17	22.5	30.0	16.3
MDLA 8M E	8	6.4	14	17	21.3	28.8	16.3
MDLA 10M	10	7.9	17	19	24.0	31.8	17.3
MDLA 12M	12	9.5	22	22	27.0	37.2	22.9
MDLA 15M	15	12.0	24	27	28.0	38.0	24.3
MDLA 16M	16	12.7	24	27	28.0	38.2	24.5
MDLA 18M	18	15.1	27	30	28.2	38.4	24.5
MDLA 20M	20	16.5	30	30	32.5	42.7	24.5
MDLA 22M	22	18.3	30	32	32.5	42.7	26.1
MDLA 25M	25	22.5	36	41	36.0	48.5	31.6

[Note] E :European Standard

# MDLR

Reducing Union Elbow  
Connects metric tube to Fractional tube



Part No.	A	A <sub>1</sub>		E	E <sub>1</sub>	h	H	H <sub>1</sub>		l	l <sub>1</sub>	L	L <sub>1</sub>	F	F <sub>1</sub>
	mm	in	mm	mm	mm	Flat	HEX	in	HEX	mm	mm	mm	mm	mm	mm
MDLR 4M-4	4	1/4	6.35	2.7	4.8	12	13	9/16	14.29	20.0	20.0	26.8	27.5	13.9	15.4
MDLR 6M-4	6	1/4	6.35	4.8	4.8	12	14	9/16	14.29	22.2	22.2	29.7	29.7	15.4	15.4
MDLR 6M-6	6	3/8	9.53	4.8	7.1	17	14	11/16	17.46	24.0	24.0	31.5	31.5	15.4	17.0
MDLR 8M-4	8	1/4	6.35	6.4	4.8	14	17	9/16	14.29	22.5	22.5	29.9	30.0	16.3	15.4
MDLR 8M-6	8	3/8	9.53	6.4	7.1	17	17	11/16	17.46	24.0	24.0	31.5	31.5	16.3	17.0
MDLR 10M-4	10	1/4	6.35	7.9	4.8	17	19	9/16	14.29	24.0	24.0	31.8	31.5	17.3	15.4
MDLR 12M-4	12	1/4	6.35	9.5	4.8	22	22	9/16	14.29	27.0	27.0	37.2	34.5	22.9	15.4

# MDLR

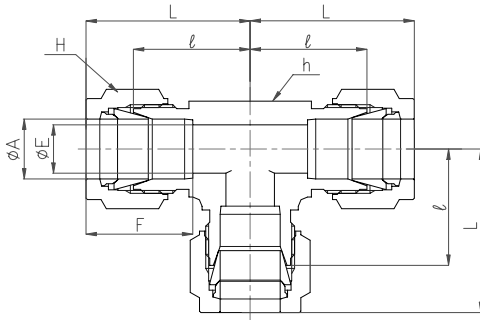
Reducing Union Elbow  
Connects metric tubes

Part No.	A	A <sub>1</sub>	E	E <sub>1</sub>	h	H	H <sub>1</sub>	l	l <sub>1</sub>	L	L <sub>1</sub>	F	F <sub>1</sub>
	mm	mm	mm	mm	Flat	HEX	HEX	mm	mm	mm	mm	mm	mm
MDLR 6M-4M	6	4	4.8	2.7	12	14	13	22.2	22.2	29.7	29.0	15.4	13.9
MDLR 8M-6M	8	6	6.4	4.8	14	17	14	22.5	22.5	30.0	30.0	16.3	15.4
MDLR 10M-6M	10	6	7.9	4.8	17	19	14	24.0	24.0	31.8	31.5	17.3	15.4
MDLR 10M-8M	10	8	7.9	6.4	17	19	17	24.0	24.0	31.8	31.5	17.3	16.3
MDLR 12M-6M	12	6	9.5	4.8	22	22	14	27.0	27.0	37.2	34.5	22.9	15.4
MDLR 12M-8M	12	8	9.5	6.4	22	22	17	27.0	27.0	37.2	34.5	22.9	16.3
MDLR 12M-10M	12	10	9.5	7.9	22	22	19	27.0	27.0	37.2	34.5	22.9	17.3
MDLR 15M-10M	15	10	12.0	7.9	24	27	19	28.0	28.0	38.2	35.8	24.3	17.3
MDLR 15M-12M	15	12	12.0	9.5	24	27	22	28.0	28.0	38.2	38.2	24.3	22.9
MDLR 16M-12M	16	12	12.7	9.5	24	27	22	28.0	28.0	38.2	38.2	24.5	22.9
MDLR 16M-15M	16	15	12.7	12.0	24	27	27	28.0	28.0	38.2	38.2	24.5	24.3



# MDTA

**Union Tee**  
Connects metric tubes

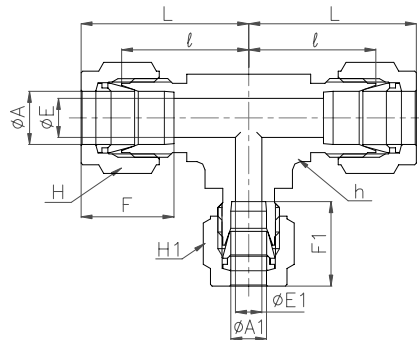


Part No.	A	E	h	H	ℓ	L	F
	mm	mm	Flat	HEX	mm	mm	mm
MDTA 2M	2	1.3	12	12	16.8	22.4	11.2
MDTA 3M	3	2.4	12	12	16.8	23.5	13.0
MDTA 4M	4	2.7	12	13	19.0	25.8	13.9
MDTA 6M	6	4.8	12	14	22.2	29.7	15.4
MDTA 6M E	6	4.8	12	14	19.6	27.1	15.4
MDTA 8M	8	6.4	14	17	22.5	30.0	16.3
MDTA 10M	10	7.9	17	19	24.0	31.8	17.3
MDTA 12M	12	9.5	22	22	27.0	37.2	22.9
MDTA 15M	15	12.0	24	27	28.0	38.0	24.3
MDTA 16M	16	12.7	24	27	28.0	38.2	24.5
MDTA 18M	18	15.1	27	30	28.2	38.4	24.5
MDTA 20M	20	16.5	30	30	32.5	42.7	24.5
MDTA 22M	22	18.3	30	32	32.5	42.7	26.1
MDTA 25M	25	22.5	36	41	36.0	48.5	31.6

[Note] E :European Standard

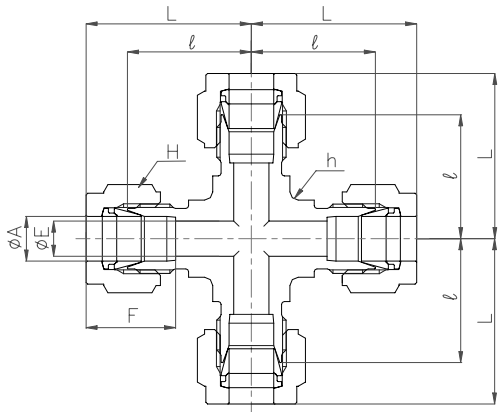
# MDTR

**Reducing Union Tee**  
Connects metric tubes



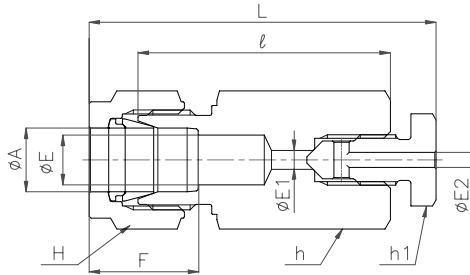
Part No.	A	A <sub>1</sub>	E	E <sub>1</sub>	h	H	H <sub>1</sub>	ℓ	L	L <sub>1</sub>	F	F <sub>1</sub>
	mm	mm	mm	mm	Flat	HEX	HEX	mm	mm	mm	mm	mm
MDTR 8M-6M	8	6	6.4	4.8	14	17	14	22.5	30.0	30.0	16.3	15.4
MDTR 10M-6M	10	6	7.9	4.8	17	19	14	24.0	31.8	31.5	17.3	15.4
MDTR 10M-8M	10	8	7.9	6.4	17	19	17	24.0	31.8	31.5	17.3	16.3
MDTR 12M-16M	12	16	9.5	12.7	24	22	27	28.0	38.2	38.2	22.9	24.5
MDTR 12M-25M	12	25	9.5	22.5	36	22	41	36.0	46.2	48.5	22.9	31.6
MDTR 16M-8M	16	8	12.7	6.4	24	27	17	28.0	38.2	35.5	24.5	16.3
MDTR 16M-10M	16	10	12.7	7.9	24	27	19	28.0	38.2	35.8	24.5	17.3
MDTR 16M-12M	16	12	12.7	9.5	24	27	22	28.0	38.2	38.2	24.5	22.9
MDTR 16M-22M	16	22	12.7	18.3	30	27	32	32.5	42.7	42.7	24.5	26.1
MDTR 18M-10M	18	10	15.1	7.9	27	30	19	28.2	38.4	36.0	24.5	17.3
MDTR 18M-12M	18	12	15.1	9.5	27	30	22	28.2	38.4	38.4	24.5	22.9
MDTR 20M-12M	20	12	16.5	9.5	30	30	22	32.5	42.7	42.7	24.5	22.9
MDTR 20M-16M	20	16	16.5	12.7	30	30	27	32.5	42.7	42.7	24.5	24.5
MDTR 22M-8M	22	8	18.3	6.4	30	32	17	32.5	42.7	40.0	26.1	16.3
MDTR 22M-18M	22	18	18.3	15.1	30	32	30	32.5	42.7	42.7	26.1	24.5
MDTR 25M-10M	25	10	22.5	7.9	36	41	19	36.0	48.5	43.8	31.6	17.3
MDTR 25M-12M	25	12	22.5	9.5	36	41	22	36.0	48.5	46.2	31.6	22.9
MDTR 25M-16M	25	16	22.5	12.7	36	41	27	36.0	48.5	46.2	31.6	24.5
MDTR 25M-20M	25	20	22.5	16.5	36	41	30	36.0	48.5	46.2	31.6	24.5

	MDXA	Union Cross Connects metric tubes
--	------	--------------------------------------



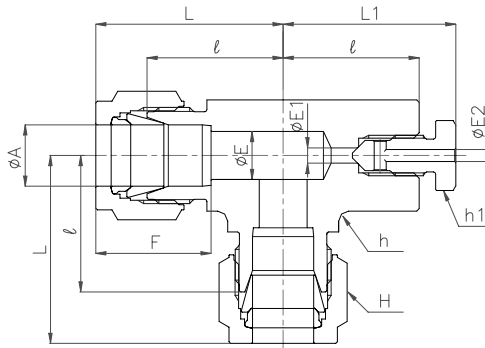
Part No.	A	E	h	H	l	L	F
	mm	mm	Flat	HEX	mm	mm	mm
MDXA 3M	3	2.4	12	12	16.8	23.5	13.0
MDXA 4M	4	2.7	12	13	19.0	25.8	13.9
MDXA 6M	6	4.8	12	14	22.2	29.7	15.4
MDXA 8M	8	6.4	14	17	22.5	30.0	16.3
MDXA 10M	10	7.9	17	19	24.0	31.8	17.3
MDXA 12M	12	9.5	22	22	27.0	37.2	22.9
MDXA 15M	15	12.0	24	27	28.0	38.0	24.3
MDXA 16M	16	12.7	24	27	28.0	38.2	24.5
MDXA 18M	18	15.1	27	30	28.2	38.4	24.5

	MDEA	Union with vent plug Connects metric tubes
--	------	---



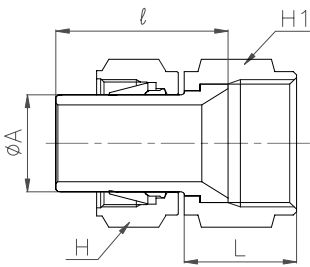
Part No.	A	E	E <sub>1</sub>	E <sub>2</sub>	h	h <sub>1</sub>	H	l	L	F
	mm	mm	mm	mm	HEX	HEX	HEX	mm	mm	mm
MDEA 10M	10	7.9	3.0	2.4	19	12	19	40.0	55.1	17.3
MDEA 12M	12	9.5	3.0	2.4	22	12	22	40.0	57.5	22.9

	MDET	Union Tee with vent plug Connects metric tubes
--	------	---



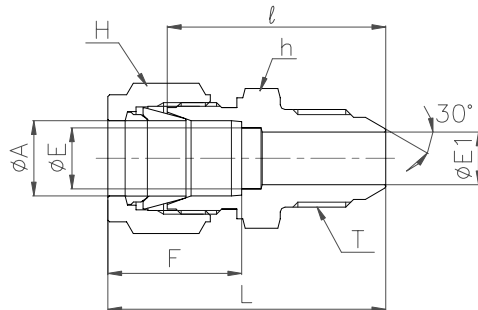
Part No.	A	E	E <sub>1</sub>	E <sub>2</sub>	h	h <sub>1</sub>	H	l	L	L <sub>1</sub>	F
	mm	mm	mm	mm	Flat	HEX	HEX	mm	mm	mm	mm
MDET 10M	10	7.9	3.0	2.4	17	12	19	24.0	31.8	31.3	17.3
MDET 12M	12	9.5	3.0	2.4	22	12	22	27.0	37.2	34.3	22.9

	MDAN	<b>AN Adapter</b> Connects metric BI-LOK port to 37° flared tube (UNF thread)
--	------	--



Part No.	A	AN	T	E	H	H <sub>1</sub>		ℓ	L
	mm	in	UNF	mm	HEX	In	HEX	mm	mm
MDAN 6M-4	6	1/4	7/16-20	4.0	14	9/16	14.29	22.3	15.7
MDAN 10M-6	10	3/8	9/16-18	8.0	19	11/16	17.46	25.3	18.3
MDAN 12M-8	12	1/2	3/4-16	9.5	22	7/8	22.23	32.0	21.3

	MDUC	<b>AN Union</b> Connects metric tube to 37° flared tube (UNF thread)
--	------	---



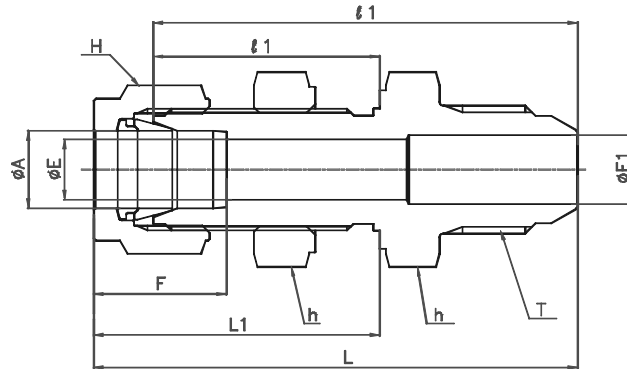
Part No.	A	AN	T	E	E <sub>1</sub>	h	H	ℓ	L	F
	mm	in	UNF	mm	mm	HEX	HEX	mm	mm	mm
MDUC 6M-4	6	1/4	7/16-20	4.8	4.3	14	14	31.0	38.5	15.4
MDUC 8M-5	8	5/16	1/2-20	6.4	5.5	17	17	32.0	39.5	16.3
MDUC 10M-4	10	1/4	7/16-20	7.9	4.3	19	19	33.0	40.8	17.3
MDUC 10M-6	10	3/8	9/16-18	7.9	7.1	19	19	33.3	41.1	17.3
MDUC 12M-8	12	1/2	3/4-16	9.5	9.9	22	22	36.5	46.7	22.9

	MDUC	<b>AN Union</b> Connects metric tube to 30° flared tube (ISO parallel thread)
--	------	--

Part No.	A	T	E	E <sub>1</sub>	h	H	ℓ	L	F
	mm	G	mm	mm	HEX	HEX	mm	mm	mm
MDUC 6M-G2	6	1/8	4.8	3.0	14	14	31.0	38.4	15.7
MDUC 6M-G4	6	1/4	4.8	6.0	17	14	33.0	42.8	15.7
MDUC 8M-G4	8	1/4	6.4	6.0	17	17	34.0	41.4	16.3
MDUC 8M-G6	8	3/8	6.4	9.0	19	17	36.0	43.4	16.3
MDUC 10M-G2	10	1/8	7.9	3.0	19	19	33.0	40.8	17.3
MDUC 10M-G4	10	1/4	7.9	6.0	19	19	35.0	42.8	17.3
MDUC 10M-G6	10	3/8	7.9	9.0	19	19	37.0	44.8	17.3
MDUC 10M-G8	10	1/2	7.9	12.0	22	19	39.0	46.8	17.3
MDUC 12M-G4	12	1/4	9.5	6.0	22	22	35.9	46.1	22.9
MDUC 12M-G6	12	3/8	9.5	9.0	22	22	37.9	48.1	22.9
MDUC 12M-G8	12	1/2	9.5	9.5	22	22	39.9	50.1	22.9
MDUC 16M-G6	16	3/8	12.7	9.0	24	27	39.5	49.7	24.5
MDUC 18M-G6	18	3/8	15.1	9.0	27	30	40.7	50.9	24.5
MDUC 20M-G12	20	3/4	16.5	16.5	30	30	44.2	54.4	24.5
MDUC 25M-G16	25	1	22.5	20.0	36	41	50.7	63.2	31.6

# MDUE

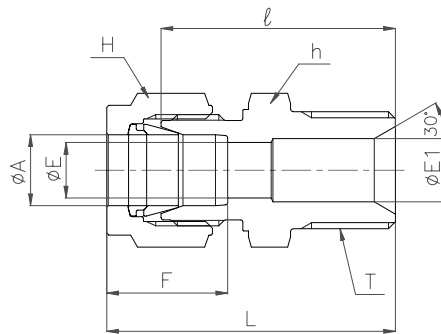
**AN Bulkhead Union**  
Connects metric tube to 37° flared tube (ISO parallel thread)



Part No.	A	T	E	E1	h	H	ℓ	ℓ <sub>1</sub>	L	L <sub>1</sub>	F	Panel	
	mm	G	mm	mm	HEX	HEX	mm	mm	mm	mm	mm	Hole	Thick
MDUE 10M-G4	10	1/4	7.9	6.0	22	19	53.0	29.5	60.8	37.3	17.3	16.3	11.6
MDUE 10M-G6	10	3/8	7.9	9.0	22	19	55.3	29.5	63.1	37.3	17.3	16.3	11.6
MDUE 12M-G6	12	3/8	9.5	9.0	24	22	58.0	32.0	68.2	42.2	22.9	19.4	13.1

# MDUD

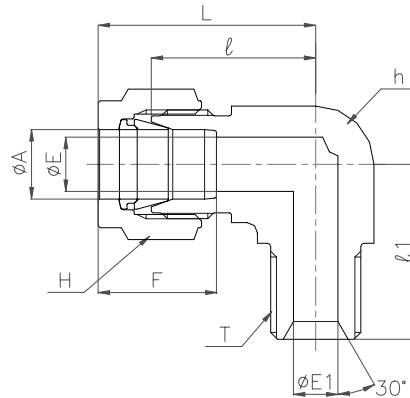
**Male Connector /for 30° Hose Adapter**  
Connects metric tube to 30° Hose Adapter (ISO parallel thread)



Part No.	A	T	E	E <sub>1</sub>	h	H	ℓ	L	F
	mm	G	mm	mm	HEX	HEX	mm	mm	mm
MDUD 6M-G2	6	1/8	4.8	3.5	14	14	29.0	36.5	15.4
MDUD 6M-G4	6	1/4	4.8	6.0	14	14	31.0	38.5	15.4
MDUD 8M-G4	8	1/4	6.4	6.0	17	17	32.0	39.5	16.3
MDUD 8M-G6	8	3/8	6.4	9.0	19	17	33.0	40.5	16.3
MDUD 10M-G4	10	1/4	7.9	6.0	19	19	32.5	40.3	17.3
MDUD 10M-G6	10	3/8	7.9	9.0	19	19	33.5	41.3	17.3
MDUD 12M-G4	12	1/4	9.5	6.0	22	22	34.0	44.2	22.9
MDUD 12M-G6	12	3/8	9.5	9.0	22	22	35.0	45.2	22.9
MDUD 12M-G8	12	1/2	9.5	12.0	22	22	38.0	48.2	22.9
MDUD 15M-G8	15	1/2	12.0	12.0	24	27	39.0	49.0	24.3
MDUD 16M-G4	16	1/4	12.7	6.0	24	27	35.0	45.2	24.5
MDUD 16M-G6	16	3/8	12.7	9.0	24	27	36.0	46.2	24.5
MDUD 16M-G8	16	1/2	12.7	12.0	24	27	39.0	49.2	24.5
MDUD 18M-G8	18	1/2	15.1	12.0	27	30	41.0	51.2	24.5
MDUD 25M-G12	25	3/4	22.5	16.0	36	41	45.5	58.0	31.6

# MDLD

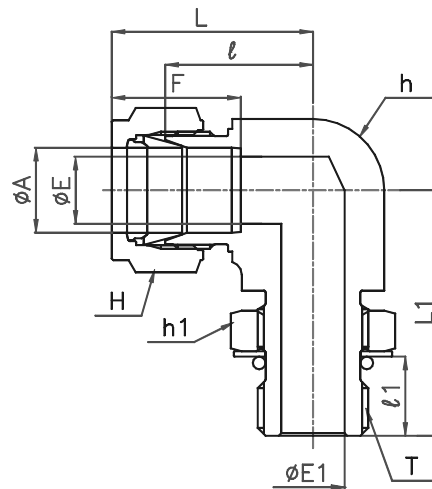
**Male Elbow /30° Hose Adapter**  
Connects metric tube to 30° Hose Adapter (ISO parallel thread)



Part No	A	T	E	E <sub>1</sub>	h	H	l	l <sub>1</sub>	L	F
	mm	G	mm	mm	Flat	HEX	mm	mm	mm	mm
MDLD 6M-G2	6	1/8	4.8	3.0	14	14	22.2	21.0	29.7	15.4
MDLD 6M-G4	6	1/4	4.8	6.0	14	14	22.2	24.0	29.7	15.4
MDLD 10M-G4	10	1/4	7.9	6.0	17	19	24.0	25.5	31.8	17.3
MDLD 12M-G6	12	3/8	9.5	9.0	22	22	27.0	29.0	37.2	22.9
MDLD 18M-G8	18	1/2	15.1	12.0	27	30	28.2	34.5	38.4	24.5

# DLO-M

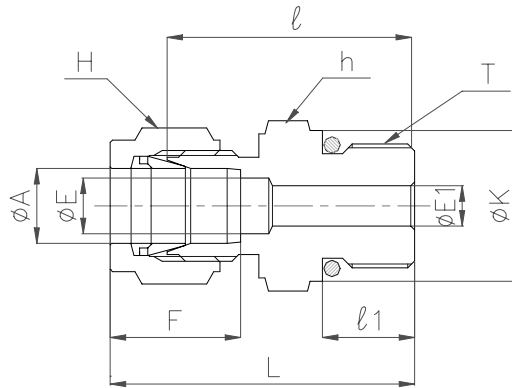
**Positional Male Elbow**  
Connects metric tube to female ISO parallel thread



Part No	A	T	E	E <sub>1</sub>	H <sub>1</sub>	h <sub>1</sub>	h		L	l	L <sub>1</sub>	l <sub>1</sub>	F	O-ring JIS B 2401 (フッ素ゴム)
	mm	G	mm	mm	HEX	HEX	In	Flat	mm	mm	mm	mm	mm	
DLO 6M-G2	6	1/8	4.8	4.0	14	14	5/8	15.9	29.0	21.5	26.5	8.0	15.4	4D-P 8
DLO 6M-G4	6	1/4	4.8	6.4	14	19	5/8	15.9	29.0	21.5	32.5	9.0	15.4	4D-P11
DLO 8M-G4	8	1/4	6.4	6.4	17	19	5/8	15.9	30.0	22.5	32.5	9.0	16.3	4D-P11
DLO 10M-G4	10	1/4	7.9	6.4	19	19	13/16	20.6	33.8	26.0	35.0	9.0	17.3	4D-P11
DLO 10M-G6	10	3/8	7.9	7.9	19	22	13/16	20.6	33.8	26.0	37.0	11.5	17.3	4D-P14
DLO 12M-G4	12	1/4	9.5	6.4	22	19	13/16	20.6	36.2	26.0	35.0	9.0	22.9	4D-P11
DLO 12M-G6	12	3/8	9.5	7.9	22	22	13/16	20.6	36.2	26.0	37.0	11.5	22.9	4D-P14
DLO 12M-G8	12	1/2	9.5	12.0	22	27	13/16	20.6	38.2	28.0	43.5	15.0	22.9	4D-P18
DLO 16M-G6	16	3/8	12.7	7.9	27	22	1-1/16	27.0	38.2	28.0	40.0	11.5	24.5	4D-P14
DLO 16M-G8	16	1/2	12.7	12.0	27	27	1-1/16	27.0	38.2	28.0	46.5	15.0	24.5	4D-P18
DLO 20M-G12	20	3/4	16.5	15.8	30	36	1-5/16	33.3	42.7	32.5	52.5	15.0	24.5	4D-P24

# MDCU

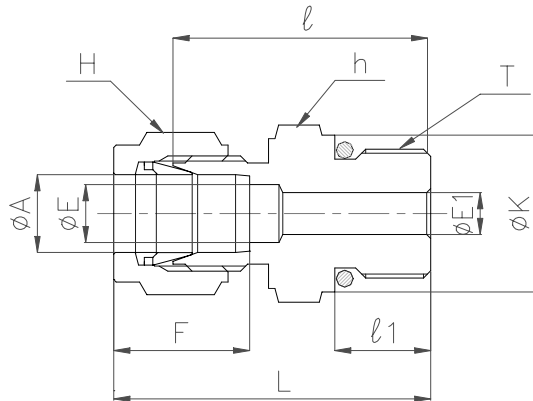
O-ring seal Male Connector for straight thread  
Connects metric tube to female UNF parallel thread



Part No	A	T	E	E <sub>1</sub>	h	H	l	l <sub>1</sub>	L	F	O-ring AS568 (NBR)
	mm	UNF	mm	mm	HEX	HEX	mm	mm	mm	mm	
MDCU 6M-4	6	7/16-20	4.8	4.8	17	14	27.5	9.0	35.0	15.4	-904
MDCU 6M-6	6	9/16-18	4.8	4.8	19	14	29.0	10.0	36.5	15.4	-906
MDCU 6M-8	6	3/4-16	4.8	4.8	24	14	30.8	11.0	38.3	15.4	-908
MDCU 8M-4	8	7/16-20	6.4	5.1	17	17	29.0	9.0	36.5	16.3	-904
MDCU 8M-6	8	9/16-18	6.4	7.1	19	17	30.0	10.0	37.5	16.3	-906
MDCU 10M-6	10	9/16-18	7.9	7.1	19	19	30.5	10.0	38.3	17.3	-906
MDCU 10M-8	10	3/4-16	7.9	7.9	24	19	32.6	11.0	40.4	17.3	-908
MDCU 12M-6	12	9/16-18	9.5	7.1	22	22	30.0	10.0	40.2	22.9	-906
MDCU 12M-8	12	3/4-16	9.5	9.5	24	22	32.6	11.0	42.8	22.9	-908
MDCU 16M-8	16	3/4-16	12.7	10.7	24	27	32.6	11.0	42.8	24.5	-908
MDCU 16M-10	16	7/8-14	12.7	12.7	27	27	36.0	12.5	46.2	24.5	-910
MDCU 20M-8	20	3/4-16	16.5	10.7	30	30	33.6	11.0	43.8	24.5	-908
MDCU 20M-12	20	1-1/16-12	16.5	15.8	32	30	39.7	15.0	49.9	24.5	-912
MDCU 25M-12	25	1-1/16-12	22.5	15.8	36	41	42.2	15.0	54.7	31.6	-912
MDCU 25M-16	25	1-5/16-12	22.5	22.5	41	41	43.0	15.0	55.5	31.6	-916

# MDCU

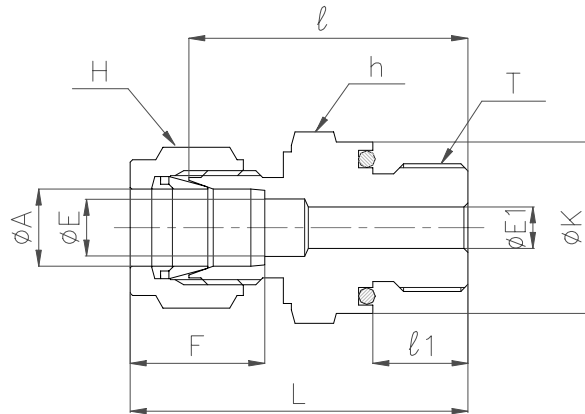
O-ring seal Male Connector for straight thread  
Connects metric tube to female ISO parallel thread



Part No	A	T	E	E <sub>1</sub>	h	H	l	l <sub>1</sub>	L	K	F	O-ring JIS B 2401 (NBR)
	mm	G	mm	mm	HEX	HEX	mm	mm	mm	mm	mm	
MDCU 2M-G2	2	1/8	1.3	4.0	14	12	23.8	8.0	29.4	14	11.1	1B-P8
MDCU 6M-G2	6	1/8	4.0	4.0	14	14	26.2	8.0	33.7	14	15.4	1B-P8
MDCU 6M-G4	6	1/4	4.8	4.8	19	14	30.2	12.0	37.7	19	15.4	1B-P11
MDCU 6M-G6	6	3/8	4.8	7.9	22	14	31.5	12.0	39.0	22	15.4	1B-P14
MDCU 6M-G8	6	1/2	4.8	12.0	27	14	37.5	14.0	45.0	27	15.4	1B-P18
MDCU 8M-G2	8	1/8	6.4	4.0	14	17	27.0	8.0	34.5	14	16.3	1B-P8
MDCU 8M-G4	8	1/4	6.4	6.4	19	17	31.0	12.0	38.5	19	16.3	1B-P11
MDCU 8M-G6	8	3/8	6.4	7.9	22	17	32.3	12.0	39.8	22	16.3	1B-P14
MDCU 8M-G8	8	1/2	6.4	12.0	27	17	38.3	14.0	45.8	27	16.3	1B-P18
MDCU 10M-G4	10	1/4	7.9	6.4	19	19	31.6	12.0	39.4	19	17.3	1B-P11
MDCU 10M-G6	10	3/8	7.9	7.9	22	19	33.0	12.0	40.8	22	17.3	1B-P14
MDCU 10M-G8	10	1/2	7.9	12.0	27	19	38.9	14.0	46.7	27	17.3	1B-P18
MDCU 12M-G4	12	1/4	9.5	6.4	22	22	32.0	12.0	42.2	19	22.9	1B-P11
MDCU 12M-G6	12	3/8	9.5	7.9	22	22	33.0	12.0	43.2	22	22.9	1B-P14
MDCU 12M-G8	12	1/2	9.5	12.0	27	22	38.9	14.0	49.1	27	22.9	1B-P18
MDCU 12M-G12	12	3/4	9.5	15.8	32	22	42.7	16.0	52.9	32	22.9	1B-P24
MDCU 15M-G6	15	3/8	12.0	7.9	24	27	33.8	12.0	43.8	22	24.3	1B-P14
MDCU 15M-G8	15	1/2	12.0	12.0	27	27	38.9	14.0	48.9	27	24.3	1B-P18
MDCU 16M-G6	16	3/8	12.7	7.9	24	27	33.8	12.0	44.0	22	24.5	1B-P14
MDCU 16M-G8	16	1/2	12.7	12.0	27	27	38.9	14.0	49.1	27	24.5	1B-P18
MDCU 16M-G12	16	3/4	12.7	15.8	32	27	42.7	16.0	52.9	32	24.5	1B-P24
MDCU 16M-G16	16	1	12.7	21.0	41	27	45.5	18.0	55.7	41	24.5	1B-P29
MDCU 18M-G8	18	1/2	15.1	12.0	27	30	39.5	14.0	49.7	27	24.5	1B-P29
MDCU 20M-G8	20	1/2	16.5	12.0	30	30	40.4	14.0	50.6	27	24.5	1B-P18
MDCU 20M-G12	20	3/4	16.5	15.8	32	30	42.7	16.0	52.9	32	24.5	1B-P24
MDCU 20M-G16	20	1	16.5	21.0	41	30	45.5	18.0	55.7	41	24.5	1B-P29
MDCU 25M-G12	25	3/4	22.5	15.8	36	41	45.2	16.0	57.7	32	31.6	1B-P24
MDCU 25M-G16	25	1	22.5	21.0	41	41	47.8	18.0	60.3	41	31.6	1B-P29

# MDCO

O-ring seal male Connector/ straight thread  
Connects metric tube to female UNF parallel thread



Part No	A	T	E	E <sub>1</sub>	h	H	l	l <sub>1</sub>	L	K	F	O-ring AS568 (NBR)
	mm	UNF	mm	mm	HEX	HEX	mm	mm	mm	mm	mm	
MDCO 6M-4	6	7/16-20	4.8	4.8	19	14	32.0	10.4	39.5	18.5	15.4	-111
MDCO 8M-5	8	1/2-20	6.4	6.4	22	17	34.3	11.2	41.8	21.8	16.3	-112
MDCO 10M-6	10	9/16-18	7.9	7.9	24	19	35.8	11.9	43.6	23.6	17.3	-113
MDCO 12M-8	12	3/4-16	9.5	9.5	30	22	36.6	11.9	46.8	28.0	22.9	-116

# MDCO

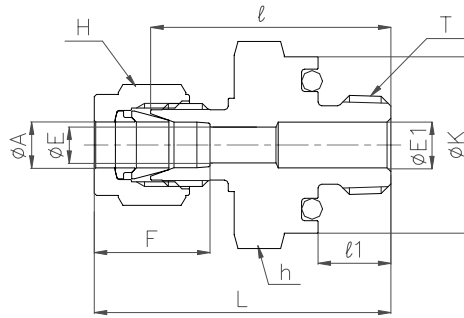
O-ring seal male Connector/ straight thread  
Connects metric tube to female ISO parallel thread

Part No	A	T	E	E <sub>1</sub>	h	H	l	l <sub>1</sub>	L	K	F	O-ring JIS B 2401 (フッ素ゴム)
	mm	G	mm	mm	HEX	HEX	mm	mm	mm	mm	mm	
MDCO 6M-G2	6	1/8	4.8	4.0	22	14	29.0	8.0	36.5	21.5	15.4	4D-P11
MDCO 6M-G4	6	1/4	4.8	4.8	24	14	33.0	12.0	40.5	23.5	15.4	4D-P15
MDCO 6M-G6	6	3/8	4.8	4.8	27	14	34.0	12.0	41.5	26.5	15.4	4D-P18
MDCO 8M-G2	8	1/8	6.4	4.0	22	17	30.0	8.0	37.5	21.5	16.3	4D-P11
MDCO 8M-G4	8	1/4	6.4	6.4	24	17	34.0	12.0	41.5	23.5	16.3	4D-P15
MDCO 8M-G6	8	3/8	6.4	6.4	27	17	35.0	12.0	42.5	26.5	16.3	4D-P18
MDCO 10M-G4	10	1/4	7.9	6.4	24	19	35.0	12.0	42.8	23.5	17.3	4D-P15
MDCO 10M-G6	10	3/8	7.9	7.9	27	19	36.0	12.0	43.8	26.5	17.3	4D-P18
MDCO 10M-G8	10	1/2	7.9	12.0	32	19	41.0	14.0	48.8	31.5	17.3	4D-P22
MDCO 12M-G4	12	1/4	9.5	6.4	24	22	35.0	12.0	45.2	23.5	22.9	4D-P15
MDCO 12M-G6	12	3/8	9.5	7.9	27	22	36.0	12.0	46.2	26.5	22.9	4D-P18
MDCO 12M-G8	12	1/2	9.5	9.5	32	22	41.0	14.0	46.2	31.5	22.9	4D-P22
MDCO 15M-G6	15	3/8	12.0	7.9	27	27	36.0	12.0	46.0	26.5	24.3	4D-P18
MDCO 15M-G8	15	1/2	12.0	12.0	32	27	41.0	14.0	51.0	31.5	24.3	4D-P22
MDCO 15M-G12	15	3/4	12.0	12.0	41	27	45.0	18.0	55.0	40.5	24.3	4D-P28
MDCO 16M-G6	16	3/8	12.7	7.9	27	27	36.0	12.0	46.2	26.5	24.5	4D-P18
MDCO 16M-G8	16	1/2	12.7	12.7	32	27	41.0	14.0	51.2	31.5	24.5	4D-P22
MDCO 16M-G12	16	3/4	12.7	12.7	41	27	45.0	18.0	55.2	40.5	24.5	4D-P28
MDCO 20M-G8	20	1/2	16.5	12.0	32	30	42.0	14.0	52.2	31.5	24.5	4D-P22
MDCO 20M-G12	20	3/4	16.5	16.5	41	30	46.0	18.0	56.2	40.5	24.5	4D-P28
MDCO 25M-G16	25	1	22.5	21.0	50	41	52.0	18.0	64.5	49.5	31.6	4D-P35



# MDCM

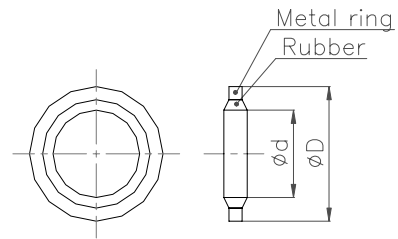
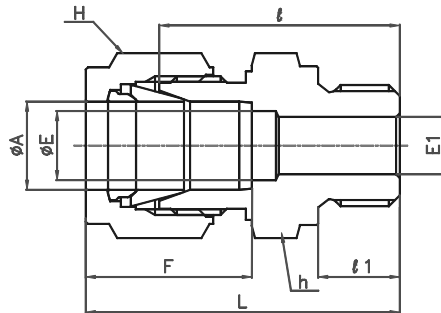
O-ring seal Male Connector for tapered pipe thread  
Connects metric tube to female NPT thread



Part No.	A	T	E	E <sub>1</sub>	K	h	H	l	l <sub>1</sub>	L	F	O-ring AS568 (NBR)
	mm	NPT	mm	mm	mm	HEX	HEX	mm	mm	mm	mm	
MDCM 6M-2	6	1/8	4.8	4.8	18.8	19	14	28.8	7.1	36.3	15.4	-111
MDCM 6M-4	6	1/4	4.8	4.8	23.6	24	14	32.0	9.7	39.5	15.4	-113

# MDCQ

Bonded seal Male Connector for straight thread  
Connects metric tube to female ISO parallel thread



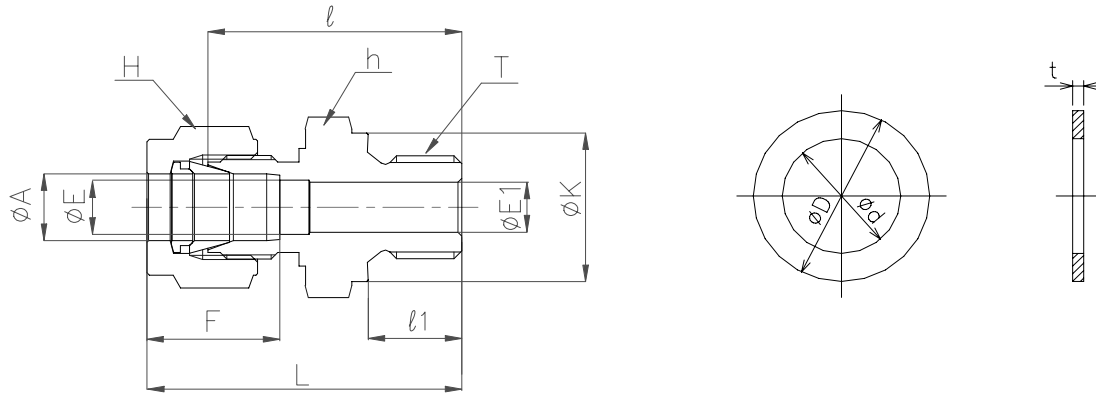
Gasket

Part No.	T	D	d	t
KP-C-01	G1/8	17	9.9	2
KP-C-02	G1/4	20.5	13.3	2
KP-C-03	G3/8	24	16.8	2
KP-C-04	G1/2	29	21.1	2

Part No.	A	T	E	E <sub>1</sub>	h	H	K	l	l <sub>1</sub>	L	F
	mm	G	mm	mm	HEX	HEX	mm	mm	mm	mm	mm
MDCQ 6M-G2	6	1/8	4.8	4.0	14	14	13.8	24.9	7.1	32.4	15.4
MDCQ 6M-G4	6	1/4	4.8	4.8	19	14	18.0	30.2	11.2	37.7	15.4
MDCQ 6M-G6	6	3/8	4.8	4.8	22	14	21.8	31.5	11.2	39.0	15.4
MDCQ 8M-G4	8	1/4	6.4	6.4	19	17	18.0	31.0	11.2	38.5	16.3
MDCQ 8M-G6	8	3/8	6.4	6.4	22	17	21.8	32.3	11.2	39.8	16.3
MDCQ 8M-G8	8	1/2	6.4	6.4	27	17	26.0	38.1	14.2	45.6	16.3
MDCQ 10M-G4	10	1/4	7.9	5.9	19	19	18.0	31.8	11.2	39.6	17.3
MDCQ 10M-G6	10	3/8	7.9	7.9	22	19	21.8	33.0	11.2	40.8	17.3
MDCQ 10M-G8	10	1/2	7.9	7.9	27	19	26.0	38.9	14.2	46.7	17.3
MDCQ 12M-G4	12	1/4	9.5	5.9	22	22	18.0	32.5	11.2	42.7	22.9
MDCQ 12M-G6	12	3/8	9.5	7.9	22	22	21.8	33.0	11.2	43.2	22.9
MDCQ 12M-G8	12	1/2	9.5	9.5	27	22	26.0	38.9	14.2	49.1	22.9

# MDCJ

**Cu Gasket seal Male Connector for straight thread**  
**Connects metric tube to female ISO parallel thread**



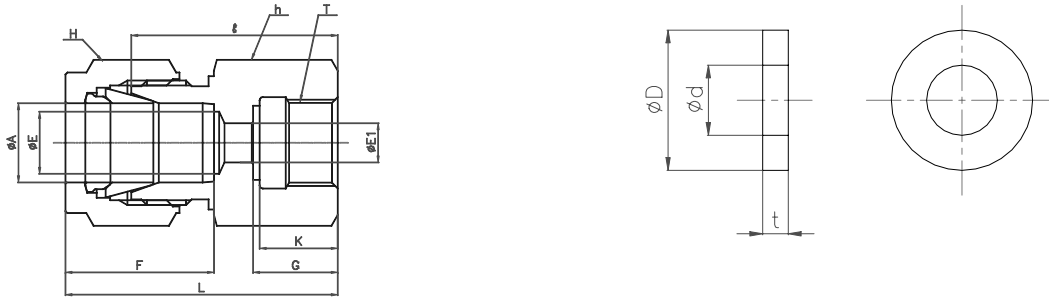
**Gasket** Material : Copper

Part No.	T	D	d	t
KP-A-01	G1/8	18	10	2
KP-A-03	G1/4	22	14	2
KP-A-05	G3/8	26	17	2
KP-A-07	G1/2	32	21.5	2
KP-A-11	G3/4	38	27	2
KP-A-16	G 1	42	34	2

Part No.	A	T	E	E1	h	H	K	l	l1	L	F
	mm	G	mm	mm	HEX	HEX	mm	mm	mm	mm	mm
MDCJ 3M-G4	3	1/4	2.4	5.9	19	12	18.0	28.7	11.2	35.4	13.0
MDCJ 6M-G2	6	1/8	4.8	4.1	14	14	13.8	24.8	7.1	32.3	15.4
MDCJ 6M-G4	6	1/4	4.8	5.9	19	14	18.0	30.2	11.2	37.7	15.4
MDCJ 6M-G6	6	3/8	4.8	7.9	22	14	21.8	31.4	11.2	38.9	15.4
MDCJ 6M-G8	6	1/2	4.8	11.9	27	14	26.0	37.3	14.2	44.8	15.4
MDCJ 8M-G4	8	1/4	6.4	5.9	19	17	18.0	31.0	11.2	38.5	16.3
MDCJ 8M-G6	8	3/8	6.4	7.9	22	17	21.8	32.2	11.2	39.7	16.3
MDCJ 8M-G8	8	1/2	6.4	11.9	27	17	26.0	38.1	14.2	45.6	16.3
MDCJ 10M-G4	10	1/4	7.9	5.9	19	19	18.0	31.8	11.2	39.6	17.3
MDCJ 10M-G6	10	3/8	7.9	7.9	22	19	21.8	32.8	11.2	40.6	17.3
MDCJ 10M-G8	10	1/2	7.9	11.9	27	19	26.0	38.9	14.2	46.7	17.3
MDCJ 12M-G4	12	1/4	9.5	5.9	22	22	18.0	32.5	11.2	42.7	22.9
MDCJ 12M-G6	12	3/8	9.5	7.9	22	22	21.8	33.0	11.2	43.2	22.9
MDCJ 12M-G8	12	1/2	9.5	11.9	27	22	26.0	38.9	14.2	49.1	22.9
MDCJ 15M-G6	15	3/8	12.0	7.9	24	27	21.8	34.0	11.2	44.0	24.3
MDCJ 16M-G6	16	3/8	12.7	7.9	24	27	21.8	34.0	11.2	44.2	24.5
MDCJ 16M-G8	16	1/2	12.7	11.9	27	27	26.0	38.9	14.2	49.1	24.5
MDCJ 18M-G8	18	1/2	15.1	11.9	27	30	26.0	38.8	14.2	49.0	24.5
MDCJ 18M-G12	18	3/4	15.1	15.1	32	30	31.5	43.9	15.7	54.1	24.5
MDCJ 20M-G8	20	1/2	16.5	11.9	30	30	26.0	40.9	14.2	51.1	24.5
MDCJ 20M-G12	20	3/4	16.5	15.1	32	30	31.5	43.9	15.7	54.1	24.5
MDCJ 25M-G16	25	1	22.5	21.0	41	41	39.0	47.8	18.0	60.3	31.6

# MDGA

**Gauge Connector**  
Connects metric tube to female ISO parallel thread



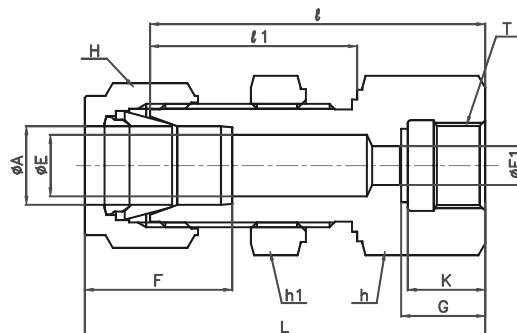
**Gasket** Material : PTFE

Part No.	T	D	d	t
KP-F-01	G1/4	11	5.5	2
KP-F-02	G3/8	14	5.5	2
KP-F-03	G1/2	18	5.5	2

Part No.	A	T	E	E <sub>1</sub>	h	H	l	G	L	F	K
	mm	G	mm	mm	HEX	HEX	mm	mm	mm	mm	mm
MDGA 3M-G4	3	1/4	2.4	6.0	19	12	30.5	13.0	37.2	13.0	12.0
MDGA 6M-G4	6	1/4	4.8	6.0	19	14	32.1	13.0	39.5	15.4	12.0
MDGA 6M-G6	6	3/8	4.8	6.0	22	14	34.1	15.0	41.6	15.4	14.0
MDGA 6M-G8	6	1/2	4.8	6.0	27	14	36.1	17.0	43.6	15.4	16.0
MDGA 8M-G4	8	1/4	6.4	6.4	19	17	30.1	13.0	37.6	16.3	12.0
MDGA 8M-G6	8	3/8	6.4	6.4	22	17	32.1	15.0	39.6	16.3	14.0
MDGA 8M-G8	8	1/2	6.4	6.4	27	17	34.1	17.0	41.6	16.3	16.0
MDGA 10M-G4	10	1/4	7.9	6.0	19	19	30.7	13.0	38.5	17.3	12.0
MDGA 10M-G6	10	3/8	7.9	6.0	22	19	32.7	15.0	40.5	17.3	14.0
MDGA 10M-G8	10	1/2	7.9	6.0	27	19	34.7	17.0	42.5	17.3	16.0
MDGA 12M-G4	12	1/4	9.5	6.0	22	22	31.7	13.0	41.9	22.9	12.0
MDGA 12M-G6	12	3/8	9.5	6.0	22	22	33.7	15.0	43.9	22.9	14.0
MDGA 12M-G8	12	1/2	9.5	6.0	27	22	35.7	17.0	45.9	22.9	16.0

# MDGB

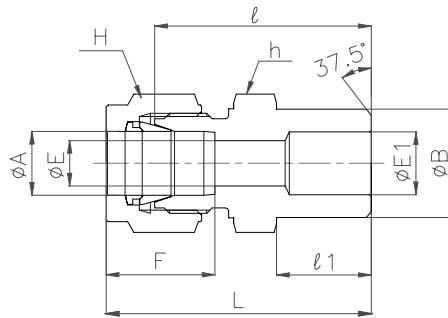
**Bulkhead Gauge Connector**  
Connects metric tube to female ISO parallel thread



Part No.	A	T	E	E <sub>1</sub>	h	h <sub>1</sub>	H	l	l <sub>1</sub>	K	L	L <sub>1</sub>	F	Panel		G
	mm	G	mm	mm	HEX	HEX	HEX	mm	mm	mm	mm	mm	mm	Hol	Thi	mm
MDGB 6M-G6	6	3/8	4.8	6.0	22	17	14	49.8	26.0	15.0	57.3	33.5	15.4	11.5	9.7	14.0
MDGB 12M-G4	12	1/4	9.5	6.0	24	24	22	51.8	32.0	13.0	62.0	42.2	22.9	19.4	13.1	12.0

# MDCB

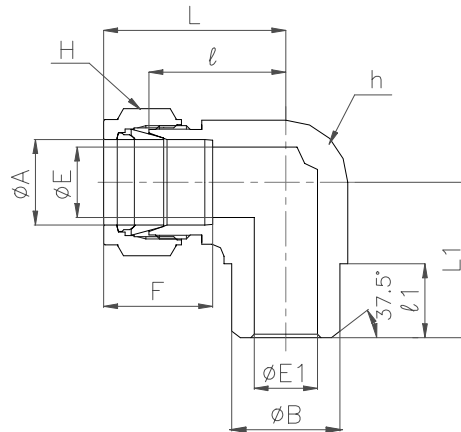
Male pipe weld Connector  
Connects metric tube to pipe



Part No.	A	B (Pipe size)		E	E <sub>1</sub>	h	H	l	l <sub>1</sub>	L	F
	mm	in	mm	mm	mm	HEX	HEX	mm	mm	mm	mm
MDCB 3M-2	3	1/8	10.3	2.4	5.5	12	12	23.9	9.7	30.6	13.0
MDCB 4M-2	4	1/8	10.3	2.7	5.5	12	13	24.6	9.7	31.4	13.9
MDCB 6M-2	6	1/8	10.3	4.8	5.5	14	14	26.5	9.7	34.0	15.4
MDCB 6M-4	6	1/4	13.7	4.8	7.7	14	14	31.0	14.2	38.5	15.4
MDCB 6M-6	6	3/8	17.1	4.8	10.7	19	14	33.0	14.2	40.5	15.4
MDCB 6M-8	6	1/2	21.3	4.8	13.9	22	14	37.4	19.1	44.9	15.4
MDCB 8M-2	8	1/8	10.3	6.4	5.5	17	17	26.7	9.7	34.2	16.3
MDCB 8M-4	8	1/4	13.7	6.4	7.7	17	17	33.3	14.2	40.8	16.3
MDCB 8M-6	8	3/8	17.1	6.4	10.7	19	17	33.3	14.2	40.8	16.3
MDCB 8M-8	8	1/2	21.3	6.4	13.9	22	17	38.1	19.1	45.6	16.3
MDCB 10M-4	10	1/4	13.7	7.9	7.7	19	19	33.3	14.2	41.1	17.3
MDCB 10M-6	10	3/8	17.1	7.9	10.7	19	19	33.3	14.2	41.1	17.3
MDCB 10M-8	10	1/2	21.3	7.9	13.9	22	19	39.0	19.1	46.8	17.3
MDCB 12M-4	12	1/4	13.7	9.5	7.7	22	22	33.3	14.2	43.5	22.9
MDCB 12M-6	12	3/8	17.1	9.5	10.7	22	22	34.1	14.2	44.3	22.9
MDCB 12M-8	12	1/2	21.3	9.5	13.9	22	22	39.0	19.1	49.2	22.9
MDCB 15M-8	15	1/2	21.3	12.0	13.9	24	27	38.7	19.1	48.7	24.3
MDCB 15M-12	15	3/4	26.7	12.0	18.8	27	27	41.4	19.1	51.4	24.3
MDCB 16M-8	16	1/2	21.3	12.7	13.9	24	27	39.7	19.1	49.9	24.5
MDCB 16M-12	16	3/4	26.7	12.7	18.8	27	27	41.4	19.1	51.6	24.5
MDCB 18M-8	18	1/2	21.3	15.1	13.9	27	30	41.0	19.1	51.2	24.5
MDCB 18M-12	18	3/4	26.7	15.1	18.8	27	30	42.7	19.1	52.9	24.5
MDCB 20M-12	20	3/4	26.7	16.5	18.8	30	30	41.4	19.1	51.6	24.5
MDCB 25M-12	25	3/4	26.7	22.5	18.8	36	41	46.2	19.1	58.7	31.6
MDCB 25M-16	25	1	33.4	22.5	24.3	36	41	51.0	23.9	63.5	31.6

# MDLB

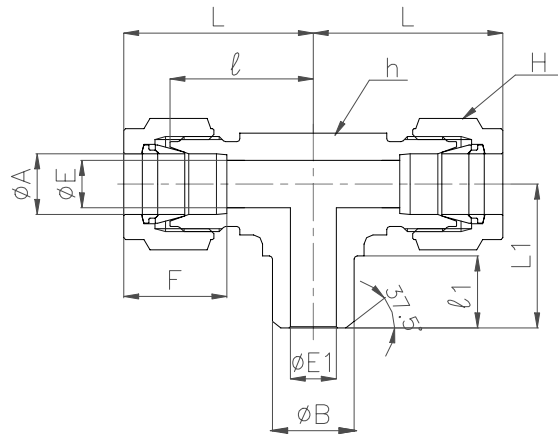
Male pipe weld Elbow  
Connects metric tube to pipe



Part No.	A	B(Pipe size)		E	E <sub>1</sub>	h	H	l	L	l <sub>1</sub>	L <sub>1</sub>	F
	mm	in	mm	mm	mm	Flat	HEX	mm	mm	mm	mm	mm
MDLB 4M-2	4	1/8	10.3	2.7	5.5	12	13	19.0	25.8	9.7	19.0	13.9
MDLB 4M-4	4	1/4	13.7	2.7	7.7	17	13	21.5	28.3	12.0	24.0	13.9
MDLB 4M-6	4	3/8	17.1	2.7	10.7	22	13	24.0	30.8	14.2	28.5	13.9
MDLB 6M-2	6	1/8	10.3	4.8	5.5	12	14	22.4	29.9	9.7	20.6	15.4
MDLB 6M-4	6	1/4	13.7	4.8	7.7	17	14	24.0	31.5	12.0	24.0	15.4
MDLB 6M-6	6	3/8	17.1	4.8	10.7	22	14	25.0	32.5	14.2	28.5	15.4
MDLB 6M-8	6	1/2	21.3	4.8	13.9	24	14	26.2	33.7	19.1	33.5	15.4
MDLB 8M-2	8	1/8	10.3	6.4	5.5	14	17	22.5	30.0	9.7	20.6	16.3
MDLB 8M-4	8	1/4	13.7	6.4	7.7	17	17	24.0	31.5	12.0	24.0	16.3
MDLB 8M-6	8	3/8	17.1	6.4	10.7	22	17	25.0	32.5	14.2	28.5	16.3
MDLB 8M-8	8	1/2	21.3	6.4	13.9	24	17	26.2	33.7	19.1	33.5	16.3
MDLB 10M-2	10	1/8	10.3	7.9	5.5	17	19	24.0	31.8	9.7	24.0	17.3
MDLB 10M-4	10	1/4	13.7	7.9	7.7	17	19	24.0	31.8	12.0	24.0	17.3
MDLB 10M-6	10	3/8	17.1	7.9	10.7	22	19	25.0	32.8	14.2	28.5	17.3
MDLB 10M-8	10	1/2	21.3	7.9	13.9	24	19	26.2	34.0	19.1	33.5	17.3
MDLB 12M-2	12	1/8	10.3	9.5	5.5	22	22	27.0	37.2	9.7	25.5	22.9
MDLB 12M-4	12	1/4	13.7	9.5	7.7	22	22	27.0	37.2	12.0	29.5	22.9
MDLB 12M-6	12	3/8	17.1	9.5	10.7	22	22	27.0	37.2	14.2	29.5	22.9
MDLB 12M-8	12	1/2	21.3	9.5	13.9	24	22	27.0	37.2	19.1	33.5	22.9
MDLB 12M-12	12	3/4	26.7	9.5	18.8	27	22	28.2	38.4	19.1	35.5	22.9
MDLB 15M-8	15	1/2	21.3	12.0	13.9	24	27	28.0	38.0	19.1	35.3	24.3
MDLB 16M-4	16	1/4	13.7	12.7	7.7	24	27	28.0	38.2	12.0	34.0	24.5
MDLB 16M-6	16	3/8	17.1	12.7	10.7	24	27	28.0	38.2	14.2	35.3	24.5
MDLB 16M-8	16	1/2	21.3	12.7	13.9	24	27	28.0	38.2	19.1	35.3	24.5
MDLB 16M-12	16	3/4	26.7	12.7	18.8	27	27	28.2	38.4	19.1	35.5	24.5

# MDTB

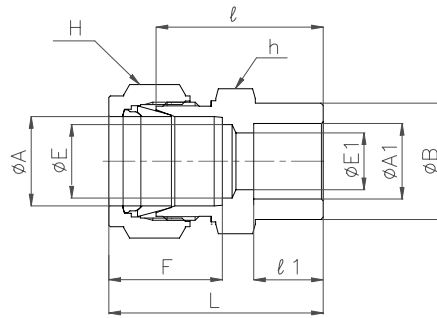
Male pipe weld Tee  
Connects metric tube to pipe



Part No.	A	B(Pipe size)		E	E <sub>1</sub>	h	H	ℓ	L	ℓ <sub>1</sub>	L <sub>1</sub>	F
	mm	in	mm	mm	mm	Flat	HEX	mm	mm	mm	mm	mm
MDTB 4M-2	4	1/8	10.3	2.7	5.5	12	13	19.0	25.8	9.7	19.0	13.9
MDTB 4M-4	4	1/4	13.7	2.7	7.7	17	13	21.5	28.3	12.0	24.0	13.9
MDTB 4M-6	4	3/8	17.1	2.7	10.7	22	13	24.0	30.8	14.2	28.5	13.9
MDTB 6M-2	6	1/8	10.3	4.8	5.5	12	14	22.4	29.9	9.7	20.6	15.4
MDTB 6M-4	6	1/4	13.7	4.8	7.7	17	14	24.0	31.5	12.0	24.0	15.4
MDTB 6M-6	6	3/8	17.1	4.8	10.7	22	14	25.0	32.5	14.2	28.5	15.4
MDTB 6M-8	6	1/2	21.3	4.8	13.9	24	14	26.2	33.7	19.1	33.5	15.4
MDTB 8M-2	8	1/8	10.3	6.4	5.5	14	17	22.5	30.0	9.7	20.6	16.3
MDTB 8M-4	8	1/4	13.7	6.4	7.7	17	17	24.0	31.5	12.0	24.0	16.3
MDTB 8M-6	8	3/8	17.1	6.4	10.7	22	17	25.0	32.5	14.2	28.5	16.3
MDTB 8M-8	8	1/2	21.3	6.4	13.9	24	17	26.2	33.7	19.1	33.5	16.3
MDTB 10M-2	10	1/8	10.3	7.9	5.5	17	19	24.0	31.8	9.7	24.0	17.3
MDTB 10M-4	10	1/4	13.7	7.9	7.7	17	19	24.0	31.8	12.0	24.0	17.3
MDTB 10M-6	10	3/8	17.1	7.9	10.7	22	19	25.0	32.8	14.2	28.5	17.3
MDTB 10M-8	10	1/2	21.3	7.9	13.9	24	19	26.2	34.0	19.1	33.5	17.3
MDTB 12M-2	12	1/8	10.3	9.5	5.5	22	22	27.0	37.2	9.7	25.5	22.9
MDTB 12M-4	12	1/4	13.7	9.5	7.7	22	22	27.0	37.2	12.0	29.5	22.9
MDTB 12M-6	12	3/8	17.1	9.5	10.7	22	22	27.0	37.2	14.2	29.5	22.9
MDTB 12M-8	12	1/2	21.3	9.5	13.9	24	22	27.0	37.2	19.1	33.5	22.9
MDTB 12M-12	12	3/4	26.7	9.5	18.8	27	22	28.2	38.4	19.1	35.5	22.9
MDTB 15M-8	15	1/2	21.3	12.0	13.9	24	27	28.0	38.0	19.1	35.3	24.3
MDTB 16M-4	16	1/4	13.7	12.7	7.7	24	27	28.0	38.2	12.0	34.0	24.5
MDTB 16M-6	16	3/8	17.1	12.7	10.7	24	27	28.0	38.2	14.2	35.3	24.5
MDTB 16M-8	16	1/2	21.3	12.7	13.9	24	27	28.0	38.2	19.1	35.3	24.5
MDTB 16M-12	16	3/4	26.7	12.7	18.8	27	27	28.2	38.4	19.1	35.5	24.5

# MDCW

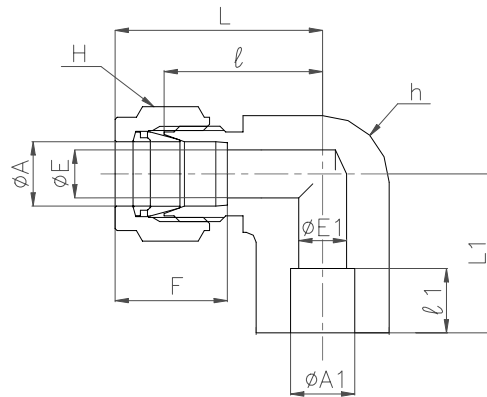
Tube socket weld Union  
Connects metric tubes



Part No.	A	A <sub>1</sub>	E	E <sub>1</sub>	h	H	B	l	l <sub>1</sub>	L	F
	mm	mm	mm	mm	HEX	HEX	mm	mm	mm	mm	mm
MDCW 6M-6M	6	6	4.8	4.8	14	14	12	27.0	8.0	34.5	15.4
MDCW 8M-8M	8	8	6.4	6.4	17	17	15	29.0	9.0	36.5	16.3
MDCW 8M-15M	8	15	6.4	6.4	22	17	22	30.0	12.7	37.5	16.3
MDCW 10M-8M	10	8	7.9	6.4	19	19	15	30.0	9.0	37.8	17.3
MDCW 10M-10M	10	10	7.9	7.9	19	19	17	31.0	10.0	38.8	17.3
MDCW 10M-15M	10	15	7.9	7.9	22	19	22	31.0	12.7	38.8	17.3
MDCW 12M-12M	12	12	9.5	9.5	22	22	20	33.0	12.7	43.2	22.9
MDCW 25M-25M	25	25	22.5	22.5	36	41	34	41.0	14.0	53.5	31.6

# MDLW

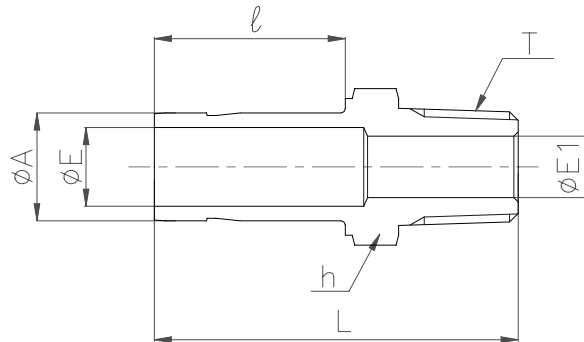
Tube socket weld Elbow  
Connects metric tubes



Part No.	A	A <sub>1</sub>	E	E <sub>1</sub>	h	H	l	l <sub>1</sub>	L	L <sub>1</sub>	F
	mm	mm	mm	mm	Flat	HEX	mm	mm	mm	mm	mm
MDLW 6M-6M	6	6	4.8	4.8	14	14	22.4	8.0	29.9	22.4	15.4
MDLW 10M-10M	10	10	7.9	7.9	17	19	24.0	10.0	31.5	24.0	17.3

# MDHA

Male Adapter/tapered pipe thread  
Connects metric BI-LOK Port to female tapered pipe thread

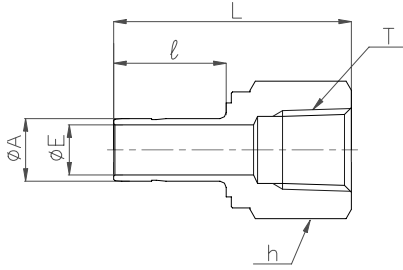


Part No.		A	T	E	E <sub>1</sub>	h	l	L
ANSI NPT	ISO/JIS R	mm	NPT/R	mm	mm	HEX	mm	mm
MDHA 3M-2	MDHA 3M-R2	3	1/8	1.5	4.8	12	14.0	29.2
MDHA 4M-2	MDHA 4M-R2	4	1/8	2.5	4.8	12	15.0	30.2
MDHA 4M-4	MDHA 4M-R4	4	1/4	2.5	7.1	14	15.0	35.0
MDHA 6M-2	MDHA 6M-R2	6	1/8	4.0	4.8	12	16.5	31.7
MDHA 6M-4	MDHA 6M-R4	6	1/4	4.0	7.1	14	16.5	36.5
MDHA 6M-6	MDHA 6M-R6	6	3/8	4.0	10.4	19	16.5	38.3
MDHA 6M-8	MDHA 6M-R8	6	1/2	4.0	12.7	22	16.5	42.8
MDHA 8M-2	MDHA 8M-R2	8	1/8	6.4	4.8	12	17.2	31.8
MDHA 8M-4	MDHA 8M-R4	8	1/4	6.4	7.1	14	17.2	37.1
MDHA 8M-6	MDHA 8M-R6	8	3/8	6.4	10.4	19	17.2	39.0
MDHA 8M-8	MDHA 8M-R8	8	1/2	6.4	12.7	22	17.2	43.5
MDHA 10M-4	MDHA 10M-R4	10	1/4	8.0	7.1	14	18.0	38.0
MDHA 10M-6	MDHA 10M-R6	10	3/8	8.0	10.4	19	18.0	39.8
MDHA 10M-8	MDHA 10M-R8	10	1/2	8.0	12.7	22	18.0	44.3
MDHA 12M-4	MDHA 12M-R4	12	1/4	9.5	7.1	14	23.5	43.5
MDHA 12M-6	MDHA 12M-R6	12	3/8	9.5	10.4	19	23.5	45.3
MDHA 12M-8	MDHA 12M-R8	12	1/2	9.5	12.7	22	23.5	49.8
MDHA 12M-12	MDHA 12M-R12	12	3/4	9.5	18.3	27	23.5	51.3
		12	3/4	9.5	18.3	27	23.5	53.3
MDHA 15M-6	MDHA 15M-R6	15	3/8	12.0	10.4	19	25.5	47.9
MDHA 15M-8	MDHA 15M-R8	15	1/2	12.0	12.7	22	25.5	52.5
MDHA 16M-6	MDHA 16M-R6	16	3/8	13.0	10.4	19	25.5	47.9
MDHA 16M-8	MDHA 16M-R8	16	1/2	13.0	12.7	22	25.5	52.5
MDHA 16M-12	MDHA 16M-R12	16	3/4	13.0	18.3	27	25.5	53.3
		16	3/4	13.0	18.3	27	25.5	55.3
MDHA 18M-8	MDHA 18M-R4	18	1/4	14.5	7.1	22	25.5	47.1
	MDHA 18M-R6	18	3/8	14.5	10.4	22	25.5	48.3
MDHA 18M-12	MDHA 18M-R8	18	1/2	14.5	12.7	22	25.5	52.5
	MDHA 18M-R12	18	3/4	14.5	18.3	27	25.5	53.3
		18	3/4	14.5	18.3	27	25.5	55.3
MDHA 20M-8	MDHA 20M-R8	20	1/2	16.0	12.7	22	25.5	52.5
MDHA 20M-12	MDHA 20M-R12	20	3/4	16.0	18.3	27	25.5	53.3
	MDHA 20M-R16	20	1	16.0	22.5	36	25.5	61.5
MDHA 22M-8	MDHA 22M-R8	22	1/2	18.0	12.7	27	27.0	55.8
MDHA 22M-12	MDHA 22M-R12	22	3/4	18.0	18.3	27	27.0	55.8
	MDHA 22M-R16	22	3/4	18.0	18.3	27	27.0	57.8
MDHA 25M-12	MDHA 25M-R12	25	3/4	21.0	18.3	27	32.5	60.3
	MDHA 25M-R16	25	3/4	21.0	18.3	27	32.5	62.3
MDHA 25M-16	MDHA 25M-R16	25	1	21.0	22.5	36	32.5	69.0



# MDHC

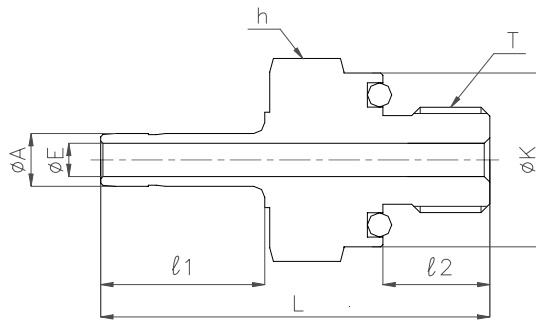
**Female Adapter/tapered pipe thread**  
Connects metric BI-LOK Port to male tapered pipe thread



Part No.		A	T	E	h	ℓ	L
ANSI NPT	ISO/JIS R	mm	NPT/Rc	mm	HEX	mm	mm
MDHC 3M-2	MDHC 3M-R2	3	1/8	1.5	14	14.0	31.0
MDHC 3M-4	MDHC 3M-R4	3	1/4	1.5	19	14.0	34.0
MDHC 4M-2	MDHC 4M-R2	4	1/8	2.5	14	15.0	31.0
MDHC 4M-4	MDHC 4M-R4	4	1/4	2.5	19	15.0	34.0
MDHC 6M-2	MDHC 6M-R2	6	1/8	4.0	14	16.5	33.5
MDHC 6M-4	MDHC 6M-R4	6	1/4	4.0	19	16.5	36.5
MDHC 6M-6	MDHC 6M-R6	6	3/8	4.0	22	16.5	39.5
MDHC 6M-8	MDHC 6M-R8	6	1/2	4.0	27	16.5	45.2
MDHC 8M-2	MDHC 8M-R2	8	1/8	6.4	14	17.2	34.5
MDHC 8M-4	MDHC 8M-R4	8	1/4	6.4	19	17.2	37.1
MDHC 8M-6	MDHC 8M-R6	8	3/8	6.4	22	17.2	40.5
MDHC 10M-2	MDHC 10M-R2	10	1/8	8.0	14	18.0	35.3
MDHC 10M-4	MDHC 10M-R4	10	1/4	8.0	19	18.0	38.0
MDHC 10M-6	MDHC 10M-R6	10	3/8	8.0	22	18.0	41.0
MDHC 10M-8	MDHC 10M-R8	10	1/2	8.0	27	18.0	46.5
MDHC 12M-4	MDHC 12M-R4	12	1/4	9.5	19	23.5	43.5
MDHC 12M-6	MDHC 12M-R6	12	3/8	9.5	22	23.5	46.5
MDHC 12M-8	MDHC 12M-R8	12	1/2	9.5	27	23.5	52.5
MDHC 16M-6	MDHC 16M-R6	16	3/8	13.0	22	25.5	48.5
MDHC 16M-8	MDHC 16M-R8	16	1/2	13.0	27	25.5	53.8
MDHC 16M-12	MDHC 16M-R12	16	3/4	13.0	32	25.5	55.4
MDHC 20M-8	MDHC 20M-R8	20	1/2	16.0	27	25.5	53.8
MDHC 20M-12	MDHC 20M-R12	20	3/4	16.0	32	25.5	55.4
MDHC 20M-16	MDHC 20M-R16	20	1	16.0	41	25.5	62.5
MDHC 25M-12	MDHC 25M-R12	25	3/4	21.0	32	32.5	62.0
MDHC 25M-16	MDHC 25M-R16	25	1	21.0	41	32.5	68.8

# MDHO

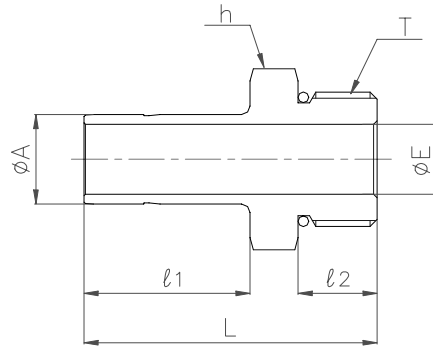
**O-ring seal Male Adapter/ Straight thread**  
Connects metric BI-LOK port to female UNF thread



Part No.	A	T	E	h	ℓ <sub>1</sub>	ℓ <sub>2</sub>	L	K	O-ring AS568 (NBR)
	mm	UNF	mm	HEX	mm	mm	mm	mm	
MDHO 6M-4	6	7/16-20	4.0	19	16.5	10.4	39.1	18.5	-111
MDHO 8M-5	8	1/2-20	6.4	22	17.2	11.2	41.7	21.8	-112
MDHO 10M-6	10	9/16-18	8.0	24	18.0	11.9	43.2	23.6	-113
MDHO 10M-8	10	3/4-16	8.0	30	18.0	11.9	44.0	28.0	-116
MDHO 12M-6	12	9/16-18	9.5	24	23.5	11.9	48.5	23.6	-113
MDHO 12M-8	12	3/4-16	9.5	30	23.5	11.9	49.5	28.0	-116

# MDHB

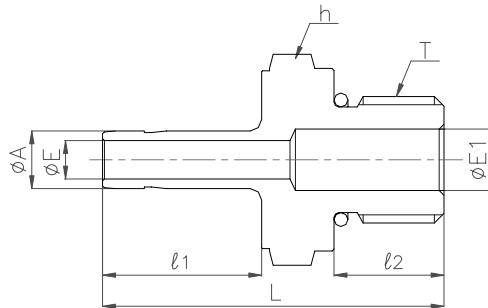
O-ring seal Male Adapter/ Straight thread  
Connects metric BI-LOK port to female UNF parallel thread



Part No.	A	T	E	h	l <sub>1</sub>	l <sub>2</sub>	L	O-ring AS568 (NBR)
	mm	UNF	mm	HEX	mm	mm	mm	
MDHB 6M-4	6	7/16-20	4.0	14.0	16.5	9	33.0	-904
MDHB 8M-4	8	7/16-20	6.4	14.0	17.2	9	34.0	-904
MDHB 10M-6	10	9/16-18	8.0	17.0	18.0	10	34.7	-906
MDHB 10M-8	10	3/4-16	8.0	22.0	18.0	11	36.0	-908
MDHB 12M-6	12	9/16-18	9.5	17.0	23.5	10	40.0	-906
MDHB 12M-8	12	3/4-16	9.5	22.0	23.5	11	41.5	-908

# MDHB

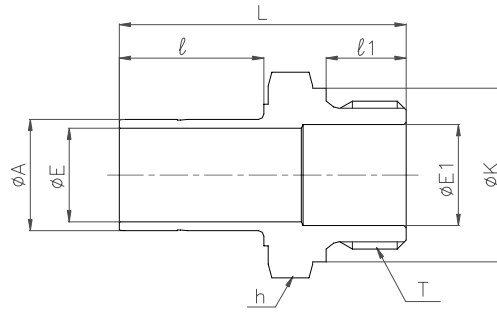
O-ring seal Male Adapter/ Straight thread  
Connects metric BI-LOK port to female ISO parallel thread



Part No.	A	T	E	E <sub>1</sub>	h	l <sub>1</sub>	l <sub>2</sub>	L	O-ring JIS B 2401 (NBR)
	mm	G	mm	mm	HEX	mm	mm	mm	
MDHB 6M-G2	6	1/8	4.0	4.0	14	16.5	8	33.0	1B-P 8
MDHB 6M-G4	6	1/4	4.0	6.4	19	16.5	12	37.0	1B-P11
MDHB 8M-G4	8	1/4	6.4	6.4	19	17.2	12	38.0	1B-P11
MDHB 10M-G4	10	1/4	8.0	6.4	19	18.0	12	39.0	1B-P11
MDHB 10M-G6	10	3/8	8.0	7.9	22	18.0	12	39.0	1B-P14
MDHB 12M-G4	12	1/4	9.5	6.4	19	23.5	12	45.0	1B-P11
MDHB 12M-G6	12	3/8	9.5	7.9	22	23.5	12	45.0	1B-P14
MDHB 12M-G8	12	1/2	9.5	12.0	27	23.5	14	49.0	1B-P18
MDHB 15M-G6	15	3/8	12.0	7.9	22	25.5	12	47.5	1B-P14
MDHB 15M-G8	15	1/2	12.0	12.0	27	25.5	14	51.0	1B-P18
MDHB 16M-G6	16	3/8	13.0	7.9	22	25.5	12	47.5	1B-P14
MDHB 16M-G8	16	1/2	13.0	12.0	27	25.5	14	51.0	1B-P18
MDHB 20M-G12	20	3/4	16.0	15.8	32	25.5	16	56.0	1B-P24
MDHB 25M-G16	25	1	21.0	21.0	41	32.5	18	66.0	1B-P29

# MDHQ

**Bonded seal Male Adapter /straight thread**  
**Connects metric BI-LOK Port to female ISO parallel thread**

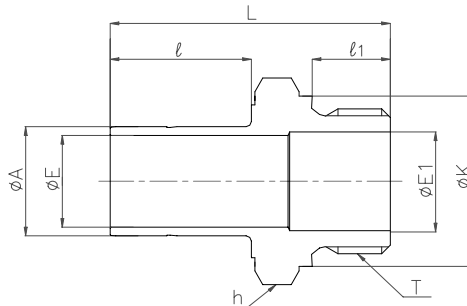


Part No.	A	T	E	E <sub>1</sub>	h	K	l	l <sub>1</sub>	L
	mm	G	mm	mm	HEX	mm	mm	mm	mm
MDHQ 6M-G2	6	1/8	4.0	4.0	14	13.8	16.5	7.1	34.3
MDHQ 6M-G4	6	1/4	4.0	5.9	19	18.0	16.5	11.2	39.1
MDHQ 8M-G4	8	1/4	6.4	5.9	19	18.0	17.2	11.2	40.1
MDHQ 10M-G4	10	1/4	8.0	5.9	19	18.0	18.0	11.2	40.9
MDHQ 10M-G6	10	3/8	8.0	7.9	22	21.8	18.0	11.2	41.7
MDHQ 10M-G8	10	1/2	8.0	11.9	27	26.0	18.0	14.2	44.7
MDHQ 12M-G4	12	1/4	9.5	5.9	19	18.0	23.5	11.2	46.7
MDHQ 12M-G6	12	3/8	9.5	7.9	22	21.8	23.5	11.2	47.2
MDHQ 12M-G8	12	1/2	9.5	11.9	27	26.0	23.5	14.2	50.5

Note: Gasket dimension for bonded seal is shown in **MDCQ** on page 32.

# MDHJ

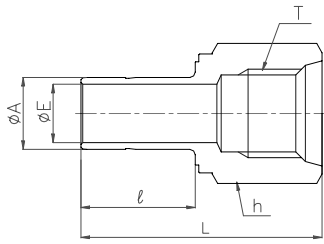
**Cu Gasket seal Male Adapter/ Straight thread**  
**Connects metric BI-LOK port to female ISO parallel thread**



Part No.	A	T	E	E <sub>1</sub>	h	K	l	l <sub>1</sub>	L
	mm	G	mm	mm	HEX	mm	mm	mm	mm
MDHJ 6M-G2	6	1/8	4.0	4.1	14	13.8	16.5	7.1	31.0
MDHJ 6M-G4	6	1/4	4.0	5.9	19	18.0	16.5	11.2	39.1
MDHJ 6M-G6	6	3/8	4.0	7.9	22	21.8	16.5	11.2	40.2
MDHJ 8M-G2	8	1/8	6.4	4.1	14	13.8	17.2	7.1	35.0
MDHJ 8M-G4	8	1/4	6.4	5.9	19	18.0	17.2	11.2	40.1
MDHJ 8M-G6	8	3/8	6.4	7.9	22	21.8	17.2	11.2	40.9
MDHJ 10M-G4	10	1/4	8.0	5.9	19	18.0	18.0	11.2	40.9
MDHJ 10M-G6	10	3/8	8.0	8.0	22	21.8	18.0	11.2	41.7
MDHJ 10M-G8	10	1/2	8.0	11.9	27	26.0	18.0	14.2	44.7
MDHJ 12M-G4	12	1/4	9.5	5.9	22	18.0	23.5	11.2	46.7
MDHJ 12M-G6	12	3/8	9.5	7.9	22	21.8	23.5	11.2	47.2
MDHJ 12M-G8	12	1/2	9.5	11.9	27	26.0	23.5	14.2	50.5
MDHJ 16M-G8	16	1/2	13.0	11.9	27	26.0	25.5	14.2	52.1
MDHJ 25M-G16	25	1	21.0	21.0	41	39.0	32.5	18.0	64.5

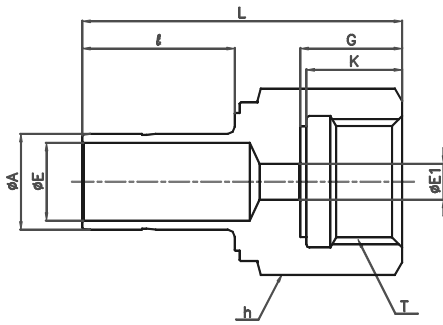
Note: Cu Gasket dimension is shown in **MDCJ** on page 33

	<b>MDHF</b>	O-ring seal Gauge Adapter/ Straight thread Connects metric BI-LOK port to male ISO parallel thread
--	-------------	---



Part No.	A	T	E	h	l	L	O ring JIS B 2401
	mm	G	mm	HEX	mm	mm	
MDHF12M-G8	12	1/2	9.5	27	23.5	52.5	1B-P-18

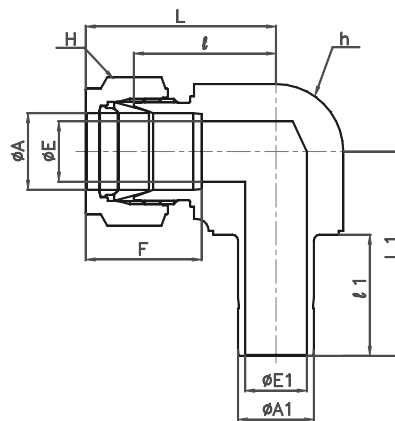
	<b>MDHG</b>	Gauge Adapter/ Straight thread Connects metric BI-LOK port to male ISO parallel thread
--	-------------	---



Part No.	A	T	E	E <sub>1</sub>	h	l	l <sub>1</sub>	L	K
	mm	G	mm	mm	HEX	mm	mm	mm	mm
MDHG 6M-G4	6	1/4	4.0	6.0	19	16.5	12	38.5	13.0
MDHG 6M-G6	6	3/8	4.0	6.0	22	16.5	14	40.5	15.0
MDHG 6M-G8	6	1/2	4.0	6.0	27	16.5	16	42.5	17.0
MDHG 8M-G4	8	1/4	6.4	6.4	19	17.2	12	36.0	13.0
MDHG 8M-G6	8	3/8	6.4	6.4	22	17.2	14	38.0	15.0
MDHG 8M-G8	8	1/2	6.4	6.4	27	17.2	16	40.0	17.0
MDHG 10M-G4	10	1/4	8.0	6.0	19	18.0	12	37.0	13.0
MDHG 10M-G6	10	3/8	8.0	6.0	22	18.0	14	39.0	15.0
MDHG 10M-G8	10	1/2	8.0	6.0	27	18.0	16	41.0	17.0
MDHG 12M-G4	12	1/4	9.5	6.0	22	23.5	12	43.5	13.0
MDHG 12M-G6	12	3/8	9.5	6.0	22	23.5	14	45.5	15.0
MDHG 12M-G8	12	1/2	9.5	6.0	27	23.5	16	47.5	17.0
MDHG 16M-G8	16	1/2	13.0	6.0	27	25.5	16	53.5	17.0

Note: Gasket dimension is shown in **MDGA** on page 34.

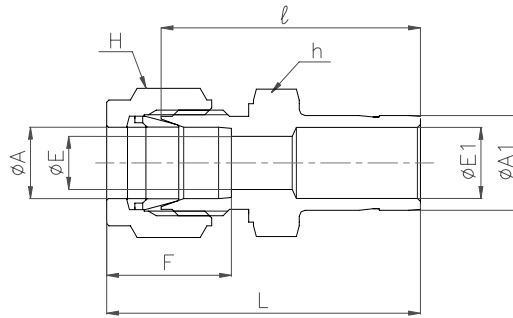
	<b>DLH-M</b>	Male Elbow Adapter Connects metric BI-LOK port to metric tube
--	--------------	--



Part No.	A	A <sub>1</sub>	E	E <sub>1</sub>	h		H	l	L	l <sub>1</sub>	L <sub>1</sub>	F
	mm	mm	mm	mm	in	Flat	HEX	mm	mm	mm	mm	mm
DLH 4M-4M	4	4	2.7	2.5	5/8	15.9	13	21.5	28.3	15.0	26.8	13.9
DLH 6M-6M	6	6	4.8	4.0	5/8	15.9	14	22.2	29.7	16.5	27.8	15.4
DLH 8M-8M	8	8	6.4	6.4	5/8	15.9	17	22.4	29.9	17.2	28.5	16.3
DLH 10M-10M	10	10	7.9	8.0	13/16	20.6	19	25.0	32.8	18.0	34.8	17.3
DLH 12M-12M	12	12	9.5	9.5	13/16	20.6	22	27.0	37.2	23.5	41.3	22.9

# MDRE

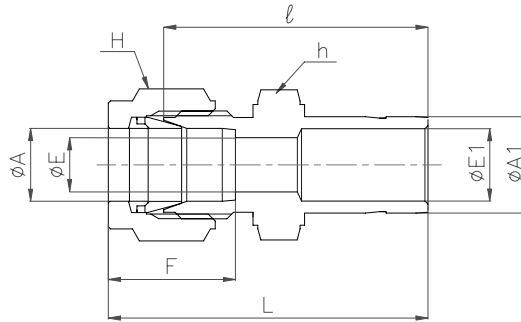
**Reducer**  
Connects metric Tube to Fractional BI-LOK Port



Part No.	A	A1		E	E1	h	H	l	l <sub>1</sub>	L	F
	mm	in	mm	mm	mm	HEX	HEX	mm	mm	mm	mm
MDRE 3M-2	3	1/8	3.18	2.4	2.0	12	12	27.9	14.0	34.6	13.0
MDRE 3M-4	3	1/4	6.35	2.4	4.8	12	12	30.4	16.5	37.1	13.0
MDRE 4M-2	4	1/8	3.18	2.7	2.0	12	13	29.5	14.0	36.3	13.9
MDRE 4M-4	4	1/4	6.35	2.7	4.8	12	13	31.5	16.5	38.3	13.9
MDRE 6M-2	6	1/8	3.18	4.8	2.0	14	14	30.0	14.0	37.5	15.4
MDRE 6M-4	6	1/4	6.35	4.8	4.8	14	14	32.6	16.5	40.1	15.4
MDRE 6M-5	6	5/16	7.94	4.8	6.4	14	14	33.3	17.2	40.8	15.4
MDRE 6M-6	6	3/8	9.53	4.8	7.1	14	14	34.0	18.0	41.5	15.4
MDRE 6M-8	6	1/2	12.7	4.8	9.9	14	14	39.5	23.5	47.0	15.4
MDRE 6M-10	6	5/8	15.88	4.8	12.7	17	14	41.9	25.2	49.4	15.4
MDRE 8M-4	8	1/4	6.35	6.4	4.8	17	17	34.0	16.5	41.5	16.3
MDRE 8M-6	8	3/8	9.53	6.4	7.1	17	17	35.5	18.0	43.0	16.3
MDRE 8M-8	8	1/2	12.7	6.4	9.9	17	17	40.5	23.5	48.0	16.3
MDRE 10M-4	10	1/4	6.35	7.9	4.8	19	19	35.8	16.5	43.6	17.3
MDRE 10M-6	10	3/8	9.53	7.9	7.1	19	19	37.2	18.0	45.0	17.3
MDRE 10M-8	10	1/2	12.7	7.9	9.9	19	19	42.7	23.5	50.5	17.3
MDRE 12M-4	12	1/4	6.35	9.5	4.8	22	22	36.3	16.5	46.5	22.9
MDRE 12M-6	12	3/8	9.53	9.5	7.1	22	22	37.8	18.0	48.0	22.9
MDRE 12M-8	12	1/2	12.7	9.5	9.9	22	22	43.3	23.5	53.5	22.9
MDRE 12M-12	12	3/4	19.05	9.5	15.0	22	22	45.0	25.2	55.2	22.9
MDRE 12M-16	12	1	25.4	9.5	20.1	27	22	53.5	32.5	63.7	22.9
MDRE 16M-16	16	1	25.4	12.7	20.1	27	27	54.2	32.5	64.4	24.5
MDRE 18M-12	18	3/4	19.05	15.1	15.0	27	30	48.4	25.2	58.6	24.5
MDRE 18M-16	18	1	25.4	15.1	20.1	27	30	54.7	32.5	64.9	24.5
MDRE 25M-16	25	1	25.4	22.5	20.1	36	41	58.4	32.5	70.9	31.6

# MDRE

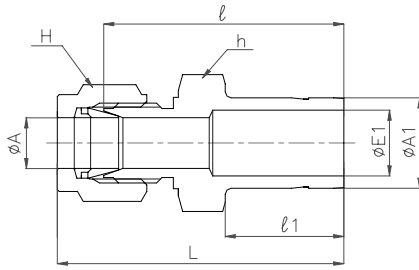
Reducer  
Connects metric Tube to Metric BI-LOK Port



Part No.	A	A <sub>1</sub>	E	E <sub>1</sub>	h	H	$\ell$	$\ell_1$	L	F
	mm	mm	mm	mm	HEX	HEX	mm	mm	mm	mm
MDRE 3M-4M	3	4	2.4	2.4	12	12	29.5	15.0	36.2	13.0
MDRE 3M-6M	3	6	2.4	4.0	12	12	31.0	16.5	37.7	13.0
MDRE 4M-3M	4	3	2.7	1.5	12	13	29.5	14.0	36.3	13.9
MDRE 4M-6M	4	6	2.7	4.0	12	13	32.0	16.5	38.8	13.9
MDRE 4M-8M	4	8	2.7	6.4	12	13	32.7	17.2	39.5	13.9
MDRE 4M-10M	4	10	2.7	8.0	14	13	34.6	18.0	41.4	13.9
MDRE 6M-3M	6	3	4.8	1.5	14	14	30.5	14.0	38.0	15.4
MDRE 6M-4M	6	4	4.8	2.5	14	14	31.8	15.0	39.3	15.4
MDRE 6M-8M	6	8	4.8	6.4	14	14	34.2	17.2	41.7	15.4
MDRE 6M-10M	6	10	4.8	8.0	14	14	35.0	18.0	42.5	15.4
MDRE 6M-12M	6	12	4.8	9.5	14	14	40.9	23.5	48.4	15.4
MDRE 8M-6M	8	6	6.4	4.0	17	17	34.7	16.5	42.2	16.3
MDRE 8M-10M	8	10	6.4	8.0	17	17	36.2	18.0	43.7	16.3
MDRE 8M-12M	8	12	6.4	9.5	17	17	41.7	23.5	49.2	16.3
MDRE 10M-6M	10	6	7.9	4.0	19	19	36.5	16.5	44.3	17.3
MDRE 10M-8M	10	8	7.9	6.4	19	19	36.4	17.2	44.2	17.3
MDRE 10M-12M	10	12	7.9	9.5	19	19	43.5	23.5	51.3	17.3
MDRE 10M-16M	10	16	7.9	13.0	19	19	45.5	25.5	53.3	17.3
MDRE 12M-6M	12	6	9.5	4.0	22	22	36.6	16.5	46.8	22.9
MDRE 12M-8M	12	8	9.5	6.4	22	22	37.3	17.2	47.5	22.9
MDRE 12M-10M	12	10	9.5	8.0	22	22	38.1	18.0	48.3	22.9
MDRE 12M-15M	12	15	9.5	12.0	22	22	45.5	25.5	55.7	22.9
MDRE 12M-16M	12	16	9.5	13.0	22	22	45.5	25.5	55.7	22.9
MDRE 12M-18M	12	18	9.5	14.5	22	22	45.5	25.5	55.7	22.9
MDRE 12M-20M	12	20	9.5	16.0	22	22	49.4	25.5	59.6	22.9
MDRE 12M-25M	12	25	9.5	21.0	22	22	55.5	32.5	65.7	22.9
MDRE 15M-10M	15	10	12.0	8.0	24	27	40.5	18.0	50.5	24.3
MDRE 15M-12M	15	12	12.0	9.5	24	27	46.0	23.5	56.0	24.3
MDRE 15M-18M	15	18	12.0	14.5	24	27	48.0	25.5	58.0	24.3
MDRE 15M-22M	15	22	12.0	18.0	27	27	50.9	27.0	60.9	24.3
MDRE 16M-12M	16	12	12.7	9.5	24	27	46.0	23.5	56.2	24.5
MDRE 16M-20M	16	20	12.7	16.0	24	27	49.4	25.5	59.6	24.5
MDRE 16M-25M	16	25	12.7	21.0	27	27	55.5	32.5	65.7	24.5
MDRE 18M-12M	18	12	15.1	9.5	27	30	46.0	23.5	56.2	24.5
MDRE 18M-20M	18	20	15.1	16.0	27	30	49.5	25.5	59.7	24.5
MDRE 18M-22M	18	22	15.1	18.0	27	30	51.0	27.0	61.2	24.5
MDRE 18M-25M	18	25	15.1	21.0	27	30	55.5	32.5	65.7	24.5
MDRE 20M-10M	20	10	16.5	8.0	30	30	41.0	18.0	51.2	24.5
MDRE 20M-12M	20	12	16.5	9.5	30	30	46.5	23.5	56.7	24.5
MDRE 20M-25M	20	25	16.5	21.0	30	30	55.5	32.5	65.7	24.5
MDRE 22M-15M	22	15	18.3	12.0	32	32	49.5	25.5	59.7	26.1
MDRE 25M-15M	25	15	22.5	12.0	36	41	53.0	25.5	65.6	31.6
MDRE 25M-18M	25	18	22.5	15.0	36	41	53.0	25.5	65.6	31.6
MDRE 25M-22M	25	22	22.5	18.0	36	41	54.5	27.0	67.1	31.6

## MDREZ

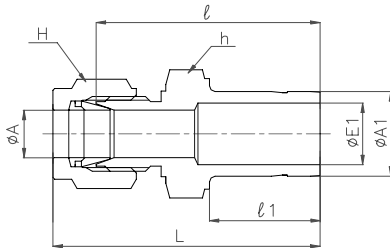
Reducer/ Bored thru  
Connects metric tube to Fractional BI-LOK port



Part No.	A	A <sub>1</sub>		E <sub>1</sub>	h	H	l	l <sub>1</sub>	L
	mm	in	mm	mm	HEX	HEX	mm	mm	mm
MDREZ 3M-4	3	1/4	6.35	4.8	12	12	30.4	16.5	37.1
MDREZ 6M-6	6	3/8	9.53	7.1	14	14	34.0	18.0	41.5
MDREZ 6M-8	6	1/2	12.7	9.9	14	14	39.5	23.5	47.0
MDREZ 8M-8	8	1/2	12.7	9.9	17	17	40.5	23.5	48.0
MDREZ 12M-12	12	3/4	19.05	15.0	22	22	45.0	25.2	55.2
MDREZ 12M-16	12	1	25.4	20.1	27	27	53.5	32.5	63.7
MDREZ 16M-16	16	1	25.4	20.1	27	27	54.2	32.5	64.4
MDREZ 18M-16	18	1	25.4	20.1	27	30	54.7	32.5	64.9

## MDREZ

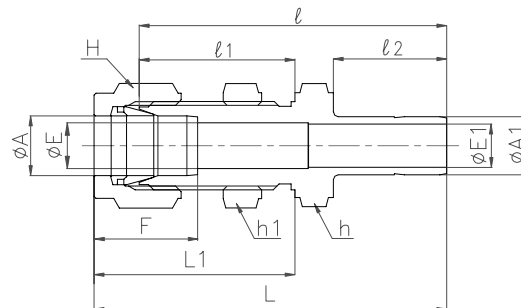
Reducer/ Bored thru  
Connects metric tube to metric BI-LOK port



Part No.	A	A <sub>1</sub>	E <sub>1</sub>	h	H	l	l <sub>1</sub>	L
	mm	mm	mm	HEX	HEX	mm	mm	mm
MDREZ 3M-6M	3	6	4.0	12	12	31.0	16.5	37.7
MDREZ 4M-8M	4	8	6.4	12	13	32.7	17.2	39.5
MDREZ 4M-10M	4	10	8.0	14	13	34.6	18.0	41.4
MDREZ 6M-8M	6	8	6.4	14	14	34.2	17.2	41.7
MDREZ 6M-10M	6	10	8.0	14	14	35.0	18.0	42.5
MDREZ 6M-12M	6	12	9.5	14	14	40.9	23.5	48.4
MDREZ 8M-12M	8	12	9.5	17	17	41.7	23.5	49.2
MDREZ 10M-16M	10	16	13.0	19	19	45.5	25.5	53.3

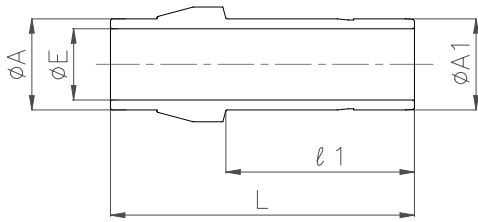
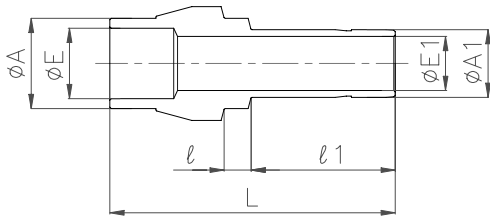
## MDSE

Bulkhead Reducer  
Connects metric Tube to metric BI-LOK Port



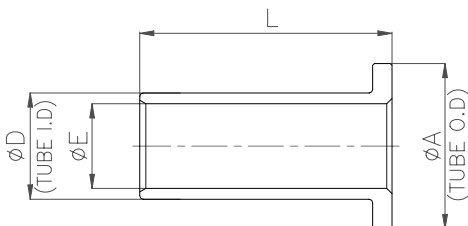
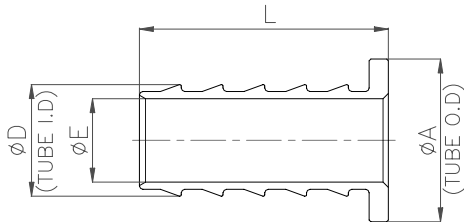
Part No.	A	A <sub>1</sub>	E	E <sub>1</sub>	h	h <sub>1</sub>	H	l	l <sub>1</sub>	l <sub>2</sub>	L	L <sub>1</sub>	F	Panel	
	mm	mm	mm	mm	HEX	HEX	HEX	mm	mm	mm	mm	mm	mm	mm	Hole
MDSE 6M-6M	6	6	4.8	4.0	17	17	14	50.0	26.0	16.5	57.5	33.5	15.4	11.5	9.7
MDSE 8M-8M	8	8	6.4	6.4	19	19	17	53.3	28.5	17.2	60.8	36.0	16.3	13.1	11.4
MDSE 10M-10M	10	10	7.9	8.0	22	22	19	55.5	29.5	18.0	63.3	37.3	17.3	16.3	11.6

	DPC-M	Port Connector Connects metric BI-LOK Port to metric ( or fractional) BI-LOK Port
--	-------	--



Part No.	A	A <sub>1</sub>		E	E <sub>1</sub>	$\ell$	$\ell_1$	L
	mm	in	mm	mm	mm	mm	mm	mm
DPC 3M-3M	3		3	1.5	1.5	-	16.4	24.5
DPC 4M-3M	4		3	2.5	1.5	2.9	16.4	28.0
DPC 4M-4M	4		4	2.5	2.5	-	17.3	26.0
DPC 6M-3M	6		3	4.0	1.5	3.6	16.4	28.6
DPC 6M-4M	6		4	4.0	2.5	3.6	17.3	29.4
DPC 6M-6M	6		6	4.0	4.0	-	19.0	27.5
DPC 8M-6M	8		6	6.4	4.0	3.7	19.0	31.5
DPC 8M-8M	8		8	6.4	6.4	-	20.2	29.0
DPC 10M-6	10	3/8	9.5	8.0	7.6	3.9	20.3	33.0
DPC 10M-6M	10		6	8.0	4.0	3.9	19.0	31.7
DPC 10M-10M	10		10	8.0	8.0	-	21.2	30.0
DPC 12M-6M	12		6	9.5	4.0	3.8	19.0	38.6
DPC 12M-8M	12		8	9.5	6.4	3.8	20.2	39.8
DPC 12M-10M	12		10	9.5	8.0	3.8	21.2	40.8
DPC 12M-12M	12		12	9.5	9.5	-	26.7	42.5
DPC 16M-12M	16		12	13.0	9.5	3.7	26.7	47.8
DPC 16M-16M	16		16	13.0	13.0	-	28.7	46.1

	DTI	Insert (Saw type) for metric tube		DTIP	Insert (Plain type) for metric tube
--	-----	--------------------------------------	--	------	--



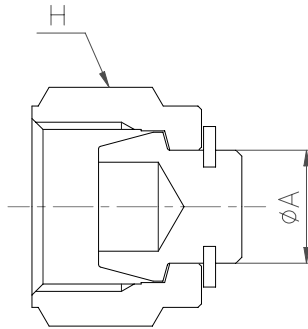
**SAW**

Part No.	A	D	E	L
	mm	mm	mm	mm
DTI 6M-4M	6	4	2.8	11.9
DTI 8M-6M	8	6	4.4	14.3
DTI 10M-8M	10	8	6.4	14.3
DTI 12M-8M	12	8	6.4	19.1
DTI 12M-10M	12	10	8.3	19.1
DTI 16M-14M	16	14	12.2	21.8
DTI 18M-12M	18	12	10.3	21.8
DTI 19M-16M	19	16	14.3	21.8

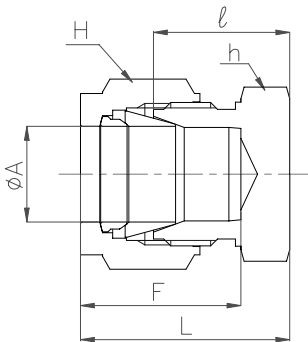
**PLAIN**

Part No.	A	D	E	L
	mm	mm	mm	mm
DTIP 4M-2M	4	2	1.0	14.0
DTIP 6M-4M	6	4	3.0	15.4
DTIP 8M-6M	8	6	5.0	16.2
DTIP 10M-8M	10	8	7.0	17.2
DTIP 12M-9M	12	9	8.0	22.8
DTIP 12M-10M	12	10	9.0	22.8
DTIP 16M-12M	16	12	10.5	24.4
DTIP 16M-13M	16	13	10.5	24.4
DTIP 16M-14M	16	14	11.0	26.0
DTIP 18M-15M	18	15	13.5	24.4
DTIP 19M-15M	19	15	13.5	24.4
DTIP 20M-18M	20	18	16.5	24.4
DTIP 25M-22M	25	22	20.5	24.0



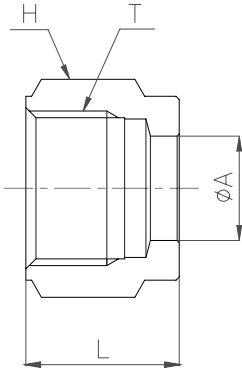
**MDBA****Plug  
for Metric tube**

Part No.	A (O. D)	H	Snap ring
	mm	HEX	
MDBA 3M	3	12	E Type (JIS B280-2)
MDBA 4M	4	13	E Type (JIS B280-3)
MDBA 6M	6	14	E Type (JIS B280-5)
MDBA 8M	8	17	E Type (JIS B280-6)
MDBA 10M	10	19	E Type (JIS B280-7)
MDBA 12M	12	22	E Type (JIS B280-10)
MDBA 15M	15	27	C Type (JIS B2804-15)
MDBA 16M	16	27	E Type (US-62S)
MDBA 18M	18	30	E Type (FUS-S18)
MDBA 20M	20	30	E Type (US-75S)
MDBA 22M	22	32	E Type (US-87S)
MDBA 25M	25	41	E Type (US-100S)

**MDCA****Cap  
Caps end of metric tube**

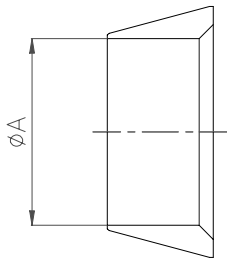
Part No.	A (O. D)	h	H	ℓ	L	F
	mm	HEX	HEX	mm	mm	mm
MDCA 3M	3	12	12	14.3	21.0	13.0
MDCA 4M	4	12	13	15.5	22.3	13.9
MDCA 6M	6	14	14	16.5	24.0	15.4
MDCA 8M	8	17	17	17.8	25.3	16.3
MDCA 10M	10	19	19	19.3	27.1	17.3
MDCA 12M	12	22	22	19.8	30.0	22.9
MDCA 15M	15	24	27	20.6	30.6	24.3
MDCA 16M	16	24	27	20.6	30.8	24.5
MDCA 18M	18	27	30	22.0	32.2	24.5
MDCA 20M	20	30	30	22.3	32.5	24.5
MDCA 22M	22	32	32	22.3	32.5	26.1
MDCA 25M	25	36	41	26.7	39.2	31.6

	MDNA	Nut Metric tube
--	------	--------------------



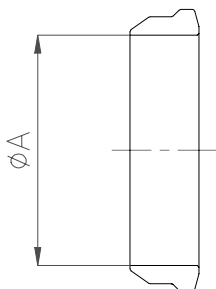
Part No.	A (Tube O. D)	H	L	T (Straight thread)
	mm	HEX	mm	
MDNA 2M	2	12	10.2	1/4-24 UN
MDNA 3M	3	12	11.9	5/16-20UN
MDNA 4M	4	13	11.9	3/8-20UN
MDNA 6M	6	14	12.7	7/16-20UNF
MDNA 8M	8	17	13.5	1/2-20UNF
MDNA 10M	10	19	15.1	5/8-20UN
MDNA 12M	12	22	17.5	3/4-20UNEF
MDNA 15M	15	27	17.4	7/8-20UNEF
MDNA 16M	16	27	17.4	7/8-20UNEF
MDNA 18M	18	30	17.4	1-20UNEF
MDNA 20M	20	30	17.4	1-1/16-20UN
MDNA 22M	22	32	17.4	1-1/8-20UN
MDNA 25M	25	41	20.6	1-5/16-20UN

	DOF	Front Ferrule Metric tube
--	-----	------------------------------

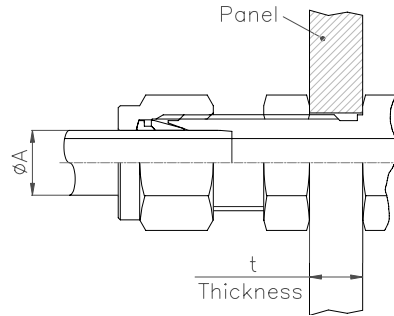
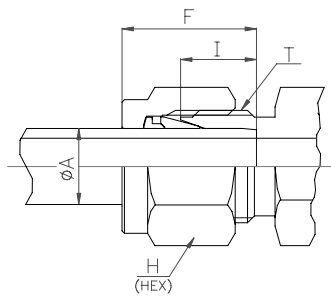


Part No.	A (mm)
DOF 2M	2
DOF 3M	3
DOF 4M	4
DOF 6M	6
DOF 8M	8
DOF 10M	10
DOF 12M	12
DOF 15M	15
DOF 16M	16
DOF 18M	18
DOF 20M	20
DOF 22M	22
DOF 25M	25

	DOB	Back Ferrule Metric tube
--	-----	-----------------------------



Part No.	A (mm)
DOB 2M	2
DOB 3M	3
DOB 4M	4
DOB 6M	6
DOB 8M	8
DOB 10M	10
DOB 12M	12
DOB 15M	15
DOB 16M	16
DOB 18M	18
DOB 20M	20
DOB 22M	22
DOB 25M	25



### Fractional tube series

Nominal Size	Tube end dimensional data						Panel size for Bulkhead		
	A (Tube O.D)		T Unified Straight thread	I mm	H (Hex)		F mm	Panel Hole Drill dia mm	Panel wall thickness(t) mm
	in	mm			in	mm			
1	1/16	1.59	10-32	4.9	5/16	7.94	8.9	5.2	3.0
2	1/8	3.18	5/16-20	6.4	7/16	11.11	13.0	8.3	12.7
3	3/16	4.76	3/8-20	7.2	1/2	12.7	13.8	9.9	12.7
4	1/4	6.35	7/16-20	7.9	9/16	14.29	15.4	11.5	10.2
5	5/16	7.94	1/2-20	8.8	5/8	15.88	16.3	13.1	10.9
6	3/8	9.53	9/16-20	9.5	11/16	17.46	17.0	14.7	11.2
8	1/2	12.7	3/4-20	12.7	7/8	22.23	23.0	19.4	12.7
10	5/8	15.88	7/8-20	14.3	1	25.4	24.6	22.6	12.7
12	3/4	19.05	1-20	14.3	1-1/8	28.58	24.6	25.8	16.8
14	7/8	22.23	1-1/8-20	15.9	1-1/4	31.75	26.1	29.0	19.6
16	1	25.4	1-5/16-20	19.1	1-1/2	38.1	31.6	33.7	19.1

### Metric tube series

Nominal Size	Tube end dimensional data						Panel size for Bulkhead		
	A (Tube O.D)		T Unified Straight thread	I mm	H (Hex)		F mm	Panel Hole Drill dia mm	Panel wall thickness(t) mm
	mm	mm			mm	mm			
2M	2		1/4-24	5.6	1 2		11.1	6.7	3.0
3M	3		5/16-20	6.4	1 2		13.0	8.3	12.7
4M	4		3/8-20	7.2	1 3		13.9	9.9	10.4
6M	6		7/16-20	7.9	1 4		15.4	11.5	9.7
8M	8		1/2-20	8.8	1 7		16.3	13.1	11.4
10M	10		5/8-20	9.5	1 9		17.3	16.3	11.6
12M	12		3/4-20	12.7	2 2		22.9	19.4	13.1
15M	15		7/8-20	14.3	2 7		24.3	22.6	12.0
16M	16		7/8-20	14.3	2 7		24.5	22.6	12.0
18M	18		1-20	14.3	3 0		24.5	25.8	16.7
20M	20		1-1/16-20	14.3	3 0		24.5	27.0	16.7
22M	22		1-1/8-20	15.9	3 2		26.1	29.0	16.7
25M	25		1-5/16-20	19.1	4 1		31.6	33.7	20.0

### Schedule pipe series

Nominal Size	Tube end dimensional data						Panel size for Bulkhead		
	A (Tube O.D)		T Unified Straight thread	I mm	H (Hex)		F mm	Panel Hole Drill dia mm	Panel wall thickness(t) mm
	in	mm			mm	mm			
10.5	1/8B	10.5	3/4-20	12.7	2 2		22.7	19.4	11.1
13.8	1/4B	13.8	13/16-20	12.7	2 4		23.3	21.0	12.1
17.3	3/8B	17.3	1-20	14.3	3 0		24.5	25.8	14.9
21.7	1/2B	21.7	1-1/8-20	15.9	3 2		26.1	29.0	19.5

