

**WEGS**



**WEGS (Shanghai) Fluid Technology Co., Ltd.**

ADD1: No.51 North Zhoujialou Rd.,Xinbang Industra Park, Songjiang  
Dist.,Shanghai 201605, P.R. China

ADD2: Intersection of Xiyuan 7th Road and Xiyuan 10th Road, Phase  
III, Hi-tech Development Zone, Xianning City, Hubei Province

**Super Stainless Steel Piping**

 [www.wegspipe.com](http://www.wegspipe.com)  +86-4000990700  [wegspipe@gmail.com](mailto:wegspipe@gmail.com)

**Hydraulic Strengthen Single and Double Fixed (HealthyWaterSeries)**

源自德国 高端不锈钢管智造专家

# QUALITY AND HEALTHY 品质 AND 健康

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## COMPANY PROFILE

### WEGS (Shanghai) Fluid Technology Co., Ltd., Global Leader in Fluid Technology Solutions

WEGS (Shanghai) Fluid Technology Co., Ltd., founded in 2012, is a committed manufacturer and supplier that specializes in the research, development, production, and the sales of V profile as well as M profile press. thin-walled stainless steel and carbon steel pipes, as well as pipeline accessories. WEGS distinguishes itself through its superior product quality and innovation, offering comprehensive solutions for water and gas supply to a global clientele.

WEGS is Located in the vibrant city of Shanghai, WEGS' headquarters occupies approximately 16,000 square meters. Its manufacturing base, positioned in Xianning, Hubei, extends over about 40,000 square meters. This strategic geographical positioning, combined with a strong production capacity, ensures efficient transportation and prompt, reliable delivery, bolstering the company's swift growth. Presently, WEGS has achieved certifications in management systems including ISO 9001, ISO 14001, ISO 45001, and ISO 10012.





## ■ WEGS BRABD



WEGS was established in Munich, Germany in 2019 by Dr. Maximilian, a renowned international expert in the field of fluid technology, and his interdisciplinary team. The team brings together the best talent from the fields of material engineering, fluid mechanics, built environment and information technology, and is committed to transforming the modern water supply and drainage industry with the dual-core drive of "intelligent innovation" and "sustainable development". The modern pattern of water supply and drainage piping industry. I would be grateful if you could provide me with a copy of your procurement plan and list as soon as possible.

Deutschland

## Urkunde

über die Eintragung der  
Marke Nr. 30 2019 111 354

Az.: 30 2019 111 354.3 / 06

**WEGS**

Inhaber/Inhaberin  
Wegs (Shanghai) Fluid Technology Co., Ltd., Shanghai, CN

Tag der Anmeldung:  
30.08.2019

Tag der Eintragung:  
06.09.2019

Die Präsidentin des Deutschen Patent- und Markenamtes

*Rudolf-Schäffer*

Rudolf-Schäffer

München, 06.09.2019



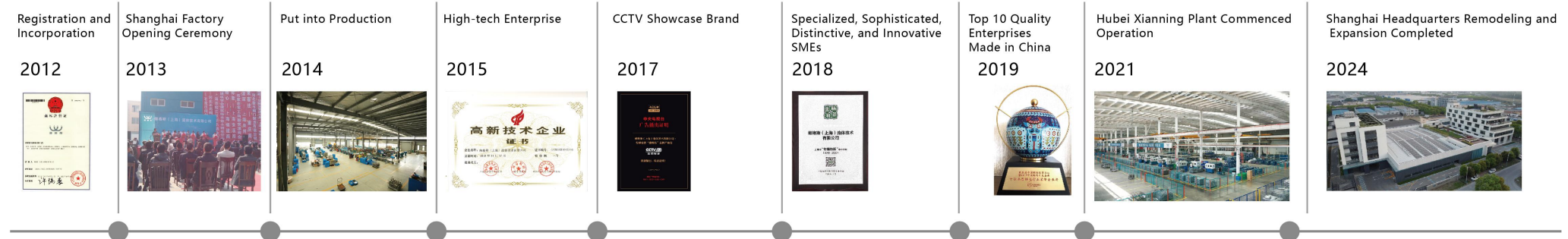
Den aktuellen Rechtsstand und Schutzumfang nach dem Verzeichnis der Waren und Dienstleistungen  
entnehmen Sie bitte dem DPMAregister unter [www.dpma.de](http://www.dpma.de).



## CORPORATE HISTORY

As the global supply chain becomes increasingly integrated and international trade continues to develop, WEGS can provide OEM and ODM services to its partners as well. With strong manufacturing capabilities, WEGS can quickly capture market demands and trends. Through technological innovation, it actively meets the needs of its partners, further promoting domestic and international cooperation and industrial upgrading. WEGS collaborates with global partners in joint research and development and production, achieving resource sharing and technological complementarity, and enhancing the competitiveness of the entire industrial chain.

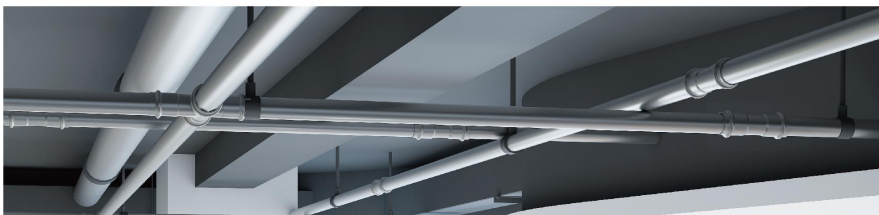
We warmly welcome friends from all over the world to negotiate business and seek opportunities to develop new markets and new products together.



## MARKET



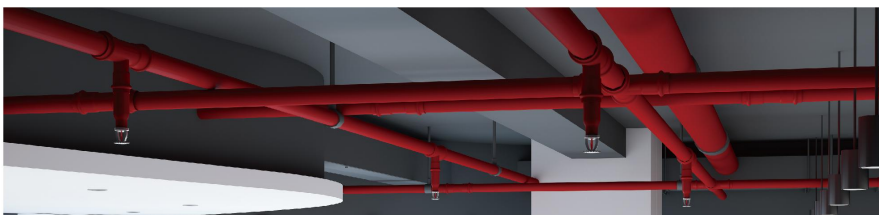
Healthy water supply pipeline series



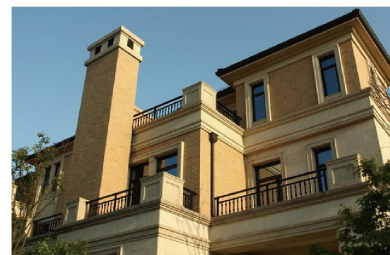
Super gas pipeline series



Compressed air pipe series



## APPLICATION AREA



Residential buildings

Tap water (Cold water) Piping/ Hot Water Piping/  
Drinking Water Piping



Hospitals, Cultural,  
Educational and Health Buildings

Tap water (Cold water) Piping/ Hot Water Piping/  
Drinking Water Piping



Industrial Building

Tap water (Cold water) Piping/ Hot Water Piping/  
Drinking Water Piping

**Commercial Complex**  
Tap water (Cold water) Piping/ Hot Water Piping/  
Drinking Water Piping



**Construction of automobile factories**

Tap water (Cold water) Piping/ Hot Water Piping/  
Drinking Water Piping



**Water Company**

Water ,Mains/ Splitters





## LABORATORY



### China National Accreditation Service for Conformity Assessment LABORATORY ACCREDITATION CERTIFICATE (Registration No. CNAS L17849)

Testing Center of Wegs (Shanghai) Fluid Technology Co., Ltd.

(Legal Entity: Wegs (Shanghai) Fluid Technology Co., Ltd.)

No. 51, Zhoujialou Road, Xingang Industrial Park, Songjiang District,  
Shanghai, China

is accredited in accordance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence to undertake the service described in the schedule attached to this certificate.

The scope of accreditation is detailed in the attached schedule bearing the same registration number as above. The schedule forms an integral part of this certificate.

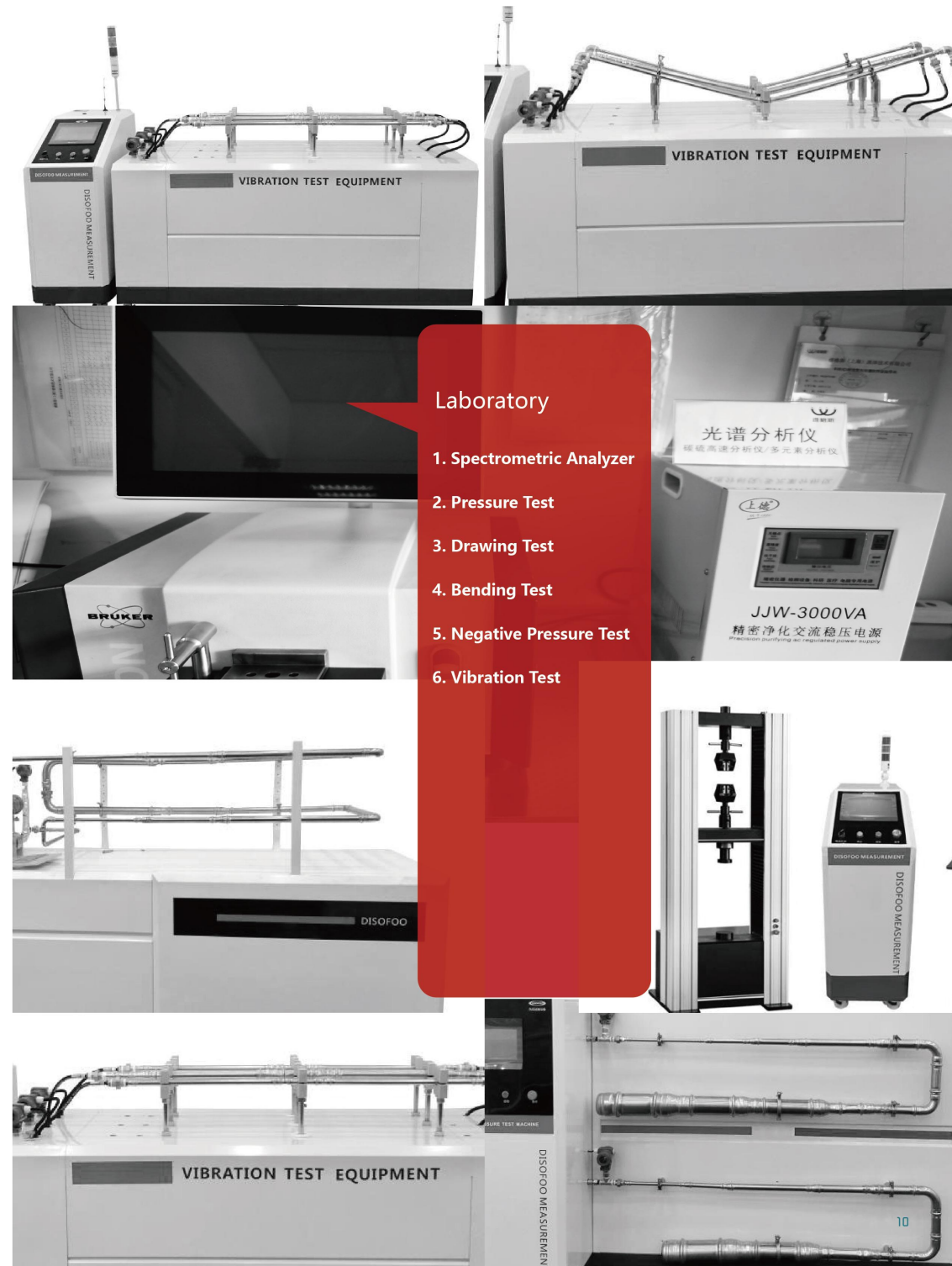
Effective Date: 2023-02-24

Expiry Date: 2028-02-23

Signed on behalf of China National Accreditation Service for Conformity Assessment

张朝华

China National Accreditation Service for Conformity Assessment (CNAS) is authorized by Certification and Accreditation Administration of the People's Republic of China (CMAA) to operate the national accreditation schemes for conformity assessment. CNAS is a signatory of the International Laboratory Accreditation Cooperation Mutual Recognition Arrangement (ILAC MRA) and the Asia Pacific Accreditation Cooperation Mutual Recognition Arrangement (APAC MRA). The validity of the certificate can be checked on CNAS website at <http://www.cnas.org.cn/english/finelaccreditedbody/index.shtml>.



### Laboratory

1. Spectrometric Analyzer
2. Pressure Test
3. Drawing Test
4. Bending Test
5. Negative Pressure Test
6. Vibration Test

To learn more about Wegs Labs, please visit [www.wegspipe.com](http://www.wegspipe.com)





## PRODUCT KEY PROCESS



GAS PROTECTION WELDING



PICKLING PASSIVATION





SOLID SOLUTION PROCESS



INTERNAL HIGH PRESSURE FORMING



AIRTIGHT TEST



FULLY AUTOMATIC HYDRAULIC PRESS



## PRODUCT KEY PROCESS ■







# STAINLESS STEEL



Stainless Steel pipe

| Diameter/mm | Thickness/ mm |
|-------------|---------------|
| 15          | 0.8           |
| 18          | 1.0           |
| 22          | 1.2           |
| 28          | 1.2           |
| 35          | 1.5           |
| 42          | 1.5           |
| 54          | 1.5           |
| 76.1        | 2.0           |
| 88.9        | 2.0           |
| 108         | 2.0           |



Stainless Steel cold water pipe

| Diameter/mm | Thickness/ mm |
|-------------|---------------|
| 15          | 0.8           |
| 18          | 1.0           |
| 22          | 1.2           |
| 28          | 1.2           |
| 35          | 1.5           |
| 42          | 1.5           |
| 54          | 1.5           |



Stainless Steel hot water pipe

| Diameter/mm | Thickness/ mm |
|-------------|---------------|
| 15          | 0.8           |
| 18          | 1.0           |
| 22          | 1.2           |
| 28          | 1.2           |
| 35          | 1.5           |
| 42          | 1.5           |
| 54          | 1.5           |

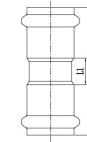


## V PROFILE SERIES

## COUPLING



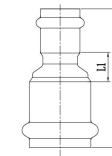
Equal coupling



| Diameter/mm | Thickness/mm | L/mm | L1/mm |
|-------------|--------------|------|-------|
| 15          | 1.5          | 54   | 8     |
| 18          | 1.5          | 54   | 8     |
| 22          | 1.5          | 56   | 8     |
| 28          | 1.5          | 60   | 8     |
| 35          | 1.5          | 69   | 11    |
| 42          | 1.5          | 81   | 9     |
| 54          | 1.5          | 93   | 11    |
| 76.1        | 2.0          | 158  | 38    |
| 88.9        | 2.0          | 165  | 25    |
| 108         | 2.0          | 190  | 40    |



Reducing coupling



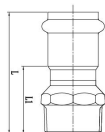
| Diameter/mm | Thickness/mm | L/mm | L1/mm |
|-------------|--------------|------|-------|
| 18×15       | 1.5×1.5      | 63   | 16    |
| 22×18       | 1.5×1.5      | 64   | 17    |
| 28×18       | 1.5×1.5      | 66   | 17    |
| 28×22       | 1.5×1.5      | 67   | 17    |
| 35×18       | 1.5×1.5      | 73   | 21    |
| 35×22       | 1.5×1.5      | 74   | 21    |
| 35×28       | 1.5×1.5      | 74   | 19    |
| 42×18       | 1.5×1.5      | 82   | 23    |
| 42×22       | 1.5×1.5      | 82   | 22    |
| 42×28       | 1.5×1.5      | 83   | 21    |
| 42×35       | 1.5×1.5      | 85   | 20    |
| 54×18       | 1.5×1.5      | 93   | 29    |
| 54×22       | 1.5×1.5      | 93   | 28    |
| 54×28       | 1.5×1.5      | 93   | 26    |
| 54×35       | 1.5×1.5      | 95   | 25    |
| 54×42       | 1.5×1.5      | 100  | 23    |
| 76.1×22     | 2.0×1.5      | 136  | 52    |
| 76.1×28     | 2.0×1.5      | 135  | 49    |
| 76.1×35     | 2.0×1.5      | 137  | 48    |
| 76.1×42     | 2.0×1.5      | 141  | 45    |
| 76.1×54     | 2.0×1.5      | 145  | 44    |
| 88.9×54     | 2.0×1.5      | 150  | 39    |
| 88.9×76.1   | 2.0×2.0      | 176  | 46    |
| 108×28      | 2.0×1.5      | 156  | 55    |
| 108×35      | 2.0×1.5      | 164  | 60    |
| 108×42      | 2.0×1.5      | 178  | 67    |
| 108×54      | 2.0×1.5      | 170  | 54    |
| 108×76.1    | 2.0×2.0      | 196  | 61    |
| 108×88.9    | 2.0×2.0      | 197  | 52    |



## COUPLING



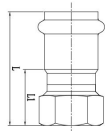
Male Adapter



| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm |
|-------------|---------------|-------|--------|
| 15×1/2"     | 1.5           | 53    | 30     |
| 15×3/4"     | 1.5           | 53    | 30     |
| 18×1/2"     | 1.5           | 53    | 30     |
| 18×3/4"     | 1.5           | 56    | 33     |
| 22×1/2"     | 1.5           | 54    | 30     |
| 22×3/4"     | 1.5           | 57    | 33     |
| 28×3/4"     | 1.5           | 59    | 33     |
| 28×1        | 1.5           | 63    | 37     |
| 35×1        | 1.5           | 67.5  | 38.5   |
| 35×1 1/4"   | 1.5           | 72.5  | 43.5   |
| 42×1 1/4"   | 1.5           | 78.5  | 42.5   |
| 42×1 1/2"   | 1.5           | 78.5  | 42.5   |
| 54×1 1/2"   | 1.5           | 84.5  | 43.5   |
| 54×2        | 1.5           | 89.5  | 48.5   |



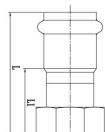
Female Adapter



| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm |
|-------------|---------------|-------|--------|
| 15×1/2"     | 1.5           | 49    | 26     |
| 15×3/4"     | 1.5           | 51    | 28     |
| 18×1/2"     | 1.5           | 49    | 26     |
| 18×3/4"     | 1.5           | 51    | 28     |
| 22×1/2"     | 1.5           | 59    | 35     |
| 22×3/4"     | 1.5           | 52    | 28     |
| 28×1/2"     | 1.5           | 63    | 37     |
| 28×3/4"     | 1.5           | 63    | 37     |
| 28×1        | 1.5           | 59    | 33     |
| 35×1        | 1.5           | 72.5  | 43.5   |
| 35×1 1/4"   | 1.5           | 66.5  | 37.5   |
| 42×1 1/4"   | 1.5           | 82    | 46     |
| 42×1 1/2"   | 1.5           | 74.5  | 38.5   |
| 54×1 1/2"   | 1.5           | 93    | 52     |
| 54×2        | 1.5           | 86.5  | 45.5   |



Moving Female Adapter



| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm |
|-------------|---------------|-------|--------|
| 15×1/2"     | 1.5           | 55    | 32     |
| 15×3/4"     | 1.5           | 56    | 33     |
| 18×1/2"     | 1.5           | 55    | 32     |
| 18×3/4"     | 1.5           | 56    | 33     |
| 22×1/2"     | 1.5           | 68    | 44     |
| 22×3/4"     | 1.5           | 69    | 45     |
| 28×1        | 1.5           | 67    | 41     |
| 35×1 1/4"   | 1.5           | 70.5  | 41.5   |
| 42×1 1/2"   | 1.5           | 78.5  | 42.5   |
| 54×2        | 1.5           | 89.5  | 48.5   |

## COUPLING



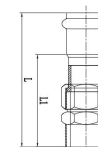
Slip coupling



| Diameter/mm | Thickness/ mm | L/ mm |
|-------------|---------------|-------|
| 15          | 1.5           | 81    |
| 18          | 1.5           | 81    |
| 22          | 1.5           | 85    |
| 28          | 1.5           | 96    |
| 35          | 1.5           | 106   |
| 42          | 1.5           | 120   |
| 54          | 1.5           | 134   |
| 76.1        | 2.0           | 235   |
| 88.9        | 2.0           | 263   |
| 108         | 2.0           | 303   |



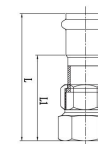
Adaptor Union  
With Male Thread



| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm |
|-------------|---------------|-------|--------|
| 15×1/2"     | 1.5           | 79    | 56     |
| 15×3/4"     | 1.5           | 79.5  | 56.5   |
| 18×1/2"     | 1.5           | 79    | 56     |
| 18×3/4"     | 1.5           | 79.5  | 56.5   |
| 22×1/2"     | 1.5           | 92    | 68     |
| 22×3/4"     | 1.5           | 92.5  | 68.5   |
| 22×1        | 1.5           | 106.5 | 82.5   |
| 28×1        | 1.5           | 104.5 | 78.5   |
| 35×1 1/4"   | 1.5           | 100.5 | 71.5   |
| 42×1 1/2"   | 1.5           | 111.5 | 75.5   |
| 54×2        | 1.5           | 124   | 83     |



Adaptor Union  
With Female Thread

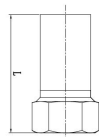


| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm |
|-------------|---------------|-------|--------|
| 15×1/2"     | 1.5           | 73.5  | 50.5   |
| 15×3/4"     | 1.5           | 76    | 53     |
| 18×1/2"     | 1.5           | 73.5  | 50.5   |
| 18×3/4"     | 1.5           | 76    | 53     |
| 22×3/4"     | 1.5           | 89    | 65     |
| 22×1        | 1.5           | 103   | 79     |
| 28×1        | 1.5           | 92    | 66     |
| 35×1 1/4"   | 1.5           | 98.5  | 69.5   |
| 42×1 1/2"   | 1.5           | 108.5 | 72.5   |
| 54×2        | 1.5           | 125   | 84     |

## COUPLING



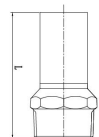
Adaptor with Female Thread and Plain End



| Diameter/mm | Thickness/ mm | L/ mm |
|-------------|---------------|-------|
| 15×1/2"     | 1.5           | 72    |
| 18×1/2"     | 1.5           | 72    |
| 18×3/4"     | 1.5           | 74    |
| 22×1/2"     | 1.5           | 72    |
| 22×3/4"     | 1.5           | 74    |
| 28×1        | 1.5           | 79    |
| 35×11/4"    | 1.5           | 82    |
| 42×11/2"    | 1.5           | 84    |
| 54×2        | 1.5           | 90    |



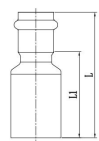
Adaptor with Male Thread and Plain End



| Diameter/mm | Thickness/ mm | L/ mm |
|-------------|---------------|-------|
| 15×1/2"     | 1.5           | 76    |
| 18×1/2"     | 1.5           | 76    |
| 22×3/4"     | 1.5           | 79    |
| 28×1        | 1.5           | 83    |
| 35×11/4"    | 1.5           | 88    |
| 42×11/2"    | 1.5           | 88    |
| 54×2        | 1.5           | 93    |



B Reducer With Plain End

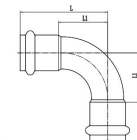


| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm |
|-------------|---------------|-------|--------|
| 18×15       | 1.5×1.5       | 84    | 62     |
| 22×15       | 1.5×1.5       | 84    | 61     |
| 22×18       | 1.5×1.5       | 84    | 62     |
| 28×15       | 1.5×1.5       | 88    | 65     |
| 28×18       | 1.5×1.5       | 88    | 65     |
| 28×22       | 1.5×1.5       | 87    | 63     |
| 35×18       | 1.5×1.5       | 89    | 66     |
| 35×22       | 1.5×1.5       | 89    | 65     |
| 35×28       | 1.5×1.5       | 89    | 63     |
| 42×22       | 1.5×1.5       | 92    | 68     |
| 42×28       | 1.5×1.5       | 92    | 66     |
| 42×35       | 1.5×1.5       | 94    | 65     |
| 52×28       | 1.5×1.5       | 96    | 71     |
| 54×35       | 1.5×1.5       | 99    | 70     |
| 54×42       | 1.5×1.5       | 103   | 67     |

## ELBOW



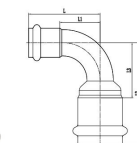
90° Equal Elbow



| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm |
|-------------|---------------|-------|--------|
| 15          | 1.5           | 58    | 35     |
| 18          | 1.5           | 58    | 35     |
| 22          | 1.5           | 58    | 34     |
| 28          | 1.5           | 67    | 41     |
| 35          | 1.5           | 76    | 47     |
| 42          | 1.5           | 100   | 64     |
| 54          | 1.5           | 118   | 77     |
| 76.1        | 2.0           | 165   | 105    |
| 88.9        | 2.0           | 191   | 121    |
| 108         | 2.0           | 250   | 175    |



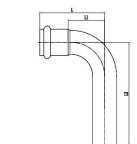
90° Reducing Elbow



| Diameter/mm | Thickness/ mm | L/ mm | L2/ mm | L3/ mm | L1/ mm |
|-------------|---------------|-------|--------|--------|--------|
| 18×15       | 1.5×1.5       | 58    | 67.5   | 43.5   | 35     |
| 22×18       | 1.5×1.5       | 58    | 67.5   | 43.5   | 35     |
| 28×18"      | 1.5×1.5       | 58    | 70     | 44     | 35     |
| 28×22       | 1.5×1.5       | 58    | 65.5   | 39.5   | 34     |



Adaptor Union With Female Thread



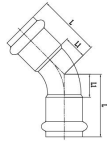
| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm | L2/ mm |
|-------------|---------------|-------|--------|--------|
| 15          | 1.5           | 58    | 35     | 81     |
| 18          | 1.5           | 58    | 35     | 81     |
| 22          | 1.5           | 58    | 34     | 68     |
| 28          | 1.5           | 67    | 41     | 67     |
| 35          | 1.5           | 76    | 47     | 120.5  |
| 42          | 1.5           | 100   | 64     | 149    |
| 54          | 1.5           | 118   | 77     | 194.5  |
| 76.1        | 2.0           | 165   | 105    | 239.5  |
| 88.9        | 2.0           | 191   | 121    | 279    |
| 108         | 2.0           | 250   | 175    | 301    |



## ELBOW



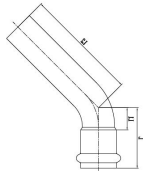
45° Equal Elbow



| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm |
|-------------|---------------|-------|--------|
| 15          | 1.5           | 40    | 17     |
| 18          | 1.5           | 40    | 17     |
| 22          | 1.5           | 43    | 19     |
| 28          | 1.5           | 43    | 23     |
| 35          | 1.5           | 55    | 26     |
| 42          | 1.5           | 68    | 32     |
| 54          | 1.5           | 81    | 40     |
| 76.1        | 2.0           | 110   | 50     |
| 88.9        | 2.0           | 123   | 53     |
| 108         | 2.0           | 162   | 87     |



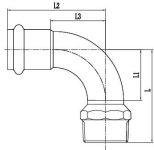
45° B-type equal elbow



| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm | L2/ mm |
|-------------|---------------|-------|--------|--------|
| 15          | 1.5           | 40    | 17     | 46     |
| 18          | 1.5           | 40    | 17     | 46     |
| 22          | 1.5           | 43    | 19     | 47     |
| 28          | 1.5           | 49    | 23     | 53     |
| 35          | 1.5           | 55    | 26     | 84.5   |
| 42          | 1.5           | 68    | 32     | 99     |
| 54          | 1.5           | 81    | 40     | 132.5  |
| 76.1        | 2.0           | 110   | 50     | 192.5  |
| 88.9        | 2.0           | 123   | 53     | 211    |
| 108         | 2.0           | 162   | 87     | 276    |



90° Male Elbow

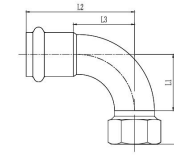


| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm | L2/ mm | L3/ mm |
|-------------|---------------|-------|--------|--------|--------|
| 15×1/2"     | 1.5           | 57    | 31     | 58     | 35     |
| 15×3/4"     | 1.5           | 68    | 31     | 58     | 35     |
| 18×1/2"     | 1.5           | 57    | 31     | 58     | 35     |
| 18×3/4"     | 1.5           | 68    | 31     | 58     | 35     |
| 22×1/2"     | 1.5           | 53    | 27     | 58     | 34     |
| 22×3/4"     | 1.5           | 56    | 27     | 58     | 34     |
| 28×3/4"     | 1.5           | 63    | 34     | 67     | 41     |
| 28×1        | 1.5           | 67    | 34     | 67     | 41     |
| 35×1        | 1.5           | 83.5  | 41.5   | 76     | 47     |
| 35×1 1/4"   | 1.5           | 78.5  | 41.5   | 76     | 47     |
| 42×1 1/4"   | 1.5           | 92    | 55     | 100    | 64     |
| 42×1 1/2"   | 1.5           | 93    | 55     | 100    | 64     |
| 54×1 1/2"   | 1.5           | 122   | 71.5   | 118    | 77     |
| 54×2        | 1.5           | 114.5 | 71.5   | 118    | 77     |

## ELBOW



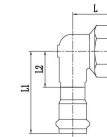
90° female elbow



| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm | L2/ mm | L3/ mm |
|-------------|---------------|-------|--------|--------|--------|
| 15×1/2"     | 1.5           | 55    | 31     | 58     | 35     |
| 15×3/4"     | 1.5           | 62    | 31     | 58     | 35     |
| 18×1/2"     | 1.5           | 55    | 31     | 58     | 35     |
| 18×3/4"     | 1.5           | 62    | 31     | 58     | 35     |
| 22×1/2"     | 1.5           | 60    | 27     | 58     | 34     |
| 22×3/4"     | 1.5           | 51    | 27     | 58     | 34     |
| 28×3/4"     | 1.5           | 67    | 34     | 67     | 41     |
| 28×1        | 1.5           | 63    | 34     | 67     | 41     |
| 35×1        | 1.5           | 79.5  | 41.5   | 76     | 47     |
| 35×1 1/4"   | 1.5           | 73.5  | 41.5   | 76     | 47     |
| 42×1 1/2"   | 1.5           | 89    | 55     | 100    | 64     |
| 54×2        | 1.5           | 111.5 | 71.5   | 118    | 77     |



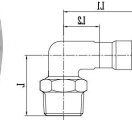
Short elbow with female



| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm | L2/ mm |
|-------------|---------------|-------|--------|--------|
| 15×1/2"     | 1.5           | 24    | 50     | 27     |
| 15×3/4"     | 1.5           | 29    | 56     | 32     |
| 18×1/2"     | 1.5           | 24    | 50     | 27     |
| 18×3/4"     | 1.5           | 29    | 56     | 32     |
| 22×1/2"     | 1.5           | 24    | 50     | 26     |
| 22×3/4"     | 1.5           | 29    | 56     | 32     |
| 28×1/2"     | 1.5           | 24    | 62.5   | 36.5   |
| 28×3/4"     | 1.5           | 29    | 67     | 41     |
| 28×1        | 1.5           | 30    | 58     | 32     |



Short elbow with male

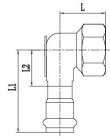


| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm | L2/ mm |
|-------------|---------------|-------|--------|--------|
| 15×1/2"     | 1.5           | 31.5  | 41.5   | 14.5   |
| 15×3/4"     | 1.5           | 36    | 46.5   | 19.5   |
| 18×1/2"     | 1.5           | 31.5  | 41.5   | 14.5   |
| 18×3/4"     | 1.5           | 36    | 46.5   | 19.5   |
| 22×1/2"     | 1.5           | 36.5  | 44     | 16     |
| 22×3/4"     | 1.5           | 39    | 50     | 22     |
| 28×1/2"     | 1.5           | 31.5  | 44.5   | 14.5   |
| 28×3/4"     | 1.5           | 39    | 49.5   | 19.5   |
| 28×1        | 1.5           | 44    | 53.5   | 23.5   |

## ELBOW



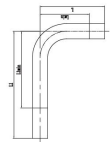
Elbow Adaptor 90°  
with Wall Plate



| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm | L2/ mm |
|-------------|---------------|-------|--------|--------|
| 15×1/2"     | 1.5           | 24    | 50     | 27     |
| 18×1/2"     | 1.5           | 24    | 50     | 27     |
| 22×3/4"     | 1.5           | 29    | 56     | 32     |



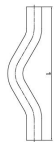
Bend 90°



| Diameter/mm | Thickness/ mm | L/ mm | Lmin/ mm | L1/ mm | L1min/ mm |
|-------------|---------------|-------|----------|--------|-----------|
| 15          | 1.5           | 70    | 58       | 120    | 58        |
| 18          | 1.5           | 70    | 63       | 120    | 63        |
| 22          | 1.5           | 70    | 70       | 120    | 70        |
| 28          | 1.5           | 80    | 80       | 120    | 80        |
| 35          | 1.5           | 120   | 100      | 200    | 100       |
| 42          | 1.5           | 150   | 100      | 200    | 120       |
| 54          | 1.5           | 200   | 145      | 300    | 145       |



Layflat bridge

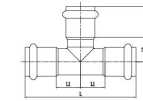


| Diameter/mm | Thickness/ mm | L/ mm |
|-------------|---------------|-------|
| 15          | 1.5           | 206   |
| 18          | 1.5           | 206   |
| 22          | 1.5           | 216   |
| 28          | 1.5           | 258   |

## TEE



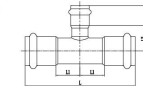
Equal tee



| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm | L3/ mm | L2/ mm |
|-------------|---------------|-------|--------|--------|--------|
| 15          | 1.5           | 73    | 12.5   | 48.5   | 25.5   |
| 18          | 1.5           | 73    | 12.5   | 48.5   | 25.5   |
| 22          | 1.5           | 80    | 16     | 48     | 24     |
| 28          | 1.5           | 90    | 19     | 52     | 26     |
| 35          | 1.5           | 107   | 24.5   | 61     | 32     |
| 42          | 1.5           | 124   | 26     | 69     | 33     |
| 54          | 1.5           | 164   | 41     | 75.5   | 34.5   |
| 76.1        | 2.0           | 235   | 57.5   | 119    | 59     |
| 88.9        | 2.0           | 263   | 61.5   | 129    | 59     |
| 108         | 2.0           | 307   | 78.5   | 151    | 76     |



Reducing Tee



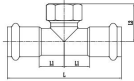
| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm | L3/ mm | L2/ mm |
|-------------|---------------|-------|--------|--------|--------|
| 18×15       | 1.5×1.5       | 73    | 12.5   | 49.5   | 26.5   |
| 22×18       | 1.5×1.5       | 80    | 16     | 49.5   | 26.5   |
| 28×18       | 1.5×1.5       | 90    | 19     | 52.5   | 29.5   |
| 28×22       | 1.5×1.5       | 90    | 19     | 51     | 27     |
| 35×18       | 1.5×1.5       | 107   | 24.5   | 56     | 33     |
| 35×22       | 1.5×1.5       | 107   | 24.5   | 54.5   | 30.5   |
| 35×28       | 1.5×1.5       | 107   | 24.5   | 55.5   | 29.5   |
| 42×18       | 1.5×1.5       | 124   | 26     | 59.5   | 36.5   |
| 42×22       | 1.5×1.5       | 124   | 26     | 58     | 34     |
| 42×28       | 1.5×1.5       | 124   | 26     | 59     | 33     |
| 42×35       | 1.5×1.5       | 124   | 26     | 64.5   | 35.5   |
| 54×18       | 1.5×1.5       | 164   | 41     | 65.5   | 42.5   |
| 54×22       | 1.5×1.5       | 164   | 41     | 64     | 40     |
| 54×28       | 1.5×1.5       | 164   | 41     | 65     | 39     |
| 54×35       | 1.5×1.5       | 164   | 41     | 70.5   | 41.5   |
| 54×42       | 1.5×1.5       | 164   | 41     | 75     | 39     |
| 76.1×22     | 2.0×1.5       | 235   | 57.5   | 75     | 51     |
| 76.1×28     | 2.0×1.5       | 235   | 57.5   | 76     | 50     |
| 76.1×35     | 2.0×1.5       | 235   | 57.5   | 82     | 53     |
| 76.1×42     | 2.0×1.5       | 235   | 57.5   | 86     | 50     |
| 76.1×54     | 2.0×1.5       | 235   | 57.5   | 88     | 47     |
| 88.9×22     | 2.0×1.5       | 263   | 61.5   | 81     | 57     |
| 88.9×28     | 2.0×1.5       | 263   | 61.5   | 82     | 56     |
| 88.9×35     | 2.0×1.5       | 263   | 61.5   | 88     | 59     |
| 88.9×42     | 2.0×1.5       | 263   | 61.5   | 92     | 56     |
| 88.9×54     | 2.0×1.5       | 263   | 61.5   | 94     | 53     |
| 88.9×76.1   | 2.0×2.0       | 263   | 61.5   | 125.5  | 65.5   |
| 108×22      | 2.0×1.5       | 307   | 78.5   | 91.5   | 67.5   |
| 108×28      | 2.0×1.5       | 307   | 78.5   | 92     | 66     |
| 108×35      | 2.0×1.5       | 307   | 78.5   | 98     | 69     |
| 108×42      | 2.0×1.5       | 307   | 78.5   | 102    | 66     |
| 108×54      | 2.0×1.5       | 307   | 78.5   | 102    | 61     |
| 108×76.1    | 2.0×2.0       | 307   | 78.5   | 135    | 75     |
| 108×88.9    | 2.0×2.0       | 307   | 78.5   | 138    | 68     |



## TEE



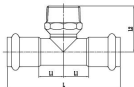
Female Tee



| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm | L2/ mm |
|-------------|---------------|-------|--------|--------|
| 15×1/2"     | 1.5           | 73    | 12.5   | 30     |
| 15×3/4"     | 1.5           | 73    | 12.5   | 30     |
| 18×1/2"     | 1.5           | 73    | 12.5   | 30     |
| 18×3/4"     | 1.5           | 73    | 12.5   | 30     |
| 22×1/2"     | 1.5           | 80    | 16     | 35     |
| 22×3/4"     | 1.5           | 80    | 16     | 37     |
| 28×1/2"     | 1.5           | 90    | 19     | 38     |
| 28×3/4"     | 1.5           | 90    | 19     | 40     |
| 28×1        | 1.5           | 90    | 19     | 45     |
| 35×1/2"     | 1.5           | 107   | 24.5   | 41.5   |
| 35×3/4"     | 1.5           | 107   | 24.5   | 43.5   |
| 35.0×1      | 1.5           | 107   | 24.5   | 48.5   |
| 35×11/4"    | 1.5           | 107   | 24.5   | 51.5   |
| 42×1/2"     | 1.5           | 124   | 26     | 45     |
| 42×3/4"     | 1.5           | 124   | 26     | 47     |
| 42×1        | 1.5           | 124   | 26     | 52     |
| 42×11/4"    | 1.5           | 124   | 26     | 55     |
| 42×11/2"    | 1.5           | 124   | 26     | 57     |
| 54×1/2"     | 1.5           | 164   | 41     | 51     |
| 54×3/4"     | 1.5           | 164   | 41     | 53     |
| 54×1        | 1.5           | 164   | 41     | 58     |
| 54×11/4"    | 1.5           | 164   | 41     | 61     |
| 54×11/2"    | 1.5           | 164   | 41     | 63     |
| 54×2        | 1.5           | 164   | 41     | 69     |



Male Tee

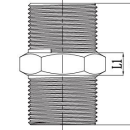


| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm | L2/ mm |
|-------------|---------------|-------|--------|--------|
| 15×1/2"     | 1.5           | 73    | 23     | 35.5   |
| 15×3/4"     | 1.5           | 73    | 23     | 35.5   |
| 18×1/2"     | 1.5           | 73    | 23     | 38     |
| 18×3/4"     | 1.5           | 73    | 23     | 38     |
| 22×1/2"     | 1.5           | 80    | 24     | 39     |
| 22×3/4"     | 1.5           | 80    | 24     | 39     |
| 28×1/2"     | 1.5           | 90    | 26     | 42     |
| 28×3/4"     | 1.5           | 90    | 26     | 42     |
| 28×1        | 1.5           | 90    | 26     | 49     |
| 35×1/2"     | 1.5           | 107   | 29     | 45.5   |
| 35×3/4"     | 1.5           | 107   | 29     | 45.5   |
| 35.0×1      | 1.5           | 107   | 29     | 52.5   |
| 35×11/4"    | 1.5           | 107   | 29     | 57.5   |
| 42×1/2"     | 1.5           | 124   | 36     | 49     |
| 42×3/4"     | 1.5           | 124   | 36     | 49     |
| 42×1        | 1.5           | 124   | 36     | 56     |
| 42×11/4"    | 1.5           | 124   | 36     | 61     |
| 42×11/2"    | 1.5           | 124   | 36     | 61     |
| 54×1/2"     | 1.5           | 164   | 41     | 55     |
| 54×3/4"     | 1.5           | 164   | 41     | 55     |
| 54×1        | 1.5           | 164   | 41     | 62     |
| 54×11/4"    | 1.5           | 164   | 41     | 67     |
| 54×11/2"    | 1.5           | 164   | 41     | 67     |
| 54×2        | 1.5           | 164   | 41     | 72     |

## OTHER FITTINGS



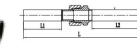
Hexagonal male connector



Caps



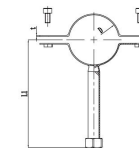
Straight Tube Fittings



Flange adapters



Bracket



| Diameter/mm | Thickness/ mm | L1/ mm | L/ mm |
|-------------|---------------|--------|-------|
| 1/2"×1/2"   | 1.5           | 8.5    | 39.5  |
| 3/4"×3/4"   | 1.5           | 8      | 39    |
| 1×1         | 1.5           | 9      | 44    |
| 11/4"×11/4" | 1.5           | 10     | 50    |
| 11/2"×11/2" | 1.5           | 12     | 54    |
| 2×2         | 1.5           | 12     | 57    |

| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm |
|-------------|---------------|-------|--------|
| 15          | 1.5           | 36    | 13     |
| 18          | 1.5           | 36    | 13     |
| 22          | 1.5           | 35    | 11     |
| 28          | 1.5           | 39    | 13     |
| 35          | 1.5           | 43    | 14     |
| 42          | 1.5           | 50    | 14     |
| 54          | 1.5           | 56    | 15     |
| 76.1        | 2.0           | 93    | 33     |
| 88.9        | 2.0           | 96    | 26     |
| 108         | 2.0           | 112   | 37     |

| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm | L2/ mm |
|-------------|---------------|-------|--------|--------|
| 15          | 1.5           | 172   | 54     | 74     |
| 18          | 1.5           | 172   | 54     | 74     |
| 22          | 1.5           | 193   | 62     | 82     |
| 28          | 1.5           | 217   | 70     | 90     |

| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm |
|-------------|---------------|-------|--------|
| 15          | 1.5           | 34    | 11     |
| 18          | 1.5           | 34    | 11     |
| 22          | 1.5           | 37    | 13     |
| 28          | 1.5           | 42    | 16     |
| 35          | 1.5           | 51    | 22     |
| 42          | 1.5           | 58    | 22     |
| 54          | 1.5           | 73    | 32     |
| 76.1        | 2.0           | 78    | 18     |
| 88.9        | 2.0           | 90    | 20     |
| 108         | 2.0           | 107   | 32     |

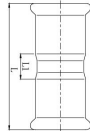
| Diameter/mm | L1/ mm | t   | c  |
|-------------|--------|-----|----|
| 18          | 100    | 0.8 | 3  |
| 22          | 100    | 0.8 | 5  |
| 28          | 100    | 0.8 | 5  |
| 35          | 100    | 1.0 | 5  |
| 42          | 100    | 1.0 | 7  |
| 54          | 100    | 1.0 | 7  |
| 76.1        | 100    | 1.2 | 10 |
| 88.9        | 100    | 1.2 | 10 |
| 108         | 100    | 1.2 | 10 |



### COUPLING



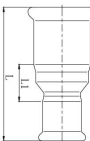
Equal coupling



| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm |
|-------------|---------------|-------|--------|
| 15          | 1.5           | 48    | 8      |
| 18          | 1.5           | 49    | 9      |
| 22          | 1.5           | 52.5  | 10.5   |
| 28          | 1.5           | 58.5  | 10.5   |
| 35          | 1.5           | 64.5  | 10.5   |
| 42          | 1.5           | 76    | 12     |
| 54          | 1.5           | 87    | 15     |
| 76.1        | 2.0           | 144   | 34     |
| 88.9        | 2.0           | 165   | 45     |
| 108         | 2.0           | 197   | 47     |



Reducing coupling

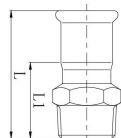


| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm |
|-------------|---------------|-------|--------|
| 18×15       | 1.5×1.5       | 56    | 16     |
| 22×18       | 1.5×1.5       | 58    | 17     |
| 28×18       | 1.5×1.5       | 65    | 21     |
| 28×22       | 1.5×1.5       | 65    | 20     |
| 35×18       | 1.5×1.5       | 69    | 22     |
| 35×22       | 1.5×1.5       | 70    | 22     |
| 35×28       | 1.5×1.5       | 71    | 20     |
| 42×18       | 1.5×1.5       | 78    | 26     |
| 42×22       | 1.5×1.5       | 78    | 25     |
| 42×28       | 1.5×1.5       | 80    | 24     |
| 42×35       | 1.5×1.5       | 80    | 21     |
| 54×18       | 1.5×1.5       | 88    | 32     |
| 54×22       | 1.5×1.5       | 89    | 32     |
| 54×28       | 1.5×1.5       | 89    | 29     |
| 54×35       | 1.5×1.5       | 90    | 27     |
| 54×42       | 1.5×1.5       | 94    | 26     |
| 76.1×22     | 2.0×1.5       | 128   | 52     |
| 76.1×28     | 2.0×1.5       | 128   | 49     |
| 76.1×35     | 2.0×1.5       | 128   | 46     |
| 76.1×42     | 2.0×1.5       | 132   | 45     |
| 76.1×54     | 2.0×1.5       | 135   | 44     |
| 88.9×54     | 2.0×1.5       | 148   | 52     |
| 88.9×76.1   | 2.0×2.0       | 170   | 55     |
| 108×28      | 2.0×1.5       | 159   | 60     |
| 108×35      | 2.0×1.5       | 165   | 63     |
| 108×42      | 2.0×1.5       | 180   | 73     |
| 108×54      | 2.0×1.5       | 171   | 60     |
| 108×76.1    | 2.0×2.0       | 192   | 62     |
| 108×88.9    | 2.0×2.0       | 200   | 65     |

## COUPLING



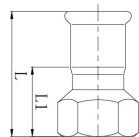
Male Adapter



| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm |
|-------------|---------------|-------|--------|
| 15×1/2"     | 1.5           | 50    | 30     |
| 15×3/4"     | 1.5           | 50    | 30     |
| 18×1/2"     | 1.5           | 51    | 31     |
| 18×3/4"     | 1.5           | 54    | 34     |
| 22×1/2"     | 1.5           | 53    | 32     |
| 22×3/4"     | 1.5           | 56    | 35     |
| 28×3/4"     | 1.5           | 59    | 35     |
| 28×1        | 1.5           | 63    | 39     |
| 35×1        | 1.5           | 66    | 39     |
| 35×1 1/4"   | 1.5           | 71    | 44     |
| 42×1 1/4"   | 1.5           | 76    | 44     |
| 42×1 1/2"   | 1.5           | 76    | 44     |
| 54×1 1/2"   | 1.5           | 82    | 46     |
| 54×2        | 1.5           | 87    | 51     |



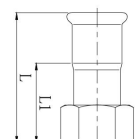
Female Adapter



| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm |
|-------------|---------------|-------|--------|
| 15×1/2"     | 1.5           | 46    | 26     |
| 15×3/4"     | 1.5           | 48    | 28     |
| 18×1/2"     | 1.5           | 47    | 27     |
| 18×3/4"     | 1.5           | 49    | 29     |
| 22×1/2"     | 1.5           | 58    | 37     |
| 22×3/4"     | 1.5           | 51    | 30     |
| 28×1/2"     | 1.5           | 63    | 39     |
| 28×3/4"     | 1.5           | 63    | 39     |
| 28×1        | 1.5           | 59    | 35     |
| 35×1        | 1.5           | 71    | 44     |
| 35×1 1/4"   | 1.5           | 65    | 38     |
| 42×1 1/4"   | 1.5           | 80    | 48     |
| 42×1 1/2"   | 1.5           | 72    | 40     |
| 54×1 1/2"   | 1.5           | 90    | 54     |
| 54×2        | 1.5           | 84    | 48     |



Moving Female Adapter



| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm |
|-------------|---------------|-------|--------|
| 15×1/2"     | 1.5           | 52    | 32     |
| 15×3/4"     | 1.5           | 53    | 33     |
| 18×1/2"     | 1.5           | 53    | 33     |
| 18×3/4"     | 1.5           | 54    | 34     |
| 22×1/2"     | 1.5           | 67    | 46     |
| 22×3/4"     | 1.5           | 68    | 47     |
| 28×1        | 1.5           | 67    | 43     |
| 35×1 1/4"   | 1.5           | 69    | 42     |
| 42×1 1/2"   | 1.5           | 76    | 44     |
| 54×2        | 1.5           | 87    | 51     |

## COUPLING



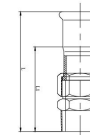
Slip coupling



| Diameter/mm | Thickness/ mm | L/ mm |
|-------------|---------------|-------|
| 15          | 1.5           | 83    |
| 18          | 1.5           | 83    |
| 22          | 1.5           | 85    |
| 28          | 1.5           | 98    |
| 35          | 1.5           | 105   |
| 42          | 1.5           | 120   |
| 54          | 1.5           | 138   |
| 76.1        | 2.0           | 236   |
| 88.9        | 2.0           | 260   |
| 108         | 2.0           | 312   |



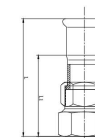
Adaptor Union  
With Male Thread



| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm |
|-------------|---------------|-------|--------|
| 15×1/2"     | 1.5           | 76    | 56     |
| 15×3/4"     | 1.5           | 76.5  | 56.5   |
| 18×1/2"     | 1.5           | 77    | 57     |
| 18×3/4"     | 1.5           | 77.5  | 57.5   |
| 22×1/2"     | 1.5           | 91    | 70     |
| 22×3/4"     | 1.5           | 91.5  | 70.5   |
| 22×1        | 1.5           | 110.5 | 89.5   |
| 28×1        | 1.5           | 104.5 | 80.5   |
| 35×1 1/4"   | 1.5           | 99    | 72     |
| 42×1 1/2"   | 1.5           | 109   | 77     |
| 54×2        | 1.5           | 121.5 | 85.5   |



Adaptor Union  
With Female Thread



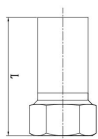
| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm |
|-------------|---------------|-------|--------|
| 15×1/2"     | 1.5           | 71    | 51     |
| 15×3/4"     | 1.5           | 73    | 53     |
| 18×1/2"     | 1.5           | 72    | 52     |
| 18×3/4"     | 1.5           | 74    | 54     |
| 22×1/2"     | 1.5           | 87    | 66     |
| 22×3/4"     | 1.5           | 93    | 72     |
| 28×1        | 1.5           | 92    | 68     |
| 35×1 1/4"   | 1.5           | 97    | 70     |
| 42×1 1/2"   | 1.5           | 106   | 74     |
| 54×2        | 1.5           | 123   | 87     |



## COUPLING



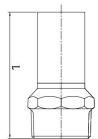
Adaptor with Female Thread and Plain End



| Diameter/mm | Thickness/ mm | L/ mm |
|-------------|---------------|-------|
| 15×1/2"     | 1.5           | 72    |
| 18×1/2"     | 1.5           | 72    |
| 18×3/4"     | 1.5           | 74    |
| 22×1/2"     | 1.5           | 72    |
| 22×3/4"     | 1.5           | 74    |
| 28×1        | 1.5           | 79    |
| 35×11/4"    | 1.5           | 82    |
| 42×11/2"    | 1.5           | 84    |
| 54×2        | 1.5           | 90    |



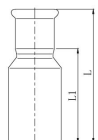
Adaptor with Male Thread and Plain End



| Diameter/mm | Thickness/ mm | L/ mm |
|-------------|---------------|-------|
| 15×1/2"     | 1.5           | 76    |
| 18×1/2"     | 1.5           | 76    |
| 22×3/4"     | 1.5           | 79    |
| 28×1        | 1.5           | 83    |
| 35×11/4"    | 1.5           | 88    |
| 42×11/2"    | 1.5           | 88    |
| 54×2        | 1.5           | 93    |



B Reducer With Plain End

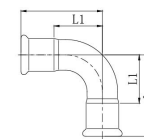


| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm |
|-------------|---------------|-------|--------|
| 18×15       | 1.5×1.5       | 81    | 61     |
| 22×15       | 1.5×1.5       | 81    | 61     |
| 22×18       | 1.5×1.5       | 85    | 65     |
| 28×15       | 1.5×1.5       | 84    | 64     |
| 28×18       | 1.5×1.5       | 84    | 64     |
| 28×22       | 1.5×1.5       | 85    | 64     |
| 35×15       | 1.5×1.5       | 86    | 66     |
| 35×18       | 1.5×1.5       | 87    | 67     |
| 35×22       | 1.5×1.5       | 87    | 66     |
| 35×28       | 1.5×1.5       | 88    | 64     |
| 42×15       | 1.5×1.5       | 90    | 70     |
| 42×18       | 1.5×1.5       | 90    | 70     |
| 42×22       | 1.5×1.5       | 90    | 69     |
| 42×28       | 1.5×1.5       | 91    | 67     |
| 42×35       | 1.5×1.5       | 92    | 65     |
| 54×15       | 1.5×1.5       | 92    | 73     |
| 54×18       | 1.5×1.5       | 94    | 74     |
| 54×22       | 1.5×1.5       | 95    | 74     |
| 54×28       | 1.5×1.5       | 95    | 71     |
| 54×35       | 1.5×1.5       | 96    | 69     |
| 54×42       | 1.5×1.5       | 101   | 69     |
| 76.1×42     | 2.0×1.5       | 130   | 98     |
| 76.1×54     | 2.0×1.5       | 133   | 97     |
| 88.9×54     | 2.0×1.5       | 135   | 99     |
| 88.9×76.1   | 2.0×2.0       | 157   | 102    |
| 108×54      | 2.0×1.5       | 142   | 106    |
| 108×88.9    | 2.0×2.0       | 164   | 109    |

## ELBOW



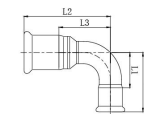
90° Equal Elbow



| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm |
|-------------|---------------|-------|--------|
| 15          | 1.5           | 47    | 27     |
| 18          | 1.5           | 47    | 27     |
| 22          | 1.5           | 53    | 32     |
| 28          | 1.5           | 62    | 38     |
| 35          | 1.5           | 72    | 45     |
| 42          | 1.5           | 82    | 50     |
| 54          | 1.5           | 110   | 74     |
| 76.1        | 2.0           | 174   | 119    |
| 88.9        | 2.0           | 200   | 140    |
| 108         | 2.0           | 243   | 168    |



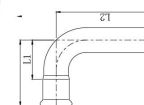
90° Reducing Elbow



| Diameter/mm | Thickness/ mm | L/ mm | L2/ mm | L1/ mm | L3/ mm |
|-------------|---------------|-------|--------|--------|--------|
| 18×15       | 1.5×1.5       | 47    | 52     | 27     | 31     |
| 22×18       | 1.5×1.5       | 47    | 52     | 27     | 31     |
| 28×18       | 1.5×1.5       | 47    | 57     | 27     | 33     |
| 28×22       | 1.5×1.5       | 53    | 65     | 32     | 41     |



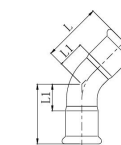
Adaptor Union With Female Thread



| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm | L2/ mm |
|-------------|---------------|-------|--------|--------|
| 15          | 1.5           | 47    | 27     | 50     |
| 18          | 1.5           | 47    | 27     | 50     |
| 22          | 1.5           | 53    | 32     | 57     |
| 28          | 1.5           | 62    | 38     | 74     |
| 35          | 1.5           | 72    | 45     | 81     |
| 42          | 1.5           | 82    | 50     | 107    |
| 54          | 1.5           | 110   | 74     | 126    |
| 76.1        | 2.0           | 174   | 119    | 225    |
| 88.9        | 2.0           | 200   | 140    | 260    |
| 108         | 2.0           | 243   | 168    | 290    |

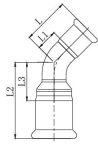


45° Equal Elbow



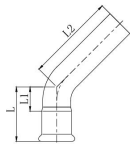
| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm |
|-------------|---------------|-------|--------|
| 15          | 1.5           | 32    | 12     |
| 18          | 1.5           | 32    | 12     |
| 22          | 1.5           | 35    | 14     |
| 28          | 1.5           | 41    | 17     |
| 35          | 1.5           | 46    | 19     |
| 42          | 1.5           | 54    | 22     |
| 54          | 1.5           | 68    | 32     |
| 76.1        | 2.0           | 115   | 60     |
| 88.9        | 2.0           | 130   | 70     |
| 108         | 2.0           | 160   | 85     |

## ELBOW



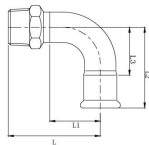
45° Reducing Elbow

| Diameter/mm | Thickness/ mm | L/ mm | L2/ mm | L1/ mm | L3/ mm |
|-------------|---------------|-------|--------|--------|--------|
| 18×15       | 1.5×1.5       | 32    | 40     | 12     | 20     |
| 22×18       | 1.5×1.5       | 32    | 42     | 12     | 20     |
| 28×18       | 1.5×1.5       | 32    | 47     | 12     | 27     |
| 28×22       | 1.5×1.5       | 35    | 47     | 14     | 27     |



45° B-type equal elbow

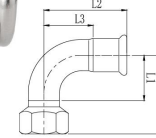
| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm | L2/ mm |
|-------------|---------------|-------|--------|--------|
| 15          | 1.5           | 32    | 12     | 34     |
| 18          | 1.5           | 32    | 12     | 34     |
| 22          | 1.5           | 35    | 14     | 37     |
| 28          | 1.5           | 41    | 17     | 43     |
| 35          | 1.5           | 46    | 19     | 55     |
| 42          | 1.5           | 54    | 22     | 65     |
| 54          | 1.5           | 68    | 32     | 72     |
| 76.1        | 2.0           | 115   | 60     | 120    |
| 88.9        | 2.0           | 130   | 70     | 135    |
| 108         | 2.0           | 160   | 85     | 165    |



90° Male Elbow

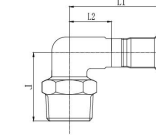
| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm | L2/ mm | L3/ mm |
|-------------|---------------|-------|--------|--------|--------|
| 15×1/2"     | 1.5           | 45    | 18     | 47     | 27     |
| 15×3/4"     | 1.5           | 54    | 18     | 47     | 27     |
| 18×1/2"     | 1.5           | 45    | 18     | 47     | 27     |
| 18×3/4"     | 1.5           | 54    | 18     | 47     | 27     |
| 22×1/2"     | 1.5           | 54    | 27     | 53     | 32     |
| 22×3/4"     | 1.5           | 54    | 27     | 53     | 32     |
| 28×3/4"     | 1.5           | 61    | 32     | 62     | 40     |
| 28×1        | 1.5           | 61    | 32     | 62     | 40     |
| 35×1        | 1.5           | 71    | 48     | 72     | 47     |
| 35×11/4"    | 1.5           | 75    | 48     | 72     | 47     |
| 42×11/4"    | 1.5           | 92    | 54     | 82     | 49     |
| 42×11/2"    | 1.5           | 96    | 54     | 82     | 49     |
| 54×11/2"    | 1.5           | 118   | 69     | 110    | 72     |
| 54×2        | 1.5           | 112   | 69     | 110    | 72     |

## ELBOW



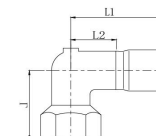
90° female elbow

| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm | L2/ mm | L3/ mm |
|-------------|---------------|-------|--------|--------|--------|
| 15×1/2"     | 1.5           | 42    | 18     | 47     | 27     |
| 15×3/4"     | 1.5           | 46    | 18     | 47     | 27     |
| 18×1/2"     | 1.5           | 42    | 18     | 47     | 27     |
| 18×3/4"     | 1.5           | 46    | 18     | 47     | 27     |
| 22×1/2"     | 1.5           | 51    | 27     | 53     | 32     |
| 22×3/4"     | 1.5           | 50    | 27     | 53     | 32     |
| 28×3/4"     | 1.5           | 52    | 32     | 62     | 40     |
| 28×1        | 1.5           | 58    | 32     | 62     | 40     |
| 35×1        | 1.5           | 77    | 48     | 72     | 47     |
| 35×11/4"    | 1.5           | 82    | 48     | 72     | 47     |
| 42×11/2"    | 1.5           | 88    | 54     | 82     | 49     |
| 54×2        | 1.5           | 107   | 69     | 110    | 72     |



Short elbow with female

| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm | L2/ mm |
|-------------|---------------|-------|--------|--------|
| 15×1/2"     | 1.5           | 31.5  | 38.5   | 14.5   |
| 15×3/4"     | 1.5           | 36    | 43.5   | 19.5   |
| 18×1/2"     | 1.5           | 31.5  | 38.5   | 14.5   |
| 18×3/4"     | 1.5           | 36    | 43.5   | 19.5   |
| 22×1/2"     | 1.5           | 36.5  | 42     | 16     |
| 22×3/4"     | 1.5           | 39    | 48     | 22     |
| 28×1/2"     | 1.5           | 31.5  | 43.5   | 14.5   |
| 28×3/4"     | 1.5           | 39    | 48.5   | 19.5   |
| 28×1        | 1.5           | 44    | 52.5   | 23.5   |



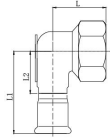
Short elbow with female

| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm | L2/ mm |
|-------------|---------------|-------|--------|--------|
| 15×1/2"     | 1.5           | 24    | 51     | 27     |
| 15×3/4"     | 1.5           | 29    | 56     | 32     |
| 18×1/2"     | 1.5           | 24    | 51.5   | 27     |
| 18×3/4"     | 1.5           | 29    | 56.5   | 32     |
| 22×1/2"     | 1.5           | 24    | 52     | 26     |
| 22×3/4"     | 1.5           | 29    | 58     | 32     |
| 28×1/2"     | 1.5           | 24    | 65.5   | 36.5   |
| 28×3/4"     | 1.5           | 29    | 70     | 41     |
| 28×1        | 1.5           | 30    | 61     | 32     |

## ELBOW



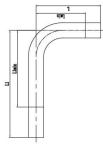
Elbow Adaptor 90°  
with Wall Plate



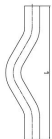
| Diameter/mm | Thickness/mm | L/ mm | L1/ mm | L2/ mm |
|-------------|--------------|-------|--------|--------|
| 15×1/2"     | 1.5          | 24    | 51     | 27     |
| 18×1/2"     | 1.5          | 24    | 51.5   | 27     |
| 22×3/4"     | 1.5          | 29    | 58     | 32     |



Bend 90°



| Diameter/mm | Thickness/ mm | L/ mm | Lmin/ mm | L1/ mm | L1min/ mm |
|-------------|---------------|-------|----------|--------|-----------|
| 15          | 1.5           | 70    | 58       | 120    | 58        |
| 18          | 1.5           | 70    | 63       | 120    | 63        |
| 22          | 1.5           | 70    | 70       | 120    | 70        |
| 28          | 1.5           | 80    | 80       | 120    | 80        |
| 35          | 1.5           | 120   | 100      | 200    | 100       |
| 42          | 1.5           | 150   | 100      | 200    | 120       |
| 54          | 1.5           | 200   | 145      | 300    | 145       |

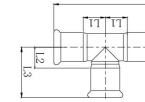


| Diameter/mm | Thickness/ mm | L/ mm |
|-------------|---------------|-------|
| 15          | 1.5           | 206   |
| 18          | 1.5           | 206   |
| 22          | 1.5           | 216   |
| 28          | 1.5           | 258   |

## TEE



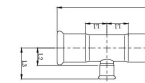
Equal tee



| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm | L3/ mm | L2/ mm |
|-------------|---------------|-------|--------|--------|--------|
| 15          | 1.5           | 70    | 15     | 34     | 14     |
| 18          | 1.5           | 70    | 15     | 36     | 16     |
| 22          | 1.5           | 77    | 17.5   | 39     | 18     |
| 28          | 1.5           | 88    | 20     | 45     | 21     |
| 35          | 1.5           | 102   | 24     | 52     | 25     |
| 42          | 1.5           | 120   | 28     | 61     | 29     |
| 54          | 1.5           | 144   | 36     | 73     | 27     |
| 76.1        | 2.0           | 232   | 61     | 113    | 58     |
| 88.9        | 2.0           | 262   | 71     | 130    | 70     |
| 108         | 2.0           | 312   | 81     | 156    | 81     |



Reducing Tee



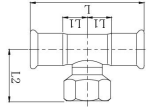
| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm | L3/ mm | L2/ mm |
|-------------|---------------|-------|--------|--------|--------|
| 18×15       | 1.5×1.5       | 70    | 15     | 35     | 15     |
| 22×18       | 1.5×1.5       | 77    | 17.5   | 38     | 18     |
| 28×18       | 1.5×1.5       | 88    | 20     | 41     | 21     |
| 28×22       | 1.5×1.5       | 88    | 20     | 42     | 21     |
| 35×18       | 1.5×1.5       | 102   | 24     | 44     | 24     |
| 35×22       | 1.5×1.5       | 102   | 24     | 46     | 25     |
| 35×28       | 1.5×1.5       | 102   | 24     | 49     | 25     |
| 42×18       | 1.5×1.5       | 120   | 28     | 48     | 28     |
| 42×22       | 1.5×1.5       | 120   | 28     | 49     | 28     |
| 42×28       | 1.5×1.5       | 120   | 28     | 52     | 28     |
| 42×35       | 1.5×1.5       | 120   | 28     | 55     | 28     |
| 54×18       | 1.5×1.5       | 144   | 36     | 54     | 34     |
| 54×22       | 1.5×1.5       | 144   | 36     | 55     | 34     |
| 54×28       | 1.5×1.5       | 144   | 36     | 58     | 34     |
| 54×35       | 1.5×1.5       | 144   | 36     | 61     | 34     |
| 54×42       | 1.5×1.5       | 144   | 36     | 67     | 35     |
| 76.1×22     | 2.0×1.5       | 232   | 61     | 67     | 46     |
| 76.1×28     | 2.0×1.5       | 232   | 61     | 70     | 46     |
| 76.1×35     | 2.0×1.5       | 232   | 61     | 73     | 46     |
| 76.1×42     | 2.0×1.5       | 232   | 61     | 79     | 47     |
| 76.1×54     | 2.0×1.5       | 232   | 61     | 84     | 48     |
| 88.9×22     | 2.0×1.5       | 262   | 71     | 73     | 52     |
| 88.9×28     | 2.0×1.5       | 262   | 71     | 76     | 52     |
| 88.9×35     | 2.0×1.5       | 262   | 71     | 79     | 52     |
| 88.9×42     | 2.0×1.5       | 262   | 71     | 85     | 53     |
| 88.9×54     | 2.0×1.5       | 262   | 71     | 90     | 54     |
| 88.9×76.1   | 2.0×2.0       | 262   | 71     | 119    | 64     |
| 108×22      | 2.0×1.5       | 312   | 81     | 83     | 62     |
| 108×28      | 2.0×1.5       | 312   | 81     | 86     | 62     |
| 108×35      | 2.0×1.5       | 312   | 81     | 89     | 62     |
| 108×42      | 2.0×1.5       | 312   | 81     | 95     | 63     |
| 108×54      | 2.0×1.5       | 312   | 81     | 100    | 64     |
| 108×76.1    | 2.0×2.0       | 312   | 81     | 129    | 74     |
| 108×88.9    | 2.0×2.0       | 312   | 81     | 139    | 79     |



## TEE



Female Tee

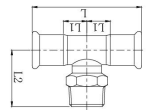


| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm | L2/ mm |
|-------------|---------------|-------|--------|--------|
| 15×1/2"     | 1.5           | 70    | 15     | 31.5   |
| 15×3/4"     | 1.5           | 70    | 15     | 33.5   |
| 18×1/2"     | 1.5           | 70    | 15     | 33     |
| 18×3/4"     | 1.5           | 70    | 15     | 35     |
| 22×1/2"     | 1.5           | 77    | 17.5   | 35     |
| 22×3/4"     | 1.5           | 77    | 17.5   | 37     |
| 28×1/2"     | 1.5           | 88    | 20     | 38     |
| 28×3/4"     | 1.5           | 88    | 20     | 40     |
| 28×1        | 1.5           | 88    | 20     | 45     |
| 35×1/2"     | 1.5           | 102   | 24     | 41.5   |
| 35×3/4"     | 1.5           | 102   | 24     | 43.5   |
| 35.0×1      | 1.5           | 102   | 24     | 48.5   |
| 35×11/4"    | 1.5           | 102   | 24     | 51.5   |
| 42×1/2"     | 1.5           | 120   | 28     | 45     |
| 42×3/4"     | 1.5           | 120   | 28     | 47     |
| 42×1        | 1.5           | 120   | 28     | 52     |
| 42×11/4"    | 1.5           | 120   | 28     | 55     |
| 42×11/2"    | 1.5           | 120   | 28     | 57     |
| 54×1/2"     | 1.5           | 144   | 36     | 51     |
| 54×3/4"     | 1.5           | 144   | 36     | 53     |
| 54×1        | 1.5           | 144   | 36     | 58     |
| 54×11/4"    | 1.5           | 144   | 36     | 61     |
| 54×11/2"    | 1.5           | 144   | 36     | 63     |
| 54×2        | 1.5           | 144   | 36     | 69     |

| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm | L2/ mm |
|-------------|---------------|-------|--------|--------|
| 15×1/2"     | 1.5           | 70    | 15     | 35.5   |
| 15×3/4"     | 1.5           | 70    | 15     | 38.5   |
| 18×1/2"     | 1.5           | 70    | 15     | 37     |
| 18×3/4"     | 1.5           | 70    | 15     | 40     |
| 22×1/2"     | 1.5           | 77    | 17.5   | 39     |
| 22×3/4"     | 1.5           | 77    | 17.5   | 42     |
| 28×1/2"     | 1.5           | 88    | 20     | 42     |
| 28×3/4"     | 1.5           | 88    | 20     | 45     |
| 28×1        | 1.5           | 88    | 20     | 49     |
| 35×1/2"     | 1.5           | 102   | 24     | 45.5   |
| 35×3/4"     | 1.5           | 102   | 24     | 48.5   |
| 35.0×1      | 1.5           | 102   | 24     | 52.5   |
| 35×11/4"    | 1.5           | 102   | 24     | 57.5   |
| 42×1/2"     | 1.5           | 120   | 28     | 49     |
| 42×3/4"     | 1.5           | 120   | 28     | 52     |
| 42×1        | 1.5           | 120   | 28     | 56     |
| 42×11/4"    | 1.5           | 120   | 28     | 61     |
| 42×11/2"    | 1.5           | 120   | 28     | 61     |
| 54×1/2"     | 1.5           | 144   | 36     | 55     |
| 54×3/4"     | 1.5           | 144   | 36     | 58     |
| 54×1        | 1.5           | 144   | 36     | 62     |
| 54×11/4"    | 1.5           | 144   | 36     | 67     |
| 54×11/2"    | 1.5           | 144   | 36     | 67     |
| 54×2        | 1.5           | 144   | 36     | 72     |



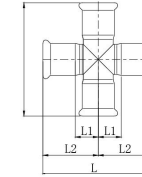
Male Tee



## TEE



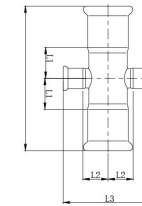
Equal Cross



| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm | L2/ mm |
|-------------|---------------|-------|--------|--------|
| 15          | 1.5           | 70    | 15     | 35     |
| 18          | 1.5           | 70    | 15     | 35     |
| 22          | 1.5           | 77    | 17.5   | 38.5   |
| 28          | 1.5           | 88    | 20     | 44     |
| 35          | 1.5           | 102   | 24     | 51     |
| 42          | 1.5           | 120   | 28     | 60     |
| 54          | 1.5           | 144   | 36     | 72     |
| 76.1        | 2.0           | 232   | 61     | 116    |
| 88.9        | 2.0           | 262   | 71     | 131    |
| 108         | 2.0           | 312   | 81     | 156    |



Reducing Cross

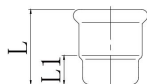


| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm | L3/ mm | L2/ mm |
|-------------|---------------|-------|--------|--------|--------|
| 18×15       | 1.5×1.5       | 70    | 15     | 70     | 15     |
| 22×18       | 1.5×1.5       | 77    | 17.5   | 76     | 18     |
| 28×18       | 1.5×1.5       | 88    | 20     | 82     | 21     |
| 28×22       | 1.5×1.5       | 88    | 20     | 84     | 21     |
| 35×18       | 1.5×1.5       | 102   | 24     | 88     | 24     |
| 35×22       | 1.5×1.5       | 102   | 24     | 92     | 25     |
| 35×28       | 1.5×1.5       | 102   | 24     | 98     | 25     |
| 42×18       | 1.5×1.5       | 120   | 28     | 96     | 28     |
| 42×22       | 1.5×1.5       | 120   | 28     | 98     | 28     |
| 42×28       | 1.5×1.5       | 120   | 28     | 104    | 28     |
| 42×35       | 1.5×1.5       | 120   | 28     | 110    | 28     |
| 54×18       | 1.5×1.5       | 144   | 36     | 108    | 34     |
| 54×22       | 1.5×1.5       | 144   | 36     | 110    | 34     |
| 54×28       | 1.5×1.5       | 144   | 36     | 116    | 34     |
| 54×35       | 1.5×1.5       | 144   | 36     | 122    | 34     |
| 54×42       | 1.5×1.5       | 144   | 36     | 134    | 35     |

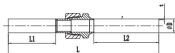
## OTHER FITTINGS



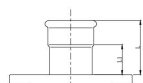
Hexagonal male connector



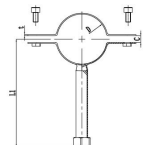
Caps



Straight Tube Fittings



Flange adapters



Bracket

| Diameter/mm   | Thickness/ mm | L1/ mm | L/ mm |
|---------------|---------------|--------|-------|
| 1/2"×1/2"     | 1.5           | 8.5    | 39.5  |
| 3/4"×3/4"     | 1.5           | 8      | 39    |
| 1×1           | 1.5           | 9      | 44    |
| 1 1/4"×1 1/4" | 1.5           | 10     | 50    |
| 1 1/2"×1 1/2" | 1.5           | 12     | 54    |
| 2×2           | 1.5           | 12     | 57    |

| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm |
|-------------|---------------|-------|--------|
| 15          | 1.5           | 34.5  | 14     |
| 18          | 1.5           | 34.5  | 14     |
| 22          | 1.5           | 34.5  | 13.5   |
| 28          | 1.5           | 37.5  | 14.5   |
| 35          | 1.5           | 42    | 15     |
| 42          | 1.5           | 46    | 14     |
| 54          | 1.5           | 52    | 15     |
| 76.1        | 2.0           | 85.5  | 30.5   |
| 88.9        | 2.0           | 96    | 33     |
| 108         | 2.0           | 114.5 | 37.5   |

| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm | L2/ mm |
|-------------|---------------|-------|--------|--------|
| 15          | 1.5           | 172   | 54     | 74     |
| 18          | 1.5           | 172   | 54     | 74     |
| 22          | 1.5           | 193   | 62     | 82     |
| 28          | 1.5           | 217   | 70     | 90     |

| Diameter/mm | Thickness/ mm | L/ mm | L1/ mm |
|-------------|---------------|-------|--------|
| 15          | 1.5           | 36    | 16     |
| 18          | 1.5           | 36    | 16     |
| 22          | 1.5           | 38    | 17     |
| 28          | 1.5           | 47    | 23     |
| 35          | 1.5           | 52    | 25     |
| 42          | 1.5           | 66    | 34     |
| 54          | 1.5           | 71    | 35     |
| 76.1        | 2.0           | 78    | 23     |
| 88.9        | 2.0           | 90    | 30     |
| 108         | 2.0           | 106   | 31     |

| Diameter/mm | L1/ mm | t   | c  |
|-------------|--------|-----|----|
| 18          | 100    | 0.8 | 3  |
| 22          | 100    | 0.8 | 5  |
| 28          | 100    | 0.8 | 5  |
| 35          | 100    | 1.0 | 5  |
| 42          | 100    | 1.0 | 7  |
| 54          | 100    | 1.0 | 7  |
| 76.1        | 100    | 1.2 | 10 |
| 88.9        | 100    | 1.2 | 10 |
| 108         | 100    | 1.2 | 10 |



## SEALS



O-ring EPDM



O-ring HNBR

| No | Sealing material | Color  | Temperature range |
|----|------------------|--------|-------------------|
| 1  | CIIR             | black  | -20°C~110°C       |
| 2  | EPDM             | black  | -15°C~110°C       |
| 3  | NBR              | yellow | -20°C~110°C       |



Manual pipe cutter



Hex gauge



Clamp holder



Jaws



Ring die



High-pressure pipeline



Electric hydraulic pump



Manual hydraulic tools  
(for engineering)



Manual hydraulic tools  
(household)



Grooving machine



Handheld tower tools

## ■ INSTALLATION TOOLS

