# Tube-Bending Equipment

CATALOGUE

| O.D. outside diameter | CLR centerline radius | Minimum straight between bends | Raw material | Wall thickness | Tube bending machine |
|---|---|---|---|---|---|
| Ø mm | mm | mm | | mm | |
| **4,7** | R **10** | 10 | Aluminum | ALL | BOTH |
| | | | Steel | ALL | BOTH |
| | | | Titanium | ALL | BOTH |
| | R **19** | 10 | Aluminum | ALL | BOTH |
| | | | Steel | ALL | BOTH |
| | | | Titanium | ALL | BOTH |
| | R **75,5** | 10 | Aluminum | ALL | C |
| | | | Steel | ALL | C |
| | | | Titanium | ALL | C |
| **6,0** | R **12** | 12 | Aluminum | ALL | P |
| | | | Steel | ALL | P |
| | | | Titanium | ALL | P |
| | R **15** | 10 | Aluminum | ALL | C |
| | | | Steel | ALL | C |
| | | | Titanium | ALL | C |
| | | 12 | Aluminum | ALL | P |
| | | | Steel | ALL | P |
| | | | Titanium | ALL | P |
| **7,0** | R **15** | 10 | Aluminum | ALL | BOTH |
| | | | Steel | ALL | BOTH |
| | | | Titanium | ALL | BOTH |
| **8,0** | R **16** | 10 | Aluminum | 8x0,5 - 8x1 | BOTH |
| | | | Steel | 8x1 | BOTH |
| | | | Titanium | 8x0,5 - 8x1 | BOTH |
| | R **20** | 10 | Aluminum | 8x0,5 - 8x1 | C |
| | | | Steel | 8x1 | C |
| | | | Titanium | 8x0,5 - 8x1 | C |
| | R **24** | 20 | Aluminum | 8x0,5 - 8x1 | BOTH |
| | | | Steel | 8x1 | BOTH |
| | | | Titanium | 8x0,5 - 8x1 | BOTH |
| **9,52** | R **15** | 10 | Aluminum | - | C |
| | | | Steel | - | C |
| | | | Titanium | 9,52x0,48 | C |
| **9,6** | R **19** | 20 | Aluminum | - | BOTH |
| | | | Steel | - | BOTH |
| | | | Titanium | 9,6x0,5 | BOTH |
| | R **36** | 20 | Aluminum | - | P |
| | | | Steel | - | P |
| | | | Titanium | 9,6x0,5 | P |
| **10,0** | R **15** | 12 | Aluminum | 10x1 - 10x1,5 | C |
| | | | Steel | 10x1 - 10x1,5 | C |
| | | | Titanium | - | C |
| | R **15** | 15 | Aluminum | 10x1 - 10x1,5 | P |
| | | | Steel | 10x1 - 10x1,5 | P |
| | | | Titanium | 10x1 - 10x1,5 | P |
| | R **30** | 12 | Aluminum | 10x1 - 10x1,5 | C |
| | | | Steel | 10x1 - 10x1,5 | C |
| | | | Titanium | - | C |
| | R **30** | 15 | Aluminum | 10x1 - 10x1,5 | P |
| | | | Steel | 10x1 - 10x1,5 | P |
| | | | Titanium | 10x1 - 10x1,5 | P |
| **12,0** | R **15** | 10 | Aluminum | 12x1 | C |
| | | | Steel | 12x1,5 | C |
| | | | Titanium | 12x1,5 | C |
| | R **25** | 30 | Aluminum | 12x1 | P |
| | | | Steel | 12x1 | P |
| | | | Titanium | 12x1 | P |
| | R **36** | 30 | Aluminum | 12x1 | P |
| | | | Steel | 12x1 | P |
| | | | Titanium | 12x1 | P |





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|---|---|---|---|---|---|
| Ø mm | mm | mm | | mm | |
| **12,7** | R **20** | 35 | Aluminum | 12,7x1,27 | C |
| | | | Steel | - | C |
| | | | Titanium | - | C |
| | R **25** | 35 | Aluminum | 12,7x1,27 | C |
| | | | Steel | - | C |
| | | | Titanium | - | C |
| | R **35** | 35 | Aluminum | 12,7x1,27 | C |
| | | | Steel | - | C |
| | | | Titanium | - | C |
| **14,0** | R **18** | 20 | Aluminum | 14x1 - 14x1,5 - 14x2 | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |
| | R **18** | 40 | Aluminum | 14x1 - 14x1,5 | C |
| | | | Steel | 14x1,5 | C |
| | | | Titanium | 14x1,5 | C |
| | R **25** | 20 | Aluminum | 14x1 - 14x1,5 - 14x2 | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |
| | R **25** | 40 | Aluminum | 14x1 - 14x1,5 | C |
| | | | Steel | 14x1,5 | C |
| | | | Titanium | 14x1,5 | C |
| **15,0** | R **20** | 15 | Aluminum | 15x1,5 - 15x2 | BOTH |
| | | | Steel | - | BOTH |
| | | | Titanium | - | BOTH |
| | R **40** | 20 | Aluminum | 15x1,5 - 15x2 | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |
| | R **50** | 15 | Aluminum | 15x1,5 - 15x2 | C |
| | | | Steel | - | C |
| | | | Titanium | - | C |
| | R **100** | 15 | Aluminum | 15x1,5 - 15x2 | C |
| | | | Steel | - | C |
| | | | Titanium | - | C |
| **16,0** | R **20** | 25 | Aluminum | 16x1 | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |
| | R **25** | 20 | Aluminum | 16x1 | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |
| | R **25** | 25 | Aluminum | 16x1 | C |
| | | | Steel | - | C |
| | | | Titanium | - | C |
| **18,0** | R **23** | 25 | Aluminum | 18x1 | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |
| | R **30** | 30 | Aluminum | 18x1 - 18x1,5 | BOTH |
| | | | Steel | - | BOTH |
| | | | Titanium | - | BOTH |
| | R **100** | 30 | Aluminum | 18x1 - 18x1,5 | C |
| | | | Steel | - | C |
| | | | Titanium | - | C |
| | R **150** | 70 | Aluminum | 18x1 | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |

| O.D. outside diameter | CLR centerline radius | Minimum straight between bends | Raw material | Wall thickness | Tube bending machine |
|---|---|---|---|---|---|
| Ø mm | mm | mm | | mm | |
| 19,05 | R **30** | 35 | Aluminum | 19,05x1,65 | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |
| | R **40** | 45 | Aluminum | 19,05x1,65 | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |
| | R **50** | 45 | Aluminum | 19,05x1,65 | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |
| 20,0 | R **25** | 25 | Aluminum | 20x1 - 20x1,5 | C |
| | | | Steel | - | C |
| | | | Titanium | - | C |
| | R **40** | 25 | Aluminum | 20x1 - 20x1,5 - 20x2 | BOTH |
| | | | Steel | - | BOTH |
| | | | Titanium | - | BOTH |
| | R **50** | 25 | Aluminum | 20x1 - 20x1,2 - 20x2 | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |
| 22,0 | R **28** | 20 | Aluminum | 22x1 - 22x1,5 - 22x2 | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |
| | R **37** | 35 | Aluminum | 22x1 - 22x1,5 - 22x2 | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |
| | R **50** | 20 | Aluminum | 22x1 - 22x1,5 - 22x2 | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |
| 25,0 | R **25** | 25 | Aluminum | 25x1 - 25x1,5 | C |
| | | | Steel | 25x1,5 | C |
| | | | Titanium | 25x1,5 | C |
| | R **30** | 10 | Aluminum | 25x1 | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |
| | R **35** | 25 | Aluminum | 25x1 - 25x1,5 | BOTH |
| | | | Steel | 25x1,5 | BOTH |
| | | | Titanium | 25x1,5 | BOTH |
| | R **50** | 30 | Aluminum | 25x1 | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |
| | R **50** | 25 | Aluminum | 25x1 - 25x1,5 | C |
| | | | Steel | 25x1,5 | C |
| | | | Titanium | 25x1,5 | C |
| | R **80** | 40 | Aluminum | 25x1 | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |
| | R **80** | 40 | Aluminum | 25x1 - 25x1,5 | C |
| | | | Steel | 25x1,5 | C |
| | | | Titanium | 25x1,5 | C |
| 25,4 | R **31** | 35 | Aluminum | - | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |
| | R **50** | 50 | Aluminum | - | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |
| | R **80** | 40 | Aluminum | - | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |





| O.D. outside diameter | CLR centerline radius | Minimum straight between bends | Raw material | Wall thickness | Tube bending machine |
|---|---|---|---|---|---|
| Ø mm | mm | mm | | mm | |
| 28,0 | R **42,0** | 50 | Aluminum | 28x1 - 28x2 | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |
| | R **73,5** | 60 | Aluminum | 28x1 - 28x2 | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |
| 30,0 | R**42** | 70 | Aluminum | - | P |
| | | | Steel | 30x2 - 30x3 | P |
| | | | Titanium | 30x2 - 30x3 | P |
| 32,0 | R **45** | 50 | Aluminum | 32x1 - 32x2 | C |
| | | | Steel | - | C |
| | | | Titanium | - | C |
| | R **50** | 50 | Aluminum | 32x1 - 32x1,5 - 32x2 | BOTH |
| | | | Steel | 32x1 | BOTH |
| | | | Titanium | 32x1 | BOTH |
| | R **90** | 70 | Aluminum | 32x1 - 32x1,5 - 32x2 | BOTH |
| | | | Steel | 32x1 | BOTH |
| | | | Titanium | 32x1 | BOTH |
| 35,0 | R **45** | 40 | Aluminum | 35x1,5 - 35x2 | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |
| | R **55** | 40 | Aluminum | 35x1,5 - 35x2 | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |
| | R **90** | 40 | Aluminum | 35x1,5 - 35x2 | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |
| 38,0 | R **45** | 60 | Aluminum | 38x1,5 - 38x2 | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |
| | R **50** | 40 | Aluminum | 38x1,5 - 38x2 | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |
| | R **55** | 100 | Aluminum | 38x1,5 - 38x2 | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |
| 40,0 | R **58** | 100 | Aluminum | 40x1,5 | P |
| | | | Steel | 40x1,5 - 40x2 | P |
| | | | Titanium | 40x1,5 - 40x2 | P |
| | R **65** | 70 | Aluminum | 40x1,5 | P |
| | | | Steel | 40x1,5 - 40x2 | P |
| | | | Titanium | 40x1,5 - 40x2 | P |
| | R **120** | 40 | Aluminum | 40x1,5 | P |
| | | | Steel | 40x1,5 - 40x2 | P |
| | | | Titanium | 40x1,5 - 40x2 | P |
| 41,0 | R **60** | 80 | Aluminum | 41x1,5 | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |
| 42,0 | R **60** | 100 | Aluminum | 42x1,2 - 42x1,5 | P |
| | | | Steel | 42x1,2 - 42x1,5 | P |
| | | | Titanium | 42x1,2 - 42x1,5 | P |
| 45,0 | R **62** | 100 | Aluminum | 45x1,5 | P |
| | | | Steel | 45x1,2 | P |
| | | | Titanium | 45x1,2 | P |
| 46,0 | R **46** | 100 | Aluminum | - | P |
| | | | Steel | 46x1 | P |
| | | | Titanium | 46x1 | P |
| | R **50** | 100 | Aluminum | - | P |
| | | | Steel | 46x1 | P |
| | | | Titanium | 46x1 | P |

| O.D. outside diameter | CLR centerline radius | Minimum straight between bends | Raw material | Wall thickness | Tube bending machine |
|---|---|---|---|---|---|
| Ø mm | mm | mm | | mm | |
| **48,0** | R **50** | 50 | Aluminum | 48x1,5 - 48x2 | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |
| | R **70** | 100 | Aluminum | 48x1,5 - 48x2 | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |
| | R **100** | 50 | Aluminum | 48x1,5 - 48x2 | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |
| **50,0** | R **50** | 100 | Aluminum | - | P |
| | | | Steel | 50x1,5 - 50x2 | P |
| | | | Titanium | 50x1,5 - 50x2 | P |
| | R **55** | 100 | Aluminum | - | P |
| | | | Steel | 50x1,5 - 50x2 | P |
| | | | Titanium | 50x1,5 - 50x2 | P |
| | R **60** | 100 | Aluminum | - | P |
| | | | Steel | 50x1,5 - 50x2 | P |
| | | | Titanium | 50x1,5 - 50x2 | P |
| | R **65** | 100 | Aluminum | - | P |
| | | | Steel | 50x1,5 - 50x2 | P |
| | | | Titanium | 50x1,5 - 50x2 | P |
| | R **70** | 100 | Aluminum | - | P |
| | | | Steel | 50x1,5 - 50x2 | P |
| | | | Titanium | 50x1,5 - 50x2 | P |
| | R **80** | 100 | Aluminum | - | P |
| | | | Steel | 50x1,5 - 50x2 | P |
| | | | Titanium | 50x1,5 - 50x2 | P |
| | R **110** | 100 | Aluminum | - | P |
| | | | Steel | 50x1,5 - 50x2 | P |
| | | | Titanium | 50x1,5 - 50x2 | P |
| | R **115** | 100 | Aluminum | - | P |
| | | | Steel | 50x1,5 - 50x2 | P |
| | | | Titanium | 50x1,5 - 50x2 | P |
| | R **150** | 100 | Aluminum | - | P |
| | | | Steel | 50x1,5 - 50x2 | P |
| | | | Titanium | 50x1,5 - 50x2 | P |
| **51,0** | R **50** | 100 | Aluminum | - | P |
| | | | Steel | 51x1 - 51x1,5 | P |
| | | | Titanium | 51x1 - 51x1,5 | P |
| | R **60** | 100 | Aluminum | - | P |
| | | | Steel | 51x1 - 51x1,5 | P |
| | | | Titanium | 51x1 - 51x1,5 | P |
| | R **95** | 100 | Aluminum | - | P |
| | | | Steel | 51x1 - 51x1,5 | P |
| | | | Titanium | 51x1 - 51x1,5 | P |
| **52,0** | R **52** | 110 | Aluminum | - | P |
| | | | Steel | 52x1 | P |
| | | | Titanium | 52x1 | P |
| **54,0** | R **52** | 52 | Aluminum | - | P |
| | | | Steel | 54x1,5 - 54x2 | P |
| | | | Titanium | 54x1,5 - 54x2 | P |
| | R **60** | 100 | Aluminum | - | P |
| | | | Steel | 54x1,5 - 54x2 | P |
| | | | Titanium | 54x1,5 - 54x2 | P |
| | R **80** | 100 | Aluminum | - | P |
| | | | Steel | 54x1,5 - 54x2 | P |
| | | | Titanium | 54x1,5 - 54x2 | P |
| **55,0** | R **80** | 100 | Aluminum | 55x2 | P |
| | | | Steel | - | P |
| | | | Titanium | - | P |





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|---|---|---|---|---|---|
| Ø mm | mm | mm | | mm | |
| **56,0** | R **54** | 120 | Aluminum | - | P |
| | | | Steel | 56x1 | P |
| | | | Titanium | 56x1 | P |
| | R **60** | 120 | Aluminum | - | P |
| | | | Steel | 56x1 | P |
| | | | Titanium | 56x1 | P |
| | R **100** | 120 | Aluminum | - | P |
| | | | Steel | 56x1 | P |
| | | | Titanium | 56x1 | P |
| **57,0** | R **72** | 110 | Aluminum | - | P |
| | | | Steel | 57x1 | P |
| | | | Titanium | 57x1 | P |
| **58,0** | R **60** | 120 | Aluminum | - | P |
| | | | Steel | 58x1 | P |
| | | | Titanium | 58x1 | P |
| | R **65** | 120 | Aluminum | - | P |
| | | | Steel | 58x1 | P |
| | | | Titanium | 58x1 | P |
| | R **85** | 120 | Aluminum | - | P |
| | | | Steel | 58x1 | P |
| | | | Titanium | 58x1 | P |
| | R **110** | 120 | Aluminum | - | P |
| | | | Steel | 58x1 | P |
| | | | Titanium | 58x1 | P |
| **60,0** | R **60** | 100 | Aluminum | - | P |
| | | | Steel | 60x1 - 60x1,5 | P |
| | | | Titanium | 60x1 - 60x1,5 | P |
| | R **70** | 100 | Aluminum | - | P |
| | | | Steel | 60x1 - 60x1,5 | P |
| | | | Titanium | 60x1 - 60x1,5 | P |
| | R **85** | 120 | Aluminum | - | P |
| | | | Steel | 60x1 - 60x1,5 | P |
| | | | Titanium | 60x1 - 60x1,5 | P |
| | R **150** | 120 | Aluminum | - | P |
| | | | Steel | 60x1 - 60x1,5 | P |
| | | | Titanium | 60x1 - 60x1,5 | P |
| **63,5** | R **110** | 100 | Aluminum | - | P |
| | | | Steel | 63,5x1,5 - 63,5x2 | P |
| | | | Titanium | 63,5x1,5 - 63,5x2 | P |
| **65,0** | R **70** | 100 | Aluminum | - | P |
| | | | Steel | 65x1 | P |
| | | | Titanium | 65x1 | P |
| | R **80** | 130 | Aluminum | - | P |
| | | | Steel | 65x1 | P |
| | | | Titanium | 65x1 | P |
| | R **90** | 140 | Aluminum | - | P |
| | | | Steel | 65x1 | P |
| | | | Titanium | 65x1 | P |
| **66,0** | R **85** | 140 | Aluminum | - | P |
| | | | Steel | 66x1 | P |
| | | | Titanium | 66x1 | P |
| | R **180** | 140 | Aluminum | - | P |
| | | | Steel | 66x1 | P |
| | | | Titanium | 66x1 | P |

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|---|---|---|---|---|---|
| Ø mm | mm | mm | | mm | |
| 20x20 | R 30 | 50 | Aluminum | ALL | P |
| | | | Steel | ALL | P |
| | | | Titanium | - | P |
| | R 160 | 100 | Aluminum | ALL | P |
| | | | Steel | ALL | P |
| | | | Titanium | - | P |
| 20x25 | R 165 | 100 | Aluminum | ALL | P |
| | | | Steel | ALL | P |
| | | | Titanium | - | P |
| | R 185 | 100 | Aluminum | ALL | P |
| | | | Steel | ALL | P |
| | | | Titanium | - | P |
| 25x30 | R 175 | 100 | Aluminum | ALL | P |
| | | | Steel | ALL | P |
| | | | Titanium | - | P |
| 30x15 | R 135 | 100 | Aluminum | ALL | P |
| | | | Steel | ALL | P |
| | | | Titanium | - | P |

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**ANDREOLI & C. S.R.L.**
Via Taruffi, 24 | 41053 MARANELLO (MO) ITALY
Tel. +39.0536 941 419 | Fax +39.0536 932 175

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