



- 1 Improved asymmetric housing**
– even distribution of forces and safe assembly
- 2 Screw support**
– ease of assembly due to the safe guidance of the emerging band end
- 3 Material and clamping range stamped on the band**
– prevention of errors
- 4 Asymmetric extension**
– prevents the housing from tilting over when the clamp is tightened
- 5 Short housing saddle**
– even contact pressure
– improved efficiency
- 6 Smooth or stamped inside of band**
– optimal hose protection

Worm drive hose clamps in accordance with DIN 3017

NORMACLAMP® TORRO® multi-range hose clamps are ideally suited to applications with high mechanical loads. Thanks to the continuous developments these products have undergone, they remain the benchmark within modern clamp construction. The key feature of a NORMACLAMP® TORRO® product is its asymmetrical construction - an instant sign that it is a genuine TORRO®.



Asymmetric housing provides high clamping force and superior torque strength. Even distribution of clamping pressure. Clamp aligns perfectly on the hose and ensures the optimal sealing of the connection.

Advantages at a glance

- Multi-range hose clamp
- No chromium(VI) used for coating purposes
- Clamping ranges in acc. with DIN 3017: 8-16 mm to 140-160 mm
- Larger diameters available on request

Applications

- Joining cooling water lines
- Depressurized and pressurized fuel lines and ventilation systems
- Oil lines
- Joining lines in sanitary applications
- Joining lines in machine building applications
- Lines in the household appliance industry
- Hose lines in the commercial vehicle industries

Materials

W1*	W2	W3	W4	W5
x	x	x	x	x

* No chromium(VI) used for the coating on the closure components

Material	Corrosion resistance in salt spray testing
W1	Min. 144 h
W2	Min. 72 h
W3	Min. 200 h*
W4	Min. 240 h
W5	Min. 400 h

*Max 10% base metal corrosion permissible

Types of clamp band and screw

	W1	W2	W3	W4	W5
Phillips head SW 7*	•	•			
Slotted head SW 7			•	•	•

* Band width 7.5 mm = SW 6

Band width 7.5 mm

- W2, W3 with smooth inside

Band width 9 mm

- W1 with smooth inside
- W2, W3, W4, W5 with stamped inside

Band width 12 mm

- W1, W2, W3 with smooth inside
- W4, W5 with stamped inside

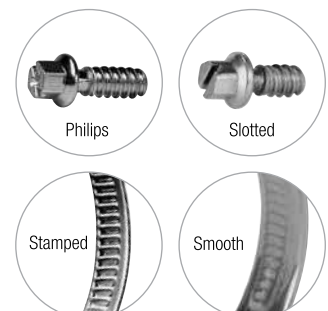


Table of torques

TORRO 12 W1

Diameter	8-12	10-16	12-18	12-22	16-27	20-32	25-40	30-45	35-50	40-60
AD					5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5
LD max					1.2	1.2	1.2	1.2	1.2	1.2
PD					6.5	6.5	6.5	6.5	6.5	6.5
BD min					10	10	10	10	10	10

Diameter	50-70	60-80	70-90	80-100	90-110	100-120	110-130	120-140	130-150	140-160
AD	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5
LD max	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
PD	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
BD min	10	10	10	10	10	10	10	10	10	10

TORRO 12 W2/W3

Diameter	8-12	10-16	12-18	12-22	16-27	20-32	25-40	30-45	35-50	40-60
AD					5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5
LD max					1	1	1	1	1	1
PD					6.5	6.5	6.5	6.5	6.5	6.5
BD min					8.0	8.0	8.5	8.5	8.5	8.5

Diameter	50-70	60-80	70-90	80-100	90-110	100-120	110-130	120-140	130-150	140-160
AD	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5
LD max	1	1	1	1	1	1	1	1	1	1
PD	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
BD min	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5

TORRO 12 W4/W5

Diameter	8-12	10-16	12-18	12-22	16-27	20-32	25-40	30-45	35-50	40-60
AD					5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5
LD max					1	1	1	1	1	1
PD					6.5	6.5	6.5	6.5	6.5	6.5
BD min					8	8	8.5	8.5	8.5	8.5

Diameter	50-70	60-80	70-90	80-100	90-110	100-120	110-130	120-140	130-150	140-160
AD	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5
LD max	1	1	1	1	1	1	1	1	1	1
PD	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
BD min	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5