

TORRO® – BENEFITS 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



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 clamp-ing pressure. Clamp aligns perfectly on the hose and ensures the optimal sealing of the connection.



- 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

Materials

W1*	W2	W3	W4	W5
X	X	X	X	X

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

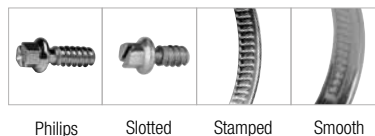
Material	Corrosion resistance in salt spray testing
W1	Min. 144 h
W2	Min. 72 h
W3	Min. 200 h*
W4	Min. 400 h
W5	Min. 1000 h

*Max 10% base metal corrosion permissible

Types of clamp band and screw

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

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



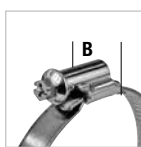
Table of torques

TORRO 9 W1										
Diameter	8-12	10-16	12-18	12-22	16-27	20-32	25-40	30-45	35-50	40-60
TT	2.5 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5
FRT max	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
TT	3.3	4	4	4	4	4	4	4	4	4
BD min	4	4.5	4.5	4.5	4.5	4.5	6	6	6	6
Diameter	50-70	60-80	70-90	80-100	90-110	100-120	110-130	120-140	130-150	140-160
TT	3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5
FRT max	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
TT	4	4	4	4	4	4	4	4	4	4
BD min	6	6	6	6	6	6	6	6	6	6

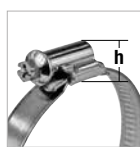
TORRO 9 W2										
Diameter	8-12	8-16	12-18	12-22	16-27	20-32	25-40	30-45	35-50	40-60
TT		2 +0.5		3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5
FRT max		0.7		0.7	0.7	0.7	0.7	0.7	0.7	0.7
TT		2.6		4	4	4	4	4	4	4
BD min		4		4.5	4.5	4.5	4.5	4.5	4.5	4.5
Diameter	50-70	60-80	70-90	80-100	90-110	100-120	110-130	120-140	130-150	140-160
TT	3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5
FRT max	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
TT	4	4	4	4	4	4	4	4	4	4
BD min	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5

TORRO 9 W3-W5										
Diameter	8-12	8-16	12-18	12-22	16-27	20-32	25-40	30-45	35-50	40-60
TT		2 +0.5		3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5
FRT max		0.7		0.7	0.7	0.7	0.7	0.7	0.7	0.7
TT		2.6		4	4	4	4	4	4	4
BD min		4		4.5	4.5	4.5	4.5	4.5	4.5	4.5
Diameter	50-70	60-80	70-90	80-100	90-110	100-120	110-130	120-140	130-150	140-160
TT	3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5
FRT max	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
TT	4	4	4	4	4	4	4	4	4	4
BD min	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5

TT = Tightening Torque
 FRT = Free Running Torque
 TT = Testing Torque
 BD = Break Torque



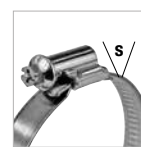
B = overall width housing



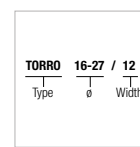
h = overall height bolt and housing



L = overall length bolt and housing



s = band thickness clamp band



Name structure clamp band

Technical data & Ordering information

NORMACLAMP® TORRO®														
Width	Designation	Clamping ranges		B	h	L	s	s (W1 only)	W1 Product No.	W2 Product No.	W3 Product No.	W4 Product No.	W5 Product No.	
		in mm	in inches											
9	TORRO 8-16/9 (10-16)	8-16	5/16-5/8	13.0	11.0	21.0	0.65	0.8	0126 7565 013	0126 7702 013	0126 7703 013	0126 7704 013	0126 7705 013	
	TORRO 12-22/9	12-22	1/2-7/8	13.0	11.0	24.0	0.65	0.8	0126 7565 017	0126 7702 017	0126 7703 017	0126 7704 017	0126 7705 017	
	TORRO 16-27/9	16-27	5/8-1 1/16	13.0	11.0	24.0	0.65	0.8	0126 7565 021	0126 7702 021	0126 7703 021	0126 7704 021	0126 7705 021	
	TORRO 20-32/9	20-32	13/16-1 1/4	13.0	11.0	24.0	0.65	0.8	0126 7565 026	0126 7702 026	0126 7703 026	0126 7704 026	0126 7705 026	
	TORRO 23-35/9	23-35	15/16-1 3/8	13.0	11.0	24.0	0.65	0.8	0126 7565 029	0126 7702 029	0126 7703 029	0126 7704 029	0126 7705 029	
	TORRO 25-40/9	25-40	1-1 9/16	13.0	11.0	26.0	0.65	0.8	0126 7565 032	0126 7702 032	0126 7703 032	0126 7704 032	0126 7705 032	
	TORRO 30-45/9	30-45	1 3/16-1 3/4	13.0	11.0	26.0	0.65	0.8	0126 7565 037	0126 7702 037	0126 7703 037	0126 7704 037	0126 7705 037	
	TORRO 35-50/9 (32-50)	35-50	1 3/8-2	13.0	11.0	26.0	0.65	0.8	0126 7565 043	0126 7702 041	0126 7703 041	0126 7704 041	0126 7705 041	
	TORRO 40-60/9	40-60	1 9/16-2 3/8	13.0	11.0	26.0	0.65	0.8	0126 7565 050	0126 7702 050	0126 7703 050	0126 7704 050	0126 7705 050	
	TORRO 50-70/9	50-70	2-2 3/4	13.0	11.0	26.0	0.65	0.8	0126 7565 060	0126 7702 060	0126 7703 060	0126 7704 060	0126 7705 060	
TORRO 60-80/9	60-80	2 3/8-3 1/8	13.0	11.0	26.0	0.65	0.8	0126 7565 070	0126 7702 070	0126 7703 070	0126 7704 070	0126 7705 070		

Additional diameters on request (up to 700 mm)

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
TT					5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5
FRT max					1.2	1.2	1.2	1.2	1.2	1.2
TT					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
TT	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
FRT max	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
TT	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
TT					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
TT					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

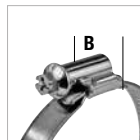
Diameter	50-70	60-80	70-90	80-100	90-110	100-120	110-130	120-140	130-150	140-160
TT	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5
FRT max	1	1	1	1	1	1	1	1	1	1
TT	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
BD min	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5

TORRO 12 W4/W5

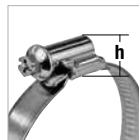
Diameter	8-12	10-16	12-18	12-22	16-27	20-32	25-40	30-45	35-50	40-60
TT					5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5
FRT max					1	1	1	1	1	1
TT					6.5	6.5	6.5	6.5	6.5	6.5
BD min					8	8	8.5	8.5	8.5	8.5

Diameter	50-70	60-80	70-90	80-100	90-110	100-120	110-130	120-140	130-150	140-160
TT	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
FRT max	1	1	1	1	1	1	1	1	1	1
TT	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

TT = Tightening Torque
 FRT = Free Running Torque
 TT = Testing Torque
 BD = Break Torque



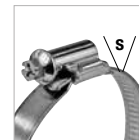
B = overall width housing



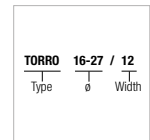
h = overall height bolt and housing



L = overall length bolt and housing



s = band thickness clamp band



Name structure clamp band

Technical data & Ordering information

NORMACLAMP® TORRO®

Width	Designation	Clamping ranges		B	h	L	s	s (W1 only)	W1 Product No.	W2 Product No.	W3 Product No.	W4 Product No.	W5 Product No.
		in mm	in inches										
12	TORRO 16-27/12	16-27	5/8-1 1/16	14.6	12.5	30.0	0.8	0.8	0136 7352 021	0136 7702 021	0136 7703 021	0136 7704 021	0136 7705 021
	TORRO 20-32/12	20-32	13/16-1 1/4	14.6	12.5	30.0	0.8	0.8	0136 7352 026	0136 7702 026	0136 7703 026	0136 7704 026	0136 7705 026
	TORRO 23-35/12	23-35	15/16-1 3/8	14.6	12.5	30.0	0.8	0.8	0136 7352 029	0136 7702 029	0136 7703 029	0136 7704 029	0136 7705 029
	TORRO 25-40/12	25-40	1-1 9/16	14.6	12.5	30.0	0.8	1.0	0136 7352 032	0136 7702 032	0136 7703 032	0136 7704 032	0136 7705 032
	TORRO 30-45/12	30-45	1 3/16-1 3/4	14.6	12.5	30.0	0.8	1.0	0136 7352 037	0136 7702 037	0136 7703 037	0136 7704 037	0136 7705 037
	TORRO 35-50/12	35-50	1 3/8-2	14.6	12.5	30.0	0.8	1.0	0136 7352 043	0136 7702 043	0136 7703 043	0136 7704 043	0136 7705 043
	TORRO 40-60/12	40-60	1 9/16-2 3/8	14.6	12.5	30.0	0.8	1.0	0136 7352 050	0136 7702 050	0136 7703 050	0136 7704 050	0136 7705 050
	TORRO 50-70/12	50-70	2-2 3/4	14.6	12.5	30.0	0.8	1.0	0136 7352 060	0136 7702 060	0136 7703 060	0136 7704 060	0136 7705 060
TORRO 60-80/12	60-80	2 3/8-3 1/8	14.6	12.5	30.0	0.8	1.0	0136 7352 070	0136 7702 070	0136 7703 070	0136 7704 070	0136 7705 070	

Additional diameters on request (up to 700 mm)

NORMACLAMP® TORRO® Dispenser



NORMACLAMP® TORRO DISPENSER				
Width	Designation	Clamping range	Quantity	W2 Product No.
7.5	TORRO 8 - 12/7.5	8 - 12	10	0126 9702 010
9	TORRO 8 - 16/9	8 - 16	10	
	TORRO 12 - 22/9	12 - 22	10	
	TORRO 16 - 27/9	16 - 27	10	
	TORRO 20 - 32/9	20 - 32	10	
	TORRO 25 - 40/9	25 - 40	10	
	TORRO 32 - 50/9	32 - 50	10	
	TORRO 40 - 60/9	40 - 60	10	
	TORRO 50 - 70/9	50 - 70	10	
	TORRO 60 - 80/9	60 - 80	10	

NORMACLAMP® TORRO® Drawer box



NORMACLAMP® TORRO DRAWER BOX				
Width	Designation	Clamping range	Quantity	W2 Product No.
9	TORRO 8 - 16/9	8 - 16	155	0126 9702 450
	TORRO 12 - 22/9	12 - 22	60	
	TORRO 16 - 27/9	16 - 27	100	
	TORRO 20 - 32/9	20 - 32	50	
	TORRO 25 - 40/9	25 - 40	50	
	TORRO 32 - 50/9	32 - 50	15	
	TORRO 50 - 70/9	50 - 70	20	

NORMACLAMP® TORRO® Assembly fixture



NORMACLAMP® TORRO® ASSEMBLY FIXTURE	
Designation	Product No.
ASSEMBLY FIXTURE	0126 9900 001

NORMACLAMP® TORRO® Screwdriver SW6, SW7, SW6/7



NORMACLAMP® TORRO® SCREWDRIVER SW6, SW7, SW6/7	
Designation	Product No.
SW6	0000 0000 899
SW7	0000 0000 898
SW6/7	0000 0000 894