



- 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
- 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. Within the NORMACLAMP® range, only the TORRO® has its trademark asymmetrical construction.



The asymmetric housing provides high force, superior torque and 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: 8-12 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. 400 h
W5	Min. 1000 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

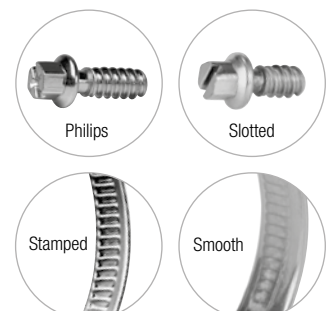
- W2, W3 with smooth inside

#### 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



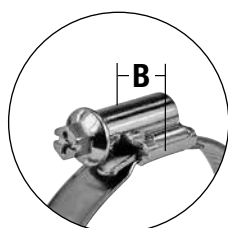
## Technical data & Ordering information

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										
7.5	TORRO 8-12/7.5	8-12	5/16-1/2"	11.5	9	17	0.6			0116 7602 010	0116 7603 010		
	TORRO 10-16/7.5	10-16	3/8-5/8"	11.5	9	17	0.6			0116 7602 013	0116 7603 013		
	TORRO 12-18/7.5	12-18	1/2-11/16"	11.5	9	17	0.6			0116 7602 015	0116 7603 015		
	TORRO 12-22/7.5	12-22	1/2-7/8"	11.5	9	17	0.6			0116 7602 017	0116 7603 017		
	TORRO 16-27/7.5	16-27	5/8-1 1/16"	11.5	9	17	0.6			0116 7602 021	0116 7603 021		
9	TORRO 8-12/9	8-12	5/16-1/2"	13.0	11.0	21.0	0.65	0.8	0126 7565 010	0126 7702 010	0126 7703 010	0126 7704 010	
	TORRO 10-16/9	10-16	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
	TORRO 70-90/9	70-90	2 3/4-3 9/16"	13.0	11.0	26.0	0.65	0.8	0126 7565 080	0126 7702 080	0126 7703 080	0126 7704 080	0126 7705 080
	TORRO 80-100/9	80-100	3 1/8-3 15/16"	13.0	11.0	26.0	0.65	0.8	0126 7565 090	0126 7702 090	0126 7703 090	0126 7704 090	0126 7705 090
	TORRO 90-110/9	90-110	3 9/16-4 5/16"	13.0	11.0	26.0	0.65	0.8	0126 7565 100	0126 7702 100	0126 7703 100	0126 7704 100	0126 7705 100
	TORRO 100-120/9	100-120	3 15/16-4 3/4"	13.0	11.0	26.0	0.65	0.8	0126 6565 110	0126 6702 110	0126 6703 110	0126 6704 110	0126 6705 110
	TORRO 110-130/9	110-130	4 5/16-5 1/8"	13.0	11.0	26.0	0.65	0.8	0126 6565 120	0126 6702 120	0126 6703 120	0126 6704 120	0126 6705 120
	TORRO 120-140/9	120-140	4 3/4-5 1/2"	13.0	11.0	26.0	0.65	0.8	0126 6565 130	0126 6702 130	0126 6703 130	0126 6704 130	0126 6705 130
	TORRO 130-150/9	130-150	5 1/8-5 15/16"	13.0	11.0	26.0	0.65	0.8	0126 6565 140	0126 6702 140	0126 6703 140	0126 6704 140	0126 6705 140
	TORRO 140-160/9	140-160	5 1/2-6 5/16"	13.0	11.0	26.0	0.65	0.8	0126 6565 150	0126 6702 150	0126 6703 150	0126 6704 150	0126 6705 150
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
	TORRO 70-90/12	70-90	2 3/4-3 9/16"	14.6	12.5	36.0	0.8	1.0	0136 7352 080	0136 7702 080	0136 7703 080	0136 7704 080	0136 7705 080
	TORRO 80-100/12	80-100	3 1/8-3 15/16"	14.6	12.5	36.0	0.8	1.0	0136 7352 090	0136 7702 090	0136 7703 090	0136 7704 090	0136 7705 090
	TORRO 90-110/12	90-110	3 9/16-4 5/16"	14.6	12.5	36.0	0.8	1.0	0136 7352 100	0136 7702 100	0136 7703 100	0136 7704 100	0136 7705 100
	TORRO 100-120/12	100-120	3 15/16-4 3/4"	14.6	12.5	36.0	0.8	1.0	0136 6352 110	0136 6702 110	0136 6703 110	0136 6704 110	0136 6705 110
	TORRO 110-130/12	110-130	4 5/16-5 1/8"	14.6	12.5	36.0	0.8	1.0	0136 6352 120	0136 6702 120	0136 6703 120	0136 6704 120	0136 6705 120
	TORRO 120-140/12	120-140	4 3/4-5 1/2"	14.6	12.5	36.0	0.8	1.0	0136 6352 130	0136 6702 130	0136 6703 130	0136 6704 130	0136 6705 130
TORRO 130-150/12	130-150	5 1/8-5 15/16"	14.6	12.5	36.0	0.8	1.0	0136 6352 140	0136 6702 140	0136 6703 140	0136 6704 140	0136 6705 140	
TORRO 140-160/12	140-160	5 1/2-6 5/16"	14.6	12.5	36.0	0.8	1.0	0136 6352 150	0136 6702 150	0136 6703 150	0136 6704 150	0136 6705 150	

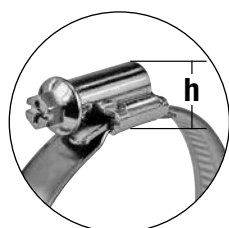
Additional diameters on request (up to 700 mm)



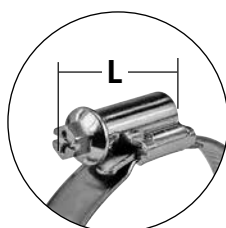
Refer to pages 191, 193, 194 and 199



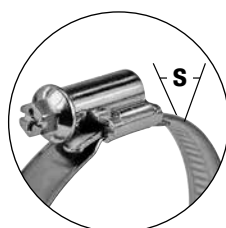
**B = overall width**  
housing



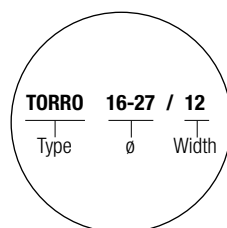
**h = overall height**  
bolt and housing



**L = overall length**  
bolt and housing

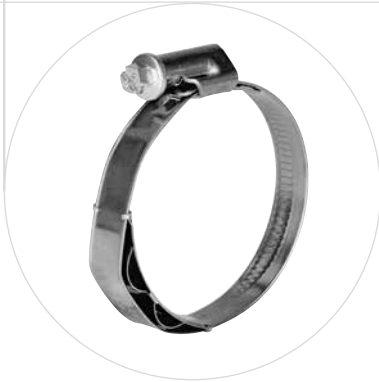


**s = band thickness**  
clamp band



**Name structure**  
clamp band





The TORRO® WF clamp is fitted with a wave spring which automatically re-tensions to ensure optimal radial clamping force. The TORRO® WF is the ideal choice for applications under extreme temperature changes (e.g. charged air), under extremely low temperatures or for the retention of hoses with a tendency of “creeping”/ hose relaxation.

**Advantages at a glance**

- Automatic re-tensioning effect in the event of hose relaxation
- Increased sealing reliability across a wide temperature range

**Materials**

W3, W4



**NORMACLAMP® TORRO® WF**

Width	Designation	Clamping ranges		B	h	L	s	W3 Product No.	W4 Product No.
		in mm	in inches						
9	TORRO WF 10-16/9	10-16	3/8 - 5/8"	13.0	11.0	21.0	0.65	0127 7708 013	0127 7711 013
	TORRO WF 12-18/9	12-18	1/2-11/16"	13.0	11.0	24.0	0.65	0127 7708 018	0127 7711 015
	TORRO WF 12-20/9	12-20	1/2-13/16"	13.0	11.0	24.0	0.65	0127 7708 016	0127 7711 016
	TORRO WF 12-22/9	12-22	1/2-7/8"	13.0	11.0	24.0	0.65	0127 7708 017	0127 7711 017
	TORRO WF 16-25/9	16-25	5/8-1"	13.0	11.0	24.0	0.65	0127 7708 020	0127 7711 020
	TORRO WF 16-27/9	16-27	5/8-1 1/16"	13.0	11.0	24.0	0.65	0127 7708 021	0127 7711 021
	TORRO WF 20-32/9	20-32	13/16-1 1/4"	13.0	11.0	24.0	0.65	0127 7708 026	0127 7711 026
	TORRO WF 23-35/9	23-35	15/16-1 3/8"	13.0	11.0	24.0	0.65	0127 7708 029	0127 7711 029
	TORRO WF 25-40/9	25-40	1-1 9/16"	13.0	11.0	26.0	0.65	0127 7708 032	0127 7711 032
	TORRO WF 30-45/9	30-45	1 3/16-1 3/4"	13.0	11.0	26.0	0.65	0127 7708 037	0127 7711 037
	TORRO WF 32-50/9	32-50	1 3/8-2"	13.0	11.0	26.0	0.65	0127 7708 041	0127 7711 041
	TORRO WF 40-60/9	40-60	1 9/16-2 3/8"	13.0	11.0	26.0	0.65	0127 7708 050	0127 7711 050
	TORRO WF 45-65/9	45-65	1 3/4-2 9/16"	13.0	11.0	26.0	0.65	0127 7708 055	0127 7711 055
	TORRO WF 50-70/9	50-70	2-2 3/4"	13.0	11.0	26.0	0.65	0127 7708 060	0127 7711 060
	TORRO WF 60-80/9	60-80	2 3/8-3 1/8"	13.0	11.0	26.0	0.65	0127 7708 070	0127 7711 070
	TORRO WF 70-90/9	70-90	2 3/4-3 9/16"	13.0	11.0	26.0	0.65	0127 7708 080	0127 7711 080
	TORRO WF 80-100/9	80-100	3 1/8-3 15/16"	13.0	11.0	26.0	0.65	0127 7708 090	0127 7711 090
	TORRO WF 90-110/9	90-110	3 9/16-4 5/16"	13.0	11.0	26.0	0.65	0127 7708 100	0127 7711 100
TORRO WF 100-120/9	100-120	3 15/16-4 3/4"	13.0	11.0	26.0	0.65	0127 7708 110	0127 7711 110	
TORRO WF 110-130/9	110-130	4 3/8-5 1/8"	13.0	11.0	26.0	0.65	0127 7708 120	0127 7711 120	
12	TORRO WF 16-27/12	16-27	5/8-1 1/16"	14.6	12.5	30.0	0.8	0137 7708 021	0137 7711 021
	TORRO WF 20-32/12	20-32	13/16-1 1/4"	14.6	12.5	30.0	0.8	0137 7708 026	0137 7711 026
	TORRO WF 25-40/12	25-40	1-1 9/16"	14.6	12.5	30.0	0.8	0137 7708 032	0137 7711 032
	TORRO WF 30-45/12	30-45	1 3/16-1 3/4"	14.6	12.5	30.0	0.8	0137 7708 037	0137 7711 037
	TORRO WF 35-50/12	35-50	1 3/8-2"	14.6	12.5	30.0	0.8	0137 7708 043	0137 7711 043
	TORRO WF 40-60/12	40-60	1 9/16-2 3/8"	14.6	12.5	30.0	0.8	0137 7708 050	0137 7711 050
	TORRO WF 50-70/12	50-70	2-2 3/4"	14.6	12.5	30.0	0.8	0137 7708 060	0137 7711 060
	TORRO WF 60-80/12	60-80	2 3/8-3 1/8"	14.6	12.5	30.0	0.8	0137 7708 070	0137 7711 070
	TORRO WF 70-90/12	70-90	2 3/4-3 9/16"	14.6	12.5	36.0	0.8	0137 7708 080	0137 7711 080
	TORRO WF 80-100/12	80-100	3 1/8-3 15/16"	14.6	12.5	36.0	0.8	0137 7708 090	0137 7711 090
TORRO WF 90-110/12	90-110	3 9/16-4 5/16"	14.6	12.5	36.0	0.8	0137 7708 100	0137 7711 100	

Available in W2 on request



Refer to page 199

## Table of torques

### TORRO 7.5 W2-W3

Diameter	8-12	10-16	12-18	12-22	16-27	20-32	25-40	30-45	35-50	40-60
TT	max 1.5	max 1.5	max 1.5	max 1.5	max 1.5					
FRT max										

### 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

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

### TORRO 9 W2

Diameter	8-12	10-16	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

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

### TORRO 9 W3-W5

Diameter	8-12	10-16	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

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

### 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

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

### 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

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

### 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

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 = Tightening Torque

FRT = Free Running Torque



The torque cap shears off when the permissible tightening torque is reached, thus saving the need to use a torque wrench. The bolt slot can still be accessed even after the break-off point, meaning that the clamp can be removed and/or re-tensioned if necessary.

**Advantages at a glance**

- Defined tightening torque without the need for special tools
- Installation can be checked visually

**Materials**

W1, W2, W3, W4

NORMACLAMP® TORRO® WITH TORQUE CAP												
Width	Designation	Clamping ranges		B	h	L	s	S (W1 only)	W1 Product No.	W2 Product No.	W3 Product No.	W4 Product No.
		in mm	in inches									
9	TORRO TORQUE CAP 8-12/9	8-12	5/16-1/2"	13.0	11.0	27.0	0.65	0.8	0126 7562 010	0126 7516 010	0126 7432 010	0126 7490 010
	TORRO TORQUE CAP 8-16/9	8-16	5/16-5/8"	13.0	11.0	27.0	0.65	0.8	0126 7562 013	0126 7516 013	0126 7432 013	0126 7490 013
	TORRO TORQUE CAP 12-22/9	12-22	1/2-7/8"	13.0	11.0	30.0	0.65	0.8	0126 7562 017	0126 7516 017	0126 7432 017	0126 7490 017
	TORRO TORQUE CAP 16-27/9	16-27	5/8-1 1/16"	13.0	11.0	30.0	0.65	0.8	0126 7562 021	0126 7516 021	0126 7432 021	0126 7490 021
	TORRO TORQUE CAP 20-32/9	20-32	13/16-1 1/4"	13.0	11.0	30.0	0.65	0.8	0126 7562 026	0126 7516 026	0126 7432 026	0126 7490 026
	TORRO TORQUE CAP 23-35/9	23-35	15/16-1 3/8"	13.0	11.0	30.0	0.65	0.8	0126 7562 029	0126 7516 029	0126 7432 029	0126 7490 029
	TORRO TORQUE CAP 25-40/9	25-40	1-1 9/16"	13.0	11.0	32.0	0.65	0.8	0126 7562 032	0126 7516 032	0126 7432 032	0126 7490 032
	TORRO TORQUE CAP 30-45/9	30-45	1 3/16-1 3/4"	13.0	11.0	32.0	0.65	0.8	0126 7562 037	0126 7516 037	0126 7432 037	0126 7490 037
	TORRO TORQUE CAP 35-50/9 (32 - 50)	35-50	1 3/8-2"	13.0	11.0	32.0	0.65	0.8	0126 7562 043	0126 7516 041	0126 7432 041	0126 7490 041
	TORRO TORQUE CAP 40-60/9	40-60	1 9/16-2 3/8"	13.0	11.0	32.0	0.65	0.8	0126 7562 050	0126 7516 050	0126 7432 050	0126 7490 050
	TORRO TORQUE CAP 50-70/9	50-70	2-2 3/4"	13.0	11.0	32.0	0.65	0.8	0126 7562 060	0126 7516 060	0126 7432 060	0126 7490 060
	TORRO TORQUE CAP 60-80/9	60-80	2 3/8-3 1/8"	13.0	11.0	32.0	0.65	0.8	0126 7562 070	0126 7516 070	0126 7432 070	0126 7490 070
	TORRO TORQUE CAP 70-90/9	70-90	2 3/4-3 9/16"	13.0	11.0	32.0	0.65	0.8	0126 7562 080	0126 7516 080	0126 7432 080	0126 7490 080
	TORRO TORQUE CAP 80-100/9	80-100	3 1/8-3 15/16"	13.0	11.0	32.0	0.65	0.8	0126 7562 090	0126 7516 090	0126 7432 090	0126 7490 090
	TORRO TORQUE CAP 90-110/9	90-110	3 9/16-4 5/16"	13.0	11.0	32.0	0.65	0.8	0126 7562 100	0126 7516 100	0126 7432 100	0126 7490 100
	TORRO TORQUE CAP 100-120/9	100-120	3 15/16-4 5/16"	13.0	11.0	32.0	0.65	0.8	0126 6562 110	0126 6516 110	0126 6432 110	0126 6490 110
	TORRO TORQUE CAP 110-130/9	110-130	4 5/16-5 1/8"	13.0	11.0	32.0	0.65	0.8	0126 6562 120	0126 6516 120	0126 6432 120	0126 6490 120
TORRO TORQUE CAP 120-140/9	120-140	4 3/4-5 1/2"	13.0	11.0	32.0	0.65	0.8	0126 6562 130	0126 6516 130	0126 6432 130	0126 6490 130	
TORRO TORQUE CAP 130-150/9	130-150	5 1/8-5 15/16"	13.0	11.0	32.0	0.65	0.8	0126 6562 140	0126 6516 140	0126 6432 140	0126 6490 140	
TORRO TORQUE CAP 140-160/9	140-160	5 1/2-6 5/16"	13.0	11.0	32.0	0.65	0.8	0126 6562 150	0126 6516 150	0126 6432 150	0126 6490 150	
12	TORRO TORQUE CAP 16-27/12	16-27	5/8-1 1/16"	14.6	12.5	36.0	0.8	0.8	0136 7135 021		0136 7181 021	
	TORRO TORQUE CAP 20-32/12	20-32	13/16-1 1/4"	14.6	12.5	36.0	0.8	0.8	0136 7135 026		0136 7181 026	
	TORRO TORQUE CAP 23-35/12	23-35	15/16-1 3/8"	14.6	12.5	36.0	0.8	0.8	0136 7135 029		0136 7181 029	
	TORRO TORQUE CAP 25-40/12	25-40	1-1 9/16"	14.6	12.5	36.0	1.0	1.0	0136 7135 032		0136 7181 032	
	TORRO TORQUE CAP 30-45/12	30-45	1 3/16-1 3/4"	14.6	12.5	36.0	1.0	1.0	0136 7135 037		0136 7181 037	
	TORRO TORQUE CAP 35-50/12	35-50	1 3/8-2"	14.6	12.5	36.0	1.0	1.0	0136 7135 043		0136 7181 043	
	TORRO TORQUE CAP 40-60/12	40-60	1 9/16-2 3/8"	14.6	12.5	36.0	1.0	1.0	0136 7135 050		0136 7181 050	
	TORRO TORQUE CAP 50-70/12	50-70	2-2 3/4"	14.6	12.5	36.0	1.0	1.0	0136 7135 060		0136 7181 060	
	TORRO TORQUE CAP 60-80/12	60-80	2 3/8-3 1/8"	14.6	12.5	36.0	1.0	1.0	0136 7135 070		0136 7181 070	
	TORRO TORQUE CAP 70-90/12	70-90	2 3/4-3 9/16"	14.6	12.5	42.0	1.0	1.0	0136 7135 080		0136 7181 080	
	TORRO TORQUE CAP 80-100/12	80-100	3 1/8-3 15/16"	14.6	12.5	42.0	1.0	1.0	0136 7135 090		0136 7181 090	
	TORRO TORQUE CAP 90-110/12	90-110	3 9/16-4 5/16"	14.6	12.5	42.0	1.0	1.0	0136 7135 100		0136 7181 100	
	TORRO TORQUE CAP 100-120/12	100-120	3 15/16-4 3/4"	14.6	12.5	42.0	1.0	1.0	0136 6135 110		0136 6181 110	
	TORRO TORQUE CAP 110-130/12	110-130	4 5/16-5 1/8"	14.6	12.5	42.0	1.0	1.0	0136 6135 120		0136 6181 120	
	TORRO TORQUE CAP 120-140/12	120-140	4 3/4-5 1/2"	14.6	12.5	42.0	1.0	1.0	0136 6135 130		0136 6181 130	
	TORRO TORQUE CAP 130-150/12	130-150	5 1/8-5 15/16"	14.6	12.5	42.0	1.0	1.0	0136 6135 140		0136 6181 140	
	TORRO TORQUE CAP 140-160/12	140-160	5 1/2-6 5/16"	14.6	12.5	42.0	1.0	1.0	0136 6135 150		0136 6181 150	



The NORMACLAMP® TORRO® Thumb screw can be comfortably tightened by hand using the wide screw head.

**Main advantage**

The clamp can be tightened or opened manually

**Materials**

W1, W2, W3, W4, W5

NORMACLAMP® TORRO® THUMB SCREW													
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 THUMB SCREW 8-12/9	8-12	5/16-1/2"	13.0	11.0	21.0	0.65	0.8	0126 7269 010				
	TORRO THUMB SCREW 8-16/9	8-16	5/16-5/8"	13.0	11.0	21.0	0.65	0.8	0126 7269 013	0126 7270 013	0126 7271 013	0126 7272 013	
	TORRO THUMB SCREW 12-22/9	12-22	1/2-7/8"	13.0	11.0	24.0	0.65	0.8	0126 7269 017	0126 7270 017	0126 7271 017	0126 7272 017	
	TORRO THUMB SCREW 16-27/9	16-27	5/8-1 1/16"	13.0	11.0	24.0	0.65	0.8	0126 7269 021	0126 7270 021	0126 7271 021	0126 7272 021	
	TORRO THUMB SCREW 20-32/9	20-32	13/16-1 1/4"	13.0	11.0	24.0	0.65	0.8	0126 7269 026	0126 7270 026	0126 7271 026	0126 7272 026	
	TORRO THUMB SCREW 23-35/9	23-35	15/16-1 3/8"	13.0	11.0	24.0	0.65	0.8	0126 7269 029	0126 7270 029	0126 7271 029	0126 7272 029	
	TORRO THUMB SCREW 25-40/9	25-40	1-1 9/16"	13.0	11.0	26.0	0.65	0.8	0126 7269 032	0126 7270 032	0126 7271 032	0126 7272 032	
	TORRO THUMB SCREW 30-45/9	30-45	1 3/16-1 3/4"	13.0	11.0	26.0	0.65	0.8	0126 7269 037	0126 7270 037	0126 7271 037	0126 7272 037	
	TORRO THUMB SCREW 35-50/9 (32-50)	35-50	1 3/8-2"	13.0	11.0	26.0	0.65	0.8	0126 7269 043	0126 7270 041	0126 7271 041	0126 7272 041	
	TORRO THUMB SCREW 40-60/9	40-60	1 9/16-2 3/8"	13.0	11.0	26.0	0.65	0.8	0126 7269 050	0126 7270 050	0126 7271 050	0126 7272 050	
	TORRO THUMB SCREW 50-70/9	50-70	2-2 3/4"	13.0	11.0	26.0	0.65	0.8	0126 7269 060	0126 7270 060	0126 7271 060	0126 7272 060	
	TORRO THUMB SCREW 60-80/9	60-80	2 3/8-3 1/8"	13.0	11.0	26.0	0.65	0.8	0126 7269 070	0126 7270 070	0126 7271 070	0126 7272 070	
	TORRO THUMB SCREW 70-90/9	70-90	2 3/4-3 9/16"	13.0	11.0	26.0	0.65	0.8	0126 7269 080	0126 7270 080	0126 7271 080	0126 7272 080	
TORRO THUMB SCREW 80-100/9	80-100	3 1/8-3 15/16"	13.0	11.0	26.0	0.65	0.8	0126 7269 090	0126 7270 090	0126 7271 090	0126 7272 090		
TORRO THUMB SCREW 90-110/9	90-110	3 9/16-4 5/16"	13.0	11.0	26.0	0.65	0.8	0126 7269 100	0126 7270 100	0126 7271 100	0126 7272 100		
12	TORRO THUMB SCREW 16-27/12	16-27	5/8-1 1/16"	14.6	12.5	30.0	0.8	0.8	0136 7308 021	0136 7309 021	0136 7310 021	0136 7311 021	0136 7312 021
	TORRO THUMB SCREW 20-32/12	20-32	13/16-1 1/4"	14.6	12.5	30.0	0.8	0.8	0136 7308 026	0136 7309 026	0136 7310 026	0136 7311 026	0136 7312 026
	TORRO THUMB SCREW 23-35/12	23-35	15/16-1 3/8"	14.6	12.5	30.0	0.8	0.8	0136 7308 029	0136 7309 029	0136 7310 029	0136 7311 029	0136 7312 029
	TORRO THUMB SCREW 25-40/12	25-40	1-1 9/16"	14.6	12.5	30.0	0.8	1.0	0136 7308 032	0136 7309 032	0136 7310 032	0136 7311 032	0136 7312 032
	TORRO THUMB SCREW 30-45/12	30-45	1 3/16-1 3/4"	14.6	12.5	30.0	0.8	1.0	0136 7308 037	0136 7309 037	0136 7310 037	0136 7311 037	0136 7312 037
	TORRO THUMB SCREW 35-50/12	35-50	1 3/8-2"	14.6	12.5	30.0	0.8	1.0	0136 7308 043	0136 7309 043	0136 7310 043	0136 7311 043	0136 7312 043
	TORRO THUMB SCREW 45-55/12	45-55	1 3/4-2 3/16"	14.6	12.5	30.0	0.8	1.0	0136 7308 048	0136 7309 048	0136 7310 048	0136 7311 048	0136 7312 048
	TORRO THUMB SCREW 40-60/12	40-60	1 9/16-2 3/8"	14.6	12.5	30.0	0.8	1.0	0136 7308 050	0136 7309 050	0136 7310 050	0136 7311 050	0136 7312 050
	TORRO THUMB SCREW 45-65/12	45-65	1 3/4-2 9/16"	14.6	12.5	30.0	0.8	1.0	0136 7308 055	0136 7309 055	0136 7310 055	0136 7311 055	0136 7312 055
	TORRO THUMB SCREW 50-70/12	50-70	2-2 3/4"	14.6	12.5	30.0	0.8	1.0	0136 7308 060	0136 7309 060	0136 7310 060	0136 7311 060	0136 7312 060
	TORRO THUMB SCREW 55-75/12	55-75	2 3/16-2 15/16"	14.6	12.5	30.0	0.8	1.0	0136 7308 065	0136 7309 065	0136 7310 065	0136 7311 065	0136 7312 065
	TORRO THUMB SCREW 60-80/12	60-80	2 3/8-3 1/8"	14.6	12.5	30.0	0.8	1.0	0136 7308 070	0136 7309 070	0136 7310 070	0136 7311 070	0136 7312 070
	TORRO THUMB SCREW 65-85/12	65-85	2 9/16-3 3/8"	14.6	12.5	30.0	0.8	1.0	0136 7308 075	0136 7309 075	0136 7310 075	0136 7311 075	0136 7312 075
	TORRO THUMB SCREW 70-90/12	70-90	2 3/4-3 9/16"	14.6	12.5	36.0	0.8	1.0	0136 7308 080	0136 7309 080	0136 7310 080	0136 7311 080	0136 7312 080
	TORRO THUMB SCREW 75-95/12	75-95	2 15/16-3 3/4"	14.6	12.5	36.0	0.8	1.0	0136 7308 085	0136 7309 085	0136 7310 085	0136 7311 085	0136 7312 085
	TORRO THUMB SCREW 80-100/12	80-100	3 1/8-3 15/16"	14.6	12.5	36.0	0.8	1.0	0136 7308 090	0136 7309 090	0136 7310 090	0136 7311 090	0136 7312 090
	TORRO THUMB SCREW 90-110/12	90-110	3 9/16-4 5/16"	14.6	12.5	36.0	0.8	1.0	0136 7308 100	0136 7309 100	0136 7310 100	0136 7311 100	0136 7312 100
	TORRO THUMB SCREW 100-120/12	100-120	3 15/16-4 3/4"	14.6	12.5	36.0	0.8	1.0	0136 7308 110	0136 7309 110	0136 7310 110	0136 7311 110	0136 7312 110
	TORRO THUMB SCREW 110-130/12	110-130	4 5/16-5 1/8"	14.6	12.5	36.0	0.8	1.0	0136 7308 120	0136 7309 120	0136 7310 120	0136 7311 120	0136 7312 120
	TORRO THUMB SCREW 120-140/12	120-140	4 3/4-5 1/2"	14.6	12.5	36.0	0.8	1.0	0136 7308 130	0136 7309 130	0136 7310 130	0136 7311 130	0136 7312 130
	TORRO THUMB SCREW 130-150/12	130-150	5 1/8-5 15/16"	14.6	12.5	36.0	0.8	1.0	0136 7308 140	0136 7309 140	0136 7310 140	0136 7311 140	0136 7312 140
	TORRO THUMB SCREW 140-160/12	140-160	5 1/2-6 5/16"	14.6	12.5	36.0	0.8	1.0	0136 7308 150	0136 7309 150	0136 7310 150	0136 7311 150	0136 7312 150
	TORRO THUMB SCREW 150-170/12	150-170	5 15/16-6 11/16"	14.6	12.5	36.0	0.8	1.0	0136 7308 160	0136 7309 160	0136 7310 160	0136 7311 160	0136 7312 160
	TORRO THUMB SCREW 160-180/12	160-180	6 5/16-7 1/16"	14.6	12.5	36.0	0.8	1.0	0136 7308 170	0136 7309 170	0136 7310 170	0136 7311 170	0136 7312 170



The NORMACLAMP® TORRO® Tamperproof can only be mounted and dismantled by using the Tamperproof Screwdriver – details on page 199. The specially designed screw head has three radial grooves, which means it cannot be adjusted with any commercially available tools. Automated assembly using a torque gun is particularly effective, as the special shape of the screw head allows for minimal misalignment or offset.

**Main advantage**

Non-dismountable clamps protect against manipulation

**Materials**

W3, W4



Refer to page 199



**NORMACLAMP® TORRO® TAMPERPROOF**

Width	Designation	Clamping ranges		B	h	L	s	W3 Product No.	W4 Product No.
		mm	inches						
9	TORRO TAMPERPROOF 8-12/9	8-12	5/16-1/2"	13.0	11.0	21.0	0.65	0126 6468 010	0126 6469 010
	TORRO TAMPERPROOF 8-16/9	8-16	5/16-5/8"	13.0	11.0	21.0	0.65	0126 6468 013	0126 6469 013
	TORRO TAMPERPROOF 12-20/9	12-20	1/2-13/16"	13.0	11.0	24.0	0.65	0126 6468 016	0126 6469 016
	TORRO TAMPERPROOF 12-22/9	12-22	1/2-7/8"	13.0	11.0	24.0	0.65	0126 6468 017	0126 6469 017
	TORRO TAMPERPROOF 16-25/9	16-25	5/8-1"	13.0	11.0	24.0	0.65	0126 6468 020	0126 6469 020
	TORRO TAMPERPROOF 16-27/9	16-27	5/8-1 1/16"	13.0	11.0	24.0	0.65	0126 6468 021	0126 6469 021
	TORRO TAMPERPROOF 20-32/9	20-32	13/16-1 1/4"	13.0	11.0	24.0	0.65	0126 6468 026	0126 6469 026
	TORRO TAMPERPROOF 23-35/9	23-35	15/16-1 3/8"	13.0	11.0	24.0	0.65	0126 6468 029	0126 6469 029
	TORRO TAMPERPROOF 25-40/9	25-40	1-1 9/16"	13.0	11.0	26.0	0.65	0126 6468 032	0126 6469 032
	TORRO TAMPERPROOF 30-45/9	30-45	1 3/16-1 3/4"	13.0	11.0	26.0	0.65	0126 6468 037	0126 6469 037
	TORRO TAMPERPROOF 32-50/9	32-50	1 1/4-2"	13.0	11.0	26.0	0.65	0126 6468 041	0126 6469 041
	TORRO TAMPERPROOF 35-55/9	35-55	1 3/8-2 3/16"	13.0	11.0	26.0	0.65	0126 6468 045	0126 6469 045
	TORRO TAMPERPROOF 40-60/9	40-60	1 9/16-2 3/8"	13.0	11.0	26.0	0.65	0126 6468 050	0126 6469 050
	TORRO TAMPERPROOF 45-65/9	45-65	1 3/4-2 9/16"	13.0	11.0	26.0	0.65	0126 6468 055	0126 6469 055
	TORRO TAMPERPROOF 50-70/9	50-70	2-2 3/4"	13.0	11.0	26.0	0.65	0126 6468 060	0126 6469 060
	TORRO TAMPERPROOF 55-75/9	55-75	2 3/16-2 15/16"	13.0	11.0	26.0	0.65	0126 6468 065	0126 6469 065
	TORRO TAMPERPROOF 60-80/9	60-80	2 3/8-3 1/8"	13.0	11.0	26.0	0.65	0126 6468 070	0126 6469 070
	TORRO TAMPERPROOF 65-85/9	65-85	2 9/16-3 3/8"	13.0	11.0	26.0	0.65	0126 6468 075	0126 6469 075
	TORRO TAMPERPROOF 70-90/9	70-90	2 3/4-3 9/16"	13.0	11.0	26.0	0.65	0126 6468 080	0126 6469 080
	TORRO TAMPERPROOF 75-95/9	75-95	2 15/16-3 3/4"	13.0	11.0	26.0	0.65	0126 6468 085	0126 6469 085
TORRO TAMPERPROOF 80-100/9	80-100	3 1/8-3 15/16"	13.0	11.0	26.0	0.65	0126 6468 090	0126 6469 090	
TORRO TAMPERPROOF 90-110/9	90-110	3 9/16-4 5/16"	13.0	11.0	26.0	0.65	0126 6468 100	0126 6469 100	
TORRO TAMPERPROOF 100-120/9	100-120	3 15/16-4 3/4"	13.0	11.0	26.0	0.65	0126 6468 110	0126 6469 110	
TORRO TAMPERPROOF 110-130/9	110-130	4 5/16-5 1/8"	13.0	11.0	26.0	0.65	0126 6468 120	0126 6469 120	
TORRO TAMPERPROOF 120-140/9	120-140	4 3/4-5 1/2"	13.0	11.0	26.0	0.65	0126 6468 130	0126 6469 130	
TORRO TAMPERPROOF 130-150/9	130-150	5 1/8-5 15/16"	13.0	11.0	26.0	0.65	0126 6468 140	0126 6469 140	
TORRO TAMPERPROOF 140-160/9	140-160	5 1/2-6 5/16"	13.0	11.0	26.0	0.65	0126 6468 150	0126 6469 150	
12	TORRO TAMPERPROOF 16-27/12	16-27	5/8-1 1/16"	14.6	12.5	30.0	0.8	0136 6358 021	0136 6359 021
	TORRO TAMPERPROOF 20-32/12	20-32	13/16-1 1/4"	14.6	12.5	30.0	0.8	0136 6358 026	0136 6359 026
	TORRO TAMPERPROOF 23-35/12	23-35	15/16-1 3/8"	14.6	12.5	30.0	0.8	0136 6358 029	0136 6359 029
	TORRO TAMPERPROOF 25-40/12	25-40	1-1 9/16"	14.6	12.5	30.0	0.8	0136 6358 032	0136 6359 032
	TORRO TAMPERPROOF 30-45/12	30-45	1 3/16-1 3/4"	14.6	12.5	30.0	0.8	0136 6358 037	0136 6359 037
	TORRO TAMPERPROOF 35-50/12	35-50	1 3/8-2"	14.6	12.5	30.0	0.8	0136 6358 043	0136 6359 043
	TORRO TAMPERPROOF 40-55/12	40-55	1 9/16-2 3/16"	14.6	12.5	30.0	0.8	0136 6358 048	0136 6359 048
	TORRO TAMPERPROOF 40-60/12	40-60	1 9/16-2 3/8"	14.6	12.5	30.0	0.8	0136 6358 050	0136 6359 050
	TORRO TAMPERPROOF 45-65/12	45-65	1 3/4-2 9/16"	14.6	12.5	30.0	0.8	0136 6358 055	0136 6359 055
	TORRO TAMPERPROOF 50-70/12	50-70	2-2 3/4"	14.6	12.5	30.0	0.8	0136 6358 060	0136 6359 060
	TORRO TAMPERPROOF 55-75/12	55-75	2 3/16-2 15/16"	14.6	12.5	30.0	0.8	0136 6358 065	0136 6359 065
	TORRO TAMPERPROOF 60-80/12	60-80	2 3/8-3 1/8"	14.6	12.5	30.0	0.8	0136 6358 070	0136 6359 070
	TORRO TAMPERPROOF 65-85/12	65-85	2 9/16-3 3/8"	14.6	12.5	30.0	0.8	0136 6358 075	0136 6359 075
	TORRO TAMPERPROOF 70-90/12	70-90	2 3/4-3 9/16"	14.6	12.5	36.0	0.8	0136 6358 080	0136 6359 080
	TORRO TAMPERPROOF 75-95/12	75-95	2 15/16-3 3/4"	14.6	12.5	36.0	0.8	0136 6358 085	0136 6359 085
	TORRO TAMPERPROOF 80-100/12	80-100	3 1/8-3 15/16"	14.6	12.5	36.0	0.8	0136 6358 090	0136 6359 090
	TORRO TAMPERPROOF 90-110/12	90-110	3 9/16-4 5/16"	14.6	12.5	36.0	0.8	0136 6358 100	0136 6359 100
	TORRO TAMPERPROOF 100-120/12	100-120	3 15/16-4 3/4"	14.6	12.5	36.0	0.8	0136 6358 110	0136 6359 110
	TORRO TAMPERPROOF 110-130/12	110-130	4 5/16-5 1/8"	14.6	12.5	36.0	0.8	0136 6358 120	0136 6359 120
	TORRO TAMPERPROOF 120-140/12	120-140	4 3/4-5 1/2"	14.6	12.5	36.0	0.8	0136 6358 130	0136 6359 130
TORRO TAMPERPROOF 130-150/12	130-150	5 1/8-5 15/16"	14.6	12.5	36.0	0.8	0136 6358 140	0136 6359 140	
TORRO TAMPERPROOF 140-160/12	140-160	5 1/2-6 5/16"	14.6	12.5	36.0	0.8	0136 6358 150	0136 6359 150	



## Notch



The notch is a clever means of pre-positioning the TORRO® hose clip on the hose. In this case the oval hole in the clamp band finds its exact counterpart on the hose surface. Thus the TORRO® is safely and accurately kept in place prior to the final assembly. Available in band widths of 9 and 12 mm and different angles on request.

### Main advantage

Safe pre-assembly on rubber sleeves and molded pipes

### Material

W3



Refer to page 199

## Prefix system



The NORMACLAMP® TORRO® Prefix system is a concept for integrated clamps and clips on hoses and pipes. Demand for complete systems that include the appropriate sealing function is increasing. This system can only be fixed by using a special tool. Available in band widths of 9 and 12 mm on request.

### Advantages at a glance

- Safe pre-assembly on hoses and molded pipes
- Two versions, left- and right-handed. Works on silicone and rubber hoses

### Materials

W3, W4



Refer to page 195

## WF Prefix system



The NORMACLAMP® TORRO® WF Prefix system is the combination of the NORMACLAMP® TORRO® WF and the NORMACLAMP® Prefix system. This system can only be fixed by using a special tool. Available in 9 and 12 mm band widths on request.

### Advantages at a glance

- Axial and radial adjustment of the clamp
- Possible for multilayer hoses and blow molded pipes
- Already available in series for different hose thickness
- Clinch design
- Eliminates corrosion issues
- Two versions, left- and right-handed
- Works on silicone and rubber hoses

### Materials

W3, W4



Refer to page 195

### Prefix clip



With this feature the TORRO® can also be pre-positioned on the hose. The two 'teeth' of this device keep the TORRO® hose clip safely in place if it needs to be stocked or transported prior to its final assembly. Available in band widths of 9 and 12 mm on request.

**Advantages at a glance**

- Safe pre-assembly on the hose
- Two versions, left- and right-handed

**Materials**

W3, W4



Refer to page 199

### Prefix Double clip



With this feature the TORRO® can also be pre-positioned on the hose. The 'teeth' of the clips keep the TORRO® hose clip safely in place if it needs to be stocked or transported prior to its final assembly. Available for the TORRO® with band width 12 mm.



**Advantages at a glance**

- Safe pre-assembly on the hose
- Two versions, left- and right-handed

**Materials**

W3, W4



Refer to page 199

### Radial insert



Compared to standard worm drive hose clamps, the Radial Insert is a "Spring Clamp", which offers optimal contraction and expansion capabilities. It is suitable for all applications where the hose is exposed to temperature fluctuations. The special design ensures a reliable seal throughout the complete thermal cycle. Available for the TORRO® with band width 9 mm.

**Advantages at a glance**

- The internal sliding sleeve optimizes clamping pressure
- High contact pressure due to the radially corrugated design
- Compensates for temperature fluctuations

**Material**

W1



Refer to page 199

### Safety collar



The NORMACLAMP® TORRO® safety collar 9/12 - 1043 0000 364 is a plastic ring that can be attached easily to the screw head of the clamp. By preventing the screwdriver from slipping off the head, it makes the installation process considerably safer. The safety collar is available for screws that correspond to wrench opening 7.

**Main advantage**

Screwdriver prevented from slipping during installation

**Materials**

For all materials

### Safety cap



The NORMACLAMP® TORRO® safety cap is a small plastic cap which covers the end of the clamp band, thus stopping injuries from occurring and making a significant contribution to accident prevention measures.

**Main advantage**

Available for band widths 7.5 mm - 0045 8000 021, 9 mm - 0045 8000 022 and 12 mm - 0045 8000 023

**Material**

Plastic