

# 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.

- 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
- 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



# Advantages at a glance

- Multi-range hose clamp
- Material W1, W2, W3, W4, W5
- No chromium(VI) to be 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
- Depressurised and pressurised 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 industry

## Types of clamp band and screw





## 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

		W1	W2	W3	W4	W5	
Phillips head	SW 7*	•	•				
Slotted head	SW 7			•	•	•	
* Band width 7.5 mm = SW 6							





## **Materials**

W1*		W3	W4	W5
X	х	х	х	х

<sup>\*</sup> 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

Sizes, band widths & materials

NUKIVI	ACLAMP® TORRO	) •											
		Clamp	ing ranges					S					
Width	Designation	in mm	in inches	В	h	L	s	(W1 only)	W1		W3	W4	W5
7.5	TORRO 8-12/7.5	8-12	5/16–1/2	11.5	9.2	17.6	0.6			Х	Х		
	TORRO 10-16/7.5	10-16	3/8-5/8	11.5	9.2	17.6	0.6			Х	Х		
	TORRO 12-18/7.5	12-18	1/2-3/4	11.5	9.2	17.6	0.6			Х	Х		
	TORRO 12-22/7.5	12-22	1/2-7/8	11.5	9.2	17,6	0.6			Х	Х		
	TORRO 16-27/7.5	16-27	5/8-11/16	11.5	9.2	17,6	0.6			Х	Х		
9	TORRO 8-12/9	8-12	5/16-1/2	13.0	11.0	21.0	0.7	0.8	Х	Х	Х	Х	Χ
	TORRO 8-16/9	8-16	5/16–5/8	13.0	11.0	21.0	0.7			Х	Х	Х	Χ
	TORRO 10-16/9	10-16	3/8-5/8	13.0	11.0	21.0	0.7	0.8	Х				
	TORRO 12-18/9	12-18	1/2-3/4	13.0	11.0	21.0	0.7	0.8	Х				
	TORRO 12-22/9	12-22	1/2-7/8	13.0	11.0	24.0	0.7	0.8	Х	Х	Х	Χ	Х
	TORRO 16-27/9	16-27	5/8-1 1/16	13.0	11.0	24.0	0.7	0.8	Х	Х	Х	Х	Х
	TORRO 20-32/9	20-32	3/4-1 1/4	13.0	11.0	24.0	0.7	0.8	Х	Х	Х	Χ	Х
	TORRO 25-40/9	25-40	1-1 5/8	13.0	11.0	26.0	0.7	0.8	Х	Х	Х	Х	Х
	TORRO 30-45/9	30-45	1 3/16–1 3/4	13.0	11.0	26.0	0.7	0.8	Х	Χ	Х	Χ	Х
	TORRO 35-50/9	35-50	1 3/8–2	13.0	11.0	26.0	0.7	0.8	Х	Х	Х	Х	Х
	TORRO 40-60/9	40-60	1 5/8–2 3/8	13.0	11.0	26.0	0.7	0.8	Х	Х	Х	Χ	Х
	TORRO 50-70/9	50-70	2-2 3/4	13.0	11.0	26.0	0.7	0.8	Х	Х	Х	Х	Х
	TORRO 60-80/9	60-80	2 3/8-3 1/8	13.0	11.0	26.0	0.7	0.8	Х	Х	Х	Χ	Χ
	TORRO 70-90/9	70-90	2 3/4-3 1/2	13.0	11.0	26.0	0.7	0.8	Х	Х	Х	Х	Х
	TORRO 80-100/9	80-100	3 1/8–4	13.0	11.0	26.0	0.7	0.8	Х	Х	Х	Х	Х
	TORRO 90-110/9	90-110	3 1/2-4 3/8	13.0	11.0	26.0	0.7	0.8	Х	Х	Х	Х	Х
	TORRO 100-120/9	100-120	4-4 3/4	13.0	11.0	26.0	0.7	0.8	Х	Х	Х	Х	Х
	TORRO 110-130/9	110-130	4 3/8–5 1/8	13.0	11.0	26.0	0.7	0.8	Х	Х	Х	Х	Х
	TORRO 120-140/9	120-140	4 3/4–5 1/2	13.0	11.0	26.0	0.7	0.8	Х	Х	Х	Х	Χ
	TORRO 130-150/9	130-150	5 1/8–5 7/8	13.0	11.0	26.0	0.7	0.8	Х	Х	Х	Х	Х
	TORRO 140-160/9	140-160	5 1/2-6 1/4	13.0	11.0	26.0	0.7	0.8	Х	Х	Х	Х	Χ
12	TORRO 16-27/12	16-27	5/8-1 1/16	14.6	12.5	30.0	0.8	0.8	Х	Χ	Х	Х	Х
	TORRO 20-32/12	20-32	3/4-1 1/4	14.6	12.5	30.0	0.8	0.8	Х	Х	Х	Х	Χ
	TORRO 25-40/12	25-40	1–1 5/8	14.6	12.5	30.0	0.8	1.0	Х	Х	Х	Х	Х
	TORRO 30-45/12	30-45	13/16-1 3/4	14.6	12.5	30.0	0.8	1.0	Х	Χ	Х	Χ	Х
	TORRO 35-50/12	35-50	1 3/8–2	14.6	12.5	30.0	0.8	1.0	Х	Х	Х	Х	Х
	TORRO 40-60/12	40-60	1 5/8–2 3/8	14.6	12.5	30.0	0.8	1.0	Х	Х	Х	Χ	Χ
	TORRO 50-70/12	50-70	2-2 3/4	14.6	12.5	30.0	0.8	1.0	Х	Х	Х	Х	Х
	TORRO 60-80/12	60-80	2 3/8–3 1/8	14.6	12.5	30.0	0.8	1.0	Х	Х	Х	Χ	Х
	TORRO 70-90/12	70-90	2 3/4-3 1/2	14.6	12.5	36.0	0.8	1.0	Х	Х	Х	Х	Х
	TORRO 80-100/12	80-100	3 1/8–4	14.6	12.5	36.0	0.8	1.0	Х	Х	Х	Х	Χ
	TORRO 90-110/12	90-110	3 1/2-4 3/8	14.6	12.5	36.0	0.8	1.0	Х	Х	Х	Х	Х
	TORRO 100-120/12	100-120	4-4 3/4	14.6	12.5	36.0	0.8	1.0	Х	Х	Х	Х	Χ
	TORRO 110-130/12	110-130	4 3/8–5 1/8	14.6	12.5	36.0	0.8	1.0	Х	Х	Х	Х	Х
	TORRO 120-140/12	120-140	4 3/4–5 1/2	14.6	12.5	36.0	0.8	1.0	Х	Х	Х	Х	Χ
	TORRO 130-150/12	130-150	5 1/8–5 7/8	14.6	12.5	36.0	0.8	1.0	Х	Х	Х	Х	Х
	TORRO 140-160/12	140-160	5 1/2-6 1/4	14.6	12.5	36.0	0.8	1.0	X	Х	Х	Χ	Х





#### **h** = overall height



#### $\mathbf{L} = \text{overall length}$



#### s = band thickness



#### Name structure

TORRO	16-27 / 12	
Type	ø Widht	

3

## **Versions**

## NORMACLAMP® WF

For this version of the NORMACLAMP® TORRO® the standard hose clamp is equipped with a spring insert on the inside of the clamp band. When tightening the screw the spring is loaded and stores sufficient clamping force to ensure a long-lasting automatic re-tensioning effect. Thus the radial clamping force achieved will be sufficient even under extremely low temperatures. Therefore, the TORRO® is an optimal solution for applications under extreme temperature changes (e. g. charged air) or for the retention of hoses with a tendency of 'creeping' (hose relaxation).



#### **Advantages:**

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

NORMA	CLAMP® WF								
		Clampii	ng ranges						
Width	Designation	in mm	in inches	В	h	L	s	W3	W4
9	TORRO 8-16/9 WF	8–16	5/16-5/8	13.0	11.0	21.0	0.7	Χ	Х
	TORRO 12-22/9 WF	12-22	1/2-7/8	13.0	11.0	24.0	0.7	Х	Х
	TORRO 16-27/9 WF	16–27	5/8-11/16	13.0	11.0	24.0	0.7	Х	Х
	TORRO 20-32/9 WF	20-32	3/4-11/4	13.0	11.0	24.0	0.7	Χ	Χ
	TORRO 25-40/9 WF	25-40	1–15/8	13.0	11.0	26.0	0.7	Х	Х
	TORRO 30-45/9 WF	30–45	13/16–2	13.0	11.0	26.0	0.7	Х	Х
	TORRO 35-50/9 WF	35–50	13/8–2	13.0	11.0	26.0	0.7	Х	Х
	TORRO 40-60/9 WF	40–60	15/8–23/8	13.0	11.0	26.0	0.7	Х	Х
	TORRO 50-70/9 WF	50–70	2-23/4	13.0	11.0	26.0	0.7	Х	Х
	TORRO 60-80/9 WF	60–80	23/8 -31/8	13.0	11.0	26.0	0.7	Х	Х
	TORRO 70-90/9 WF	70–90	23/4-31/2	13.0	11.0	26.0	0.7	Х	Х
	TORRO 80-100/9 WF	80–100	31/8–4	13.0	11.0	26.0	0.7	Х	Х
	TORRO 90-110/9 WF	90–110	31/2-43/8	13.0	11.0	26.0	0.7	Х	Х
	TORRO 100-120/9 WF	100–120	4-43/4	13.0	11.0	26.0	0.7	Х	Х
	TORRO 110-130/9 WF	110–130	43/8–51/8	13.0	11.0	26.0	0.7	Χ	Χ
12	TORRO 16-27/12 WF	16–27	5/8-11/16	14.6	12.5	30.0	0.8	Х	Х
	TORRO 20-32/12 WF	20–32	3/4–11/4	14.6	12.5	30.0	0.8	Х	Х
	TORRO 25-40/12 WF	25-40	1–15/8	14.6	12.5	30.0	0.8	Х	Х
	TORRO 30-45/12 WF	30–45	13/16–13/4	14.6	12.5	30.0	0.8	Х	Х
	TORRO 35-50/12 WF	35–50	13/8–2	14.6	12.5	30.0	0.8	Х	Х
	TORRO 40-60/12 WF	40–60	15/8–23/8	14.6	12.5	30.0	0.8	Х	Х
	TORRO 50-70/12 WF	50-70	2-23/4	14.6	12.5	30.0	0.8	Х	Х
	TORRO 60-80/12 WF	60–80	23/8-31/8	14.6	12.5	30.0	0.8	Х	Х
	TORRO 70-90/12 WF	70–90	23/4-31/2	14.6	12.5	36.0	0.8	Х	Х

# **Table of torques**

TORRO	7.5 W2-V	W3								
Diameter	8–12	10–16	12–18	12–22	16–27	20-32	25–40	30–45	35–50	40–60
AD	max 1.5	max 1.5	max 1.5	max 1.5	max 1.5	20 02	20 10	00 10	00 00	10 00
LD max	max no	max no	max no	max no	max no					
PD	2	2	2	2	2					
BD min	2.25	2.25	2.25	2.25	2.25					
55	2.20	2.20	2.20	2.20	2.20					
TORRO	9 W1									
Diameter	8–12	10–16	12–18	12–22	16–27	20–32	25–40	30–45	35–50	40–60
AD	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
LD max	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
PD	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
AD	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
LD max	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
PD	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
AD	0-12	2 +0.5	12-10	3 +0.5	3 +0.5	3 +0.5	3 +0.5	3+0.5	3+0.5	3 +0.5
LD max		0.7		0.7	0.7	0.7	0.7	0.7	0.7	0.7
PD		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
	E0 70	60–80	70–90	80–100	90–110	100–120	110–130	120–140	130–150	-
<b>Diameter</b> AD	<b>50–70</b> 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	<b>140–160</b> 3 +0.5
LD max	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
PD	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
DD IIIIII	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
TORRO	9 W3-W	5								
Diameter	8–12	8–16	12–18	12–22	16–27	20-32	25–40	30–45	35–50	40–60
AD		2 +0.5		3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5	3 +0.5
LD max		0.7		0.7	0.7	0.7	0.7	0.7	0.7	0.7
PD		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
AD	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
LD max	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
PD	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

Kev:

 $AD = recommended \ tightening \ torque \ in \ Nm; \ LD = idling \ torque \ in \ Nm; \ PD = test \ torque \ in \ Nm;$ 

 $\mathsf{BD} = \mathsf{failure} \; \mathsf{torque} \; \mathsf{in} \; \mathsf{Nm}$ 

# **Table of torques**

12 W1				l e			ı		l e
8–12	10–16	12–18	12–22	16–27	20–32	25–40	30–45	35–50	40–60
				5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5
				1.2	1.2	1.2	1.2	1.2	1.2
				6.5	6.5	6.5	6.5	6.5	6.5
				10	10	10	10	10	10
50-70	60-80	70-90	80-100	90–110	100-120	110-130	120-140	130-150	140-160
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
1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
10	10	10	10	10	10	10	10	10	10
12 W2/\	N3								
8–12	10–16	12–18	12–22	16–27	20-32	25-40	30–45	35–50	40-60
				5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5
				1	1	1	1	1	1
				6.5	6.5	6.5	6.5	6.5	6.5
				8.0	8.0	8.5	8.5	8.5	8.5
50-70	60–80	70–90	80–100	90–110	100–120	110–130	120–140	130–150	140–160
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
1	1	1	1	1	1	1	1	1	1
6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
12 W4/\	<b>N</b> 5								
8–12	10–16	12–18	12–22	16–27	20-32	25-40	30–45	35–50	40–60
				5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5	5 +0.5
				1	1	1	1	1	1
				6.5	6.5	6.5	6.5	6.5	6.5
				8	8	8.5	8.5	8.5	8.5
50-70	60–80	70–90	80–100	90–110	100–120	110–130	120-140	130–150	140–160
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
1	1	1	1	1	1	1	1	1	1
6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
	5+0.5 1.2 6.5 10 12 W2/\(^8-12\) 50-70 5+0.5 1 6.5 8.5 12 W4/\(^8-12\) 50-70 5+0.5 1	50-70 60-80 5+0.5 5+0.5 1.2 1.2 6.5 6.5 10 10  12 W2/W3 8-12 10-16  50-70 60-80 5+0.5 5+0.5 1 1 6.5 6.5 8.5 8.5  12 W4/W5 8-12 10-16  50-70 60-80 5+0.5 5+0.5 1 10-16	50-70 60-80 70-90 5+0.5 5+0.5 5+0.5 1.2 1.2 1.2 6.5 6.5 6.5 10 10 10  12 W2/W3 8-12 10-16 12-18  50-70 60-80 70-90 5+0.5 5+0.5 5+0.5 1 1 1 6.5 6.5 6.5 8.5 8.5 12 W4/W5 8-12 10-16 12-18	50-70 60-80 70-90 80-100 5+0.5 5+0.5 5+0.5 5+0.5 1.2 1.2 1.2 1.2 6.5 6.5 6.5 6.5 10 10 10 10 10  12 W2/W3 8-12 10-16 12-18 12-22  50-70 60-80 70-90 80-100 5+0.5 5+0.5 5+0.5 1 1 1 1 1 6.5 6.5 6.5 6.5 8.5 8.5 8.5 8.5  12 W4/W5 8-12 10-16 12-18 12-22	S + 0.5	S + 0.5	S + 0.5   S + 0.5   S + 0.5   S + 0.5     1.2	S + 0.5	1.2   1.2

Kev

 $AD = recommended \ tightening \ torque \ in \ Nm; \ LD = idling \ torque \ in \ Nm; \ PD = test \ torque \ in \ Nm;$ 

BD = failure torque in Nm

# Ordering information

When submitting requests and orders, please specify the data in the following way

	1. Type	2. Clamping range	3. Band width	4. Bolt	5. Material	
Example	TORRO	35-50	9	C7	W4	

# NORMACLAMP® TORRO® – Modular Accessory System

The TORRO® product range is based on a modular system concept – so by adding just a few components in the right places, you can furnish your TORRO® clamp with additional specific features.

The individual modules in the system can also be combined with one another if required.

#### **The Torque Cap**

STANDARD RANGE



The torque cap shares off when the permissible tightening torque is reached, thus saving the need to use a torque spanner. 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.

#### **Advantage:**

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

#### **The Notch**

STANDARD RANGE



The notch is a clever means for pre-positioning the TORRO® hose clip on the hose. In this case the oval hole in the clamp band finds its exact counter part on the hose surface. Thus the TORRO® is safely and accurately kept in place prior to the final assembly.

#### Advantage:

Safe pre-assembly on on rubber sleeves and molded pipes

#### **The Thumbsrew**

STANDARD RANGE



The NORMACLAMP® TORRO® thumbscrew. You can twist this product to tighten bolts.

#### Advantage:

• The clamp can be tightened or opened manually

#### The Spring insert

STANDARD RANGE



In this NORMACLAMP® TORRO® version, a spring insert is attached to the inside of the band. The spring insert is pretensioned during tightening, and the spring energy stored as a result of this ensures an automatic re-tensioning effect for an extended period. Even at extreme temperatures, this mechanism still enables a sufficient level of radial clamping force to be achieved.

#### **Advantage:**

- Automatic re-tensioning effect with hose relaxation
- Improved sealing reliability over a wide range of temperatures

#### **The PreFix System**

STANDARD RANGE



The NORMACLAMP® PreFix System is a concept for integrated clamps and clips on hoses and pipes. The demand for complete systems that include the appropriate sealing function is increasing.

#### **Advantage:**

• Safe pre-assembly on on hoses and molded pipes

# NORMACLAMP® TORRO® — Modular Accessory System

#### **The Prefix Clip**

STANDARD RANGE



With this accessory 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.

#### Advantage:

• Safe pre-assembly on the hose

#### The Tamper-proof

STANDARD RANGE



The NORMACLAMP® TORRO® Tamper-proof can only be mounted and dismounted by using a special tool. 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.

#### Advantage:

• Non-dismountable clamps protects against manipulation

#### **The Safety-Cap**

STANDARD RANGE



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.

#### Advantage:

• Available for band widths 7.5 mm, 9 mm and 12 mm

#### **The Radial Insert**

ON ORDER



The Radial® Spring Clamp consists of a Standard riveted clamp with a stainless steel liner. This insert in the Radial acts as a spring. Inward radial pressure on the hose is made possible as the material between the cut-outs and the longitudinal beads acts as leaf springs.

#### **Advantage**:

- Radial integrated element located on the inside of the clamp band
- High contact pressure due to the radially corrugated design
- There are also dynamic properties
- Only available in 9 mm band width



## NORMACLAMP® TORRO® — Assortments

# Find our complete range of Assortment's

## NORMACLAMP® TORRO® Dispenser

#### Dispenser - 100

contains 100 pcs. from TORRO 8-12 thru TORRO 60-80 bandwidth 7.5 / 9 mm quality W2



## NORMA**CLAMP® TORRO®** Assortment Type 50 pcs

#### Type 50K

contains 50 pcs. from TORRO 8-16 thru TORRO 40-60 bandwidth 9 mm quality W2

#### **Type 100K**

contains 100 pcs. from TORRO 8-16 thru TORRO 50-70 bandwidth 9 mm quality W2



## NORMA**CLAMP® TORRO®** Drawer Box Type 200 pcs / 450 pcs

#### **Type 200K**

contains 200 pcs. from TORRO S 16-27 thru TORRO 50-70 bandwidth 12 mm quality W1 & W2

#### **Type 450K**

contains 450 pcs. from TORRO 8-12 thru TORRO 60-80 bandwidth 9 mm quality W1 & W2



	Material: W1 and W	<b>_</b>
Width	Type designation/ Content (pcs)	Product Number
	Assortment / Dispenser – 100	0126 9702 010
7,5	TORRO 8 - 12/7,5 C6 W2/10	
9	TORRO 8 - 16/9 C7 W2/10	
	TORRO 12 - 22/9 C7 W2/10	
	TORRO 16 - 27/9 C7 W2/10	
	TORRO 20 - 32/9 C7 W2/10	
	TORRO 25 - 40/9 C7 W2/10	
	TORRO 32 - 50/9 C7 W2/10	
	TORRO 40 - 60/9 C7 W2/10	
	TORRO 50 - 70/9 C7 W2/10	
	TORRO 60 - 80/9 C7 W2/10	
	Assortment Type 50 K / 50	0126 9702 050
9	TORRO 8 - 16/9 C7 W2/5	
	TORRO 12 - 22/9 C7 W2/8	
	TORRO 16 - 27/9 C7 W2/10	
	TORRO 20 - 32/9 C7 W2/5	
	TORRO 25 - 40/9 C7 W2/12	
	TORRO 32 - 50/9 C7 W2/5	
	TORRO 40 - 60/9 C7 W2/5	
	Assortment Type 100K/ 100	0126 9702 100
9	TORRO 8 - 16/9 C7 W2/10	
	TORRO 12 - 22/9 C7 W2/15	
	TORRO 16 - 27/9 C7 W2/20	
	TORRO 20 - 32/9 C7 W2/10	
	TORRO 25 - 40/9 C7 W2/25	
	TORRO 32 - 50/9 C7 W2/10	
	TORRO 50 - 70/9 C7 W2/10	
	Assortment Type 200 K/ 200	0136 9712 200
12	TORRO S 16 - 27/12 C7 W1/60	
	TORRO S 20 - 32/12 C7 W1/48	
	TORRO S 25 - 40/12 C7 W1/32	
	TORRO S 35 - 50/12 C7 W1/24	
	TORRO S 40 - 60/12 C7 W1/20	
	TORRO S 50 - 70/12 C7 W1/16	0.0000000000000000000000000000000000000
0	Assortment Type 450 k/ 450	0126 9702 450
9	TORRO 8 - 16/9 C7 W2/155	
	TORRO 12 - 22/9 C7 W2/60	
	TORRO 16 - 27/9 C7 W2/100	
	TORRO 20 - 32/9 C7 W2/50	
	TORRO 25 - 40/9 C7 W2/50	
	TORRO 35 - 50/9 C7 W2/15	
	TORRO 50 - 70/9 C7 W2/20	

Material: W1 and W2



## **NORMA Group**

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