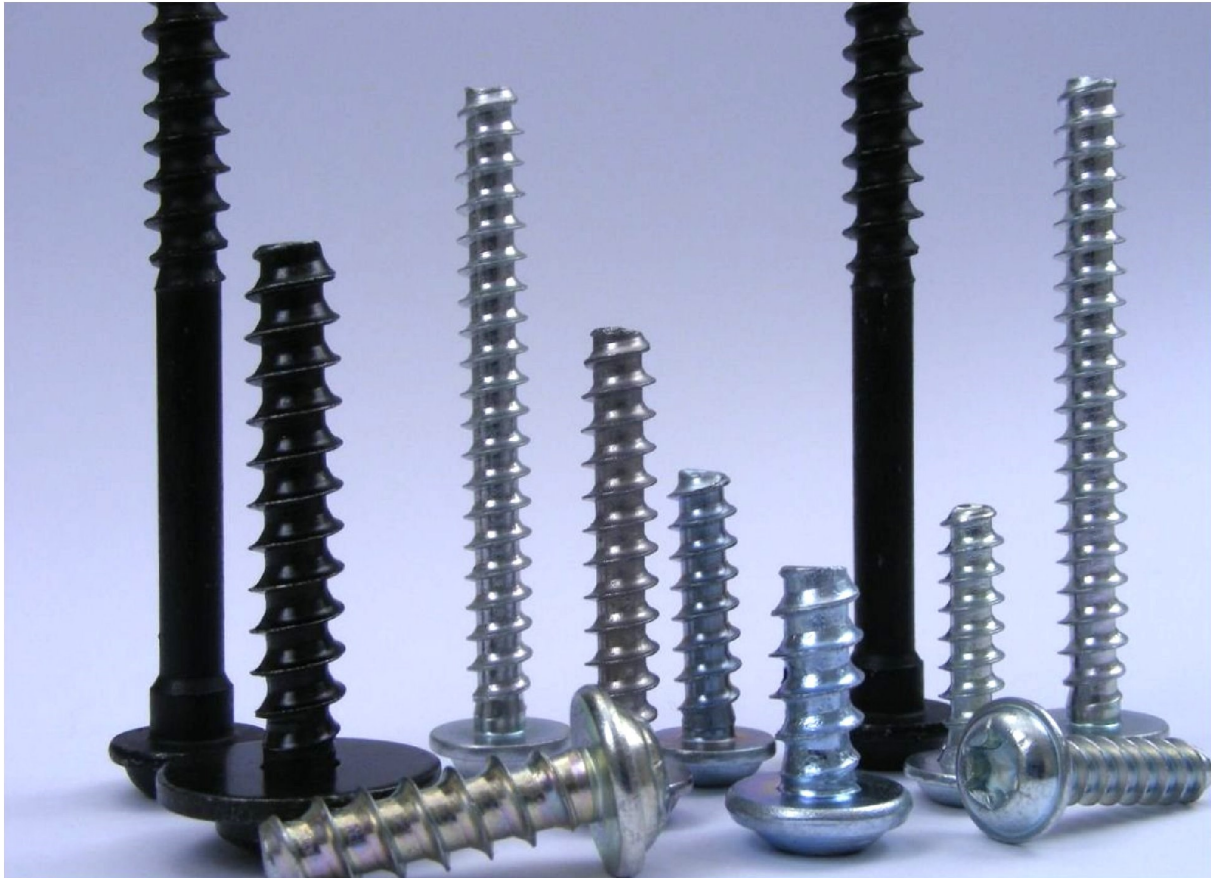




# REMFORM® II™ Screws For Plastics



## REMFORM® II™ Screws

**Designed for the Demanding Plastic Applications of Today and Tomorrow**

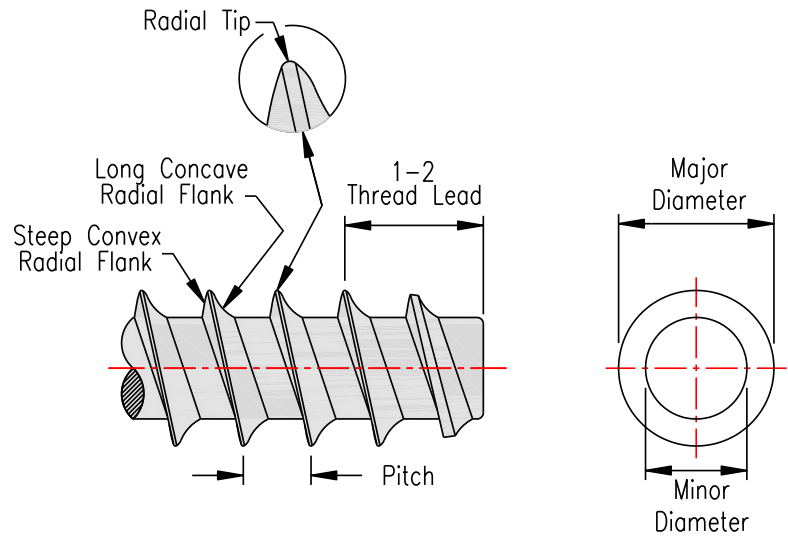
The REMFORM® II™ screw is a thread forming fastener with a unique thread form to provide superior performance in today's wide range of plastics. The asymmetrical thread minimizes radial hoop stress to reduce boss bursting. The narrow tip angle also reduces stress in the plastic nut member.

**Leaders in Lowering the Cost of Assembly**

# REFORM<sup>®</sup> II<sup>™</sup> Screws For Plastics

## REFORM<sup>®</sup> II<sup>™</sup> fasteners meet the basic design goals for screws for plastics plus:

- Reduced induced hoop stress
- Material displacement to pressure flank
- Easy manufacture
- Maintains straight shank
- High torsional strength



### Metric Series

SIZE	PITCH	MAJOR DIA.		MINOR DIA.
		Max.	Min.	Min.
1.0	0.55	1.07	1.00	0.64
1.2	0.65	1.27	1.20	0.77
1.4	0.75	1.47	1.40	0.89
1.6	0.85	1.70	1.60	1.02
1.8	0.85	1.90	1.80	1.15
2.0	1.00	2.10	2.00	1.17
2.2	1.05	2.30	2.20	1.29
2.5	1.15	2.60	2.50	1.48
3.0	1.35	3.10	3.00	1.90
3.5	1.55	3.60	3.50	2.22
4.0	1.75	4.10	4.00	2.55
4.5	2.00	4.60	4.50	2.87
5.0	2.25	5.15	5.00	3.19
6.0	2.65	6.15	6.00	3.84
7.0	3.10	7.15	7.00	4.48
8.0	3.50	8.15	8.00	5.11
9.0	4.00	9.15	9.00	5.74
10.0	4.50	10.15	10.00	6.37

Dimensions in mm

### Inch Series

SIZE	PITCH TPI	MAJOR DIA.		MINOR DIA.
		Max.	Min.	Min.
2	20	0.088	0.084	0.049
4	18	0.114	0.110	0.067
6	16	0.139	0.135	0.085
8	15	0.167	0.161	0.101
10	13	0.193	0.187	0.123
12	11	0.218	0.212	0.144
1/4	10	0.253	0.247	0.157
5/16	8	0.316	0.309	0.195

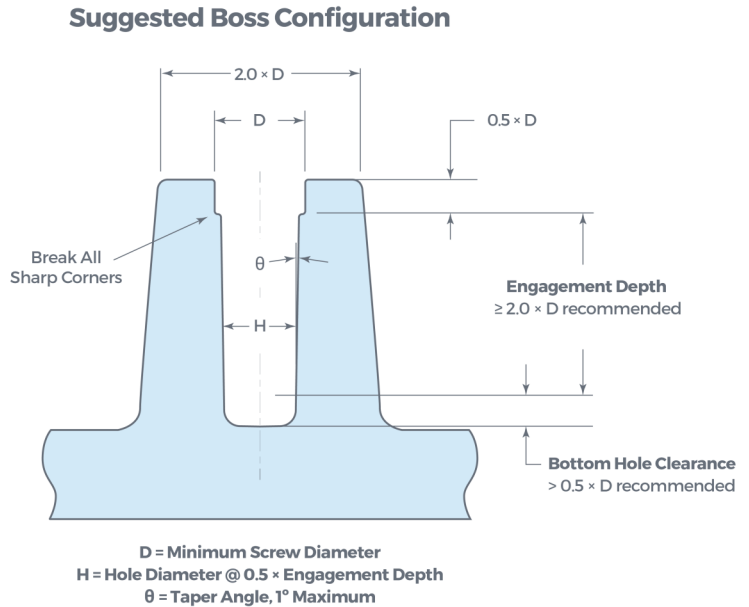
Dimensions in inches

### MATERIAL AND HEAT TREAT

- Material
  - Low to medium carbon steel (.18C minimum)
  - Stainless Steel (410, 430, 302, 304, A2)
- Heat Treat (steel products)
  - Neutral hardening recommended
  - Core Hardness HRC 33-39 / Vickers 327-382

## RECOMMENDED HOLE SIZES

MATERIAL TYPE	H HOLE DIA. FACTOR X Min. Screw Dia.
PP	0.75
PE	0.75
PA (Nylon 6 / 6.6)	0.75
ABS / PC Blend	0.75
ASA	0.75
ABS	0.75
PVC (rigid)	0.80
SAN	0.80
PS	0.80
PBT	0.80
PET	0.80
PC	0.80
PPO	0.80
PET 30% GF	0.80
PC 30% GF	0.82
PPO 30% GF	0.82
PA 6 30%GF	0.85
PBT 30% GF	0.85



**NOTE: Plastics & polymer families have significant differences in their material properties. These dimensions are offered as a starting point.**

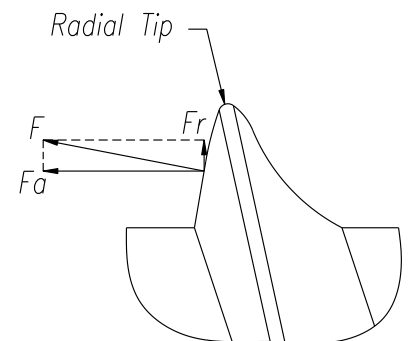
**All dimensions must be checked in practice prior to critical use.**

Hole sizes for the plastics listed in the table are derived by multiplying the minimum screw diameter by the factor listed in the table. The resulting hole size should be considered as a starting point which may need to be adjusted due to specific application conditions.

## Reduced Hoop Stress

The radial tip thread crest of REMFORM® II™ screws reduces sharp corners, which reduces radial hoop stress in the plastic caused by thread forming.

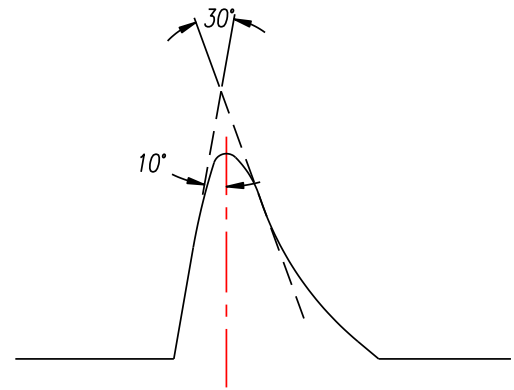
When a threaded fastener is tightened, nearly all of the axial tightening load, designated **F**, is opposed by the trailing or pressure flank of the screw and the mating thread flank of the internal thread. The steep pressure flank transfers most of the resultant tightening load in the axial direction, **F<sub>a</sub>**, minimizing boss bursting tendencies created by the radial force, **F<sub>r</sub>**. The axial force, **F<sub>a</sub>**, is over 4.5 times greater than **F<sub>r</sub>**, the radial force.





## The Unique Radius Flank™ Thread Form

REMFORM® II™ screws employ the Unique Radius Flank™ asymmetrical thread form shown in the drawing to the right. The leading thread flank is most influential in forming the mating thread. The intercepting radius form on the leading flank is there to promote efficient material displacement and material flow. The pressure flank which opposes the fastener head is engineered to resist pull-out forces, whether they be applied by a tensile load or induced by torque. The steep pressure flank has a subtle radius designed to increase resistance to pullout and to efficiently develop tension. It also provides excellent material contact resulting in a high resistance to the internal threads stripping. In applications where the failure mode is fastener fracture, the high torsional strength of REMFORM® II™ fasteners ensures a high failure torque. This unique thread and its narrow tip angle efficiently displace material and therefore require minimal energy to form an internal thread. The tip also utilizes a radius to better create the internal thread without increasing hoop stress in the plastic.



The REMFORM® II™ asymmetrical Unique Radius Flank™ thread form has the thread forming advantages of a 30° thread, without the difficulty of manufacturing a 30° thread.

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### TECHNICAL ASSISTANCE

This brochure contains basic information needed to achieve the cost-savings potential of REMFORM® II™ fasteners

To obtain further assistance and a list of qualified producers, visit our website at [www.remform.com](http://www.remform.com) or contact REMINC or CONTI.

### SPECIFY GENUINE PRODUCTS

Make sure you're getting genuine REMINC/CONTI design, engineering, quality, reliability and performance. Only genuine REMINC/CONTI products meet the rigorous standards created by REMINC/CONTI.

Patents and trademarks issued and/or pending worldwide.

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