

# Total Contact Casting: Comparison of Plantar Pressures in Two Total Contact Casting Systems

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## Purpose and Objective

A new Total Contact Casting system, the TCC-EZ, has been introduced to address diabetic foot complications. This study compares the off-loading characteristics of the TCC-EZ to a traditional Total Contact Cast (MedE-Kast). The objective is to provide a new off-loading option for clinicians dealing with these complications.

## Methods

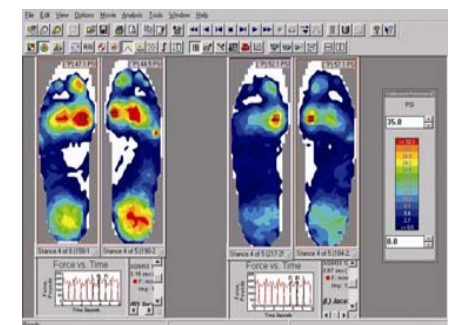
Ten healthy normal patients ambulated in each cast at 2.0 MPH on a treadmill in both a TCC-EZ and a traditional total contact cast (MedE-Kast). The off-loading results were obtained utilizing the F-Scan pressure measurement system made by Tekscan.

## Results

Location/Cast Type	MedE-Kast (Traditional TCC)	TCC-EZ (New Roll-on Sleeve)
Full Plantar Surface Pressure	Avg 8.4 psi Max 50.3 psi	Avg 7.2 psi Max 49.9 psi
Forefoot Pressure	Avg 8.5 psi Max 48.3 psi	Avg 7.1 psi Max 47.2 psi
Mid-foot Pressure	Avg 6.2 psi Max 23.9 psi	Avg 5.6 psi Max 12.6 psi
Rear-foot Pressure	Avg 10.8 psi Max 40.5 psi	Avg 9.3 psi Max 48.8 psi

## Conclusion

TCC-EZ performed better in all areas of the foot except with maximal pressures in the rear-foot. The TCC-EZ can be used for efficacious reduction in pressure when compared to a traditional Total Contact Cast (MedE-Kast). Thus, TCC-EZ should be considered a viable option for clinical use in off-loading diabetic foot ulcers.



F-Scan™ Pressure Measurement System by Tekscan

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