

Solstice™ MR SRS Immobilization System

CIVCO Technical Data Sheet



Product Name	Solstice MR SRS Immobilization System	
Product Number	CHS03MR	Solstice, Glass Fiber MR, Posifix
	CHS04MR	Solstice, Glass Fiber MR, Type-S
Kits that include this product	CHS03MRSGK, CHS04MRSGK, CHS03MRK, CHS04MRK	
General Description	The Solstice MR system is comprised of a glass fiber head support, customizable cushion and dedicated thermoplastic that create a highly customizable and comfortable head and neck immobilization system. Variable pitch capability provides increased setup options during MR imaging.	
Indications for use	SOLSTICE™ MR SRS WITH ACCUFORM™ The device is indicated to position and/or immobilize adult and pediatric patients undergoing radiation therapy of the head, brain, and neck, including Stereotactic Radiosurgery (SRS), Stereotactic Radiotherapy (SRT), Surface Guided Radiation Therapy (SGRT) and electron, photon, and proton treatments. The device is also used during image acquisition, including Computed Tomography (CT) Magnetic Resonance (MR) Imaging, to support treatment planning. SOLSTICE™ MR WITH HEADREST The device is indicated to position and/or immobilize adult and pediatric patients undergoing radiation therapy of the head, brain, and neck, including Surface Guided Radiation Therapy (SGRT) and electron, photon, and proton treatments. The device is also used during image acquisition, including Computed Tomography (CT) Magnetic Resonance (MR) Imaging, to support treatment planning.	
MRI Compatible	Yes, MR Safe	
Integration	For use with Posifix or Type-S acrylic baseplates and/or MR overlays	
FDA Clearance	Yes	
CE Marked (EU DOC)	Yes	
Other Country Registrations	Available upon request	
Country of Manufacture	USA	

Technical Details

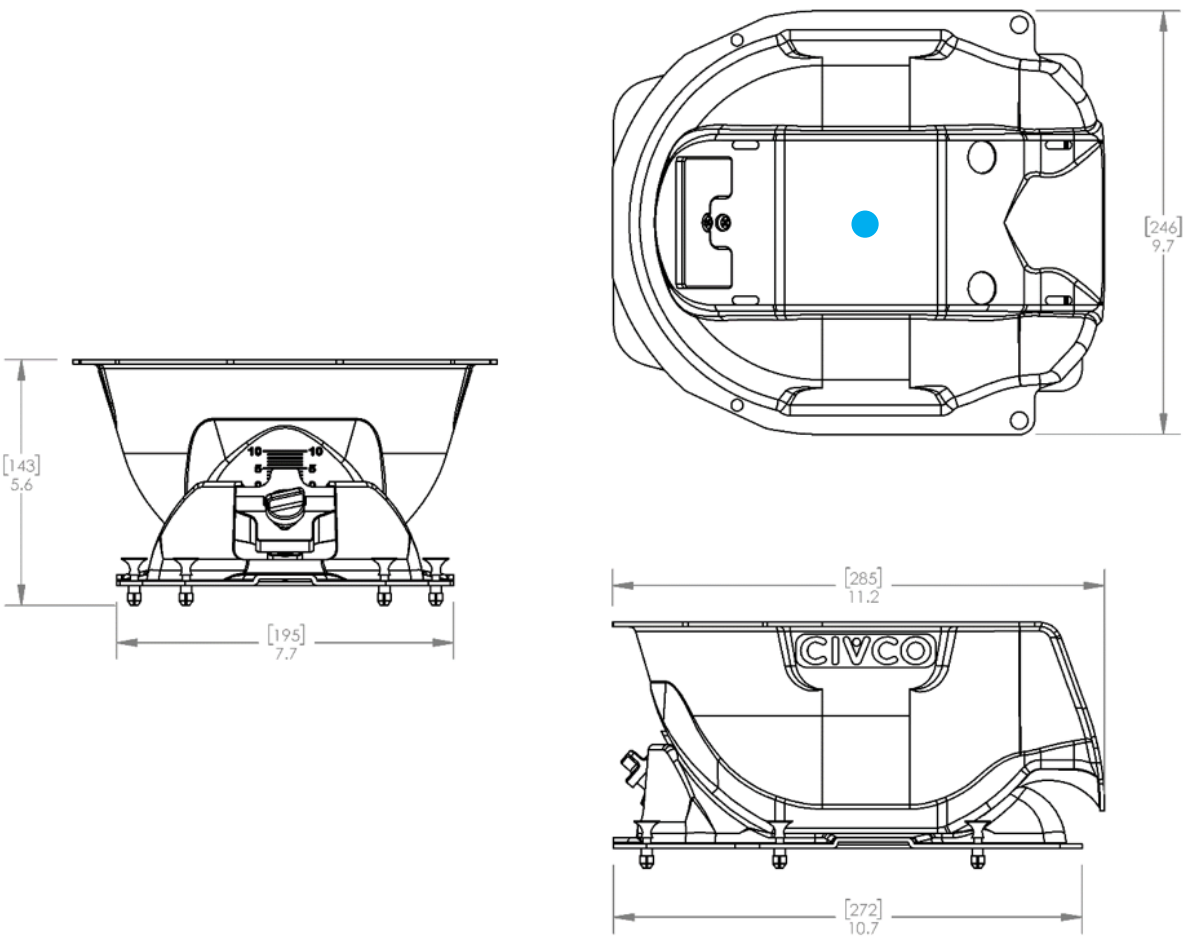
Primary Materials	Bowl: Glass Fiber Base: Kydex-T
Weight (approx)	1.5 lbs (0.68 kg)
Dimensions (mm)	Posifix®: 285 L x 246 W x 131 H (max) Type-S™: 320 L x 263 W x 131 H (max)

Dosimetric Properties

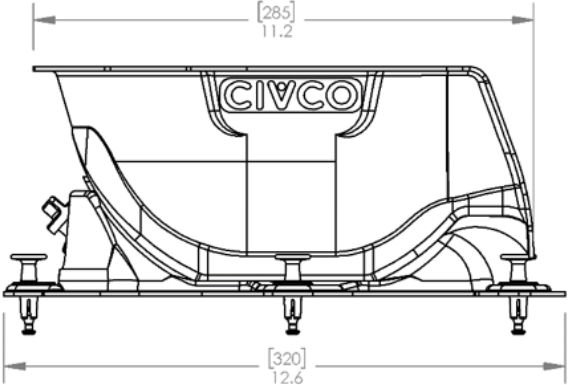
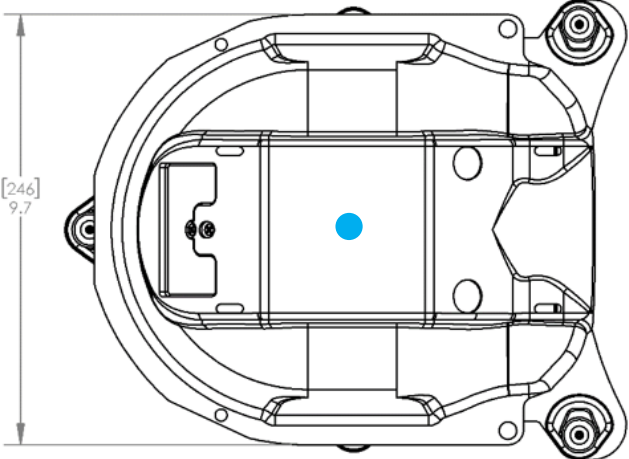
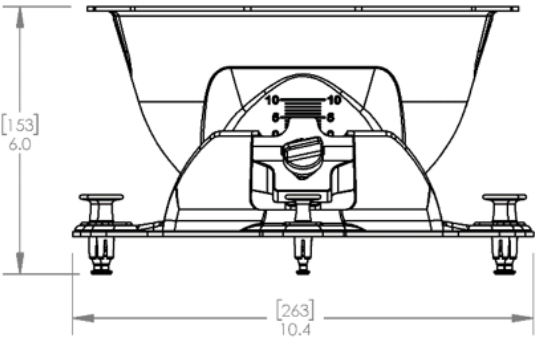
Location	Field Size	Attenuation 6 (MV)	Attenuation 18 (MV)
Bottom of bowl base ●	8 cm x 8 cm	1.8%	1.25%

Performance Specifications are for reference only, values may vary based on setup and equipment.

Technical Drawing (CHS03MR)

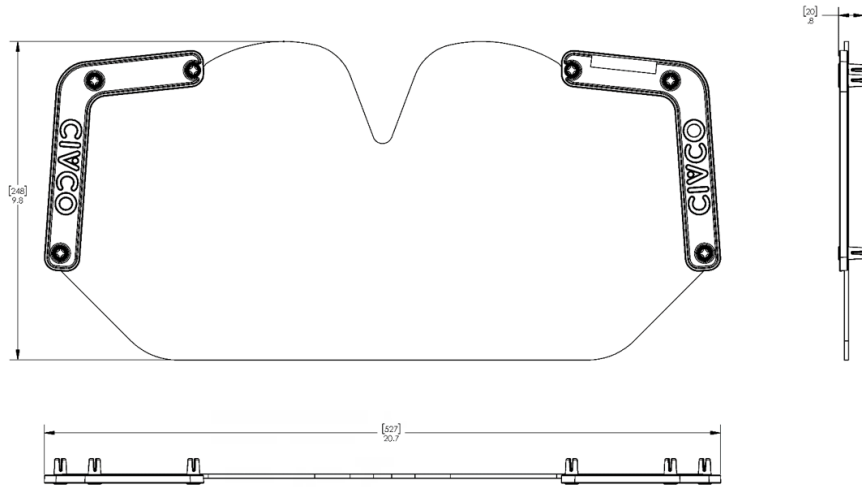


Technical Drawing (CHS04MR)



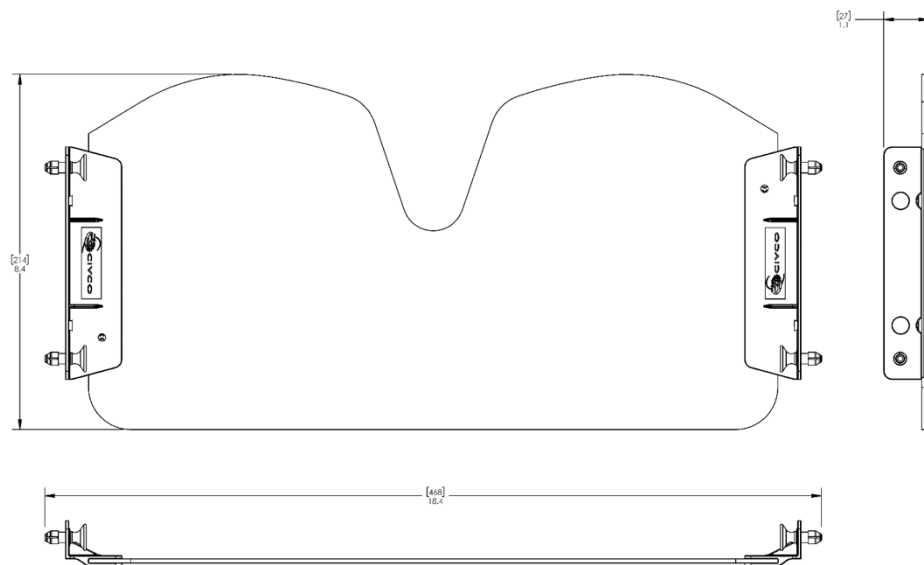
Product Name	Shoulder Thermoplastic, Standard White Solid, Type-S™
Product Number	MTAPSSTS
Primary Materials	Polycaprolactone, Polycarbonato, Delrin
Weight (approx)	0.46 kg/ 1.02 lbs
Dimensions (mm)	248 L x 527 W x 20 H

Technical Drawing

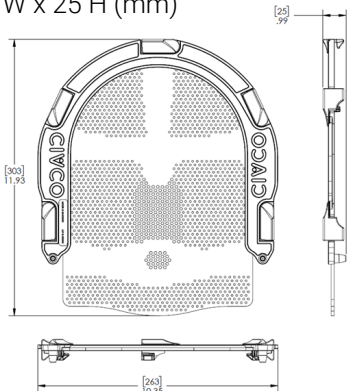
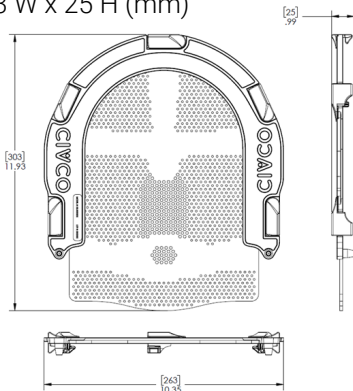


Product Name	Shoulder Thermoplastic, Standard White Solid, Posifix®
Product Number	MTAPSSPF
Primary Materials	ABS - Black, Polycaprolactone, Polycarbonato, Nylon
Weight (approx)	0.29 kg/ 0.65 lbs
Dimensions (mm)	214 L x 468 W x 27 H

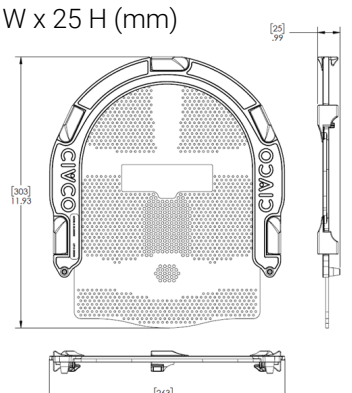
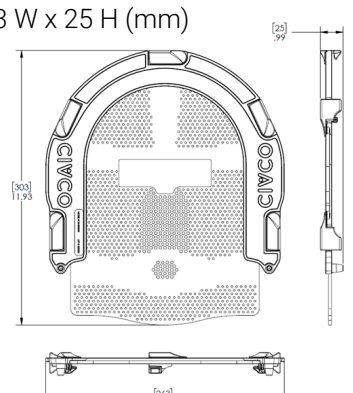
Technical Drawing



Standard White IMRT Reinforced™ Style 18

<p>Standard Frame Head Only, 303 L x 263 W x 25 H (mm)</p> <p>MTAPCID1832 3.2 mm thickness 0.5 lbs (0.23 kg)</p> 	<p>Narrow Head Only, 303 L x 263 W x 25 H (mm)</p> <p>MTAPCIN1832 3.2 mm thickness 0.5 lbs (0.23 kg)</p> 
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Standard White ClearVision™

<p>Standard Frame Head Only, 303 L x 263 W x 25 H (mm)</p> <p>MTAPCID1832SG 3.2 mm thickness 0.5 lbs (0.23 kg)</p> 	<p>Narrow Head Only, 303 L x 263 W x 25 H (mm)</p> <p>MTAPCIN1832SG 3.2 mm thickness 0.5 lbs (0.23 kg)</p> 
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Technical Details 3.2 IMRT Reinforced & ClearVision

Primary Materials	Polycaprolactone, Polycarbonate	Density	1.145 g/cm ³
Activation temperature (water bath)	75° C / 165° F	Surface feeling	Smooth
Activation time (water bath)	5 min (Head-only)	Color	White
Attenuation (Unstretched Mask)**	6MV: 1.03% (solid region) 18MV: 0.21% (solid region)	Odor	None
Thickness	3.2 mm (.125)	Biocompatible	Yes
Perforation (surface)	Varies (IMRT Pattern)	Transparent when activated	Yes
		Molding time (maximum)*^a	1 min 30 sec
		Hardening time*^b	8 min 30 sec
		Time to completion (minimum)*^c	10 min

Test Procedures used to Acquire Data

Definitions*

- Molding Time** - the time frame available from when the mask is removed from the waterbath to the time that the mask can no longer be molded or formed.
- Hardening Time** - the time between the molding and completion time where the mask should be cooling and hardening on its own without being manipulated or molded.
- Time to Completion** - the total time from when the mask is taken out of the waterbath to when the mask can be removed from the patient.

Attenuation Test Conditions**

- 100 cm SAD
- 10 x 10 cm Field Size
- 6 MV Dmax = 1.5 cm
18 MV Dmax = 3.0 cm

Packaging

Unit Pack	Each
Units / Box	One
Shelf Life	n/a
Warranty	See CIVCO website for Product Warranty Statement
Sterilization	Non-Sterile
Launch Date	May 2020

Accessories

System Customization

Thermoplastic

MTAPCID1832 Solstice™ Thermoplastic IMRT Reinforced Style 18

MTAPCIN1832 Solstice Thermoplastic IMRT Reinforced Style 18, Narrow

MTAPCID1832SG Solstice Thermoplastic ClearVision™

MTAPCIN1832SG Solstice Thermoplastic ClearVision, Narrow

MTAPSSTS Shoulder Thermoplastic, Standard White Solid, Type-S™

MTAPSSPF Shoulder Thermoplastic, Standard White Solid, Posifix®

AccuForm™ Cushions

MTACL2035 20 x 35 cm Chamfered

MTACL2035HF 20 x 35 cm Chamfered Half Fill

Headrests

CHS40K Headrest Kit (includes B,C & F), Qty 3

CHS40 Headrest B, Qty 1

CHS41 Headrest C, Qty 1

CHS42 Headrest F, Qty 1

Precise Bite™

MTCBPBITE Standard, Qty 5

MTCBPBITES Small, Qty 5

MTCBPBITETD Standard with Tongue Depressor, Qty 5

MTCBPBITETDS Small with Tongue Depressor, Qty 5

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