Test Report	Customer Reference	CS1142T	
iQDRM4217001	Date	15/06/2015	of Excellence
ISO 7176-19:2008: Wheeled mobility d	evices for use as s	eats in motor veh	nicles
Prepared For			
Drive Medical Itd			
Ainsley's Industrial Estate			
Elland			
нх5 9ЈР			
Prepared By			
in Research Centre Of Excellence			
72-76 John Wilson Business Park			
Whitstable			
Kent			
СТ5 ЗQT			
Approvals			
	Keede Orienskere		
	Kevin Grimsnaw		
Approved by Canon	Mark Faston		
1.1 Test Sample			
Description	Part Number	Revision	Batch no
Front Tie down	Q8-6200-SC		
Rear Tiedown	Q8-6200-SC		
Occupant Restraint (lap belt)	Q8-6326-A1-T		
Occupant Restraint (shoulder belt)	Q8-6326-A1-1		
Track (lower)	FE753*		
	NA NA		
Fixing Kit	NA		
Wheel Chair	Drive medical CS1142T		
			_

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## ISO 7176-19:2008: Wheeled mobility devices for use as seats in motor vehicles

2.1 Test Sample Setup

Description	Measurement	Limit	
REAR TO REAR DISTANCE	385	300	810
REAR TIE-DOWN BELT LENGTHS	500	495	533
REAR TIE-DOWN ANGLE	35	30	45
FRONT TO REAR DISTANCE	1295	1283	1308
FRONT TO FRONT DISTANCE	685	300	810
FRONT TIE-DOWN BELT LENGTH	625	-	-
FRONT TIE-DOWN ANGLE	47		
DISTANCE TO CENTRE OF ATD SHOULDER TO D RING (X)	300	285	315
DISTANCE FROM CENTRE OF ATD TO D-RING (Y)	290	285	315
HEIGHT OF D RING ABOVE ATD SHOULDER (Z)	165	158	188
DISTANCE OF CENTRE OF ATD SHOULDER TO ANCHORAGE (X)	470	-	-
DISTANCE FROM ATD CENTRE TO ANCHORAGE (Y)	420	Approx 450	-
HEIGHT OF ANCHORAGE FROM FLOOR (Z)	1555	Approx 1400	-
HEIGHT ADJUSTER CL-CL	395	-	-
h point initial	495/495	-	-

## 2.2 Pre-Test Images



2.3 Equipment			
Description	Serial Number	Cal. Date	Cal. Due
Surrogate Wheel Chair PN SA000003	00001	na	na
Humanetics H3 50th Male ATD @ 78.6Kg	DL 0299	29/10/2014	28/10/2015
Phantom Miro R320s @ 1000fps	na	na	na
Accelerometer (50g)	A087596	13/04/2015	12/04/2016
Scales	AE9AQ183	15/10/2014	15/10/2015
Digital inclinometer	210455159	na	na

## 2.4 Comments

1. Excursions are measured by post processing of high speed video using calibrated image analysis software and are accurate to +/- 5mm

2. Rear restraint lateral distance limit assumes inside dimension of securement points



Additional Comments

1. ATD lap/torso tethered to prevent damage in event of tiedown or chair failure

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3 1 Results - Pulse			
	Measurement	Li	mit
		Lower	Upper
Peak Acceleration (g)	21.85	20	28
Delta V (Kph)	49.11	48	50
Pulse Duration (ms)	104.00	75	120
Duration above 15g (ms)	49.80	40	-
Duration above 20g (ms)	22.30	15	-
Acceleration (g)	60	Delta V (Kph)	
25	50		
20	40		
15	30		
	20		
10	20		
5	10		
0 10 20 30 40 50 60 70 80 90 100 110 -5	120 0 10 20 30	40 50 60 70	80 90 100 110 120
		Time (ms)	
Time (ms)		Time (ins)	
3.2 Results - Excursions			·.
	Measurement	Lii	mit
Head Forward (mm)	516	650	
Head Rearward (mm)	449	4	50
Knee (mm)	290	375	
Chair (mm)	54	200	
3 3 Post-Test Images	5.4		.1
	Observation	Requirement	Comment#
ATD remained in chair	Yes	Yes	-
Wheelchair remained upright on sled	Yes	Yes	-
Failure of securement points	No	No	-
Component over 100g became separated	No	No	
Component with radius less than 2mm became detatched	No	No	
Load carrying components show signs of failure	No	No	-
Locking Mechanisms show no signs of failure	No	No	-
Removal of ATD does not require tools	Yes	Yes	-
Removal of Wheelchair does not require tools	Yes	Yes	-
Post Test H-Point Delta (%)	2.02	20	
Wheelchair causes partial or complete failure of WTORS webbing	No	No	
3.5 Disposition			
PASS			
Conforms to ISO 7176-19:2008: Wheeled mobility devices for use as seats in motor vehicles			