

# SmartDrive

*Power your push, your way*

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*June 2021 enhancements sales team training*





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# Poll Question 1

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“Every person with a disability has the right to have his or her needs compensated as far as possible by aids with the same technical standard as those we all use in our everyday lives.”

*Permobil Founder  
Dr. Per Uddén*

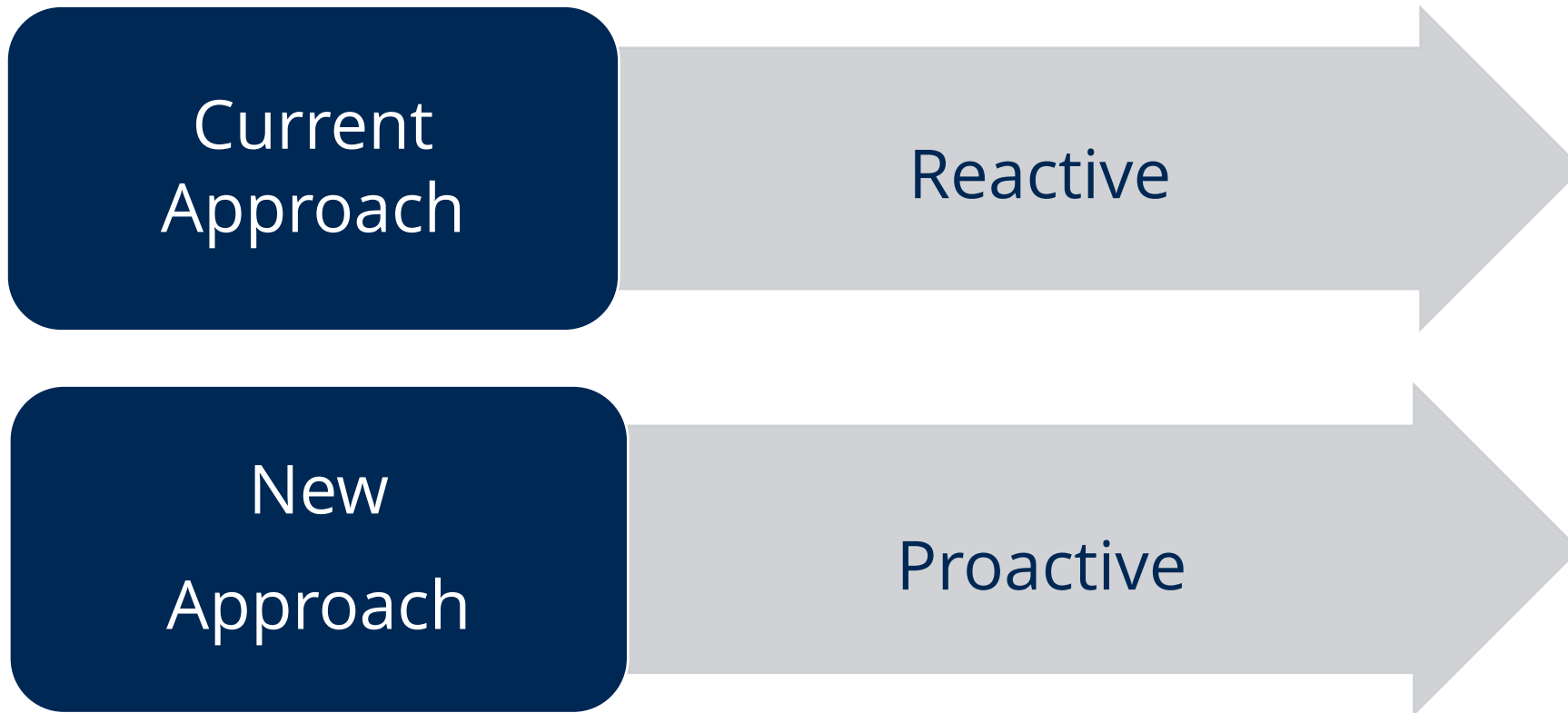
# SmartDrive overview & the why





# Proactive vs. Reactive Approach

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# Proactive vs. Reactive Approach

## Evidenced based practice - problems

**> 50% of manual wheelchair (MWC) users will develop pain and injury**

(Finley and Rodgers 2004)

**Pain and injury can lead to significant decline in independence and quality of life for MWC users**

(Gutierrez et al. 2007)

**Only 55% of patients (USA) received recommended care**

(McGlynn, 2003)

### Repetitive motions: what we know

**2000-3000**

Manual Wheelchair users push 2000-3000 times a day

**>1500**

Number of pushes per day ISO considers to be harmful



# Proactive vs. Reactive Approach

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## Evidenced based practice - solutions

**Power assist wheels decrease heart rate and perceived exertion during MWC mobility**

(Algood, 2005)

**Power assist eases energy cost/perceptual responses to propulsion for person w/ shoulder pain and SCI**

(Nash, 2008)

**Power assist wheels increase distance traveled compared to conventional propulsion**

(Levy, 2010)

**MWC users push 80% less with SmartDrive vs. without measured by the Smart Evaluation Application**

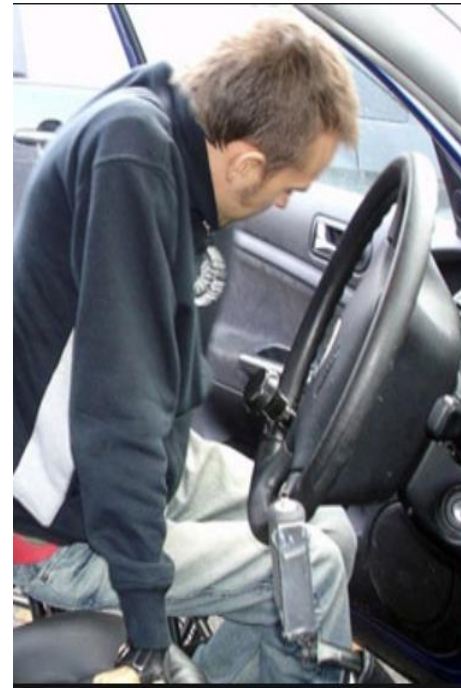
(Smart Evaluation Application, 2021)



# SmartDrive overview & the why

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**Manual wheelchair users have UE challenges beyond propulsion**



# Poll Question 2

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# SmartDrive & value-based healthcare



# SmartDrive & value-based healthcare

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## Value-Based Health Care Benefits

### PATIENTS

Lower Costs  
& better  
outcomes

### PROVIDERS

Higher Patient  
Satisfaction  
Rates &  
Better Care  
Efficiencies

### PAYERS

Stronger Cost  
Controls &  
Reduced Risks

### SUPPLIERS

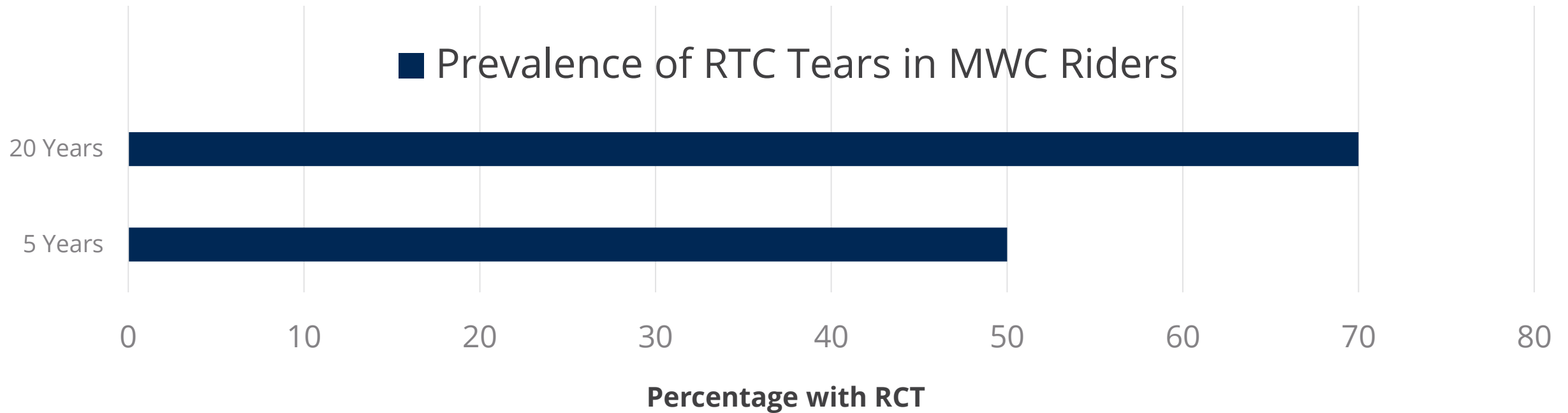
Alignment of  
Prices with  
Patient  
Outcomes

### SOCIETY

Reduced  
Healthcare  
Spending &  
Better Overall  
Health

# SmartDrive & value-based healthcare

**Risk Factors:** Patient age, # years w/c dependence



Gelmmann, 1998 & Sie, 1992)

# SmartDrive & value-based healthcare

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## Evidenced based practice - problems

**Rotator cuff tears are present in 49% of wheelchair users of which 70% were full thickness**

(Akbar, 2011)

**Carpal tunnel syndrome is a common side effect of long-term wheelchair use, & severity is associated with duration of use/age**

(Asheghan, 2015)



# SmartDrive & value-based healthcare

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## Direct costs

- Operation
  - \$6,367 Medicare
  - \$6,904 other insurers
- Rehab
  - Pre-op visits
  - Post-op visits (avg. 15)



Spectrumortho.com



# SmartDrive & value-based healthcare

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## Indirect costs

- No propulsion x 6 weeks
- NWB transfers x 4-6 months
- A w/ dressing, transfers, position changes
- PWC rental & transportation
- Extended time off work
- Caregiver fees



Gg120830570 GoGraph.com

# SmartDrive & value-based healthcare

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## SmartDrive (E0896):

Medicare Reimbursement ~ \$5750

- no configuration changes needed
- no costly remodeling needed to access same environment
- Removable for ease of transporting



## TiLite ULMWC (K0005):

Medicare Reimbursement ~ \$2,100

- more durable
- more configurable
- lighter weight materials

Power your push, your way with SmartDrive



# SmartDrive overview & the why

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“It is the primary truth of complex rehab that no single solution works well for all wheelchair users. There’s simply too much diversity in diagnoses, progression, function, goals and environments for one product to work well for everyone.”

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“Permobil’s SmartDrive accomplishes this by giving manual wheelchair users several ways to access and use its world-expanding technology.”

Laurie Watanabe – Mobility Management

[https://mobilitymgmt.com/articles/2019/12/20/smartdrive-pushtracker-e2-switch-control.aspx?s=emob\\_060120&admgarea=emob&oly\\_enc\\_id=](https://mobilitymgmt.com/articles/2019/12/20/smartdrive-pushtracker-e2-switch-control.aspx?s=emob_060120&admgarea=emob&oly_enc_id=)

# SmartDrive overview & the why

## Power your push, your way

	Stamina	Performance	Expert
Products available			
Best for	Hemi-propeller, pediatric, geriatric, or caregivers	Pediatric/active users (smaller, simpler wearable)	Adult/active users (advanced wearable features)
On-demand power assist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Energy/shoulder preservation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Easy on/off buttons	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hand gesture activation		<input type="checkbox"/>	<input type="checkbox"/>
Advanced Bluetooth connection			<input type="checkbox"/>
Easy to read, touch screen settings control			<input type="checkbox"/>
Performance & maintenance notifications			<input type="checkbox"/>

# SwitchControl

Is now included in with every SmartDrive order at no charge



# SwitchControl programming

Separate setting than PushTracker/E2		
Set your speed	1-5.5mph/1.6-8.9kph	Separate setting than PushTracker /E2
Set your mode	<b>Momentary:</b> Press to Go	<b>Latched:</b> Hold & Set

Mobility considerations for SwitchControl		
Propulsion Technique	Mode options	Specific functional activity
Bilateral Upper Extremity	Momentary alone	Ramps/Inclines
Bilateral Lower Extremity	Latched alone	Indoor Mobility
Hemi-Propulsion	Momentary with PushTracker/E2	Crowded Spaces
Dependent/Caregiver operated	Latched with PushTracker/E2	Short Distances Quick/Short Surface Change Low/No PushTracker Battery

# SwitchControl (only) Set Up

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PushTracker App





# Original PushTracker & SwitchControl Set Up

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PushTracker App





# SmartDrive overview & the why

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**Power your push, your way**

*Set up in minutes*

*No phone or wi-fi required*



# Poll Question 3

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# SmartDrive enhancements, June 2021

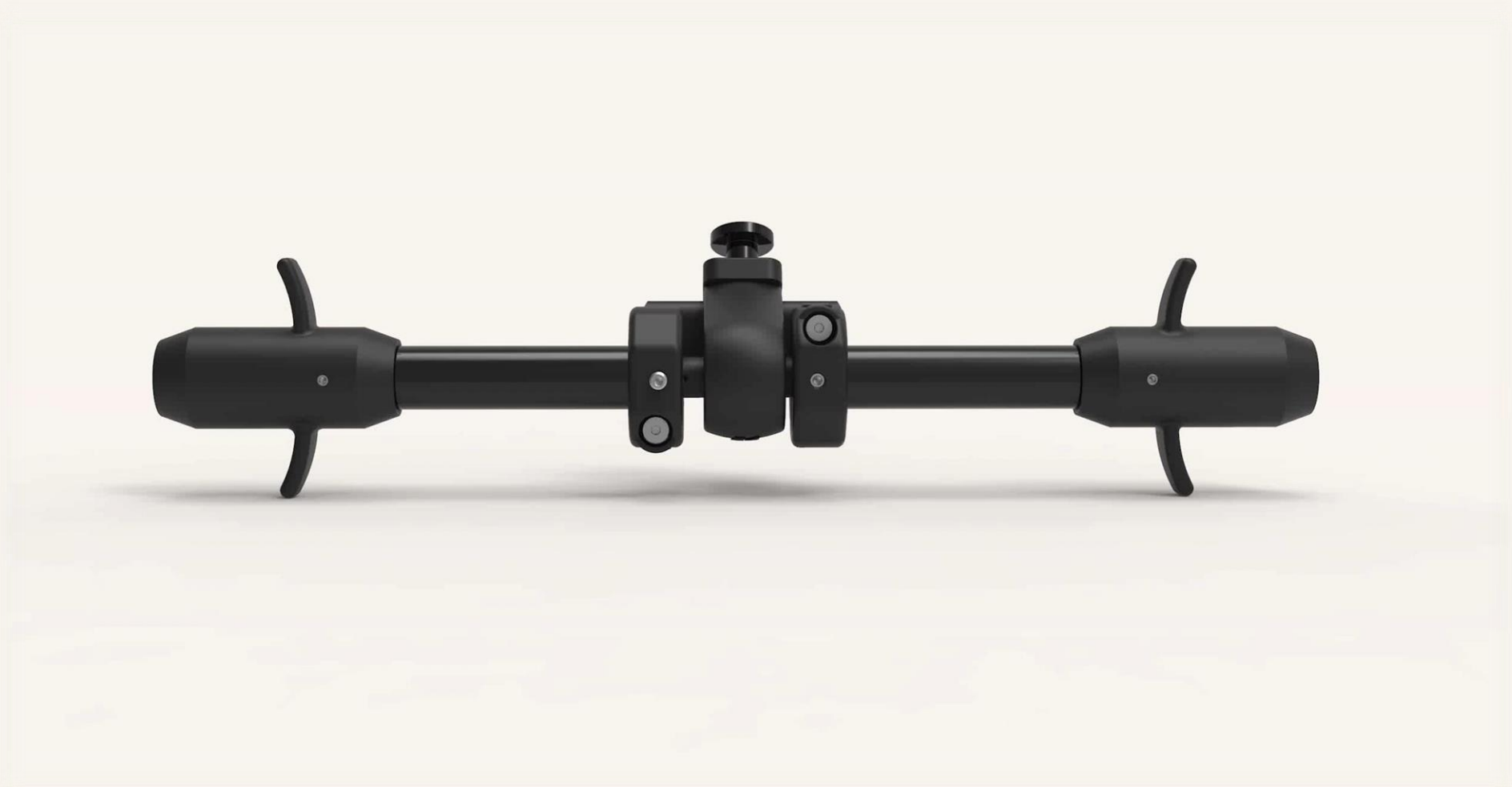














# Order form (updated)

SmartDrive enhancements, June 2021

Request for Quote (please complete entire form)  Place an Order - P.O. #:  Quote #:   
(If you do not already have a quote, please complete entire form)

### Provider Information

Provider:   
Provider account #:   
Provider location (if applicable):   
Order contact name:   
ATP / Therapist:   
E-mail:

### Shipping

Ship to provider address on file  
 Ship to alternate address:  
Alternate ship to recipient:   
Street:   
City:   
State:  Zip code:

### Mobility Products (all prices are in US dollars/USD)

- SmartDrive MX2+ Power Assist System** (HCPCS Code: E0986)  
MSRP: \$7131.00 (now includes standard SwitchControl buttons and your choice of PushTracker at no additional charge)

Client/Mark for:

Wheelchair make:

Wheelchair model:

- Rear wheel size:  
 22" / 501 mm  24" / 540 mm  
 25" / 559 mm  26" / 590 mm

Is this an existing wheelchair or a new one being ordered at the same time as this SmartDrive?

- Existing  New

#### Frame type:

- Rigid (if the wheelchair is a Motion Composites APEX, please provide the rear seat height):   
 Folding (MUST provide the chair/frame width):   
 Special frame, One-Arm drive, etc. (please specify):

#### SwitchControl Button Options

- SwitchControl buttons (two), MSRP: \$220.00 (standard option included at no charge)  
 SwitchControl button (one) with mono jack option, MSRP: \$370.00 (upgrade option with additional \$150.00 charge)

#### PushTracker Options

Included with Power Assist System at no charge

- Updated! PushTracker E2, MSRP: \$225.00, available in Shadow black  
• set up in minutes  
• no phone/Wi-Fi required  
• SmartDrive apps pre-installed  
  
 Original PushTracker, MSRP: \$200.00, available in black with three band sizes provided: Small, Medium and Large  
 No PushTracker required

#### Extra Accessories/Parts (check box(es) if desired):

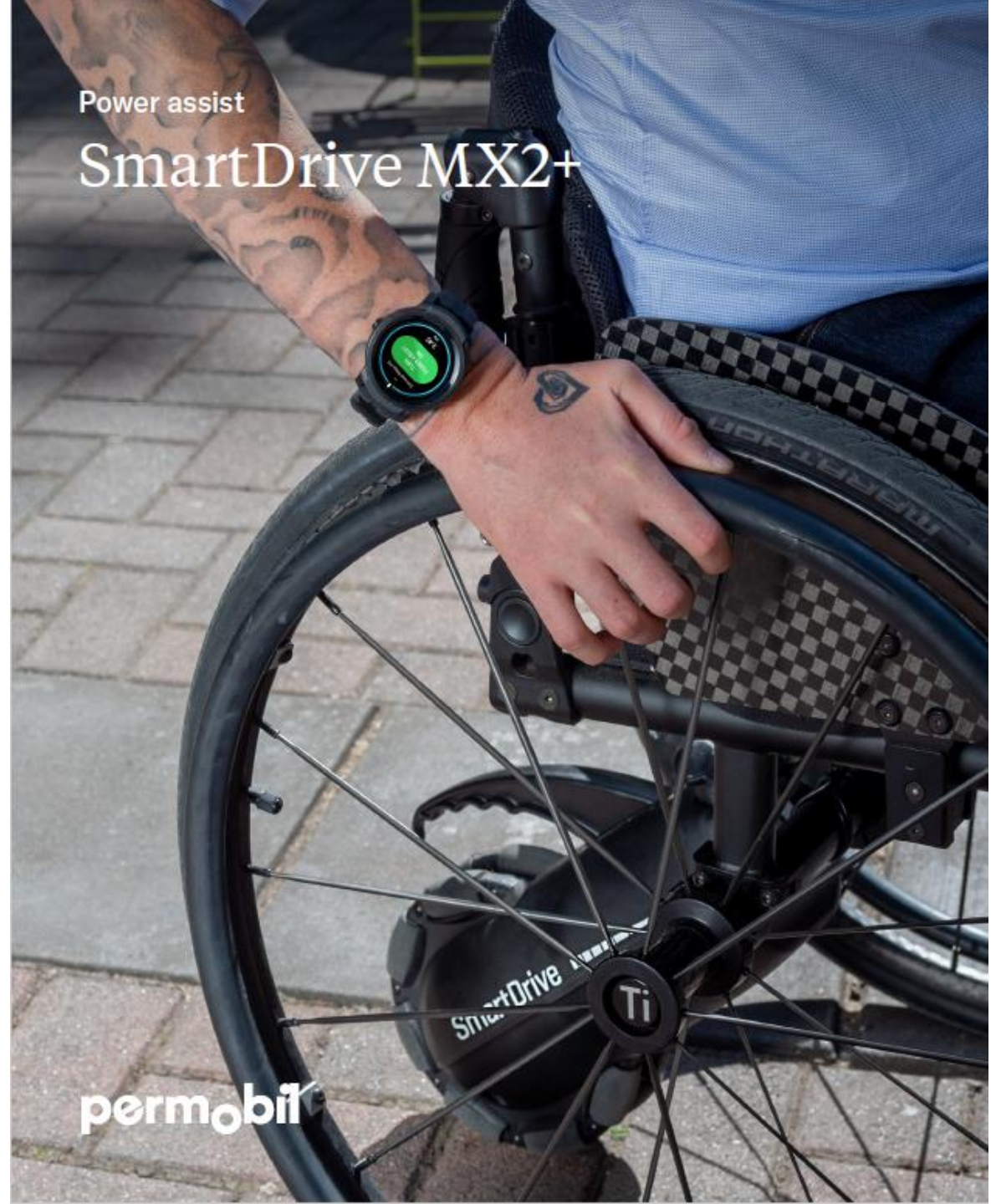
- New! Universal padded handle, MSRP: \$20.00  
 Carrying bag, MSRP: \$78.00  
 USB power bank (2600 mAh), MSRP: \$20.00  
 Roller replacement kit, MSRP: \$205.00

Order notes:

Figure shown is for illustration purposes only and actual product may vary.

# Brochure (updated)

SmartDrive enhancements, June 2021



Power assist

SmartDrive MX2+

permobil

# Enhancements supplement

SmartDrive enhancements, June 2021

Power assist

## SmartDrive enhancements

You asked for more, and we delivered! Say hello to more SmartDrive.

We've updated SmartDrive electronics to give you 50% more power, reinforced our folding adapter bar, and improved the OmniWheel design to help you power your push, your way.



### 50% more

SmartDrive's updated electronics provide 50% more power to give your SmartDrive more power to handle more load over time.

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# In-field repair videos

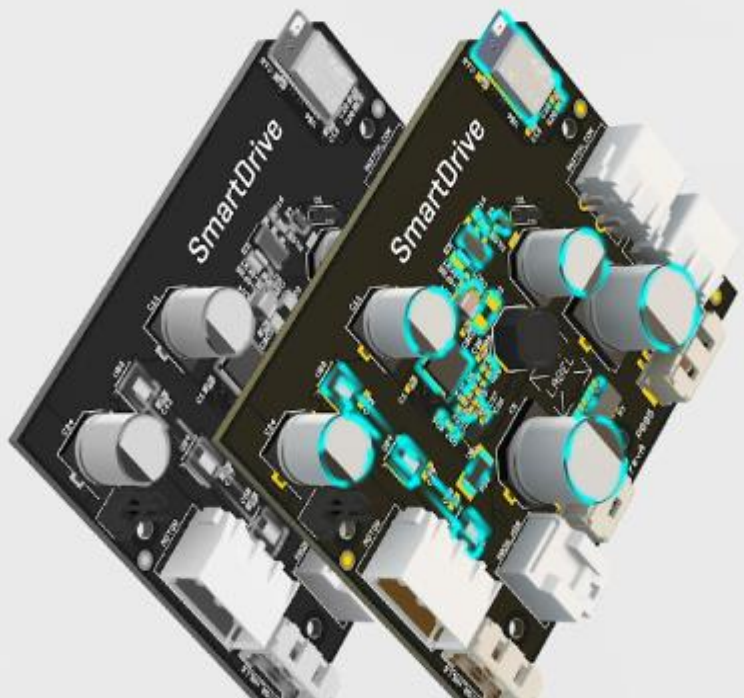
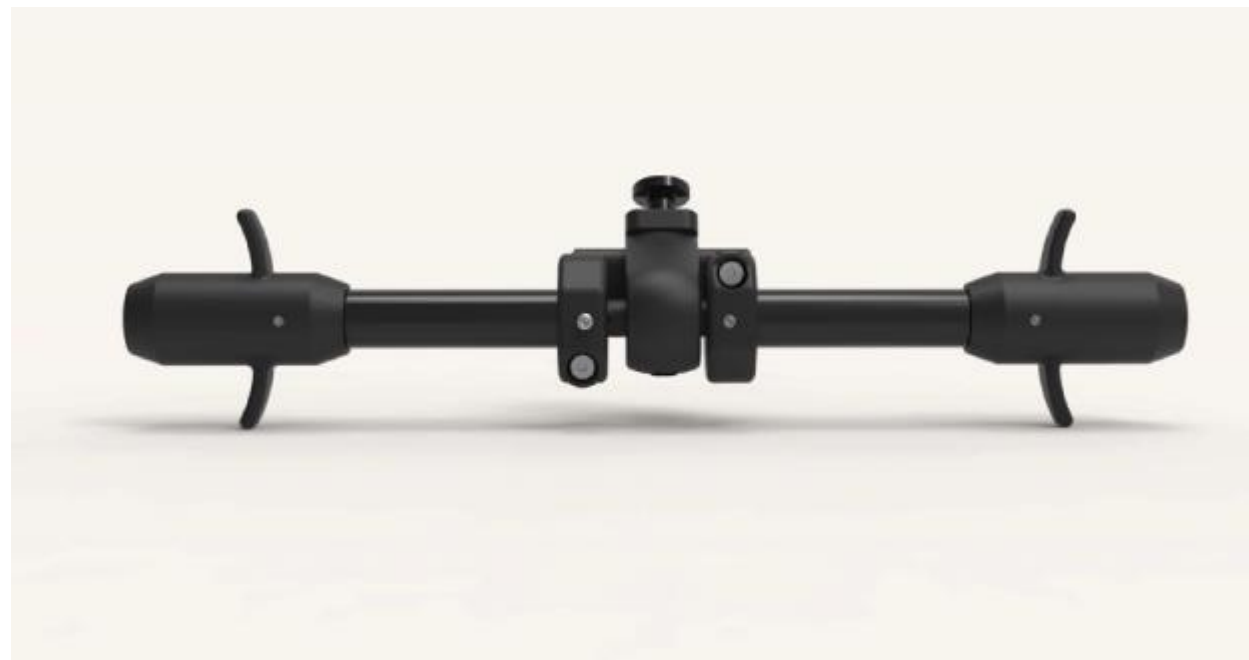
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SmartDrive enhancements, June 2021

## SmartDrive in-field repair videos

1. Removing handle (for all applicable videos)
2. Circuit Board
3. Battery
4. Adapter bar set up with retrofit
5. Adapter bar set up without retrofit
6. Power switch
7. Charger receptacle
8. Receptacle cap

## SmartDrive enhancements, June 2021



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# Permobil webinar series

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## Up Next!

**Permobil White Paper:  
A systematic review of the evidence for power  
standing wheelchairs**

Tuesday June 22, 2021-  
**Same Webinar, Three Global Times!**

- 7am Central
- 1 pm Central
- 6 pm Central

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Questions?

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