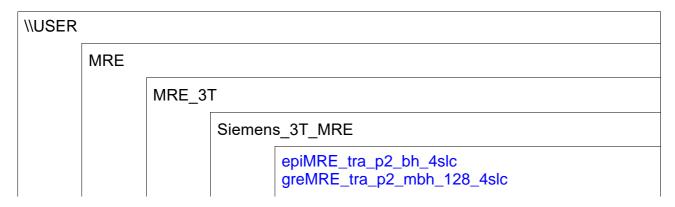
### SIEMENS MAGNETOM 3.0T XQ Numaris/X VA30A-03DZ

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### \\USER\MRE\MRE\_3T\Siemens\_3T\_MRE\epiMRE\_tra\_p2\_bh\_4slc

TA: 13 sec Coil Selection: Auto Voxel Size: 1.6×1.6×8.0 mm³ Acc:: 2 Rel. SNR: 1.00

#### **Properties**

| Start measurement without further preparation | On                 |
|---|--------------------|
| Wait for User to Start                        | Off                |
| Start measurements                            | Single Measurement |
| Prio Recon                                    | Off                |
| Auto Open Inline Display                      | Off                |
| Auto Close Inline Display                     | Off                |
| Load Images to MR View&GO                     | On                 |
| Auto Store Images                             | On                 |
| Load Images to Stamp Segments                 | Off                |
| Load Images to Graphic Segments               | Off                |
| Graphic segment                               | Default            |
| Inline Movie                                  | Off                |

#### **Routine**

| Slice Group         | 1           |
|---------------------|-------------|
| Slices              | 4           |
| Distance Factor     | 25 %        |
| Position            | Isocenter   |
| Orientation         | Transversal |
| Phase Encoding Dir. | A >> P      |
| Phase Oversampling  | 0 %         |
| FoV Read            | 420 mm      |
| FoV Phase           | 100.0 %     |
| Slice Thickness     | 8.0 mm      |
| TR                  | 1200.0 ms   |
| TE                  | 48.00 ms    |
| Averages            | 1           |
| Concatenations      | 1           |
| AutoAlign           |             |

#### **Contrast - Common**

| TR                 | 1200.0 ms |
|--------------------|-----------|
| TE                 | 48.00 ms  |
| Fat-Water Contrast | SPAIR     |
| Fat Saturation     | Strong    |

#### **Contrast - Dynamic**

| Dynamic Mode | Standard |  |
|--------------|----------|--|

#### **Resolution - Common**

| FoV Read         | 420 mm  |
|------------------|---------|
| FoV Phase        | 100.0 % |
| Slice Thickness  | 8.0 mm  |
| Base Resolution  | 100     |
| Phase Resolution | 100 %   |

#### **Resolution - Acceleration**

| Acceleration mode      | GRAPPA       |
|------------------------|--------------|
| Reference Scans        | EPI/Separate |
| Acceleration Factor PE | 2            |
| Reference Lines PE     | 32           |
| Phase Partial Fourier  | Off          |

#### **Resolution - Filter**

| Raw Filter            | On      |
|-----------------------|---------|
| Elliptical Filter     | Off     |
| Hamming               | Off     |
| Distortion Correction | 2D      |
| Normalize             | Prescan |

#### **Geometry - Common**

| Slice Group         | 1           |
|---------------------|-------------|
| Slices              | 4           |
| Distance Factor     | 25 %        |
| Position            | Isocenter   |
| Orientation         | Transversal |
| Phase Encoding Dir. | A >> P      |
| Phase Oversampling  | 0 %         |
| FoV Read            | 420 mm      |
| FoV Phase           | 100.0 %     |
| Slice Thickness     | 8.0 mm      |
| TR                  | 1200.0 ms   |
| Multi-Slice Mode    | Interleaved |
| Series              | Interleaved |
| Concatenations      | 1           |

### Geometry - AutoAlign

| Slice Group         | 1           |
|---------------------|-------------|
| Position            | Isocenter   |
| Orientation         | Transversal |
| Phase Encoding Dir. | A >> P      |
| AutoAlign           |             |
| Initial Position    | Isocenter   |
| L                   | 0.0 mm      |
| P                   | 0.0 mm      |
| Н                   | 0.0 mm      |
| Initial Orientation | Transversal |
| Initial Rotation    | 0.00 deg    |

### **Geometry - Saturation**

| Special Saturation | Parallel F/H |
|--------------------|--------------|
| Gap                | 10.00 mm     |
| Thickness          | 50.00 mm     |

### **Geometry - Tim Planning Suite**

| Set-n-Go Protocol | Off  |
|-------------------|------|
| Table Position    | 0 mm |
| Table Position    | Н    |
| Inline Composing  | Off  |

### **System - Miscellaneous**

| Coil Selection      | Auto Coil Select |
|---------------------|------------------|
| MSMA                | S-C-T            |
| Sagittal            | R >> L           |
| Coronal             | A >> P           |
| Transversal         | F >> H           |
| Coil Combination    | Adaptive Combine |
| Matrix Optimization | Off              |
| Coil Focus          | Flat             |

### **System - Adjustments**

| Adjustment Strategy   | Standard |
|-----------------------|----------|
| B0 Shim               | Standard |
| B1 Shim               | TrueForm |
| CoilShim              | Off      |
| Adjustment Tolerance  | Auto     |
| Adjust with Body Coil | Off      |
| Confirm Frequency     | Never    |
| Assume Silicone       | Off      |

## System - Adjust Volume

| Position    | Isocenter   |
|-------------|-------------|
| Orientation | Transversal |
| Rotation    | 0.00 deg    |
| A >> P      | 420 mm      |
| R >> L      | 420 mm      |
| F >> H      | 38 mm       |
| Reset       | Off         |

## System - Tx/Rx

| Frequency 1H        | 123.200000 MHz |
|---------------------|----------------|
| ? Ref. Amplitude 1H | 0.000 V        |
| Reset               | Off            |
| Image Scaling       | 1.000          |

## Sequence - Part 1

| Sequence Name     | epseMRE    |
|-------------------|------------|
| Excitation        | Standard   |
| RF Pulse Type     | Normal     |
| Gradient Mode     | Fast       |
| Bandwidth         | 2174 Hz/Px |
| Echo Spacing      | 0.52 ms    |
| Free Echo Spacing | Off        |
| EPI Factor        | 100        |

## Sequence - Part 2

| Introduction | Off |  |
|--------------|-----|--|

### \\USER\MRE\MRE\_3T\Siemens\_3T\_MRE\greMRE\_tra\_p2\_mbh\_128\_4slc

TA: 2:52 min Coil Selection: Auto Voxel Size: 1.6×1.6×10.0 mm³ Acc:: 2 Rel. SNR: 1.00

#### **Properties**

| Start measurement without further preparation | On                 |
|---|--------------------|
| Wait for User to Start                        | Off                |
| Start measurements                            | Single Measurement |
| Prio Recon                                    | Off                |
| Auto Open Inline Display                      | On                 |
| Auto Close Inline Display                     | Off                |
| Load Images to MR View&GO                     | On                 |
| Auto Store Images                             | On                 |
| Load Images to Stamp Segments                 | Off                |
| Load Images to Graphic Segments               | Off                |
| Graphic segment                               | Default            |
| Inline Movie                                  | Off                |

#### **Routine**

| Slice Group         | 1           |
|---------------------|-------------|
| Slices              | 4           |
| Distance Factor     | 0 %         |
| Position            | Isocenter   |
| Orientation         | Transversal |
| Phase Encoding Dir. | A >> P      |
| Phase Oversampling  | 0 %         |
| FoV Read            | 420 mm      |
| FoV Phase           | 87.5 %      |
| Slice Thickness     | 10.0 mm     |
| TR                  | 50.0 ms     |
| TE                  | 21.29 ms    |
| Averages            | 1           |

#### **Contrast - Common**

| TR                | 50.0 ms  |
|-------------------|----------|
| TE                | 21.29 ms |
| Magn. Preparation | None     |
| Flip Angle        | 25 deg   |

### **Contrast - Dynamic**

#### **Resolution - Common**

| FoV Read         | 420 mm  |
|------------------|---------|
| FoV Phase        | 87.5 %  |
| Slice Thickness  | 10.0 mm |
| Base Resolution  | 128     |
| Phase Resolution | 71 %    |
| Interpolation    | On      |

#### **Resolution - Acceleration**

| Acceleration mode      | GRAPPA     |
|------------------------|------------|
| Reference Scans        | Integrated |
| Acceleration Factor PE | 2          |
| Reference Lines PE     | 10         |
| Phase Partial Fourier  | Off        |
| Asymmetric Echo        | Off        |

#### **Resolution - Filter**

| Distortion Correction | 2D      |
|-----------------------|---------|
| Normalize             | Prescan |

### **Geometry - Common**

| Slice Group | 1 |  |
|-------------|---|--|
| Slices      | 4 |  |

#### **Geometry - Common**

| Distance Factor     | 0 %         |
|---------------------|-------------|
| Position            | Isocenter   |
| Orientation         | Transversal |
| Phase Encoding Dir. | A >> P      |
| Phase Oversampling  | 0 %         |
| FoV Read            | 420 mm      |
| FoV Phase           | 87.5 %      |
| Slice Thickness     | 10.0 mm     |
| TR                  | 50.0 ms     |
| Series              | Ascending   |

#### **Geometry - AutoAlign**

| Slice Group         | 1           |
|---------------------|-------------|
| Position            | Isocenter   |
| Orientation         | Transversal |
| Phase Encoding Dir. | A >> P      |
| Initial Position    | Isocenter   |
| L                   | 0.0 mm      |
| Р                   | 0.0 mm      |
| Н                   | 0.0 mm      |
| Initial Orientation | Transversal |
| Initial Rotation    | 0.00 deg    |

### **Geometry - Navigator**

#### **Geometry - Saturation**

| Saturation Mode    | Standard     |
|--------------------|--------------|
| Special Saturation | Parallel F/H |
| Gap                | 10.00 mm     |
| Thickness          | 60.00 mm     |

### **Geometry - Tim Planning Suite**

| Set-n-Go Protocol | Off  |
|-------------------|------|
| Table Position    | 0 mm |
| Table Position    | Н    |
| Inline Composing  | Off  |

#### **System - Miscellaneous**

| Coil Selection      | Auto Coil Select |
|---------------------|------------------|
| MSMA                | S - C - T        |
| Sagittal            | R >> L           |
| Coronal             | A >> P           |
| Transversal         | H >> F           |
| Coil Combination    | Adaptive Combine |
| Matrix Optimization | Off              |
| Coil Focus          | Flat             |

#### **System - Adjustments**

| Adjustment Strategy   | Standard |
|-----------------------|----------|
| B0 Shim               | Standard |
| B1 Shim               | TrueForm |
| CoilShim              | Off      |
| Adjustment Tolerance  | Auto     |
| Adjust with Body Coil | Off      |
| Confirm Frequency     | Never    |
| Assume Silicone       | Off      |

### System - Adjust Volume

| Position    | Isocenter   |
|-------------|-------------|
| Orientation | Transversal |

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## System - Adjust Volume

| Rotation | 0.00 deg |
|----------|----------|
| A >> P   | 368 mm   |
| R >> L   | 420 mm   |
| F >> H   | 40 mm    |
| Reset    | Off      |

## System - Tx/Rx

| Frequency 1H        | 123.200000 MHz |
|---------------------|----------------|
| ? Ref. Amplitude 1H | 0.000 V        |
| Reset               | Off            |
| Image Scaling       | 2.000          |

## Physio - Signal

| 1st Signal/Mode | None    |
|-----------------|---------|
| TR              | 50.0 ms |

## Physio - PACE

| Doon Control  | Drooth hold |
|---------------|-------------|
| Resp. Control | Breath-hold |

### Sequence - Part 1

| Sequence Name     | greMRE_r   |
|-------------------|------------|
| Dimension         | 2D         |
| Excitation        | Slice-sel. |
| RF Pulse Type     | Normal     |
| Gradient Mode     | Fast       |
| Flow Compensation | On         |
| Bandwidth         | 399 Hz/Px  |
| Echo Spacing      | 24.32 ms   |
| Asymmetric Echo   | Off        |

# Sequence - Part 2

| RF Spoiling         | On |
|---------------------|----|
| Phase Enc. Rewinder | On |