## CTS 20 R Series electronic forklift truck with tiller, projecting forks and reach mast

## **Technical data in line with VDI 2198**

as at: 03/2016

E 1.2 Manufacturer's type designation		1.1	Manufacturer (abbreviation)		Icem	Icem
Fig. 1.3   Drive   electric   electric   electric   1.4   Type of operation   Pedestrian/platform   Pedestri	Identification					
1.4   Type of operation						
Mast pushed forward   xi (mm)   147   147   147   149   Wheelbase   y (mn)   1595			Type of operation		Pedestrian/platform	
Mast pushed forward   xi (mm)   147   147   147   149   Wheelbase   y (mn)   1595				Q (t)		
Mast pushed forward		1.6	Load centre distance	c (mm)	500	500
1.9   Wheelbase   y (mm)   1595   1595     2.1   Service weight incl. battery (see line 6.5)   kg   2870   3050     2.4   Axle loading, laden front/rear mast advanced   kg   640/4230   650/4400     3.1   Tyres   Tyres   Tyres   Tyres   PU   PU   PU     3.2   Tyre size, front   mm   ø 320   Ø 320     3.3.1   Tyres   Size, front   mm   ø 250   Ø 250     3.3.2   Tyre size, rear   mm   ø 250   Ø 250     3.3.3   Tyres   T		1.8	Load distance, centre of drive axle to fork	x (mm)	553	553
2.1   Service weight incl. battery (see line 6.5)   kg   2870   3050			Mast pushed forward	x1 (mm)	147	
2.4   Axio loading, laden front/rear mast advanced kg   640/4230   650/4400		1.9		y (mm)	1595	1595
3.1 Tyres   PU	Weights	2.1	Service weight incl. battery (see line 6.5)	kg		
3.1 Tyres   PU			Axle loading, laden front/rear mast advanced	kg		
3.2   Tyre size, front		2.5	Axle loading, laden front/rear mast retracted	kg	1925/2945	2015/3035
3.3   Tyre size, rear	neels,	3.1				
3.7   Track width, rear   1078   1078   1078   1078   1.5		3.2		mm	ø 320	
3.7   Track width, rear   1078   1078   1078   1078   1.5						
4.1 Tilt of fork carriage forward/backward   Ba/Bi (°)   1.5/4.5   1.5/4.5   1.5/4.5   4.2   Closed mast height   h <sub>1</sub> (mm)   2100   2100   2100   4.4   4.4   Lift height   h <sub>2</sub> (mm)   -   1468   4.4   Lift height   h <sub>3</sub> (mm)   2975   3465   4.5   Height mist extended   h <sub>4</sub> (mm)   3587   5096   4.9   Height of liter in drive position min./max.   h <sub>14</sub> (mm)   1105/1455   1105/1455   1105/1455   4.10   Lowered height   h <sub>3</sub> (mm)   280   280   280   280   4.11   Lowered height   h <sub>3</sub> (mm)   45   45   45   4.19   Overall length   h <sub>1</sub> (mm)   2352   2352   2352   4.21   Overall width   h <sub>1</sub> (mm)   1352   1352   4.21   Coverall width   h <sub>2</sub> (mm)   1352   1352   4.21   Coverall width   h <sub>3</sub> (mm)   40x100x1000   40x100x1000   40x100x1000   40x100x1000   4.22   Fork carriage width   h <sub>3</sub> (mm)   800   800   800   4.25   Width over forks min/max   h <sub>3</sub> (mm)   870   870   870   4.28   Reach distance   h (mm)   700   700   700   4.21   Ground clearance, cather, below mast   m <sub>1</sub> (mm)   60   60   60   4.31   Ground clearance, cather of wheelbase   m <sub>2</sub> (mm)   60   60   60   4.31   Ground clearance, cather of wheelbase   m <sub>2</sub> (mm)   60   60   60   60   60   60   60   6	≥ €					
4.2   Closed mast height		3.7		b <sub>11</sub> (mm)		
4.3   Free lift						
4.4 Lift height         h₂ (mm)         2975         4465           4.5 Height, mast extended         h₂ (mm)         3587         5096           4.9 Height of tiller in drive position min./max.         h₂ (mm)         1105/1455         1105/1455           4.10 Height of wheel arms         h₂ (mm)         280         280           4.15 Lowered height         h₃ (mm)         45         45           4.10 Overall length         l₁ (mm)         2352         2352           4.20 Length to face of forks         l₂ (mm)         1352         1352           4.21 Overall width         b₁ (mm)         1200/940         1200/940           4.22 Fork dimensions         s/e/l (mm)         40x100x1000         40x100x1000           4.24 Fork-carriage width         b₂ (mm)         800         800           4.25 Width over forks min/max         b₂ (mm)         200/800         200/800           4.26 Distance between wheel arms         b₂ (mm)         870         870           4.28 Reach distance         l₂ (mm)         700         700           4.29 Ground clearance, laden, below mast         m₂ (mm)         60         60           4.31 Ground clearance, centre of wheelbase         m₂ (mm)         60         60           4.33 Ai					2100	
4.5   Height, mast extended						
4.9   Height of tiller in drive position min./max.   h <sub>14</sub> (mm)   1105/1455   1105/1455   1205/1455   14.0   14.10   Height for wheel arms   h <sub>13</sub> (mm)   45   45   45   45   45   45   45   4						
4.10   Height of wheel arms				,		
4.15   Lowered height						
4.19   Overall length   I1 (mm)   2352   2352   2352     4.20   Length to face of forks   I2 (mm)   1352   1352     4.21   Overall width   D1 (mm)   1200/940   1200/940     4.22   Fork dimensions   S/e/l (mm)   40x100x1000   40x100x1000     4.24   Fork-carriage width   D3 (mm)   800   800     4.25   Width over forks min/max   D5 (mm)   200/800   200/800     4.26   Distance between wheel arms   D4 (mm)   700   700     4.28   Reach distance   I4 (mm)   700   700     4.31   Ground clearance, laden, below mast   M1 (mm)   60   60     4.32   Ground clearance, centre of wheelbase   M2 (mm)   60   60     4.33   Aisle width for pallets 1000x1200 crossways   Ast (mm)   2767 (1)   2767 (1)     4.34   Aisle width for pallets 800x1200 crossways   Ast (mm)   2767 (2)   2767 (2)     4.35   Turning radius   Wa (mm)   1920   1920     4.37   Length across wheel arms   I2 (mm)   2030   2030     5.1   Travel speed, laden/unladen   Mr/s   0.11/0.18   0.10/0.16     5.2   Lift speed, laden/unladen   m/s   0.30/0.20   0.28/0.18     5.4   Reaching speed, laden/unladen   m/s   0.11/0.18   0.10/0.16     5.5   Service brake   electronic   electronic     6.1   Drive motor rating \$2 \( 60\) Gomin   kW   2   2   2     6.4   Battery voltage, nominal capacity \$K_5   V/Ah   24/500   24/500     8.1   Type of drive control   AC   AC   AC						
Section   Sect	,,					
4.24   Fork-carriage width   b3 (mm)   800   800	c dimensions					
4.24   Fork-carriage width   b3 (mm)   800   800				- \ /		
4.24   Fork-carriage width   b <sub>3</sub> (mm)   800						
4.26       Distance between wheel arms       b4 (mm)       870       870         4.28       Reach distance       l4 (mm)       700       700         4.31       Ground clearance, laden, below mast       m <sub>1</sub> (mm)       60       60         4.32       Ground clearance, centre of wheelbase       m <sub>2</sub> (mm)       60       60         4.33       Aisle width for pallets 1000x1200 crossways       Ast (mm)       2767 (1)       2767 (1)         4.34       Aisle width for pallets 800x1200 crossways       Ast (mm)       2767 (2)       2767 (2)         4.35       Turning radius       Wa (mm)       1920       1920         4.37       Length across wheel arms       lx (mm)       2030       2030         5.1       Travel speed, laden/unladen       km/h       5.0/5.0       5.0/5.0         5.1       Travel speed, laden/unladen       m/s       0.11/0.18       0.10/0.16         5.2       Lift speed, laden/unladen       m/s       0.30/0.20       0.28/0.18         5.3       Lowering speed, laden/unladen       m/s       0.1       0.1         5.4       Reaching speed, laden/unladen       m/s       0.1       0.1         5.5       Max. gradient performance, laden/unladen       %       3/8						
4.26       Distance between wheel arms       b4 (mm)       870       870         4.28       Reach distance       l4 (mm)       700       700         4.31       Ground clearance, laden, below mast       m <sub>1</sub> (mm)       60       60         4.32       Ground clearance, centre of wheelbase       m <sub>2</sub> (mm)       60       60         4.33       Aisle width for pallets 1000x1200 crossways       Ast (mm)       2767 (1)       2767 (1)         4.34       Aisle width for pallets 800x1200 crossways       Ast (mm)       2767 (2)       2767 (2)         4.35       Turning radius       Wa (mm)       1920       1920         4.37       Length across wheel arms       lx (mm)       2030       2030         5.1       Travel speed, laden/unladen       km/h       5.0/5.0       5.0/5.0         5.1       Travel speed, laden/unladen       m/s       0.11/0.18       0.10/0.16         5.2       Lift speed, laden/unladen       m/s       0.30/0.20       0.28/0.18         5.3       Lowering speed, laden/unladen       m/s       0.1       0.1         5.4       Reaching speed, laden/unladen       m/s       0.1       0.1         5.5       Max. gradient performance, laden/unladen       %       3/8	asi			- ' /		
4.28         Reach distance         Ia (mm)         700         700           4.31         Ground clearance, laden, below mast         m1 (mm)         60         60           4.32         Ground clearance, centre of wheelbase         m2 (mm)         60         60           4.33         Aisle width for pallets 1000x1200 crossways         Ast (mm)         2767 (1)         2767 (1)           4.34         Aisle width for pallets 800x1200 crossways         Ast (mm)         2767 (2)         2767 (2)           4.35         Turning radius         Wa (mm)         1920         1920           4.37         Length across wheel arms         Iv (mm)         2030         2030           5.1         Travel speed, laden/unladen         km/h         5.0/5.0         5.0/5.0           5.2         Lift speed, laden/unladen         m/s         0.11/0.18         0.10/0.16           5.3         Lowering speed, laden/unladen         m/s         0.30/0.20         0.28/0.18           5.4         Reaching speed, laden/unladen         m/s         0.1         0.1           5.8         Max. gradient performance, laden/unladen         %         3/8         3/8           5.10         Service brake         electronic         electronic	В			· · · · · · · · · · · · · · · · · · ·		
4.31       Ground clearance, laden, below mast       m1 (mm)       60       60         4.32       Ground clearance, centre of wheelbase       m2 (mm)       60       60         4.33       Aisle width for pallets 1000x1200 crossways       Ast (mm)       2767 (1)       2767 (1)         4.34       Aisle width for pallets 800x1200 crossways       Ast (mm)       2767 (2)       2767 (2)         4.35       Turning radius       Wa (mm)       1920       1920         4.37       Length across wheel arms       Iz (mm)       2030       2030         5.1       Travel speed, laden/unladen       km/h       5.0/5.0       5.0/5.0         5.2       Lift speed, laden/unladen       m/s       0.11/0.18       0.10/0.16         5.3       Lowering speed, laden/unladen       m/s       0.30/0.20       0.28/0.18         5.4       Reaching speed, laden/unladen       m/s       0.1       0.1         5.8       Max. gradient performance, laden/unladen       %       3/8       3/8         5.10       Service brake       electronic       electronic         50       6.1       Drive motor rating S <sub>2</sub> 60min       kW       2       2         6.2       Lift motor rating at S <sub>3</sub> 10%       kW       4				· · · · · ·		
4.32       Ground clearance, centre of wheelbase       m2 (mm)       60       60         4.33       Aisle width for pallets 1000x1200 crossways       Ast (mm)       2767 (1)       2767 (1)         4.34       Aisle width for pallets 800x1200 crossways       Ast (mm)       2767 (2)       2767 (2)         4.35       Turning radius       Wa (mm)       1920       1920         4.37       Length across wheel arms       Iv (mm)       2030       2030         5.1       Travel speed, laden/unladen       km/h       5.0/5.0       5.0/5.0         5.2       Lift speed, laden/unladen       m/s       0.11/0.18       0.10/0.16         5.3       Lowering speed, laden/unladen       m/s       0.30/0.20       0.28/0.18         5.4       Reaching speed, laden/unladen       m/s       0.1       0.1         5.8       Max. gradient performance, laden/unladen       %       3/8       3/8         5.10       Service brake       electronic       electronic         6.1       Drive motor rating S <sub>2</sub> 60min       kW       2       2         6.2       Lift motor rating at S <sub>3</sub> 10%       kW       4       4         6.5       Battery weight       kg       390       390         8						
4.33         Aisle width for pallets 1000x1200 crossways         Ast (mm)         2767 (1)         2767 (1)           4.34         Aisle width for pallets 800x1200 crossways         Ast (mm)         2767 (2)         2767 (2)           4.35         Turning radius         Wa (mm)         1920         1920           4.37         Length across wheel arms         Iz (mm)         2030         2030           5.1         Travel speed, laden/unladen         km/h         5.0/5.0         5.0/5.0           5.2         Lift speed, laden/unladen         m/s         0.11/0.18         0.10/0.16           5.3         Lowering speed, laden/unladen         m/s         0.30/0.20         0.28/0.18           5.4         Reaching speed, laden/unladen         m/s         0.1         0.1           5.8         Max. gradient performance, laden/unladen         %         3/8         3/8           5.10         Service brake         electronic         electronic           6.1         Drive motor rating S <sub>2</sub> 60min         kW         2         2           6.2         Lift motor rating at S <sub>3</sub> 10%         kW         4         4           6.4         Battery voltage, nominal capacity K <sub>5</sub> V/Ah         24/500         24/500						
4.34       Aisle width for pallets 800x1200 crossways       Ast (mm)       2767 (2)       2767 (2)         4.35       Turning radius       Wa (mm)       1920       1920         4.37       Length across wheel arms       I <sub>7</sub> (mm)       2030       2030         5.1       Travel speed, laden/unladen       km/h       5.0/5.0       5.0/5.0         5.2       Lift speed, laden/unladen       m/s       0.11/0.18       0.10/0.16         5.3       Lowering speed, laden/unladen       m/s       0.30/0.20       0.28/0.18         5.4       Reaching speed, laden/unladen       m/s       0.1       0.1         5.8       Max. gradient performance, laden/unladen       %       3/8       3/8         5.10       Service brake       electronic       electronic         6.1       Drive motor rating S <sub>2</sub> 60min       kW       2       2         6.2       Lift motor rating at S <sub>3</sub> 10%       kW       4       4         6.4       Battery voltage, nominal capacity K <sub>5</sub> V/Ah       24/500       24/500         8.1       Type of drive control       AC       AC						
4.35   Turning radius   Wa (mm)   1920   1920     4.37   Length across wheel arms   I <sub>7</sub> (mm)   2030   2030     5.1   Travel speed, laden/unladen   km/h   5.0/5.0   5.0/5.0     5.2   Lift speed, laden/unladen   m/s   0.11/0.18   0.10/0.16     5.3   Lowering speed, laden/unladen   m/s   0.30/0.20   0.28/0.18     5.4   Reaching speed, laden/unladen   m/s   0.1   0.1     5.8   Max. gradient performance, laden/unladen   %   3/8   3/8     5.10   Service brake   electronic   electronic     6.1   Drive motor rating S <sub>2</sub> 60min   kW   2   2     6.2   Lift motor rating at S <sub>3</sub> 10%   kW   4   4     6.4   Battery voltage, nominal capacity K <sub>5</sub>   V/Ah   24/500   24/500     6.5   Battery weight   kg   390   390     8.1   Type of drive control   AC   AC						
4.37   Length across wheel arms   I/mm   2030   2030     5.1   Travel speed, laden/unladen   km/h   5.0/5.0   5.0/5.0     5.2   Lift speed, laden/unladen   m/s   0.11/0.18   0.10/0.16     5.3   Lowering speed, laden/unladen   m/s   0.30/0.20   0.28/0.18     5.4   Reaching speed, laden/unladen   m/s   0.1   0.1     5.8   Max. gradient performance, laden/unladen   %   3/8   3/8     5.10   Service brake   electronic   electronic     6.1   Drive motor rating S <sub>2</sub> 60min   kW   2   2     6.2   Lift motor rating at S <sub>3</sub> 10%   kW   4   4     6.4   Battery voltage, nominal capacity K <sub>5</sub>   V/Ah   24/500   24/500     8.1   Type of drive control   AC   AC						
S.1   Travel speed, laden/unladen   km/h   S.0/5.0   S.0/5.0						
5.2   Lift speed, laden/unladen   m/s   0.11/0.18   0.10/0.16     5.3   Lowering speed, laden/unladen   m/s   0.30/0.20   0.28/0.18     5.4   Reaching speed, laden/unladen   m/s   0.1   0.1     5.8   Max. gradient performance, laden/unladen   %   3/8   3/8     5.10   Service brake   electronic   electronic     6.1   Drive motor rating S <sub>2</sub> 60min   kW   2   2     6.2   Lift motor rating at S <sub>3</sub> 10%   kW   4   4     6.4   Battery voltage, nominal capacity K <sub>5</sub>   V/Ah   24/500   24/500     6.5   Battery weight   kg   390   390     8.1   Type of drive control   AC   AC				<u> </u>		
5.3   Lowering speed, laden/unladen   m/s   0.30/0.20   0.28/0.18     5.4   Reaching speed, laden/unladen   m/s   0.1   0.1     5.8   Max. gradient performance, laden/unladen   %   3/8   3/8     5.10   Service brake   electronic   electronic     6.1   Drive motor rating S <sub>2</sub> 60min   kW   2   2     6.2   Lift motor rating at S <sub>3</sub> 10%   kW   4   4     6.4   Battery voltage, nominal capacity K <sub>5</sub>   V/Ah   24/500   24/500     6.5   Battery weight   kg   390   390     8.1   Type of drive control   AC   AC	≓.					
5.4         Reaching speed, laden/unladen         m/s         0.1         0.1           5.8         Max. gradient performance, laden/unladen         %         3/8         3/8           5.10         Service brake         electronic         electronic           6.1         Drive motor rating S₂ 60min         kW         2         2           6.2         Lift motor rating at S₃ 10%         kW         4         4           6.4         Battery voltage, nominal capacity K₅         V/Ah         24/500         24/500           6.5         Battery weight         kg         390         390           8.1         Type of drive control         AC         AC						
					• •	• .
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$						
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$						
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	ğ.	-		kW		
8.1 Type of drive control AC AC	Electric er					
8.1 Type of drive control AC AC						
8.1 Type of drive control AC AC						
8.4 Sound level at driver's ear according to EN 12 053 dB (A) 70 70	1	8.4	Sound level at driver's ear according to EN 12 053	dB (A)	70	70

(1) diagonal to VDI: +171 mm (2) diagonal to VDI: +114 mm

