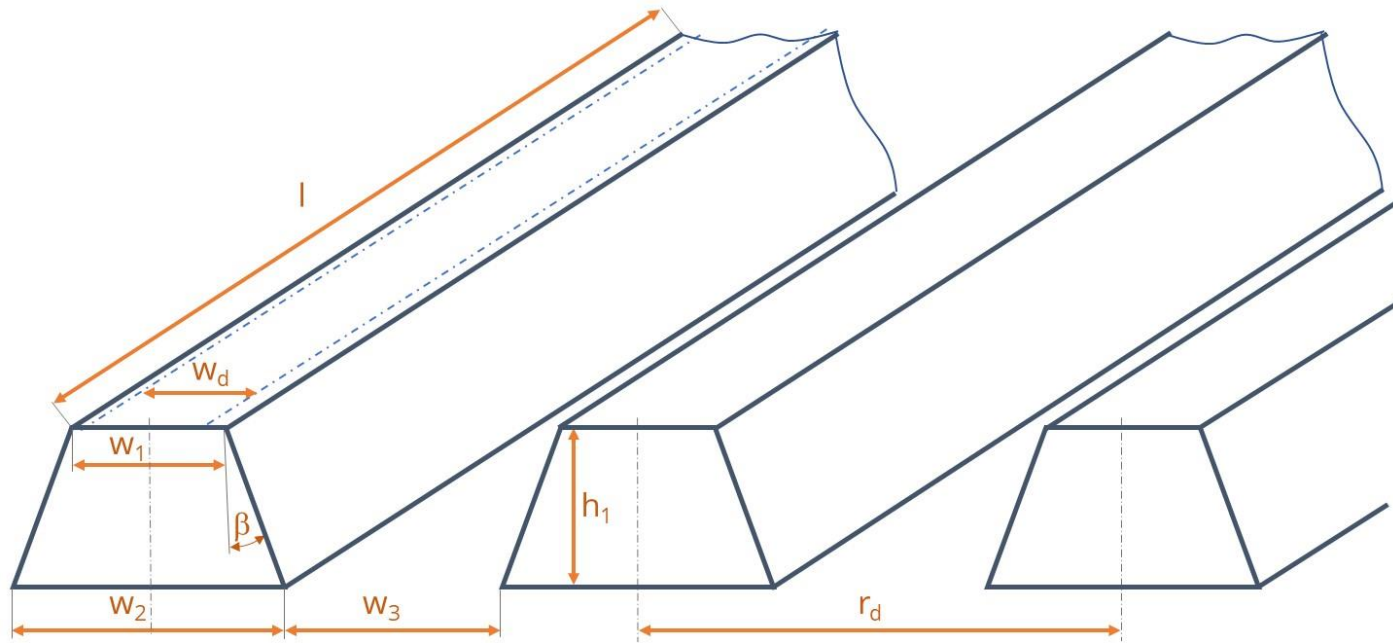




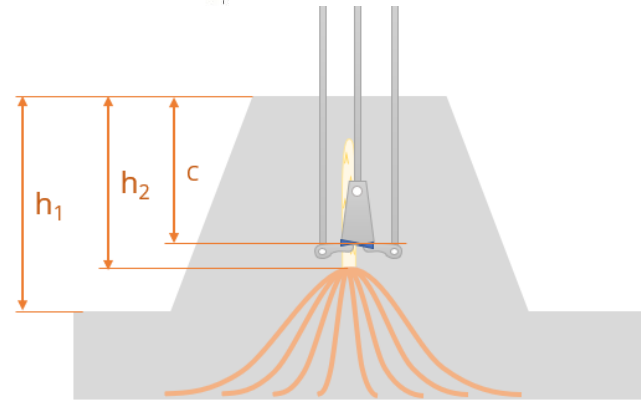
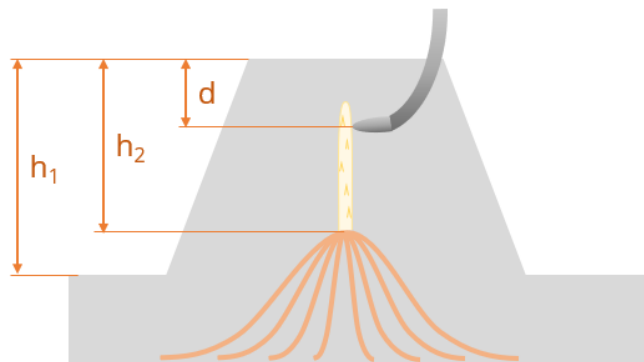
Cerescon – Sparter Specification document sand bed

Version 27 Dec 2018

Specification - legend 1



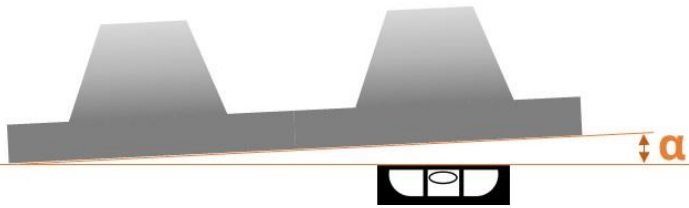
w_1 = width top
 w_2 = width bottom
 w_3 = distance bottom
 r_d = row distance
 l = length
 β = angle sand bed
 w_d = width detection



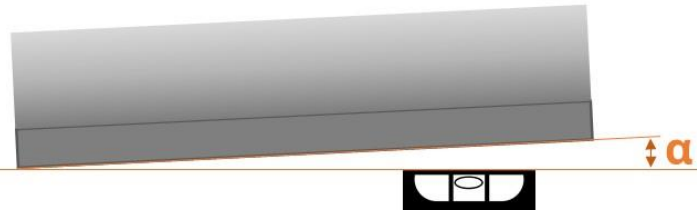
d = detection depth
 c = cutting depth
 h_1 = height sand bed
 h_2 = height above roots

Specification – legend 2

Front view sand beds

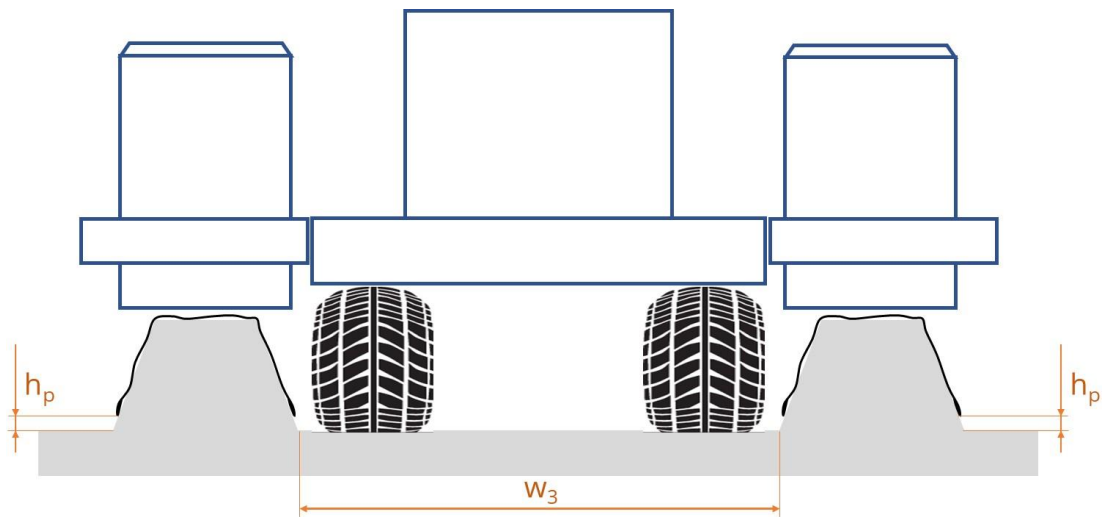
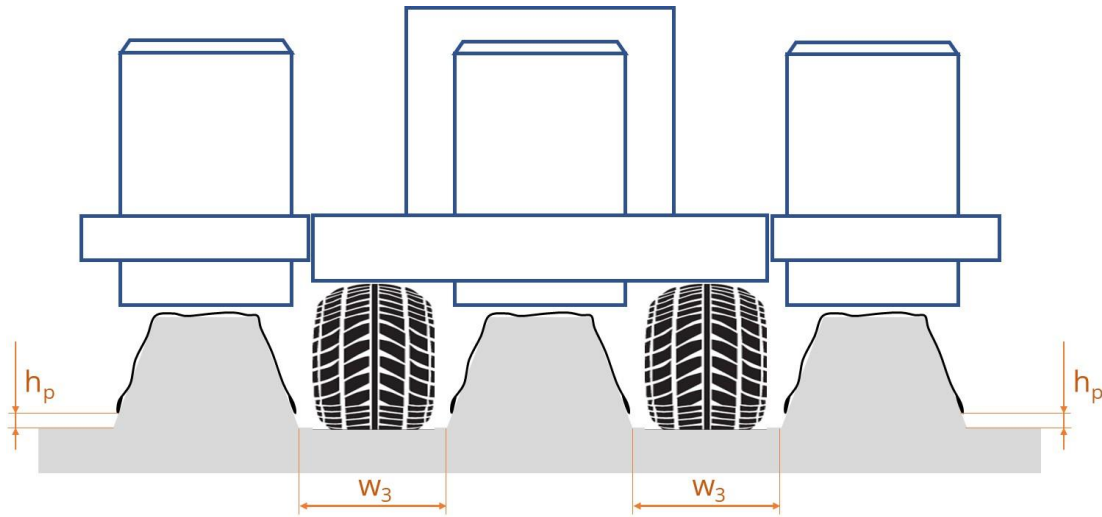


Side view sand beds



α = slope sand bed

Specification - legend 3



w_3 = space required for wheels

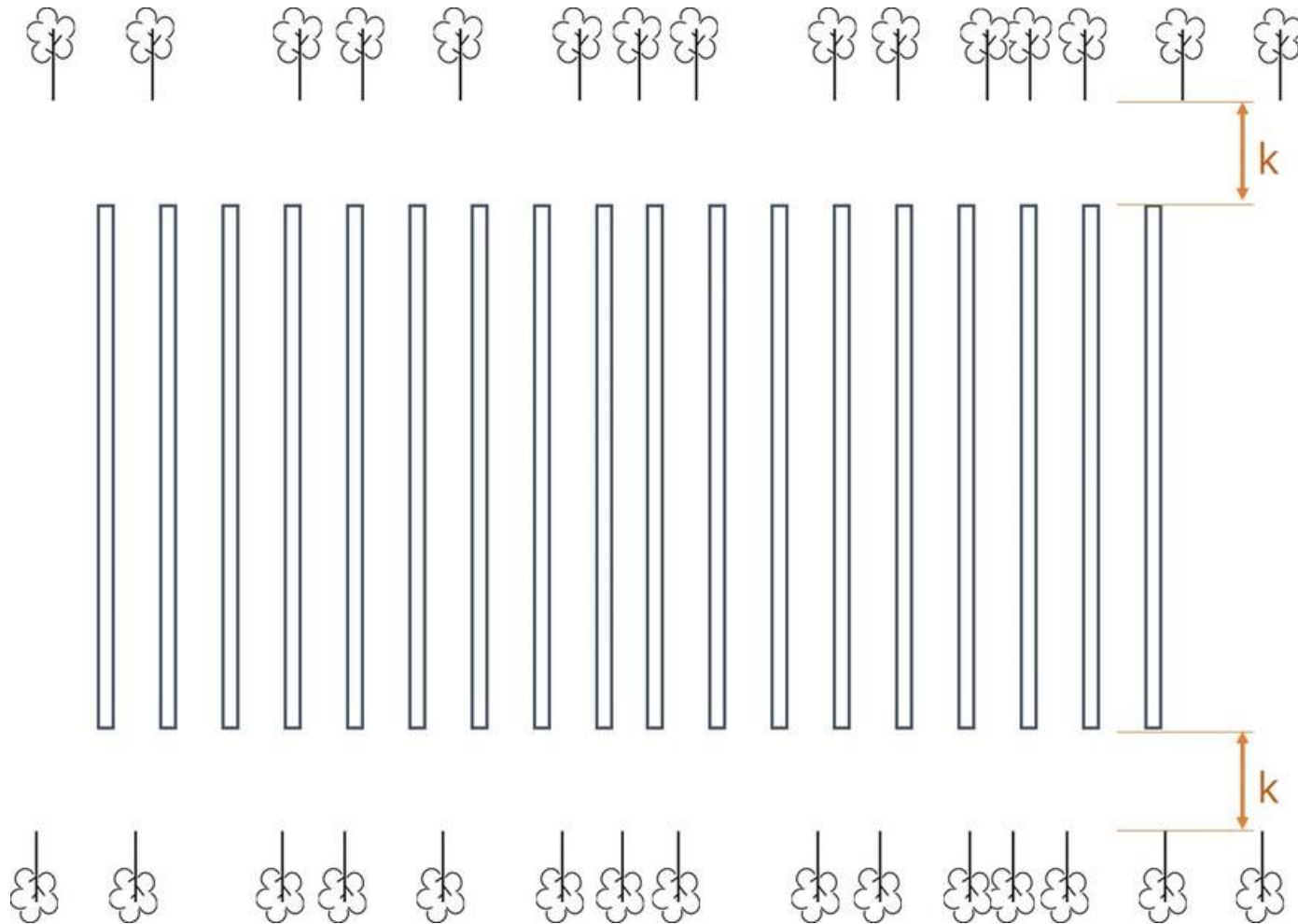
h_p = minimum height plastic

Consideration for tractor wheels:

← Over sand bed

← In between sand beds (2-row version only)

Specification - legend 4



k = headland

Specifications sand bed 2020 (1)

Dimensions: cm	1- row	2-row, 3-row	2-row (in between sand beds)	2-row, 3-row (extended sliders)
w_1	$40 \leq w_1 \leq 55$ (19 – 23 probes)			
w_d	$w_d \leq w_1 - 7$			
r_d	$170 \leq r_d$	$170 \leq r_d \leq 290$	$350 \leq r_d \leq 380$	$170 \leq r_d \leq 340$
w_2	Result of other specs			
w_3	$80 \leq w_3$	$80 \leq w_3$	$250 \leq w_3$	$80 \leq w_3$
h_1	$40 \leq h_1 \leq 60$			
d	$1 \leq d \leq 10$			
h_2	$h_2 \geq c + 5$			
h_p	Minimum plastic height $h_p \geq 5$			
c	$c \geq d + 19$ (≥ 19 cm asparagus)			
α	$0^\circ \leq \alpha \leq 2^\circ$			
β	25° to 40°			
l	No restrictions			
k	≥ 9 m and headland perpendicular to rows (2019: ≥ 11 m)			
Transport width	≤ 3 m	≤ 3 m	≤ 3 m	$\leq 3,5$ m
Electrical conductivity	Maximum value in top 10 cm layer of sand bed $< 0,05$ mS/cm (milliSiemens/centimeter)			
Humidity	Water mass percentage between 4 and 10 %			



Specifications sand bed 2020 (2)

Dimensions: cm	1- row	2-row, 3-row	2-row (in between sand beds)	2-row, 3-row (extended sliders)
Weeds in sand bed top	none			
Weeds in drive tracks	< 10 cm height and < 10% coverage			
Sand bed max penetration force	< 20 bar with standard penetrometer (e.g. Agreto penetrometer)			
Sand beds straightness	Minimum radius 500 m (2019: Only straight beds made up with GPS control)			
Sand bed minimum temperature at top	0 degrees C (no frost)			



Application aspects- Sandbed condition

- No weeds
 - Remove weeds
 - careful milling
- No clods of sand
 - Subsurface asparagus damage
 - Asparagus grow awry
- No stones
 - Subsurface asparagus damage



Application aspects – Sandbed condition

- Asparagus bed sides not damaged by manual cutting - Sand bed intact
- Asparagus not more than 3 cm above top of bed → resulting in damage by tractor. Or use higher tractor
- Internet connection (minimal 3G) or WIFI

