

BANSS SOMNIA CO₂

STUNNING SYSTEM





ADVANTAGES, SYSTEM, DESIGN... THE CONCEPT

The BANSS Somnia is a CO₂ group stunning system developed with maximum consideration for animal welfare by gentle handling of the animals, utilizing the pigs' natural curiosity and handling the pigs in groups. The concept is to have as little human contact with the pigs as possible so stress is minimized.

ANIMAL WELFARE ADVANTAGES

- Low stress levels
- Less noise
- Less skin damage and bruising
- Elimination of electrical prodders

Behind Banss Animal Welfare are years of experience with CO₂ stunning. We believe that this is the most efficient way to handle group pig stunning, on the market today which benefits both animal welfare and meat quality. In other words the system provides sustainable pig handling and stunning - both ethically and economically.

The CO₂ stunning system's intended use, is for simple stunning of pigs and includes an automatic driveway system, which can start already at the lairage/holding pens. The driveway handling

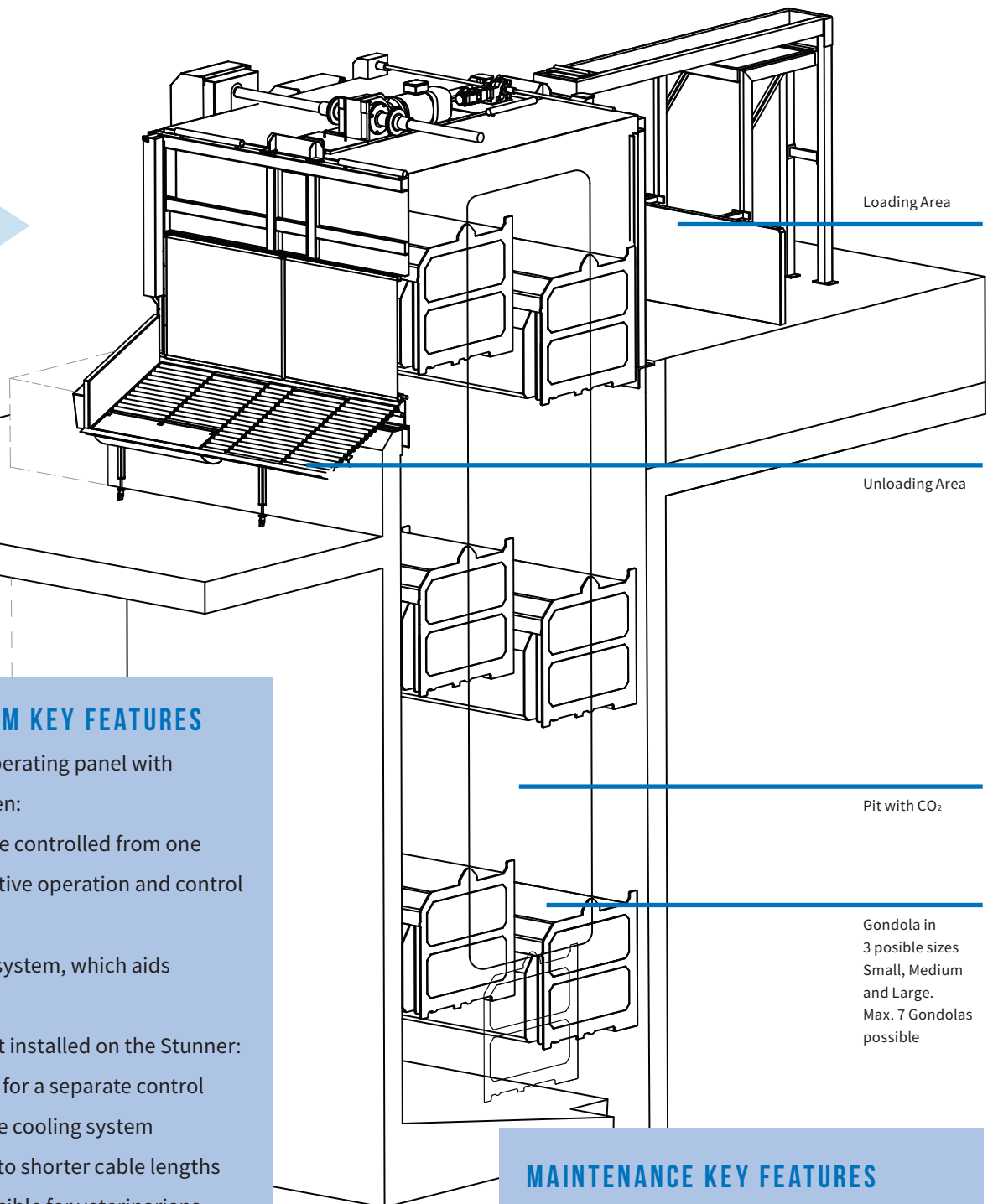
system is mechanical and designed to encourage forward movement of the pigs in groups up to the stunning area.

Once the pigs are inside the Stunner, they are lowered into a high CO₂ atmosphere and quickly lose consciousness. After an adequate amount of time in the CO₂, they are unloaded from the stunner ready for shackling and sticking.

BUSINESS ADVANTAGES

- Better meat quality i.e. low DL & PSE
- Less labour requirement with minimal handling
- Ethical sustainability
- Meet consumer expectations

”
UTILIZES THE PIGS' NATURAL CURIOSITY.



CONTROL SYSTEM KEY FEATURES

One user friendly operating panel with intuitive touch screen:

All operations can be controlled from one place allowing effective operation and control of the system

Feedback from the system, which aids operator decisions

Main control cabinet installed on the Stunner:

Eliminates the need for a separate control room with expensive cooling system

High durability due to shorter cable lengths

Data extraction possible for veterinarians, authorities, company statistics etc.

Facilitates servicing and trouble shooting

MAINTENANCE KEY FEATURES

Motors, sensors, cylinders and valves are mounted externally for easy access

Easy handling of Gondolas during maintenance (mounting/removing)

Central lubrication system provided, minimizing wear and tear of vital parts

Loading Area

Unloading Area

Pit with CO₂

Gondola in
3 possible sizes
Small, Medium
and Large.
Max. 7 Gondolas
possible



BANSS SOMNIA CO₂

STUNNING SYSTEM

HIGHLIGHTS

Best Gondola floor space on the market

All operations carried out from one place using a very intuitive operating panel

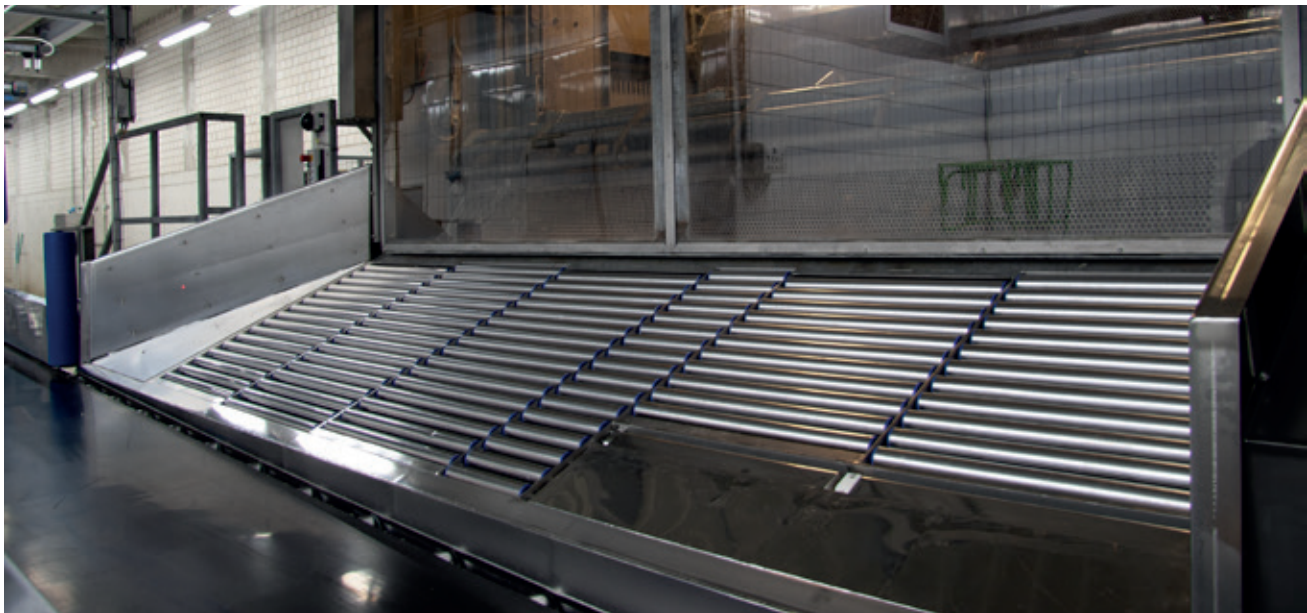
External parts provide easy maintenance and adjustment access

Main control cabinet mounted on stunner eliminating the need for a separate control room with expensive cooling system

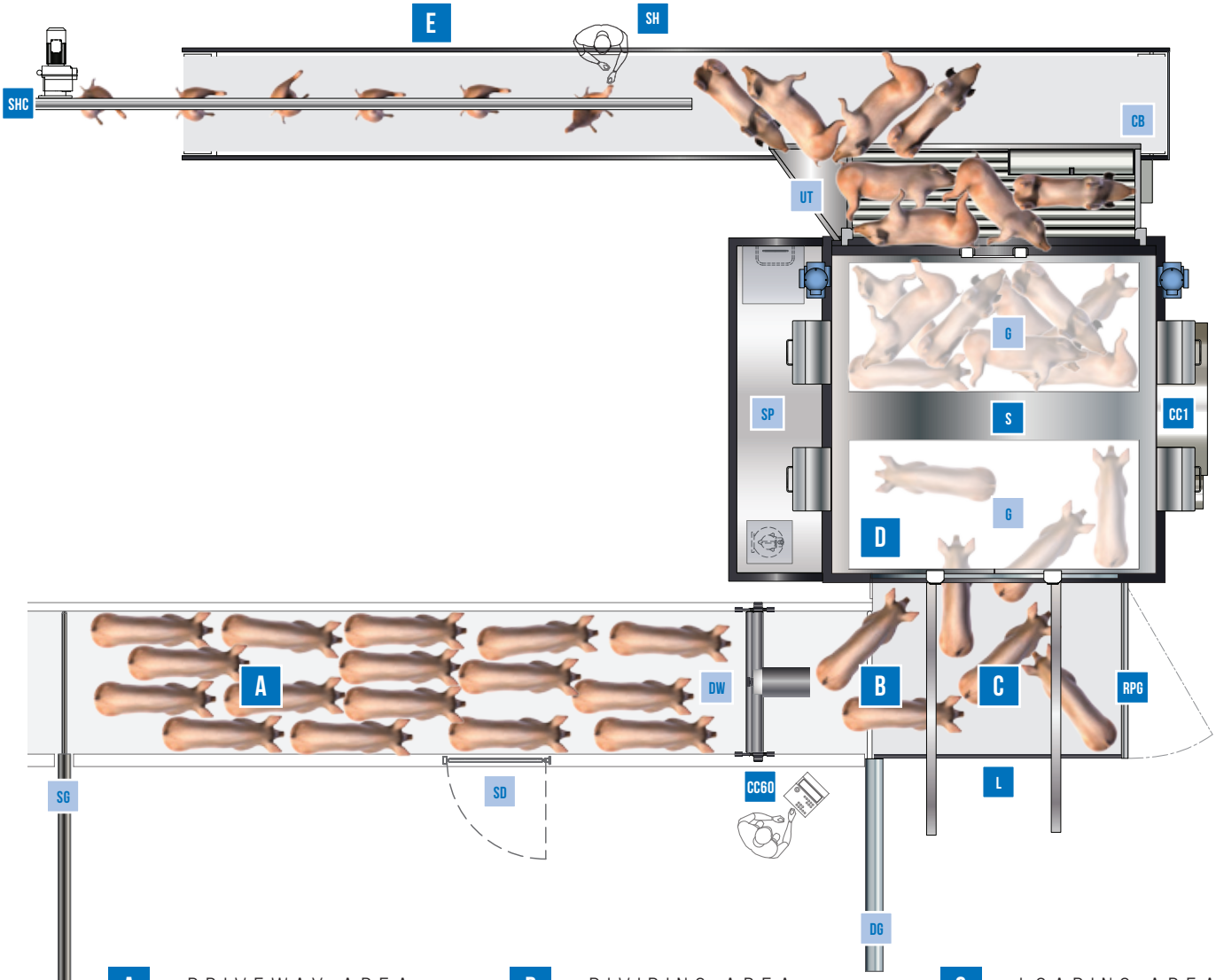
The handling system drives pigs in groups without personnel contact which allows for calmer handling

The incline towards the Somnia stunner keeps the pigs moving naturally forward instead of turning around and prolonging driving

Pressure sensitive Drive Wagons refrain from putting unnecessary pressure on the pigs



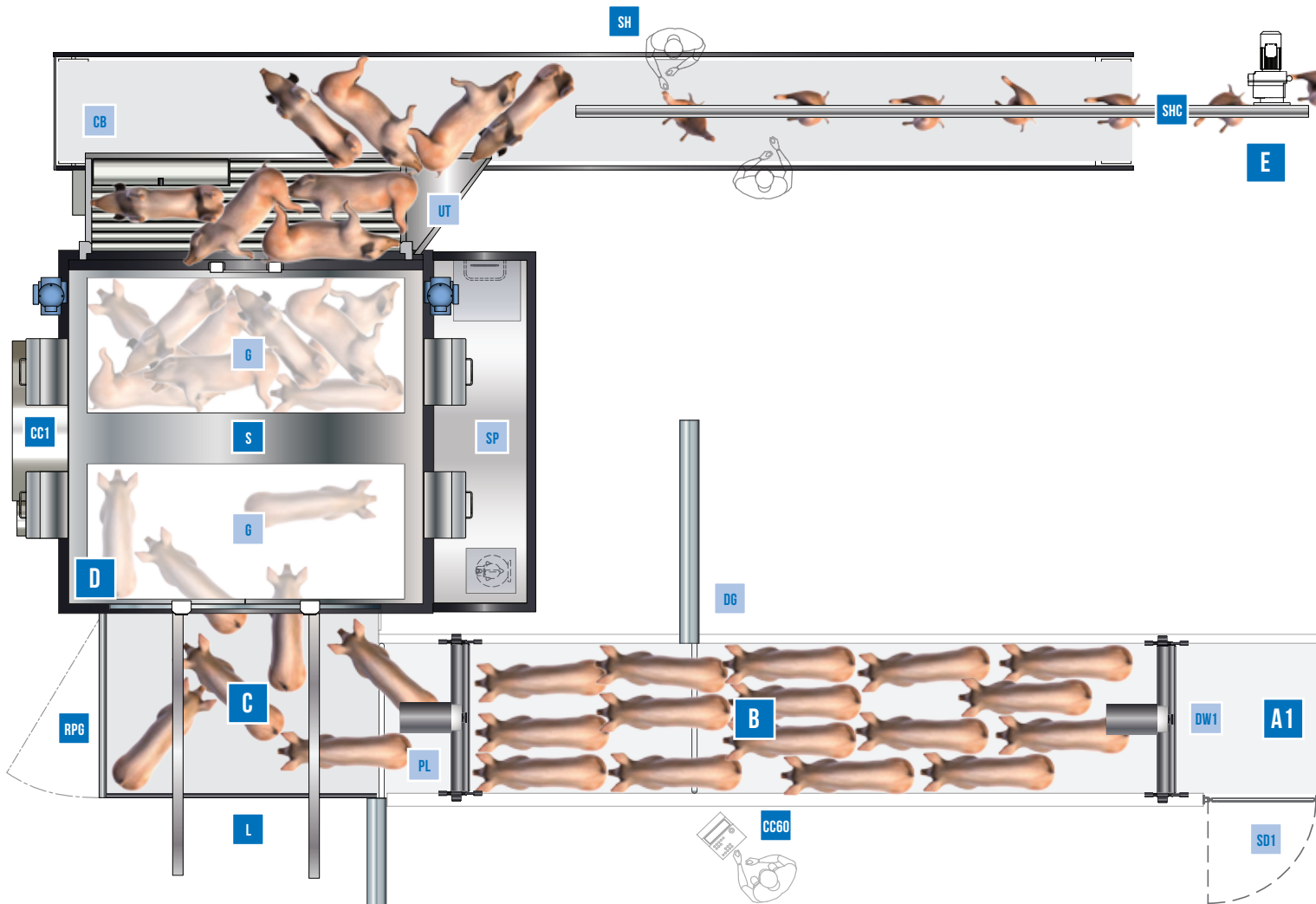
LAYOUT WITHOUT PRELOADER



- A** DRIVEWAY AREA:
 - DW Drive Wagon
 - SD Service Door
 - SG Section Gate
 - B** DIVIDING AREA:
 - DG Dividing Gate:
 - Horizontal Dividing Gate
 - Vertical Dividing Gate
 - 2-Step Dividing Gate
 - CC60 Operating Panel
 - C** LOADING AREA:
 - L Loader
 - RPG Rescue Pen gate
 - D** STUNNING AREA:
 - S Somnia
 - CC1 Main Control Cabinet
 - G Gondola
 - UT Unloading Table
 - SP Service Pit
 - E** SHACKLING AREA:
 - CB Conveyor Belt
 - SH Shackler
 - SHC Shackling Conveyor
- Mandatory
 Options/Variants



LAYOUT WITH PRELOADER



A DRIVEWAY AREA:

- PG** Pen Gate
- DW** Drive Wagon
- SD** Service Door
- SG** Section Gate

D STUNNING AREA:

- S** Somnia
- CC1** Main Control Cabinet
- G** Gondola
- UT** Unloading Table
- SP** Service Pit

B DIVIDING AREA:

- DG** Dividing Gate:
Horizontal Dividing Gate
Vertical Dividing Gate
2-Step Dividing Gate
- CC60** Operating Panel

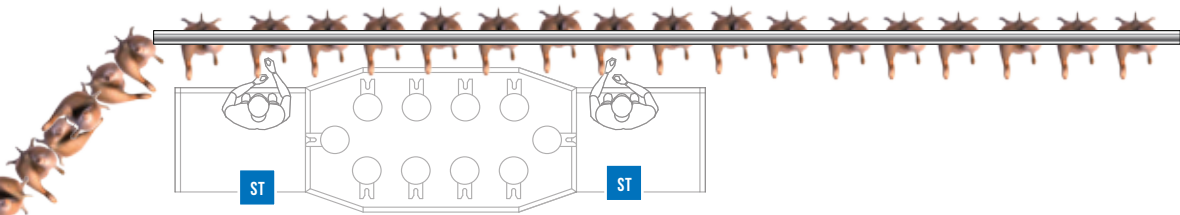
E SHACKLING AND BLEEDING AREA:

- CB** Conveyor Belt
- SH** Shackler
- SHC** Shackling Conveyor
- ST** Sticker

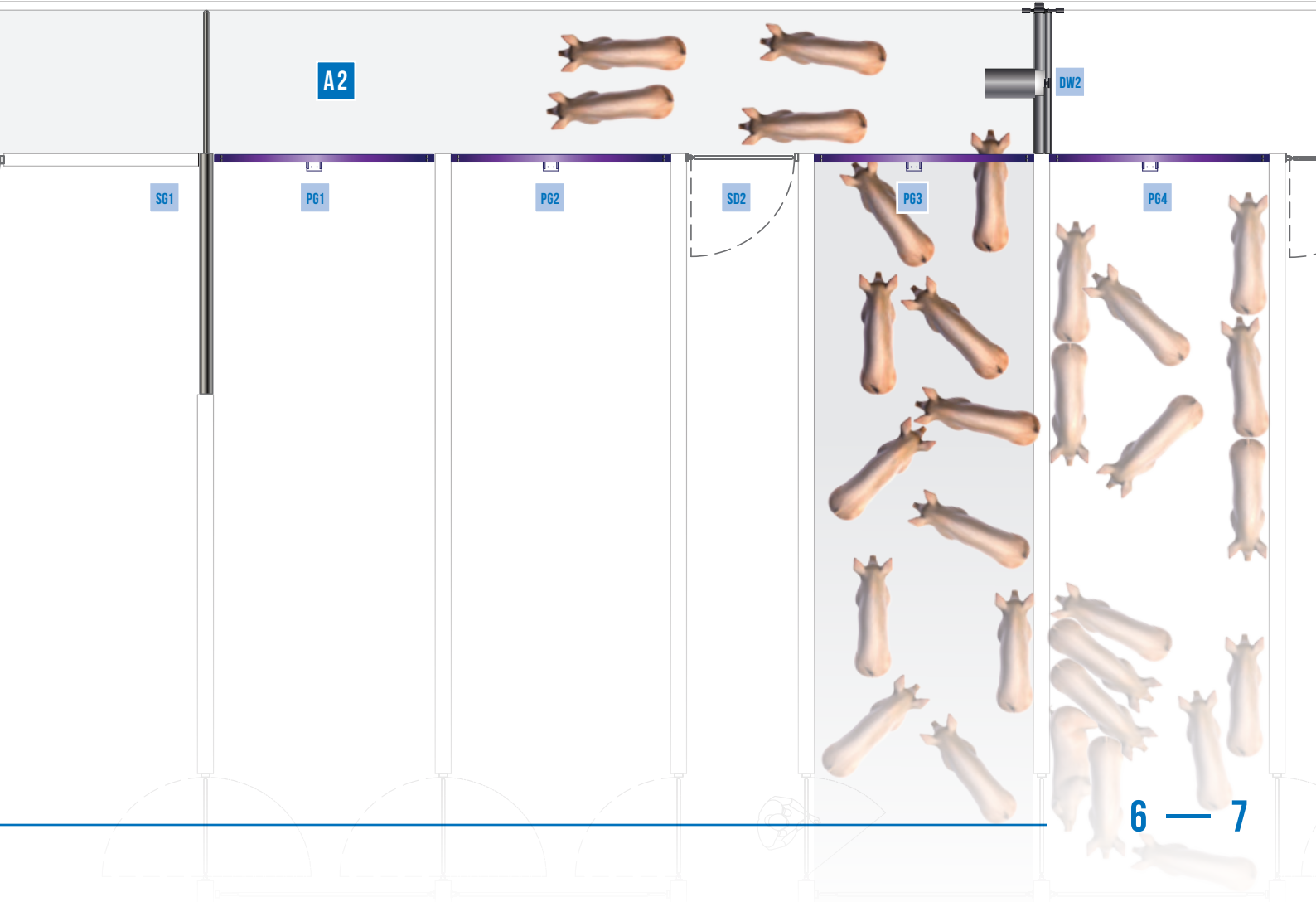
C LOADING AREA:

- L** Loader
- RPG** Rescue Pen gate
- PL** Pre-loader
(Pre-loader Section Gate &
Pre-loader Wagon)

- Mandatory
- Options/Variants



DESIGNED TO ENCOURAGE
FORWARD MOVEMENT OF THE PIGS.





SPECIFICATIONS

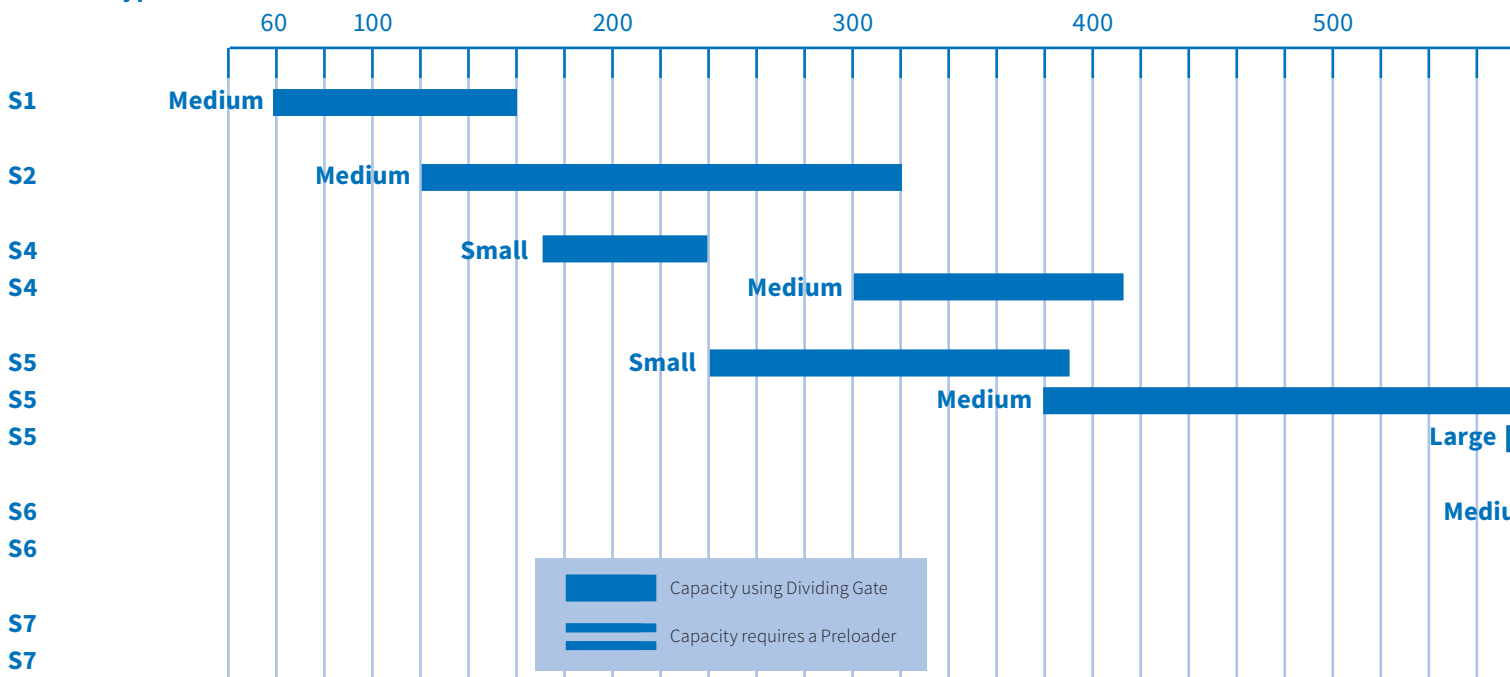
CONFIGURATION, CAPACITY, AREAS...

SOMNIA Type	Gondolas	Gondola size	Area of Gondola m ²	Pigs in Gondola (@100kg)
S1	1	Medium	3,6	8
S2	2	Medium	3,6	8
S4	4	Small	2,8	6
S4	4	Medium	3,6	8
S5	5	Small	2,8	6
S5	5	Medium	3,6	8
S5	5	Large	4,4	10
S6	6	Medium	3,6	8
S6	6	Large	4,4	10
S7	7	Medium	3,6	8
S7	7	Large	4,4	10

Gondola Size / Capacity pigs/hour

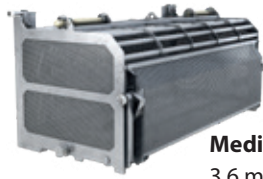
SOMNIA Type

Capacity pigs/hour depends on pig life weight





Small
2,8 m²



Medium
3,6 m²

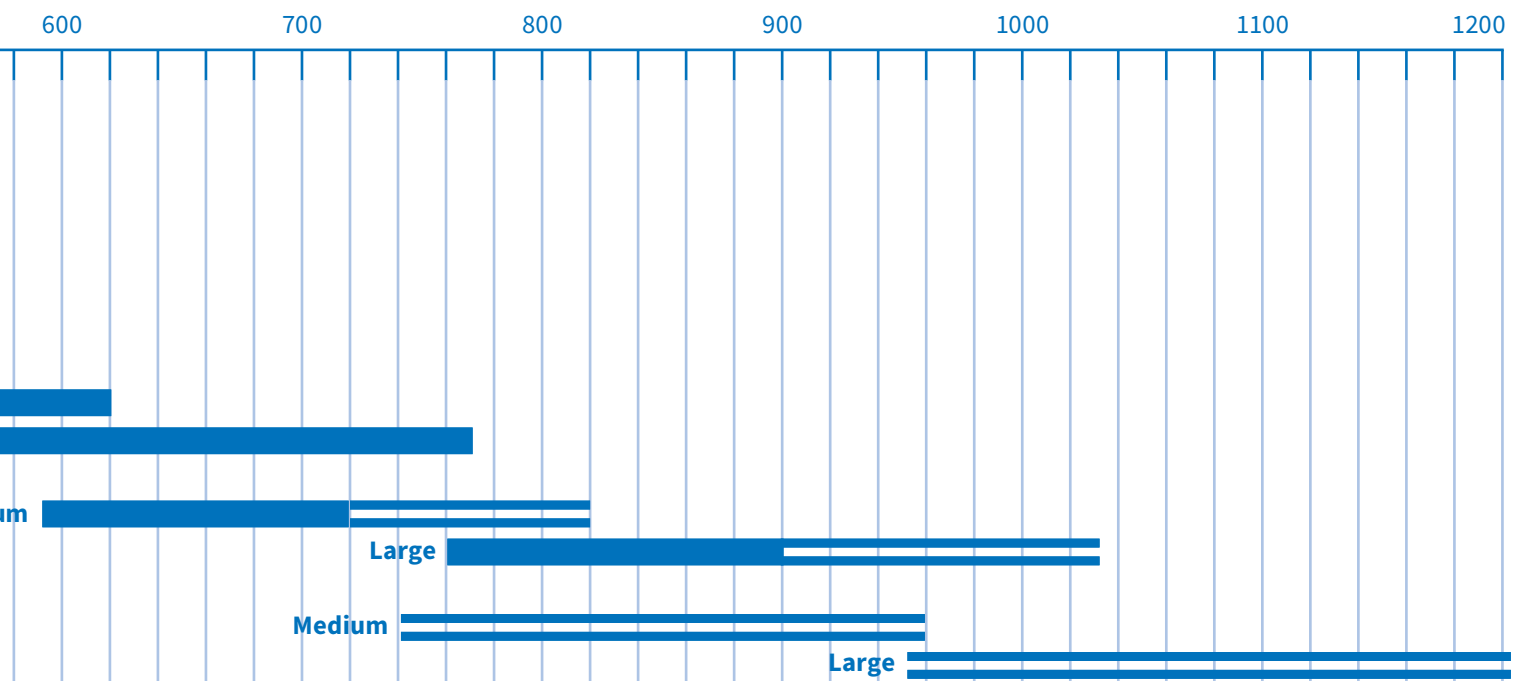


Large
4,4 m²

Expanding from smaller capacity systems to higher capacity, is easily done by adding more gondolas in the same size as your existing SOMNIA Stunner.

Pigs / hour	*Maximum Nominal Capacity		Stunning time (sec) (CO ₂ exposure)
	Pigs / hour	kg / Gondola (EC reg.)	
160	846	140	140
320	846	140	140
260	658	140	140
410	846	140	140
380	658	140	140
620	846	140	140
720	1034	140	140
820	846	140	140
960	1034	140	140
960	846	160	160
1200	1034	160	160

* Nominal capacities are dependent on animal and humans performing at 100% efficiency, 100% of the time. Variations will inevitably occur and thereby the nominal capacity will only be held periodically. Practical capacities will, therefore be approximately 10-15% less than nominal capacities. EU-Factor: Recommended space in stunning gondola: 235 kg/m²



PIT

SIZE, SUPPLY REQUIREMENTS...

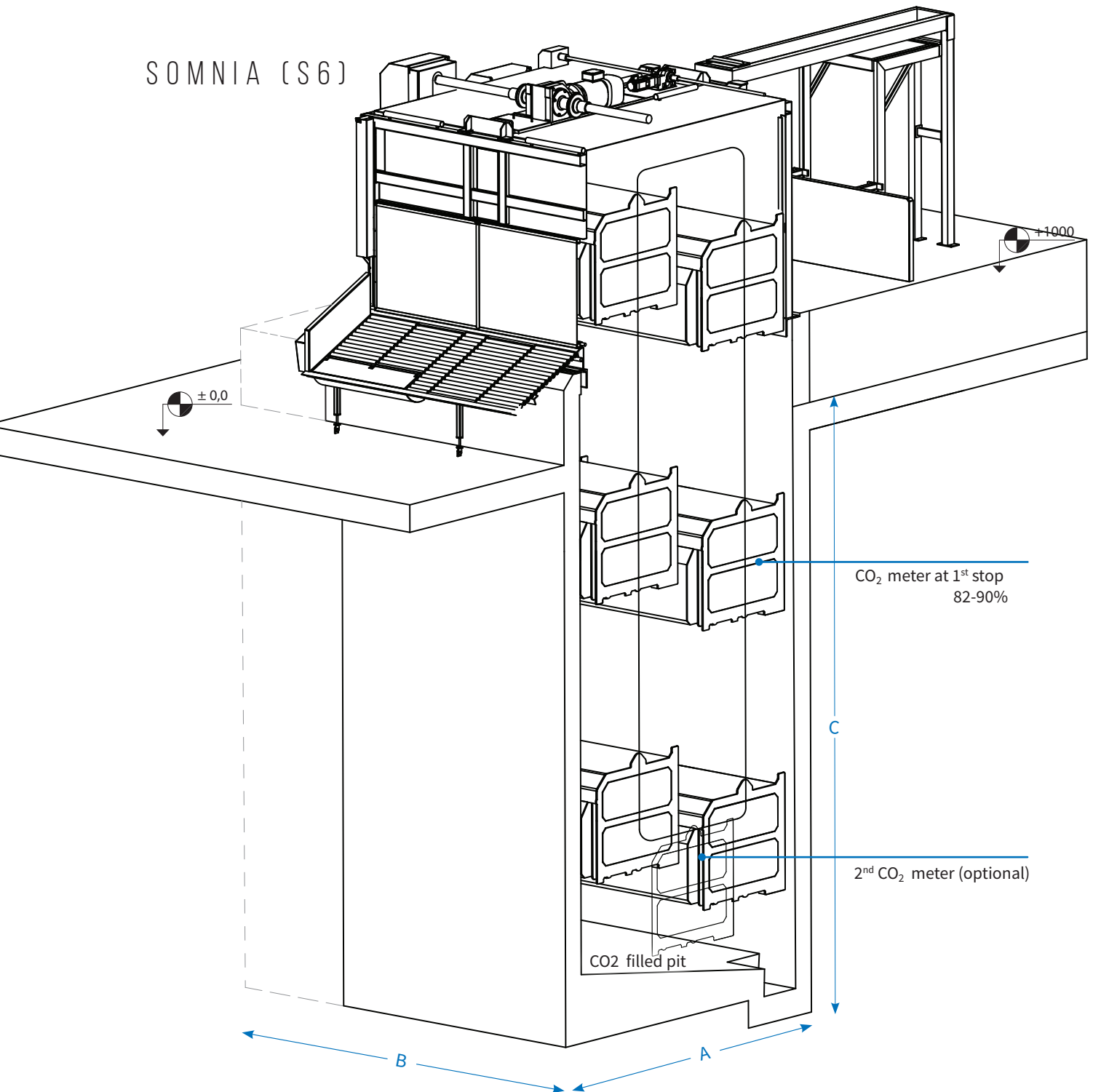
Supply requirements & internal Pit measurements for Somnia 1-7

Power	3x400V 50Hz 80 Amp. Other voltages and frequencies are available on request.
Air	7-10 Bar
CO ₂ temperature	20-25°C
CO ₂ Quality	99,8% purity - H ₂ O <100ppm, CO <10ppm, (technical quality according to EN 14175)

Gondola size		Large	Medium	Small
S1 & S2	Width mm	A -	1740*	-
	Lenght mm	B -	4440*	-
	Depth mm	C -	3200*	-
	CO ₂ supply to fill pit in 30 min at production start	-	100 kg/h (per pit)	-
S4	Width mm	A -	3480	3480
	Lenght mm	B -	4440	3840
	Depth mm	C -	3800	3800
	CO ₂ supply to fill pit in 30 min at production start	-	290 kg/h	250 kg/h
S5	Width mm	A 3480	3480	3480
	Lenght mm	B 5080	4440	3840
	Depth mm	C 5300	5300	5300
	CO ₂ supply to fill pit in 30 min at production start	430 kg/h	380 kg/h	330 kg/h
S6	Width mm	A 3480	3480	-
	Lenght mm	B 5080	4440	-
	Depth mm	C 6800	6800	-
	CO ₂ supply to fill pit in 30 min at production start	540 kg/h	470 kg/h	-
S7	Width mm	A 3480	3480	-
	Lenght mm	B 5080	4440	-
	Depth mm	C 8300	8300	-
	CO ₂ supply to fill pit in 30 min at production start	670 kg/h	560 kg/h	-

* S2 = 2 pits. Please Note: Measurements are estimates only - NOT for construction. Power, Air and CO₂ values are supply values - not consumption.

SOMNIA (S6)



The illustration shows a pit filled with CO₂ and the two measuring points. The CO₂ concentration will always be higher at the bottom of the pit. The standard supply has one CO₂ meter set to measure the CO₂ concentration at pigs snout level where the Gondola has it's first stop i.e. when the Gondola above stops to load the next batch of pigs. An optional second meter can also be supplied and is used to measure the CO₂ concentration at the bottom of the pit, also at snout level. An acoustic & visual alarm is activated if the CO₂% falls (typically) 5% below the set point.



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