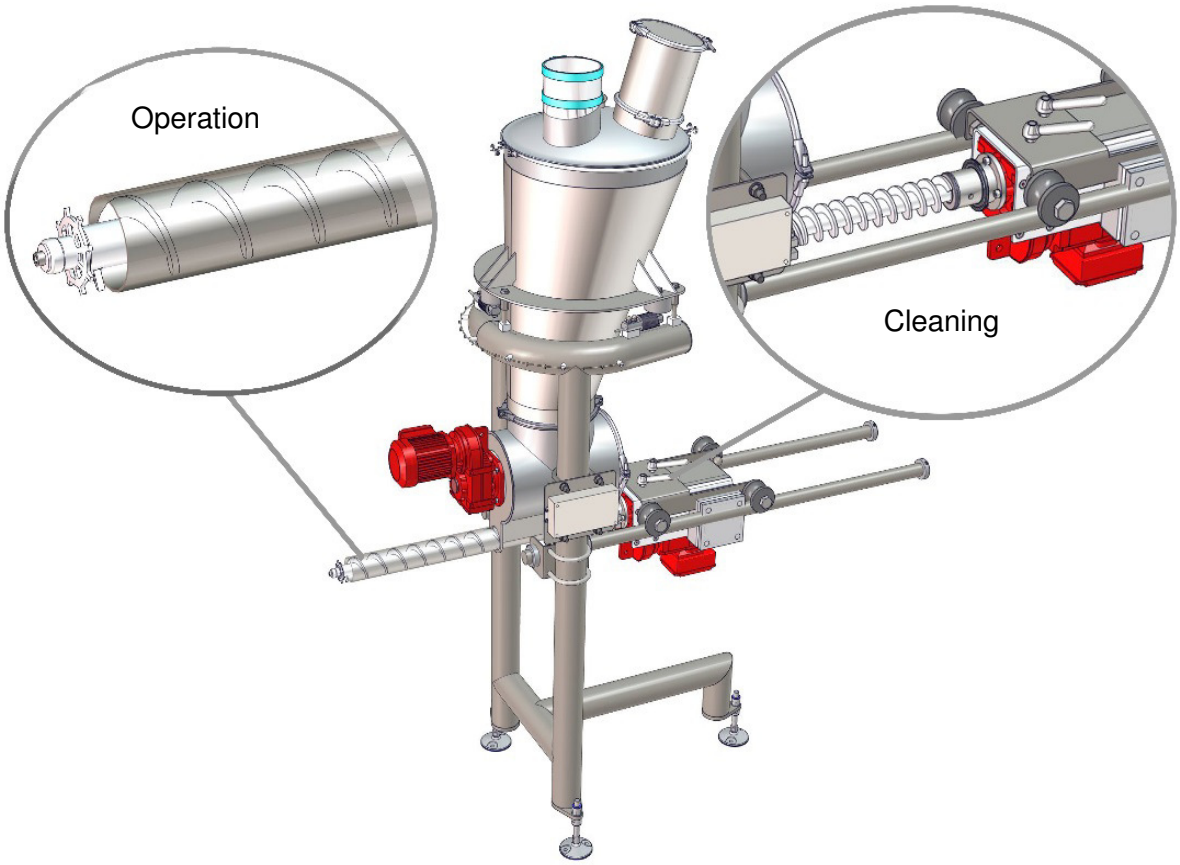
Datasheet
solids – Loss-In-Weight Scales DiffDos
LWS-Hygienic-Dry

High precision, continuous, gravimetrical dosing (Loss-in-Weight) of bulk solids with control of the mass flow for constant dosing amounts. Hygienic-Dry Design acc. to EHEDG-Guidelines for dry processes with dry cleaning for food, pharmaceutical, cosmetic and chemical industry.



Advantages:

- **High dosing constancy (+/-0,5% to +/-1%)* by innovative pulsation suppression**
- **Very good dosing precision (+/-0,5% to +/-1%)* even for cohesive bulk solids**
- **Safe and trouble-free automatic dosing for high process safety**
- **Complies with 2006/42/EG Machinery Directive and GMP requirements**
- **Easily dismountable, easy to clean by removable housing parts with quick clamping rings**
- **Easy to maintain: accessible from all sides**

*) The precision to be achieved must be confirmed by tests it this devices is ordered.

Freigabe:	MIGSA		SST		H. Linder	
	Datum:	Kurzzeichen:	Datum:	Kurzzeichen:	Datum:	Kurzzeichen:

Preliminary
Änderungen vorbehalten

Operating conditions:

- Permissible operating pressure: atmosphere
- Product temperature max.: 65° C
- Max/Min ambient temperature: -10 °C ≤ T ≤ 50 °C
- Bulk solids data: Powdered till granulates, free-flowing products

Type	Inlet-Ø	Height*)	geom. Volume	Weighing range **) for ρ=0,5kg/dm³	Weight	Type Dosing device
LWS00505YD01	150 mm	2258 mm	50 dm³	2-20 kg/h	160 kg	DSA65
LWS00505YD02	150 mm	2258 mm	50 dm³	10-100 kg/h	160 kg	DSA65
LWS00505YD03	150 mm	2258 mm	50 dm³	85-850 kg/h	160 kg	DSA65
LWS02507YD01	150 mm	2500 mm	250 dm³	160-1600 kg/h	380 kg	DSA80
LWS06510YD01	200 mm	3000 mm	650 dm³	270-2700 kg/h	1000 kg	DSA100

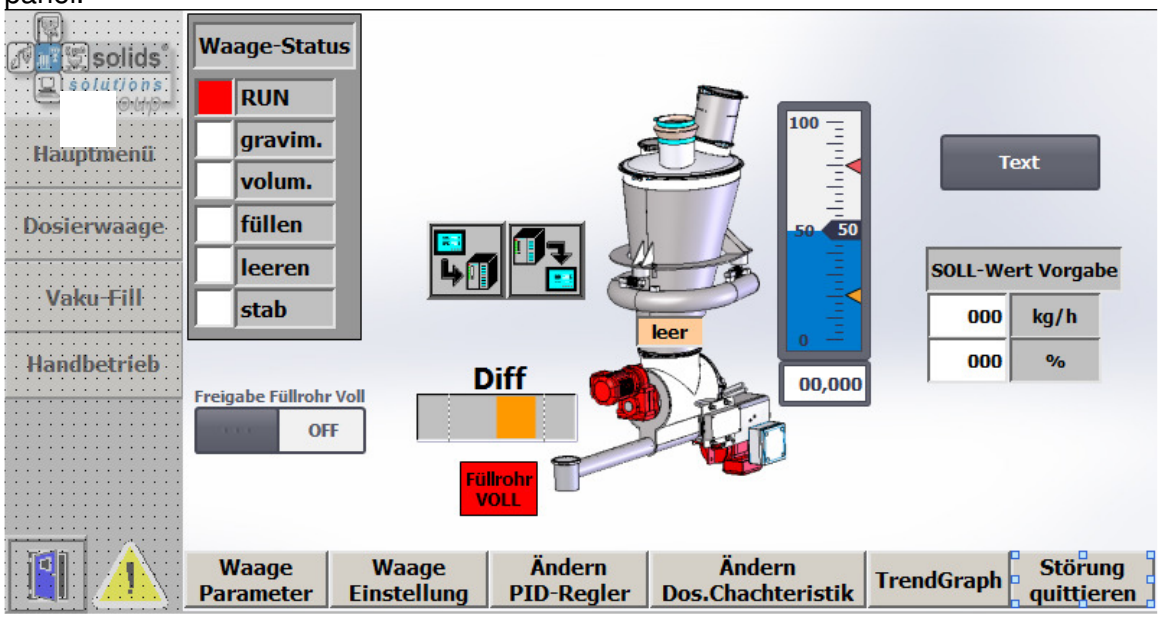
*) incl. base frame, height can be reduced to max. 400mm
**) other dosing ranges possible on request

Function:

The dosing device is the solids Precision Dosing Device Type DSA PreciDos, equipped according to requirements with regard to dosing capacity and product properties. Also for poor-flow bulk solids, or if utmost accuracy is required. The equipment includes a dosing star that rotates in the product flow and ensures an even, pulsation-free dosing.

The dosed amount per time unit is set as set point (target value). Then, the control system controls the dosing device in such a way that the actual dose rate value will be kept at level of the set point despite possible fluctuating bulk density, irregular volumetric dosing or other disturbing factors.

During refill, the control function is switched off and the dosing device is operated with a fixed parameter set. After filling has been completed and a certain relaxing phase, normal operation sets in again. The control consists of Siemens components. It includes an S7, a SIWAREX FTC and an adequate operation panel.

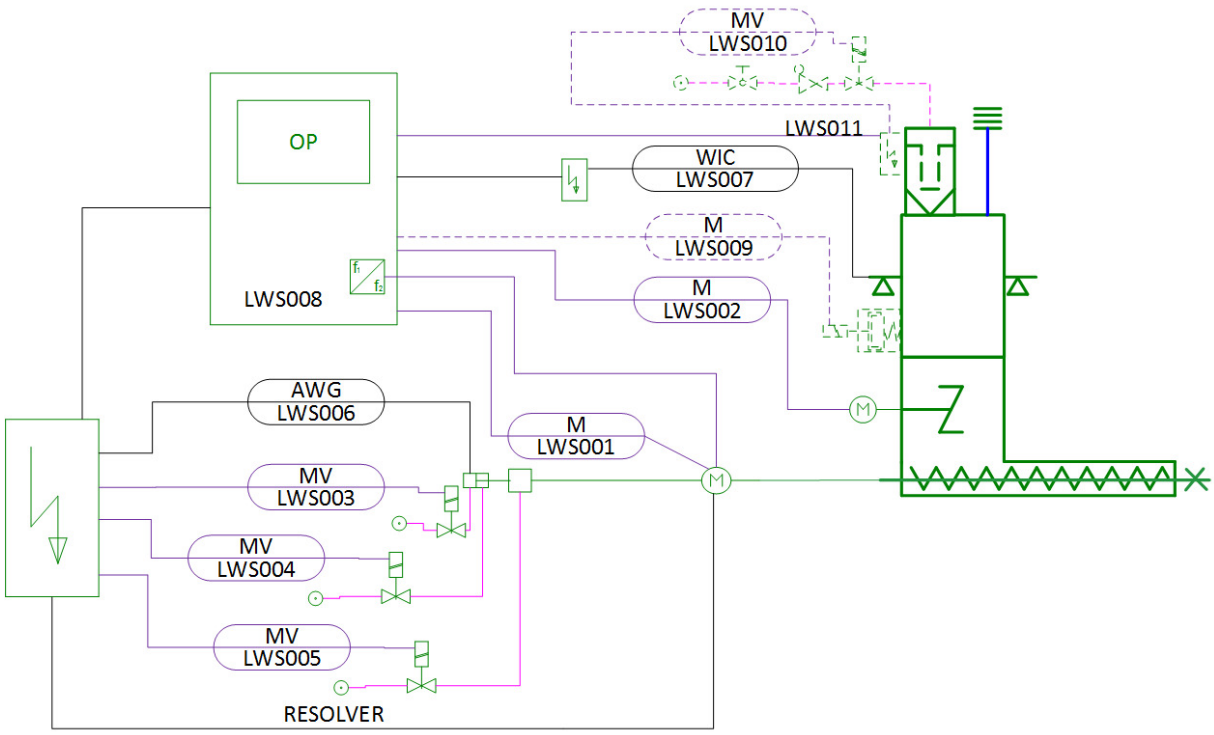


Basic version:

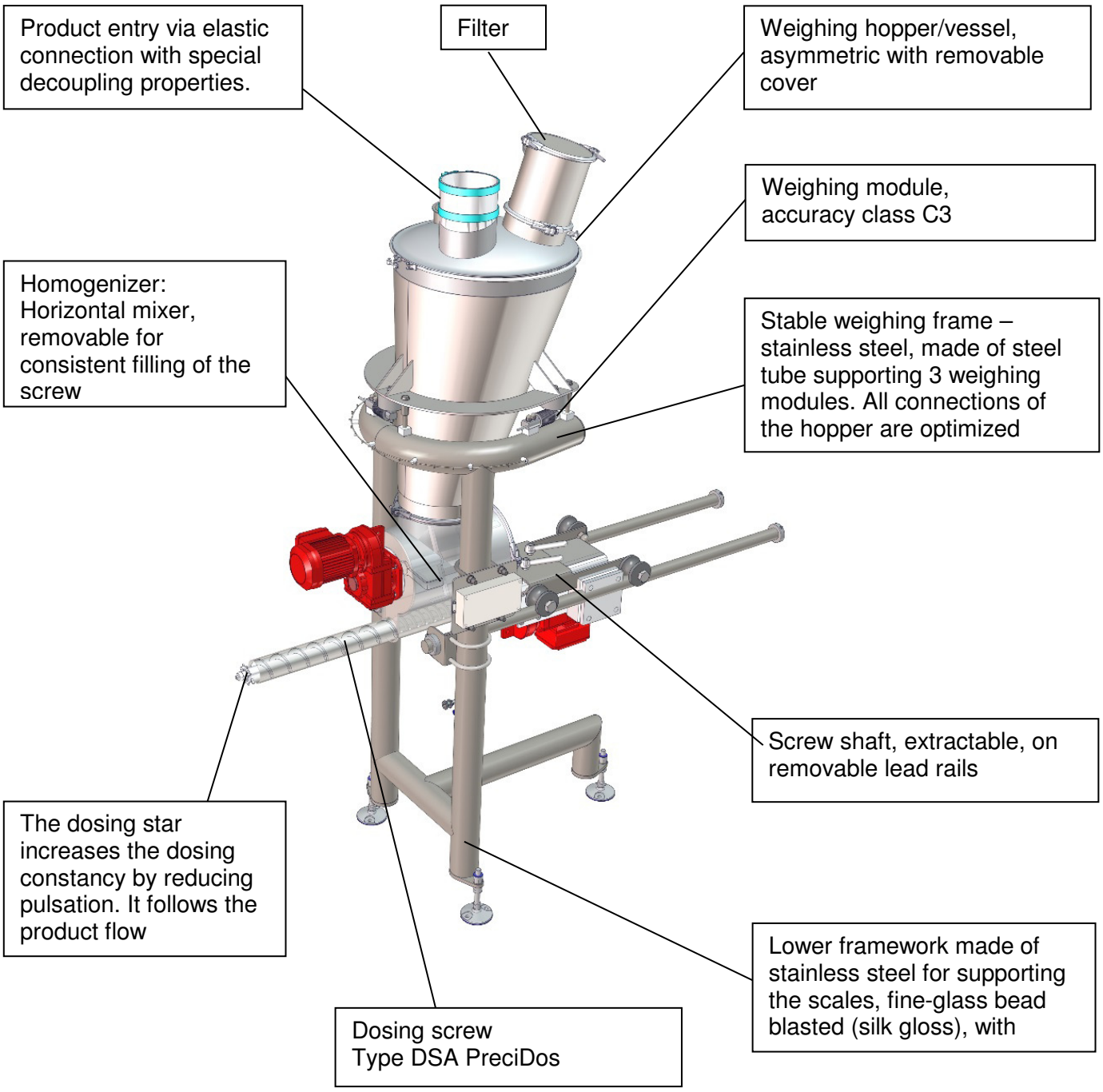
- Housing: welded steel construction – stainless steel 1.4306 (DIN) / 304L (AISI)
- Helical screw: welded steel construction - stainless steel 1.4306, lead S = D in inlet
- Surface treatment of the stainless steel parts: Pickled or brushed and passivated.
- Complies with 2006/42/EG Machinery Directive, enclosure 1, para. 2.1 Food machines, EHEDG-Guidelines as well as GMP requirements for intended use.
- Surface quality inside acc. to EN 10088 2B with roughness value Ra ≤ 0,8 µm, sheets outside from 6 mm 1D acc. to EN 10088 and fine-glass bead blasted (silk gloss).
- Weldings basically acc. to EN ISO 5817+AC:2006 evaluation group B, as well as continuously free of gaps with roughness value Ra ≤ 3 µm.
- Easy to dismantle for exclusively dry cleaning.
- Precision Dosing Device Type DSA PreciDos approved for Zone 21 inside, category 2 acc. to ATEX 2014/34/EU
- High-resolution weighing cells, dosing control and operation panel, all cabled, parametrized and tested
- Drive for mixer: direct, motor connection directly at motor terminal box
  Motor: gear motor, type: SEW, 0,25 kW,
  Design: slip-on gear mechanism with hollow shaft and fitting key
- Drive for helical screw: direct, motor connection directly at motor terminal box: gear motor, type: SEW 0,25-0,37 kW, adjusting range 1:10, design: slip-on gear mechanism

EMSR-Parts:

	Description	Brand	Type
Basic version			
LWS001	Gear motor	SEW	FA
LWS002	Gear motor	SEW	FAF27DR63L4/TF
LWS003	Magnetical valve cylinder NO	Festo	CPE14-M1BH-3OL-1/8
LWS004	Magnetical valve cylinder NC	Festo	CPE14-M1BH-3GL-1/8
LWS005	Magnetical valve cylinder NO	Festo	CPE14-M1BH-3OL-1/8
LWS006	Position transmitter	Festo	SMAT-8E-S50-IU-E-0,3-MSD
LWS007	Weighing cells	HOTTINGER	Z6FC3
LWS008	Frequeny converter	SEW	
	CPU	Siemens	S7-300
	Weighing module for Loss-in-Weight scales	Siemens	Siwarex FTC
	Operation panel	Siemens	HMI TP900 Comfort
Option 9: Magnetcial vibrator at container			
LWS009	Magnetical vibrator		
Option 10: Filter with automatic cleaning			
LWS010	2/2-way-magnetical valve	Norgren	8296300
LWS011	Filter control unit	AD invent	RM-BV 4 Micro
Option 11: Synchronous motor with FC		SEW	
LWS001	Synchronous motor	SEW	FHF27CMP50
	Frequency converter		MDX61B001-5A3-4-00



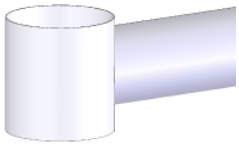
Basic version:



The whole scales is not a device acc. to ATEX-Guidelines 2014/34/EU, however, it can be used in Zones 20-21-22 (inside). Additional electrical parts have to be approved for the respective ATEX zone.

Options:

1. Parts in contact with the product made of 1.4404 (DIN) / 316L (AISI)
2. Parts in contact with the product made of 1.4571 (DIN) / 316Ti(AISI)
3. elektropolished
4. Electrical components outside suitable for Zone 2/22, with earthing
5. Electrical components outside suitable for Zone 1/21, with earthing
6. Different inlet Ø
7. Screw helix pitch S=1/2D in inlet for limited flowable to heavy cohesive products. NOTE: the dosing rate will cut in half!
8. Outlet part with connection to the screw tube and vertical round outlet



9. Magnet vibrator at container
10. Filter with automatic cleaning
11. Synchronous motor for an adjusting range of 1:35 instead of 1:10

Related documents:

3D-Part: Type.step (Example: **LWS02507YD01.** Step)
2D- planning drawing: Typ.dxf (Example: **LWS02507YD01 D**xf)
Selection criteria: SG-LWS
Price list: PL-LWS-Hygienic-Dry
Draw-No-List_LWS-Hygienic-Dry