Zoz GmbH
Maltoz®-Strasse
D-57482 Wenden

T +49-2762-9756-0
F +49-2762-9756-7
E info@zoz.de

Carrier-gas-discharging-unit TGD100
for Simoloyer® CM100

in general, mission & challenge

TGD carrier-gas-discharging-unit allows to transport and insitu separate/classify multiphase flows in dry powder processing under controlled condition under inert gas after preceding evacuation. Carier-gas-assisted-discharging is designed to support critical discharging/unloading process particularly after HKP (MA, HEM, RM) in the Simoloyer® after batch-operation mode. In 2006, TGD represented the first commercialized component group for auto-batch and semi-continuous HKP-operation at that time with conventional SKV-turbines. Later, Zoz-turbines SKZ improved evacuation substantially. In result, TGD can increase powder yield and product quality substantially, since the severe change of B/P-weight-ratio during discharging is effectively addressed.

advanced

Carrier-gas assisted discharging for Simoloyer® with standard grinding units (non-continuously), here CM100

- ➢ higher powder yield in shorter time at lower rotational speed;
- ➢ less kinetic impact at discharging (lower speed, shorter time);
- ➢ semi-automatic process:
- controlled carrier gas flow in closed or open system;
- pressure-measurement and gas-cooling on a mobile unit;
- carrier gas fully recycled, inert atmosphere;
- standard air-lock DN63 can be adapted (with glass-container).

options

- standard air-lock DN63/container adapted with option 25 (> page 02);
- air-lock DN63 adapted with opt. 30-31 (+32 for valve container);
- bypass (45-49) for different gas flow in grinding unit and cyclone;
- extended Simoloyer® cooling block for heat exchanger;
- rotary vane feeder extension for electrical control (10b):
- vacuum supply (preceding evacuation) upon unit-plateau (20-21);
- gas supply for inert gas fixed at cart-rear (22-23);
- communication of gas-drive by MALTOZ®-software.

dimension

L x B x H [mm]	1500 x 1500 x 3000
net weight (mobile unit only)	200 kg
net weight (incl. components, standard)	300 kg
nominal power (total)	6 kW
power supply	400V, 3 phase, 16A

technical data subject to alterations

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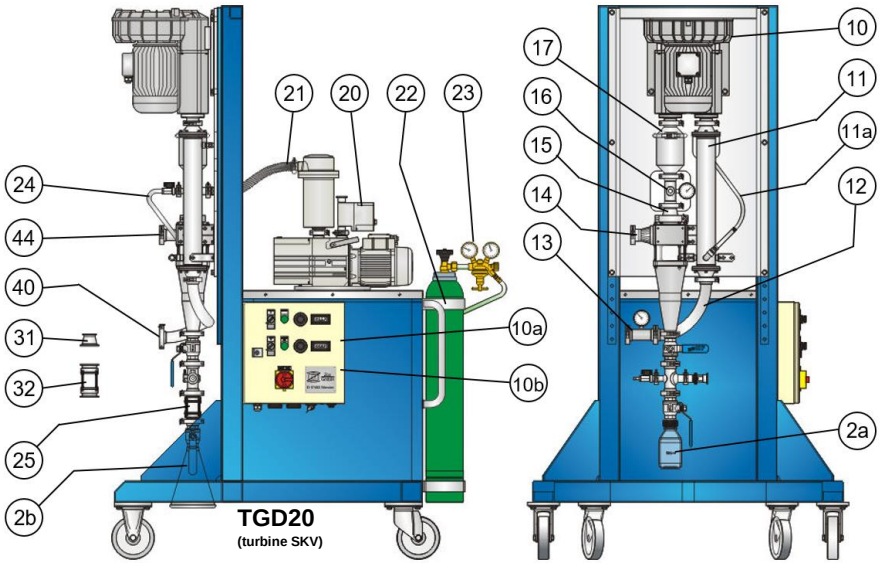
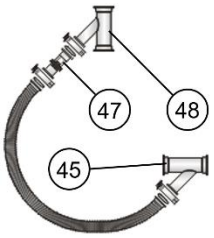


TGD20
(turbine SKV)

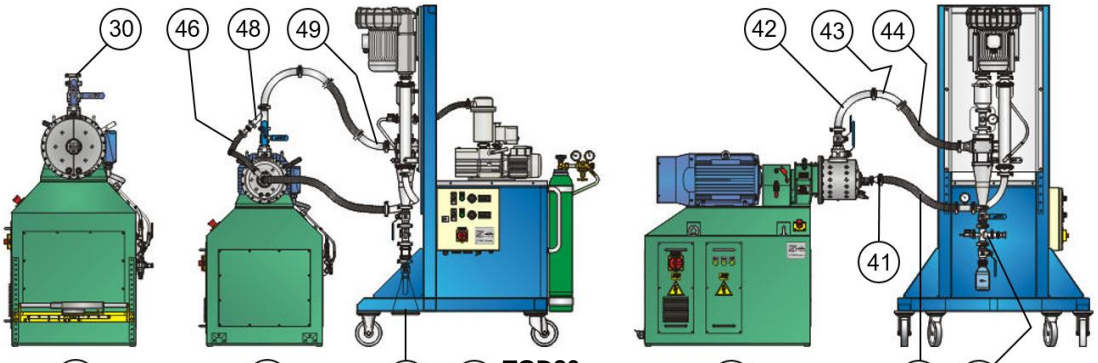


bypass at Simoloyer® CM100s1

related patents: see chapter national and international patents of Zoz GmbH in general information

ID	unit	function
01	Simoloyer® **CM100**	High Kinetic Processing (MA/HEM/RM)
02	Simoloyer® air-lock	adapted for powder-collection under controlled condition
05	**TGD100a**	mobile carrier-gas-discharging-unit
10	side-channel-turbine SKZ530-DN63	carrier gas drive
10 a/b	electronic cabinet (add-on to Maltoz®)	carrier gas drive, control of pump and rotary vane feeder (option)
11	heat exchanger WT63-750	gas flow cooling (elevated temp. during de- and compression)
11a	piping WT*	connected to cooling block Simoloyer® CM08/20 (option)
12	pipe bend RBA-DN50-90°	transfer of multiphase-flow
13	pressure-gauge DMD16	record of flow-parameters, gas-flow-outlet
14	pilot cyclone ZK140-L	separation of powder material in multiphase-flow
15		
16	KF-calming pipe DN63-25-40-40-c	cross-tube for air-lock evacuation and gas-supply
16a	pressure-gauge DMD16	adapted at 16, record of flow-parameters
17	dust-gas-filter FC-MF-DN63	protection-filter for carrier gas drive
20	vacuum pump DUO 10 / DUO 65	air-lock operation
21	flex-metal-tube DN40x500	piping vacuum-pump -//- air-lock

ID	unit	function
22	bottle-rack 10L	support for gas supply 10 liter
23	manometer 10l	control of gas supply at air-lock
24	adapter and piping DN16-G3/8-NW09k	piping gas-supply -//- air-lock
25	transparent pipe module GR-DN50x100	observation of discharging at air-lock if using valve container
30	adapter KF-A DN63-DN50x45	transfer of multiphase-flow out of Simoloyer® if using air-lock DN63
31	adapter KF-A DN63-DN50x45	transfer of multiphase-flow out of cyclone if using air-lock DN63
32	transparent pipe module GR-DN63x150	observation of discharging process at air-lock if using air-lock DN63
40	flex-metal-tube DN50x750	piping TGD20 -//- Simoloyer® side-port P02
41	Adapter KF-A DN50-DN40x50	transfer gas-flow into Simoloyer®
42	pipe bend RBA-DN50-90°	transfer of multiphase-flow out of Simoloyer®
43	pipe bend RBA-DN50-45°	transfer of multiphase-flow out of Simoloyer®
44	flex-metal-tube DN50x500	piping Simoloyer® main-port P01- //-TGD20
45	KF-junction-tube DN50-40-50-45°	junction for bypass out of gas-flow
46	flex-metal-tube DN40x750	piping bypass
47	valve adapter DN40-G1-DN40	flow-control of bypass
48	KF-junction-tube DN50-40-50-45°	junction for bypass into multiphase-flow
49	pipe bend RBA-DN50-45°	transfer of multiphase-flow out of Simoloyer® if using bypass



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