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Carrier-gas-discharging-unit TGD20a

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(for Simoloyer® CM08 and CM20)

In general

The carrier-gas-discharging-units represent the first commercialized result of ongoing development of the continuously compression mode for MA, HEM and RM resulting out of several years development in multi-phase flows and in-situ-separation/classification.

Application

Carrier-gas assisted discharging of Simoloyer® with standard (non-continuously) -grinding units after batch operation, here CM08 and CM20:

- higher powder yield in shorter time > less kinetic impact during discharging by lower rotational speed
- > less kinetic impact during discharging by shorter discharging time
- ➤ semi-automatic process:
 - controlled carrier gas flow;
 - pressure-measurement and gas-cooling;
 - carrier gas fully recycled;
 - closed or open system;
 - inert atmosphere;
 - •
 - standard air-lock DN40 can be adapted (with glass-container);
 - on a mobile cart;





Options

- standard air-lock DN40 with valve container can be adapted (25) with option 25;
- standard air-lock DN50 can be adapted with option 30-31 (+32 for valve container);
- bypass (45-49) allows 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 for preceding evacuation can be built upon the unit-plateau (20-21)
- gas supply for inert gas operation can be fixed at the end of the cart (22-23)
- communication of gas-drive by MALTOZ[®]-software;

Dimension	
L x B x H [mm]	1235 x 1200 x 2065
net weight	125 kg
(cart only)	
net weight (incl.	240 kg
base components)	
nominal power	2.2 kW
(total)	
power supply	400V, 3 phase, 10A

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	(1b)	(1a) (2b) (5)		(1a) (40) (2a)
ID 01a/b	unit Simoloyer CM08/20	function	22	bottle-rack 10L	support for gas supply 10 liter
U1a/D	Simoloyer Civi08/20	High Kinetic Processing	23	manometer 101	control of gas supply at air-lock
		(MA/HEM/RM)			
02a/b	Simoloyer air-lock	adapted for powder-collection	24	adapter and piping DN16-G3/8-NW09k	piping gas-supply -//- air-lock
02a/b 05	TGD20a	adapted for powder-collection under controlled condition mobile carrier-gas-discharging- unit		adapter and piping	piping gas-supply -//- air-lock visual control of discharging process at air-lock in case of
02a/b		adapted for powder-collection under controlled condition mobile carrier-gas-discharging-	24	adapter and piping DN16-G3/8-NW09k transparent pipe module GR-DN40x100 adapter KF-A	piping gas-supply -//- air-lock visual control of discharging process at air-lock in case of using valve container transfer of multiphase-flow out of
02a/b 05	TGD20a side-channel-turbine	adapted for powder-collection under controlled condition mobile carrier-gas-discharging- unit carrier gas drive carrier gas drive as additional	24 25 30	adapter and piping DN16-G3/8-NW09k transparent pipe module GR-DN40x100 adapter KF-A DN50-DN40x45	piping gas-supply -//- air-lock visual control of discharging process at air-lock in case of using valve container transfer of multiphase-flow out of Simoloyer in case of using air- lock DN50
02a/b 05 10	TGD20a side-channel-turbine SKV180-DN40	adapted for powder-collection under controlled condition mobile carrier-gas-discharging- unit carrier gas drive carrier gas drive as additional Maltoz-support, control of pump and rotary vane feeder (option)	24 25	adapter and piping DN16-G3/8-NW09k transparent pipe module GR-DN40x100 adapter KF-A	piping gas-supply -//- air-lock visual control of discharging process at air-lock in case of using valve container transfer of multiphase-flow out of Simoloyer in case of using air- lock DN50 transfer of multiphase-flow out of cyclone in case of using air-lock
02a/b 05 10	TGD20a side-channel-turbine SKV180-DN40 electronic cabinet heat exchanger	adapted for powder-collection under controlled condition mobile carrier-gas-discharging- unit carrier gas drive carrier gas drive as additional Maltoz-support, control of pump and rotary vane feeder (option) cooling of gas flow (elevated	24 25 30	adapter and piping DN16-G3/8-NW09k transparent pipe module GR-DN40x100 adapter KF-A DN50-DN40x45 adapter KF-A DN50-DN40x45 transparent pipe module	piping gas-supply -//- air-lock visual control of discharging process at air-lock in case of using valve container transfer of multiphase-flow out of Simoloyer in case of using air- lock DN50 transfer of multiphase-flow out of cyclone in case of using air-lock DN50 visual control of discharging
02a/b 05 10 10a/b 11	TGD20a side-channel-turbine SKV180-DN40 electronic cabinet heat exchanger WT40-500	adapted for powder-collection under controlled condition mobile carrier-gas-discharging- unit carrier gas drive carrier gas drive as additional Maltoz-support, control of pump and rotary vane feeder (option) cooling of gas flow (elevated temperature during de- and compression)	24 25 30 31	adapter and piping DN16-G3/8-NW09k transparent pipe module GR-DN40x100 adapter KF-A DN50-DN40x45 adapter KF-A DN50-DN40x45	piping gas-supply -//- air-lock visual control of discharging process at air-lock in case of using valve container transfer of multiphase-flow out of Simoloyer in case of using air- lock DN50 transfer of multiphase-flow out of cyclone in case of using air-lock DN50 visual control of discharging process at air-lock in case of
02a/b 05 10 10a/b	TGD20a side-channel-turbine SKV180-DN40 electronic cabinet heat exchanger	adapted for powder-collection under controlled condition mobile carrier-gas-discharging- unit carrier gas drive carrier gas drive as additional Maltoz-support, control of pump and rotary vane feeder (option) cooling of gas flow (elevated temperature during de- and compression) can be connected to extended cooling block at Simoloyer	24 25 30 31	adapter and piping DN16-G3/8-NW09k transparent pipe module GR-DN40x100 adapter KF-A DN50-DN40x45 adapter KF-A DN50-DN40x45 transparent pipe module GR-DN50x125 flex-metal-tube DN40x750	piping gas-supply -//- air-lock visual control of discharging process at air-lock in case of using valve container transfer of multiphase-flow out of Simoloyer in case of using air- lock DN50 transfer of multiphase-flow out of cyclone in case of using air-lock DN50 visual control of discharging
02a/b 05 10 10a/b 11	TGD20a side-channel-turbine SKV180-DN40 electronic cabinet heat exchanger WT40-500 piping WT* pipe bend	adapted for powder-collection under controlled condition mobile carrier-gas-discharging- unit carrier gas drive carrier gas drive as additional Maltoz-support, control of pump and rotary vane feeder (option) cooling of gas flow (elevated temperature during de- and compression) can be connected to extended	24 25 30 31 32	adapter and piping DN16-G3/8-NW09k transparent pipe module GR-DN40x100 adapter KF-A DN50-DN40x45 adapter KF-A DN50-DN40x45 transparent pipe module GR-DN50x125	piping gas-supply -//- air-lock visual control of discharging process at air-lock in case of using valve container transfer of multiphase-flow out of Simoloyer in case of using air- lock DN50 transfer of multiphase-flow out of cyclone in case of using air-lock DN50 visual control of discharging process at air-lock in case of using air-lock DN50 piping TGD20 -//- Simoloyer
02a/b 05 10 10a/b 11 11a	TGD20a side-channel-turbine SKV180-DN40 electronic cabinet heat exchanger WT40-500 piping WT* pipe bend RBA-DN40-90° pressure-gauge	adapted for powder-collection under controlled condition mobile carrier-gas-discharging- unit carrier gas drive carrier gas drive as additional Maltoz-support, control of pump and rotary vane feeder (option) cooling of gas flow (elevated temperature during de- and compression) can be connected to extended cooling block at Simoloyer CM08/20 transfer of multiphase-flow record of flow-parameters, gas-	24 25 30 31 32 40	adapter and piping DN16-G3/8-NW09k transparent pipe module GR-DN40x100 adapter KF-A DN50-DN40x45 adapter KF-A DN50-DN40x45 transparent pipe module GR-DN50x125 flex-metal-tube DN40x750 Adapter KF-A DN40-DN16x50 pipe bend	piping gas-supply -//- air-lock visual control of discharging process at air-lock in case of using valve container transfer of multiphase-flow out of Simoloyer in case of using air- lock DN50 transfer of multiphase-flow out of cyclone in case of using air-lock DN50 visual control of discharging process at air-lock in case of using air-lock DN50 piping TGD20 -//- Simoloyer side-port P02 transfer of gas-flow into Simoloyer transfer of multiphase-flow out of
02a/b 05 10 10a/b 11 11a 12	TGD20a side-channel-turbine SKV180-DN40 electronic cabinet heat exchanger WT40-500 piping WT* pipe bend RBA-DN40-90°	adapted for powder-collection under controlled condition mobile carrier-gas-discharging- unit carrier gas drive carrier gas drive as additional Maltoz-support, control of pump and rotary vane feeder (option) cooling of gas flow (elevated temperature during de- and compression) can be connected to extended cooling block at Simoloyer CM08/20 transfer of multiphase-flow record of flow-parameters, gas- flow-outlet separation of powder material in	24 25 30 31 32 40 41	adapter and piping DN16-G3/8-NW09k transparent pipe module GR-DN40x100 adapter KF-A DN50-DN40x45 adapter KF-A DN50-DN40x45 transparent pipe module GR-DN50x125 flex-metal-tube DN40x750 Adapter KF-A DN40-DN16x50 pipe bend RBA-DN40-90° pipe bend	piping gas-supply -//- air-lock visual control of discharging process at air-lock in case of using valve container transfer of multiphase-flow out of Simoloyer in case of using air- lock DN50 transfer of multiphase-flow out of cyclone in case of using air-lock DN50 visual control of discharging process at air-lock in case of using air-lock DN50 piping TGD20 -//- Simoloyer side-port P02 transfer of gas-flow into Simoloyer transfer of multiphase-flow out of Simoloyer transfer of multiphase-flow out of
02a/b 05 10 10a/b 11 11a 12 13	TGD20a side-channel-turbine SKV180-DN40 electronic cabinet heat exchanger WT40-500 piping WT* pipe bend RBA-DN40-90° pressure-gauge DMD16	adapted for powder-collection under controlled condition mobile carrier-gas-discharging- unit carrier gas drive carrier gas drive as additional Maltoz-support, control of pump and rotary vane feeder (option) cooling of gas flow (elevated temperature during de- and compression) can be connected to extended cooling block at Simoloyer CM08/20 transfer of multiphase-flow record of flow-parameters, gas- flow-outlet	24 25 30 31 32 40 41 42	adapter and piping DN16-G3/8-NW09k transparent pipe module GR-DN40x100 adapter KF-A DN50-DN40x45 adapter KF-A DN50-DN40x45 transparent pipe module GR-DN50x125 flex-metal-tube DN40x750 Adapter KF-A DN40-DN16x50 pipe bend RBA-DN40-90°	piping gas-supply -//- air-lock visual control of discharging process at air-lock in case of using valve container transfer of multiphase-flow out of Simoloyer in case of using air- lock DN50 transfer of multiphase-flow out of cyclone in case of using air-lock DN50 visual control of discharging process at air-lock in case of using air-lock DN50 piping TGD20 -//- Simoloyer side-port P02 transfer of gas-flow into Simoloyer transfer of multiphase-flow out of Simoloyer transfer of multiphase-flow out of Simoloyer piping Simoloyer main-port
02a/b 05 10 10a/b 11 11 11 12 13 14 15	TGD20a side-channel-turbine SKV180-DN40 electronic cabinet heat exchanger WT40-500 piping WT* pipe bend RBA-DN40-90° pressure-gauge DMD16 pilot cyclone ZK100-L adapter KF-A DN50-DN40x45	adapted for powder-collection under controlled condition mobile carrier-gas-discharging- unit carrier gas drive carrier gas drive as additional Maltoz-support, control of pump and rotary vane feeder (option) cooling of gas flow (elevated temperature during de- and compression) can be connected to extended cooling block at Simoloyer CM08/20 transfer of multiphase-flow record of flow-parameters, gas- flow-outlet separation of powder material in multiphase-flow transfer of gas-flow	24 25 30 31 32 40 41 42 43	adapter and piping DN16-G3/8-NW09k transparent pipe module GR-DN40x100 adapter KF-A DN50-DN40x45 adapter KF-A DN50-DN40x45 transparent pipe module GR-DN50x125 flex-metal-tube DN40x750 Adapter KF-A DN40-DN16x50 pipe bend RBA-DN40-90° pipe bend RBA-DN40-45° flex-metal-tube DN40x500 KF-junction-tube	piping gas-supply -//- air-lock visual control of discharging process at air-lock in case of using valve container transfer of multiphase-flow out of Simoloyer in case of using air- lock DN50 transfer of multiphase-flow out of cyclone in case of using air-lock DN50 visual control of discharging process at air-lock in case of using air-lock DN50 piping TGD20 -//- Simoloyer side-port P02 transfer of gas-flow into Simoloyer transfer of multiphase-flow out of Simoloyer transfer of multiphase-flow out of Simoloyer piping Simoloyer main-port P01- //-TGD20 junction for bypass out of gas-
02a/b 05 10 10a/b 11 11a 12 13 14	TGD20a side-channel-turbine SKV180-DN40 electronic cabinet heat exchanger WT40-500 piping WT* pipe bend RBA-DN40-90° pressure-gauge DMD16 pilot cyclone ZK100-L adapter KF-A DN50-DN40x45 KF-calming pipe DN40-16-25-40-c	adapted for powder-collection under controlled condition mobile carrier-gas-discharging- unit carrier gas drive carrier gas drive as additional Maltoz-support, control of pump and rotary vane feeder (option) cooling of gas flow (elevated temperature during de- and compression) can be connected to extended cooling block at Simoloyer CM08/20 transfer of multiphase-flow record of flow-parameters, gas- flow-outlet separation of powder material in multiphase-flow transfer of gas-flow	24 25 30 31 32 40 41 42 43 44 45	adapter and piping DN16-G3/8-NW09k transparent pipe module GR-DN40x100 adapter KF-A DN50-DN40x45 adapter KF-A DN50-DN40x45 transparent pipe module GR-DN50x125 flex-metal-tube DN40x750 Adapter KF-A DN40-DN16x50 pipe bend RBA-DN40-90° pipe bend RBA-DN40-90° flex-metal-tube DN40x500 KF-junction-tube DN40-25-40-45°	piping gas-supply -//- air-lock visual control of discharging process at air-lock in case of using valve container transfer of multiphase-flow out of Simoloyer in case of using air- lock DN50 transfer of multiphase-flow out of cyclone in case of using air-lock DN50 visual control of discharging process at air-lock in case of using air-lock DN50 piping TGD20 -//- Simoloyer side-port P02 transfer of gas-flow into Simoloyer transfer of multiphase-flow out of Simoloyer transfer of multiphase-flow out of Simoloyer piping Simoloyer main-port P01- //-TGD20 junction for bypass out of gas- flow
02a/b 05 10 10a/b 11 11 11 12 13 14 15	TGD20a side-channel-turbine SKV180-DN40 electronic cabinet heat exchanger WT40-500 piping WT* pipe bend RBA-DN40-90° pressure-gauge DMD16 pilot cyclone ZK100-L adapter KF-A DN50-DN40x45 KF-calming pipe	adapted for powder-collection under controlled condition mobile carrier-gas-discharging- unit carrier gas drive carrier gas drive as additional Maltoz-support, control of pump and rotary vane feeder (option) cooling of gas flow (elevated temperature during de- and compression) can be connected to extended cooling block at Simoloyer CM08/20 transfer of multiphase-flow record of flow-parameters, gas- flow-outlet separation of powder material in multiphase-flow transfer of gas-flow cross-tube for air-lock	24 25 30 31 32 40 41 42 43 44	adapter and piping DN16-G3/8-NW09k transparent pipe module GR-DN40x100 adapter KF-A DN50-DN40x45 adapter KF-A DN50-DN40x45 transparent pipe module GR-DN50x125 flex-metal-tube DN40x750 Adapter KF-A DN40-DN16x50 pipe bend RBA-DN40-90° pipe bend RBA-DN40-90° flex-metal-tube DN40x500 KF-junction-tube DN40-25-40-45° flex-metal-tube DN25x750 valve adapter	piping gas-supply -//- air-lock visual control of discharging process at air-lock in case of using valve container transfer of multiphase-flow out of Simoloyer in case of using air- lock DN50 transfer of multiphase-flow out of cyclone in case of using air-lock DN50 visual control of discharging process at air-lock in case of using air-lock DN50 piping TGD20 -//- Simoloyer side-port P02 transfer of gas-flow into Simoloyer transfer of multiphase-flow out of Simoloyer transfer of multiphase-flow out of Simoloyer piping Simoloyer main-port P01- //-TGD20 junction for bypass out of gas-
02a/b 05 10 10a/b 11 11 11 12 13 14 15 16	TGD20a side-channel-turbine SKV180-DN40 electronic cabinet heat exchanger WT40-500 piping WT* pipe bend RBA-DN40-90° pressure-gauge DMD16 pilot cyclone ZK100-L adapter KF-A DN50-DN40x45 KF-calming pipe DN40-16-25-40-c pressure-gauge DMD16 filter capsule	adapted for powder-collection under controlled condition mobile carrier-gas-discharging- unit carrier gas drive carrier gas drive as additional Maltoz-support, control of pump and rotary vane feeder (option) cooling of gas flow (elevated temperature during de- and compression) can be connected to extended cooling block at Simoloyer CM08/20 transfer of multiphase-flow record of flow-parameters, gas- flow-outlet separation of powder material in multiphase-flow transfer of gas-flow cross-tube for air-lock evacuation and gas-supply adapted at 16, record of flow- parameters protection-filter for carrier gas	24 25 30 31 32 40 41 42 43 44 45 46	adapter and piping DN16-G3/8-NW09k transparent pipe module GR-DN40x100 adapter KF-A DN50-DN40x45 adapter KF-A DN50-DN40x45 transparent pipe module GR-DN50x125 flex-metal-tube DN40x750 Adapter KF-A DN40-DN16x50 pipe bend RBA-DN40-90° pipe bend RBA-DN40-90° flex-metal-tube DN40x500 KF-junction-tube DN40-25-40-45° flex-metal-tube DN25x750 valve adapter DN25-G1/2-DN25	piping gas-supply -//- air-lock visual control of discharging process at air-lock in case of using valve container transfer of multiphase-flow out of Simoloyer in case of using air- lock DN50 transfer of multiphase-flow out of cyclone in case of using air-lock DN50 visual control of discharging process at air-lock in case of using air-lock DN50 piping TGD20 -//- Simoloyer side-port P02 transfer of gas-flow into Simoloyer transfer of multiphase-flow out of Simoloyer transfer of multiphase-flow out of Simoloyer piping Simoloyer main-port P01- //-TGD20 junction for bypass out of gas- flow-control of bypass
02a/b 05 10 10a/b 11 11 12 13 14 15 16 16a	TGD20a side-channel-turbine SKV180-DN40 electronic cabinet heat exchanger WT40-500 piping WT* pipe bend RBA-DN40-90° pressure-gauge DMD16 pilot cyclone ZK100-L adapter KF-A DN50-DN40x45 KF-calming pipe DN40-16-25-40-c pressure-gauge DMD16	adapted for powder-collection under controlled condition mobile carrier-gas-discharging- unit carrier gas drive carrier gas drive as additional Maltoz-support, control of pump and rotary vane feeder (option) cooling of gas flow (elevated temperature during de- and compression) can be connected to extended cooling block at Simoloyer CM08/20 transfer of multiphase-flow record of flow-parameters, gas- flow-outlet separation of powder material in multiphase-flow transfer of gas-flow	24 25 30 31 32 40 41 42 43 44 45 46 47	adapter and piping DN16-G3/8-NW09k transparent pipe module GR-DN40x100 adapter KF-A DN50-DN40x45 adapter KF-A DN50-DN40x45 transparent pipe module GR-DN50x125 flex-metal-tube DN40x750 Adapter KF-A DN40-DN16x50 pipe bend RBA-DN40-90° pipe bend RBA-DN40-90° flex-metal-tube DN40x500 KF-junction-tube DN40-25-40-45° flex-metal-tube DN25x750 valve adapter	piping gas-supply -//- air-lock visual control of discharging process at air-lock in case of using valve container transfer of multiphase-flow out of Simoloyer in case of using air- lock DN50 transfer of multiphase-flow out of cyclone in case of using air-lock DN50 visual control of discharging process at air-lock in case of using air-lock DN50 piping TGD20 -//- Simoloyer side-port P02 transfer of gas-flow into Simoloyer transfer of multiphase-flow out of Simoloyer transfer of multiphase-flow out of Simoloyer piping Simoloyer main-port P01- //-TGD20 junction for bypass out of gas- flow piping bypass

related patents: see chapter national and international patents of Zoz GmbH in general information technical data subject to alterations

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