

## *High-Pressure Blowers* TRL



### **A powerfull and flexible conveying system**

- Ideal for conveying, drying, ventilating and extraction in grain handling installations
- Self-cleaning conveying system
- TRL- an integral part of a modular conveying system
- Flexible – the same equipment can be varied as required
- Easy to install
- All blower sizes can be connected to the same pipe system. For variation of capacity only the blower and feed unit of an existing system need to be replaced

# Applications

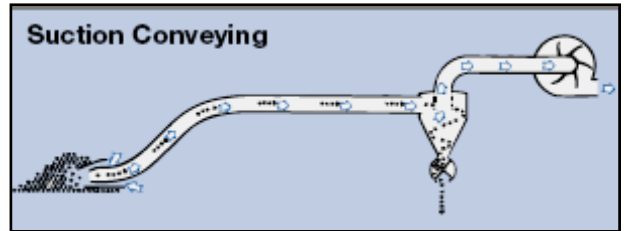
The TRL high-pressure blowers are suitable for a variety of applications and can form part of many flexible package solutions.

The high-pressure blowers are available in a wide range of sizes to match any specific conveyance requirement.

The use of the TRL high-pressure blower for conveying purposes ensures an entirely self-cleaning system which is not limited by the lay-out of the flow arrangement – whether vertical, horizontal, around corners or from one building to another. The system is ideal for farms requiring flexibility in conveying and processing different crops.

The range of accessories comprises rotary valves, cyclones and pipe systems, permitting utilization of the high-pressure blower for pressure and suction conveying, drying, cooling, and ventilating of crops.

The OK connections are common to all pipes, bends and other components, allowing them to be combined in a countless number of ways, with easy assembly by means of the OK quick-release couplings – without the use of tools.



Suction is used, for instance, when the material is delivered to a cleaner. At the same time, part of the dust is separated from the grain. The crop is sucked from the grain pit or store using a suction head. The materials is pulled through the pipe system and is delivered to the cleaner via a cyclone and rotary valve. The dust may be discharged to the open or a set of filter bags.



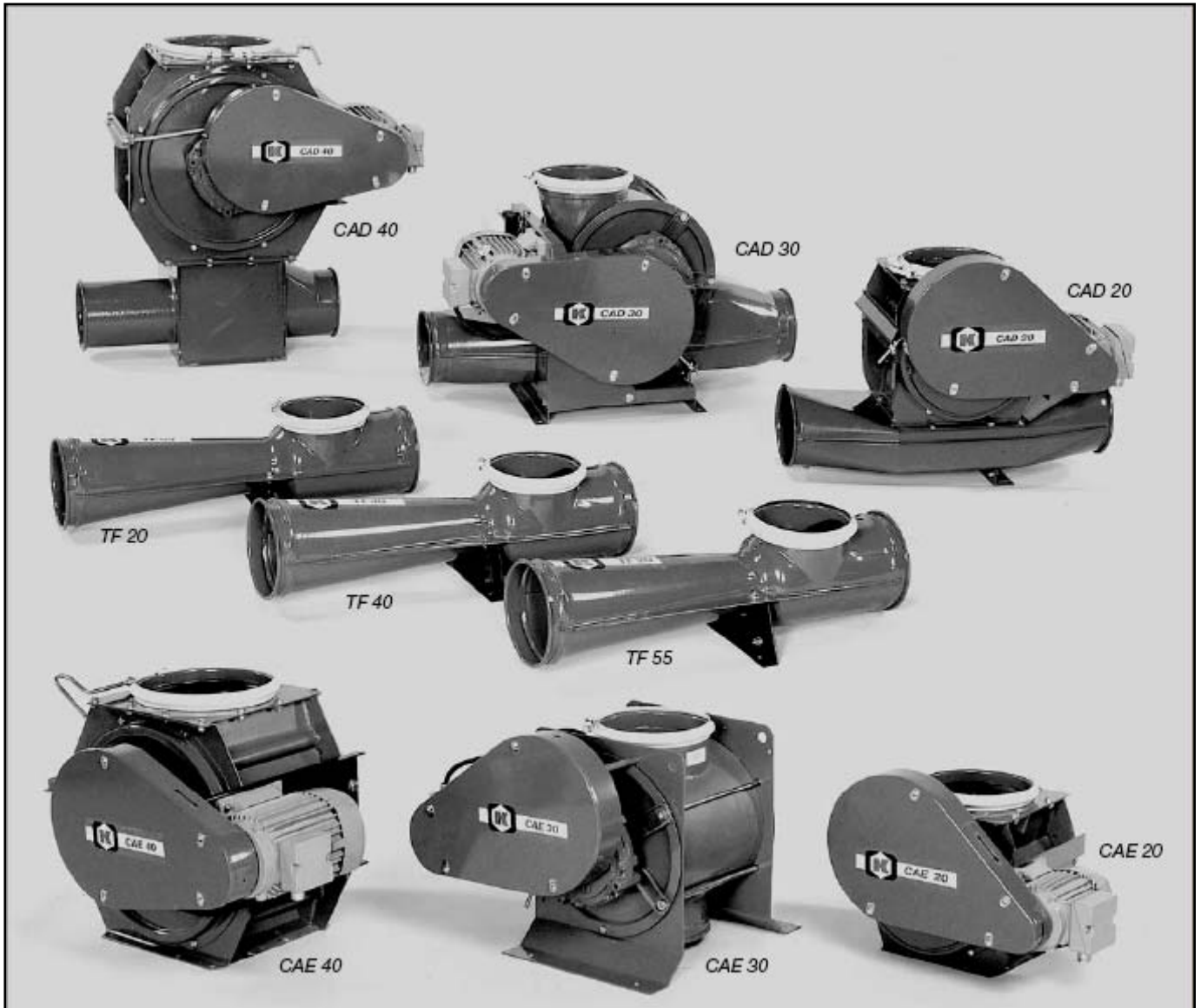
The conveying line is connected to the blowers outlet. The blower generates a powerful air stream through the pipes. The material to be conveyed is fed into the pipe system via an intake unit (venturi or rotary valve). By means of diverters the flow may be directed to different destinations.



## Applications

TRL 20/40/55: Conveying, ventilating\*, exhaust  
 TRL 75: Conveying, drying, ventilating  
 TRL 100/150/200/300/500: Conveying

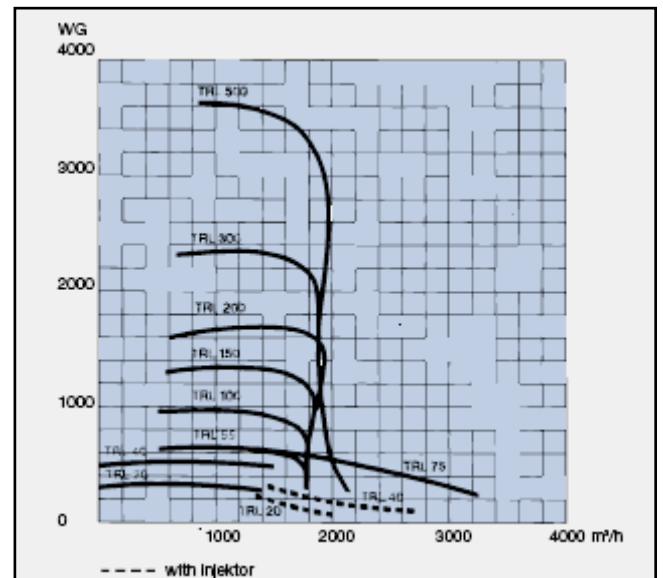
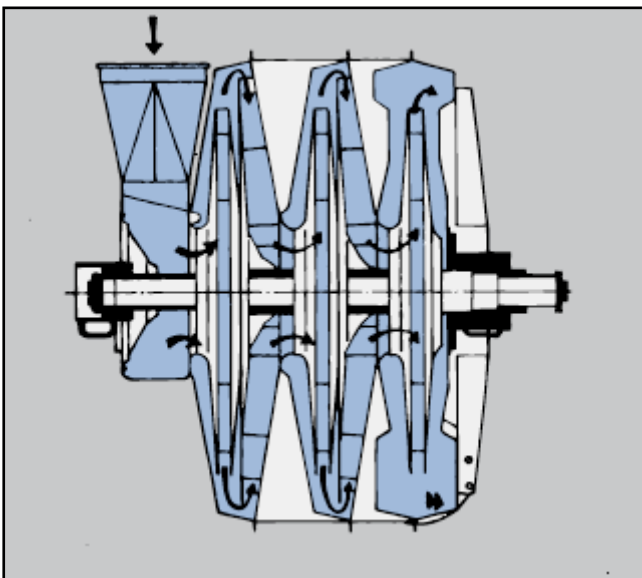
\* Ventilating blowers types TRL 20/40 require a venturi.



All rotary valves may be placed anywhere in horizontal pipelines and are resistant to dust and stones in the grain. Venturi TF is used as an alternative to rotary valves type CAD, resulting, however, in a lower capacity. The venturi is suitable for TRL blower types 20/40/55/75. The use of a hopper requires a pipe of least 30 cm to be inserted between venturi and blower.

Rotary valves types CAD 20/30/40 are used in pressure conveying for delivery into a horizontal pipeline.

Rotary valves types CAE 20/30/40 are used in suction conveying for gravity discharge from cyclones.



As can be seen from the illustration (type TRL 500), each of the rotors increase the air pressure.

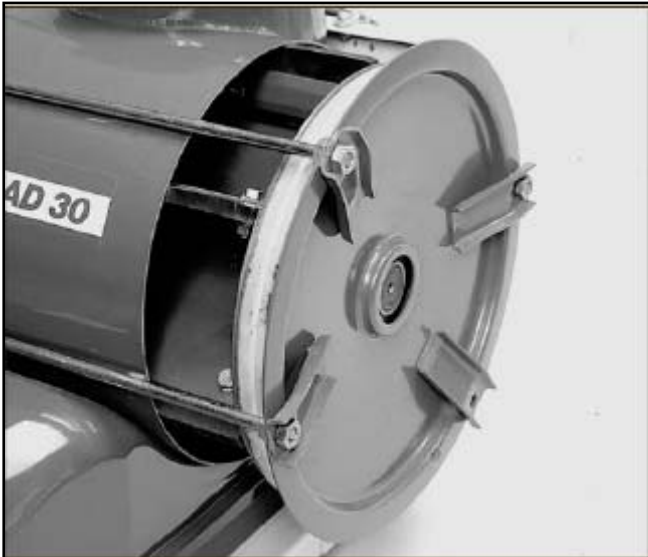
The air flow rate of the TRL blowers is approx. 1800 m<sup>3</sup>/h at different pressures depending on the type of blower. As a general rule, the higher the pressure the higher the capacity. TRL 500, a three stage blower, can deliver a pressure of no less than 3500 m WG



The pipe system comprises a wide range of straight pipes, bends, diverters, hoppers, cyclones, suction heads, etc. Assembly is effected by means of the patented OK quick-release couplings without the use of tools. See special brochure.



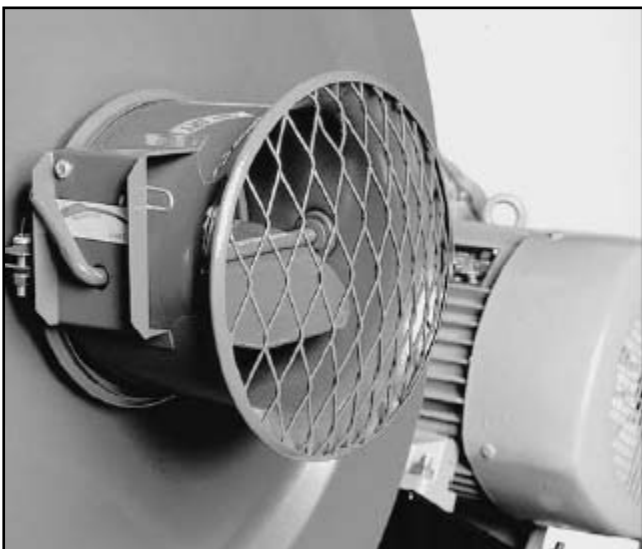
The patented OK quick-release coupling with lock ensures reliable connection during use and quick and easy adjustment of the equipment to different applications.



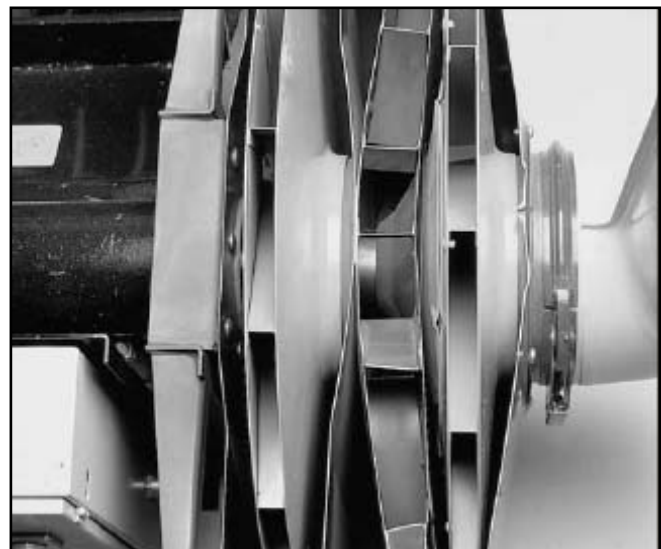
The rotary valve rotor is equipped with rubber blades in place of steel. The blades yield to stones, nails, etc. without being damaged.



The aerodynamic shape of the high-pressure blowers ensures high efficiency and low energy consumption.



The high-pressure blowers (except TRL 20/40/75) are equipped with automatic air intake regulators to keep the air velocity below 25 m/s – thus preventing grain damage – without loss of capacity.



The high-pressure blowers are designed as centrifugal fans with carefully balanced rotors. The vibration-free operation reduces noise level.



# Capacities

Conveying capacities for plastic granulate (650kg/m <sup>3</sup> )	Conveying length in metres										
	10	20	30	40	50	60	80	100	120	150	200
TRL 20+ TF 20	2.4	1.9	1.6	1.3	1.1	1.0	0.7	0.5			
TRL 40+ TF 40	4.0	3.4	2.9	2.5	2.2	1.9	1.5	1.1			
TRL 55+ TF 55	4.5	3.7	3.1	2.8	2.4	2.1	1.7	1.3	1.0	0.8	
TRL 55-75+ RV/RF 20	8.3	7.0	6.1	5.3	4.7	4.2	3.3	2.8	2.3	1.7	
TRL 100+ RV/RF 40/20	14.8	13.1	11.3	9.8	8.6	7.6	6.1	4.9	4.1	3.0	1.9
TRL 150+ RV/RF 40/20	22.1	18.7	16.2	14.1	12.5	11.1	8.8	7.2	5.9	4.4	2.8
TRL 200+ RV/RF 40/20	25.6	24.2	21.0	18.4	16.3	14.5	12.0	9.9	8.0	6.5	4.4
TRL 300+ RV/RF 40/20	36.7	31.4	27.4	24.1	21.6	19.4	16.0	13.4	11.4	9.1	6.6
TRL 500+ RV/RF 40/20	50.3	44.7	40.2	36.4	33.2	30.5	26.0	22.6	20.0	16.7	12.9

Above the black line = RV/RF 20.  
Below the black line = RV/RF 40.

**The above mentioned capacities are for clean materials**  
 25% regrind reduces capacity by 5%  
 50% regrind reduces capacity by 10%  
 100% regrind reduces capacity by 20%

## Blower Type TRL

Technical data	TRL 20	TRL 40	TRL 55	TRL 75	TRL 100	TRL 150	TRL 200	TRL 300	TRL 500
Motor output, kW/hp	1.5 (2)	3(4)	4(5.5)	5.5(7.5)	7.5(10)	11(15)	15(20)	22(30)	37(50)
El. connection	3x400/50	3x400/50	3x400/50	3x400/50	3x400/50	3x400/50	3x400/50	3x400/50	3x400/50
Amp. Consumption v/Hz	3.4	6.3	8.5	11.5	15.5	21.5	29	41.5	69.5
Min. fuse amp. (suggested)	10	16	16	20	25	35	50	63	100
Motor, rpm (Normal)	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Motor Type	Foot-mounted Norm motor IEC/DIN								
Weight incl. motor	35	67	76	96	129	157	159	324	468
Rotor, rpm	2,850	2,850	2,850	2,850	3,650	4,200	4,700	4,100	4,300
No. of rotors	1	1	1	1	1	1	1	2	3
Type of conveying pipes	OK/OKR160 Ø=160mm								
Air intake regulator	No	No	Yes	No	Yes	Yes	Yes	Yes	Yes
Blower is heating by app. °C	2°	3°	4°	4.5°	9°	12.5°	19°	27°	46°
Control box with Star/Delta switch	Aut. Star/Delta motor								
Motor connection	Direct coupled				Belt drive				
Air volume m <sup>3</sup> /h max.	1,900@	2,600@	2,600@	3,200	1,800	1,800	1,800	1,800	1,800
mm WG max.	250	350	650	650	950	1,300	1,700	2,300	3,500

@) Injector is required

## Conveying Capacities of TRL Blowers

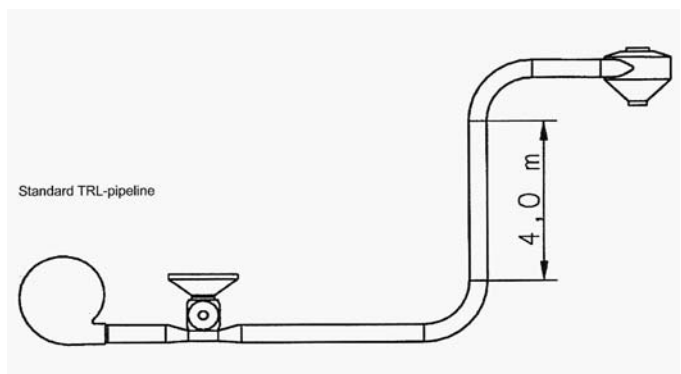
The conveying capacities of TRL blowers are listed overleaf.

The figures indicate capacities in different materials and at different conveying lengths in a standard pipeline. The standard pipeline consists of a number of horizontal piping, 4m vertical piping, two 90° bends, and an outlet cyclone.

### Assumptions:

The capacities stated apply to materials with a specific weight of 650 kg/m<sup>3</sup>.

The barometric pressure is assumed to be approx. 760 mm Hg and the air temperature 20° C.



All dimensions in mm

A	B	C	D	E	F
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		A	B	C	D	E	F
<b>DIRECT DRIVE BLOWERS</b>							
	TRL 20	OK 160	635	675	335	485	130
	TRL 40	OK 160	755	840	420	580	120
	TRL 55	OK 160	755	840	420	670	129
	TRL 75	OK 160	755	840	420	580	140
<b>V-BELT DRIVE BLOWERS</b>							
	TRL 100	OK 160	1140	830	435	695	120
	TRL 150	OK 160	1140	830	435	695	120
	TRL 200	OK 160	1140	1000	435	875	120
	TRL 300	OK 160	1225	930	585	1135	120
	TRL 500	OK 160	1380	1005	290	995	110
<b>ROTARY VALVES, HORIZONTAL OUTLET</b>							
	CAD 20-2	OK 200	370	min 110 max 130	min 445 max 465	660	OK 160
	CAD 30	OK 200	460	120	495	850	OK 160
	CAD 40	OK 200	490	105	730	600	OK 160
<b>ROTARY VALVES, VERTICAL OUTLET</b>							
	CAD 20-2	OK 200	360		360	495	
	CAD 30	OK 200	530		390	535	
	CAD 40	OK 200	480		565	705	
<b>VENTURI</b>							
	TF 20/40/55	OK 160	OK 160	500	670	min 220 max 275	min 100 max 155