

Aliva®-237

Concrete Spraying Machine

Description

The Aliva-237 is a sturdy concrete spraying machine for wet and dry spraying process.

Uses

Thanks to its variable output, the Aliva-237 can be used for small jobs, such as joint filling, as well as for extensive slope consolidation work.

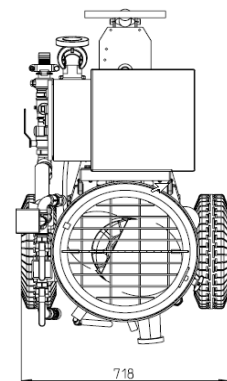
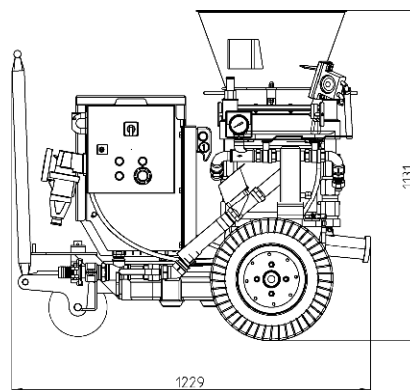
The Aliva-237 is available in the following versions:

- STANDARD
Electric drive, single speed
- TOP
Electric drive, with FC for variable rotor speed
- AIR
With air drive, variable rotor speed

Technical data

Dimensions

With chassis



Length L	
STANDARD / AIR	1229 mm
TOP	1229 mm
Width	718 mm
Height H	
with rotor 0,7 + 2,0 L	980 mm
with rotor 3,6 L	1050 mm
with rotor 5,6 L	1130 mm
Weight	
STANDARD / AIR	approx. 320 kg
TOP	approx. 450 kg
Content of hopper	40 liters



Drive	Electric (STANDARD / TOP)	With air motor (AIR)
	Motor output 2,2 kW	Only 4 th Quarter 2010 available
	Speed range	
	STANDARD 50Hz1500 rpm	
	60Hz1800 rpm	
	TOP 700–1800 rpm	
	Voltages	
	STANDARD 380-415 V 50 Hz	
	400/440 V 60 Hz	
	TOP 380-480 V 50/60 Hz	
	Protection IP 55 / IP 65 (FC)	

Theoretical conveying

Conveying (only dry)

Rotor L	Hose Ø mm	Conveying output *m³/h		max. grain mm	max. conveying distance (m) horizontal / vertical
		STANDARD	TOP		
0,7	32	0,4	0,2-0,5	6	150/60 m**
2,0	32 + 38	1,1	0,6-1,4	12	
3,6	32 + 38	2,0	1,1-2,5	12	
5,6	50	3,2	1,7-4,0	16	

* with theoretical filling degree of 100%, if motor with 60 Hz = 20% higher conveying capacity.

** more than 80 m conveying distance, use steel tubes.

Theoretical air consumption

Hose Ø mm	Air consumption Nm³/min. ***	
	Dry spraying	
	60 m	120 m
32	3	4
38	5	6
50	8	10

*** Air consumption data are approximate values and are depending on conveying output, conveying distance and hose diameter.

Caution:
For the configuration AIR (with air motor) it has to be considered:
Total air consumption =
Air consumption for conveying + Air consumption for air motor!

1 Nm³/min = 35 cfm

Safety instructions

Important safety regulations

For the safe, correct operating of the unit please consult the current machine operating manual. Sika Schweiz AG cannot accept any liability for injury or damages caused by improper use, incorrect or inadequate operation, maintenance or repairs.



Aliva equipment

Legal references

Information given, in particular suggestions made for use and application of our products are based on our current knowledge and experience in the normal case at the time of printing. In practice, the difference in materials, substrates and environmental conditions can cause deviation from this information. Sika guarantees for its products the compliance of technical characteristics according to the Technical Data Sheets up to expiry of shelf life. Users of the products must always consult the latest edition of Technical Data Sheet under «www.sika.com». Our current General Conditions are applicable.



Aliva-237 TOP



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Aliva®-246

Concrete Spraying Machine

Tunneling & Mining

Product Description

The Aliva®-246 is a sturdy concrete spraying machine for the dry spraying process.



Uses

Thanks to its variable output, the Aliva-246 can be used as well for small jobs, such as joint filling, as well for extensive slope consolidation work.

The Aliva-246.5 is available in the following versions:

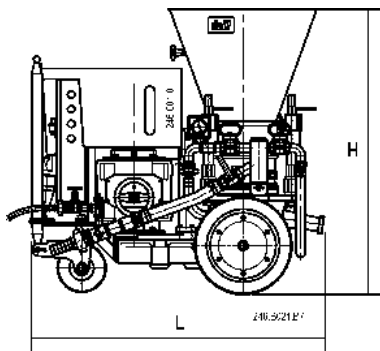
- **BASIC**
Electric drive, combined with BASIC-Dosing unit (not synchronized)
- **EXTENDED**
Electric drive, combined with EXTENDED-Dosing unit (not synchronized)
- **AIR**
With air drive, combined with BASIC-Dosing unit (not synchronized)

Product Data

Technical Data

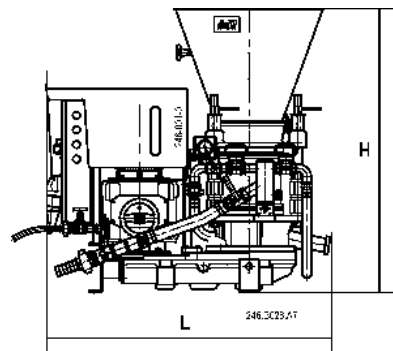
Dimensions

With chassis



Length L	
BASIC / AIR	1130 mm
EXTENDED	1200 mm
Width	700 mm
Height H	
with rotor 0,7 + 2,0 L	1110 mm
with rotor 3,6 L	1180 mm
with rotor 5,6 L	1260 mm
Weight	
BASIC / AIR	approx. 320 kg
EXTENDED	approx. 450 kg
Content of hopper	45 liters

With pedestal



Length L	
BASIC / AIR	1130 mm
EXTENDED	1170 mm
Width	700 mm
Height H	
with rotor 0,7 + 2,0 L	1020 mm
with rotor 3,6 L	1090 mm
with rotor 5,6 L	1170 mm
Weight	
BASIC / AIR	approx. 315 kg
EXTENDED	approx. 430 kg
Content of hopper	45 liters

Drive

Electric (BASIC / EXTENDED)

Motor output	2,2 kW
Speed range	
BASIC	1500 rpm
EXTENDED	700-1800 rpm
Voltages	400 V 50/60 Hz 440 V 60 Hz 220 V 50/60 Hz
Protection	IP 55

With air motor (AIR)

Motor output	3 kW
Speed range	700-1800 rpm
Pressure	3.5 bar
Air consumption	4 Nm³/min.

Theoretical Conveying Output

Conveying (only dry)

Rotor L	Hose Ø mm	Conveying output *m³/h		max. grain mm	max. conveying distance (m) horizontal / vertical
		BASIC	EXTENDED+AIR		
0.7	32	0.4	0.2 -0.5	6	150/60 m**
2.0	32 + 38	1.1	0.6-1.4	12	
3.6	32 + 38	2.0	1.1-2.5	12	
5.6	50	3.2	1.7-4.0	16	

* with theoretical filling degree of 100%, if motor with 60 Hz = 20% higher conveying capacity.

** more than 80 m conveying distance, use steel tubes.



Tunneling & Mining



Theoretical Air Consumption

Hose Ø mm	Air consumption Nm ³ /min. ***	
	Dry spraying	
	60 m	120 m
32	3	4
38	5	6
50	8	10

*** Air consumption data are approximate values and are depending on conveying output, conveying distance and hose diameter.

Caution:
For the configuration AIR (with air motor) it has to be considered:
Total air consumption =
Air consumption for conveying + Air consumption for air motor!

1 Nm³/min = 35 cfm

Health and Safety Information

Important Notes

For the safe, correct operation of the unit please consult the current machine operating manual. Sika Schweiz AG cannot accept any liability for injury or damages caused by improper use, incorrect or inadequate operation, maintenance or repairs.

Legal Disclaimer

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Aliva®-252

Concrete Spraying Machine

Product Description

The Aliva®-252 is a sturdily constructed two-axle concrete spraying machine for the processing of dry mix.



Uses

The machine can be used thanks to its compact design and mobility where space is at a premium e.g. in mines and galleries. Other potential applications are slope and hillside protection, lining of water tanks and swimming pools, guniting for single and double shell tunnel construction, backfilling of tubbings.

The Aliva®-252 is available in the following versions:

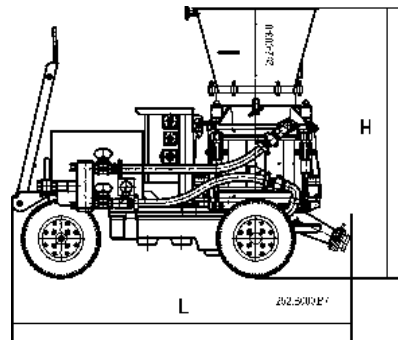
- **BASIC**
Electric drive, combined with BASIC-Dosing unit (not synchronized)
- **AIR**
With air drive, combined with BASIC-Dosing unit (not synchronized)

Product Data

Technical Data

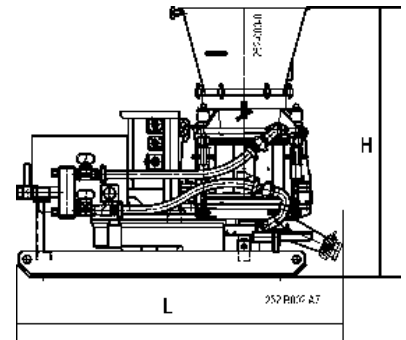
Dimensions

With chassis



Length L	
with rotor 10 L	1770 mm
with rotor 16 L	1720 mm
Width	800 mm
Height H	
with rotor 10 L	1310 mm
with rotor 16 L	1410 mm
Weight	approx. 760 kg
Content of hopper	85 liters

With skid



Length L	
with rotor 10 L	1640 mm
with rotor 16 L	1590 mm
Width	800 mm
Height H	
with rotor 10 L	1260 mm
with rotor 16 L	1360 mm
Weight	approx. 800 kg
Content of hopper	85 liters

Drive

Electric (BASIC)

Motor output	4.4 kW
Speed range	1500 rpm
Voltages	400 V 50 Hz 400/440 V 60 Hz 220 V 50 Hz 220 V 60 Hz
Protection	IP 55

With air motor (AIR)

Motor output	7,5 kW
Speed range	900-2000 rpm
Pressure	4.5 bar
Air consumption	9 Nm³/min.

Theoretical Conveying Output

Conveying (only dry)

Rotor L	Hose Ø mm	Conveying output *m³/h		max. grain mm	max. conveying distance (m) horizontal / vertical
		BASIC	AIR		
10	50	5	3.5-7	16	300/100 m**
16	60	8	5.5-11	20	

* with theoretical filling degree of 100%, if motor with 60 Hz = 20% higher conveying capacity.

** more than 80 m conveying distance, use steel tubes.



Tunneling & Mining



Theoretical Air Consumption

Hose Ø mm	Air consumption Nm ³ /min. ***	
	Dry spraying	
	60 m	120 m
50	8	10
60	11	13.5

*** Air consumption data are approximate values and are depending on conveying output, conveying distance and hose diameter.

Caution:
For the configuration AIR (with air motor) it has to be considered:
Total air consumption =
Air consumption for conveying + Air consumption for air motor!

1 Nm³/min = 35 cfm

Health and Safety Information

Important Notes

For the safe, correct operation of the unit please consult the current machine operating manual. Sika Schweiz AG cannot accept any liability for injury or damages caused by improper use, incorrect or inadequate operation, maintenance or repairs.

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Aliva-257

Betonspritzmaschine
Concrete Spraying Machine

Geschichte

Seit über einem halben Jahrhundert ist Sika involviert in der Herstellung von Rotor-Maschinen für Spritzbeton. In den Anfangsjahren von Aliva wurden noch Schneckenpumpen und Rotormaschinen hergestellt, bis dann in den 60-er Jahren die Rotormaschine die Schneckenpumpe endgültig ablöste. Seither wurden kontinuierlich Verbesserungen und Weiterentwicklungen an Aliva Rotormaschinen vorgenommen. 2010, zum 100-jährigen Jubiläum der Sika AG, kann Aliva die neueste Generation der Rotormaschinen vorstellen.

Aliva equipment ist bekannt für unübertroffene Qualität und Funktionalität der Beton-Spritzmaschinen, welche von über 70 Vertretungen weltweit verkauft, beraten und betreut werden. Nebst dem Unternehmensbereich der Bauindustrie ist Aliva auch eine der führenden Hersteller von Konverterspritzanlagen für die Stahlindustrie und Spezialanlagen auf TBM's.

History

Since more than half a century Sika is involved in the production of rotor machines for shotcrete, sprayed concrete. In the early years, Aliva produced screw pumps and rotor machines until the 60ties, when the rotor machines took the upper hand and removed the screw pumps. Ever since the rotor machines of Aliva underwent continuous improvements and developments. In 2010, to the 100year anniversary of Sika AG, Aliva is able to introduce the newest generation of rotor machines.

Aliva equipment is known for superior quality and functionality of its machines, which are represented by more than 70 distributor's world wide. Aside the rotor machines for the construction industry, Aliva is one of the leading producers of equipment for the refractory-, steel industry and special equipment for TBM's.



Trocken- und Nassspritzen

Mit der neu entwickelten, universellen AL-257, ist Trocken- und Nassspritzen gleichwertig möglich. Es ist kein Umbau der Maschine notwendig um von Trocken- auf Nassspritzen zu wechseln. Für den Wechsel von Nass- zu Trockenspritzen, muss die Maschine gereinigt und getrocknet werden. Die ausgereifte Entlüftung und ein neu konzipiertes Trichtersystem lassen hohe Füllungsgrade zu, welche zu pulsationsfreiem Spritzen und geringem Rückprall führen.

Eingebaute Komponenten

Die AL-257 verfügt über eine eingebaute, automatische Schmierung der Rotorplatten. Die Rotorgeschwindigkeit wird mittels einem Frequenz-Umformer reguliert und kann so, jeder entsprechenden Arbeit angepasst werden. Die Maschine verfügt über einen Not-Aus Knopf, welcher den Rotor und die Förderluft stoppt. Dies ermöglicht gefahrloses Arbeiten mit der AL-257 und entspricht sämtlichen Normen der EU.

Einsatz und Fördermengen

Mit nur 750 kg und kompakten Abmessungen passt die AL-257 auf jede Baustelle, kann einfach manövriert werden und passt sich den Gegebenheiten ideal an. Ein enormes Leistungsvermögen von 0.7–9.6 m³/h ermöglicht ein durchwegs wirtschaftliches Arbeiten. Sei es eine dünn-schichtige Sanierung mit dem 2.5 l Rotor bis hin zur Baugrubensicherung mit dem 12 l Rotor, die AL-257 ist immer die richtige Maschine.

Dichtungssystem

Die mit Rotoren aus hochwertigem Aluminium ausgerüstete Maschine hat auch das neue Stahl- auf Stahl Dicht- und Verschleissystem standardmässig integriert. Erfahrungen haben gezeigt, dass bis zu 10 mal weniger Verschleiss auftritt, abhängig von Material, Fördermenge, Schlauchdurchmesser und Luftzufuhr! Dies führt zu weniger Stillstandzeiten, geringeren Verschleisskosten und somit zu wirtschaftlicherem Arbeiten.

Dry- and Wetshotcrete

With the newly developed, universal AL-257, dry- and wet shotcrete are equally possible. No changing on the machine from dry to wet shotcrete has to be performed. For changing from wet to dry shotcrete, the machine has to be cleaned and dried up. The integrated exhaust system and a newly designed hopper allow a high filling degree of the rotor chambers, which leads to low pulsation and less rebound.

Built in components

The AL-257 is equipped with a fully automatic lubrication system for the rotor-discs. The rotor-speed is adjusted with a frequency converter and therefore, can be adjusted to every specific need on the job. The machine has an emergency button which stops the turning of the rotor and closes the main valve of the air supply. This enables working free of danger and complies with the new EU standard.

Application and conveying capacity

With a weight of just 750 kg and compact measurements, the AL-257 fits on every site, is easy to handle around and adjusts itself to every application. With a huge spectrum of conveying capacity from 0.7–9.6 m³/h, there is no work which could not be conducted economically. Is it for thin layer concrete renovation with the 2.5 l rotor up to slope protection of an excavation with the 12 l rotor, with the AL-257 one has always the right equipment at hand.

Sealing system

The machine is equipped with rotors made of high tec aluminium and is operating with steel- on steel wear- and rotor plates. Experience has shown up to 10 times less wear on the steel plates, depending on material, output capacity, hose diameter and compressed air supply! This again leads to less standstill time and wear-cost and therefore to more economical spraying operation.

Technische Daten / Technical Data



Theoretische Fördermenge / Theoretical conveying capacity

		Fördermenge in *m³/h Conveying output in *m³/h		Max. Korngrösse Max. aggregate size	Max. Förderdistanz ** Max. conveying distance**			
Rotor Liter Rotor litre	Schlauchdurchmesser Hose diameter	Trockenspritzen Dry spraying	Nassspritzen Wet spraying	mm	Trockenspritzen Dry spraying		Nassspritzen Wet spraying	
					horizontal horizontal	vertikal vertical	horizontal horizontal	vertikal vertical
2.5	32 / 38 mm	0.7 – 2.0	0.7 – 2.0	12	300 m	100 m	30 – 60 m	20 – 40 m
6	38 / 50 mm	1.9 – 5.0	1.9 – 5.0	12 – 16				
12	50 / 60 / 65 mm	3.6 – 9.6	3.6 – 9.6	16 – 20				

*Mit theoretischem Rotorfüllgrad von 100% / with a theoretical rotor filling degree of 100%

**Bei mehr als 100 m Förderdistanz empfehlen wir Stahlrohre /
**For more than 100 m conveying distance we recommend the use of steel pipes

Theoretischer Luftverbrauch in Nm³/min.
Theoretical air consumption in Nm³/min.

Schlauchdurchmesser Hose diameter	Luftverbrauch Nm³/min*** Air consumption Nm³/min***			
	Trockenspritzen / Dry spraing			Nassspritzen / Wet spraying
	60 m	120 m	180 m	30 – 60 m
32 / 38 mm	5 – 7	6 – 9	7 – 10	8 – 12
38 / 50 mm	6 – 8	7 – 10	8 – 12	10 – 15
50 / 60 / 65 mm	8 – 12	9 – 13	10 – 15	14 – 19

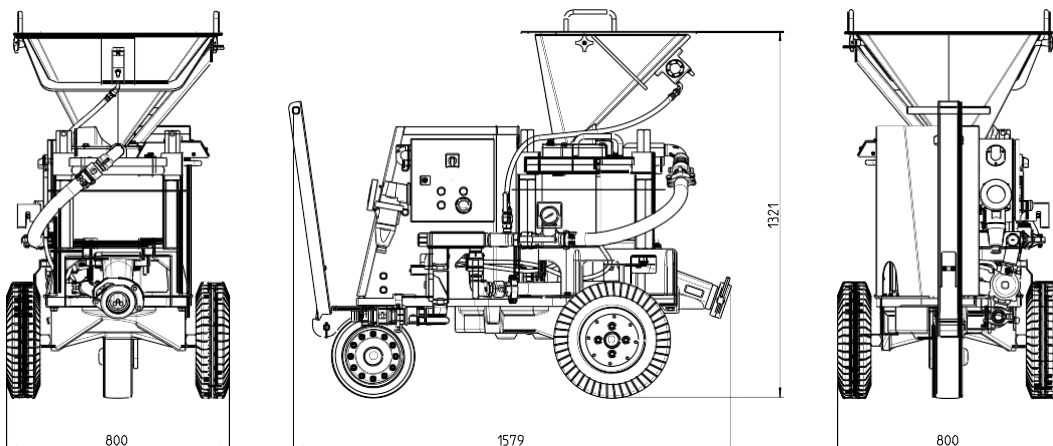
***Luftverbrauch Daten sind geschätzt und abhängig von Förderleistung, Förderdistanz und Schlauchdurchmesser.

***Air consumption data are an estimated value and are depending on output capacity, conveying distance and hose diameter.

Achtung:

Caution:

Für Luftantrieb gilt folgende Formel:
Förderluft + Luftverbrauch Motor = Total Luftbedarf
For air motor:
air consumption for conveying + air consumption for air motor = Total air required





Anwendungen

Die AL-257 ist die universelle Maschine zum Verarbeiten von Trocken- und Nassspritzbeton im Dünnstromverfahren. Das neue, sehr kompakte Aussehen der Maschine besticht durch seine Abmessungen, Gewicht und Leistungsvermögen. Mit nur 750 kg und Abmessungen wie eine kleine Trockenspritzmaschine passt sie auf jede Baustelle und kann einfach installiert und bedient werden. Mit einem unglaublichen Leistungsspektrum von 0.7–9.6 m³/h (mit 3 Rotorgrößen) arbeitet die Maschine an kleineren Sanierungsarbeiten genau so effizient wie an grossen Baugrubensicherungen oder im Bergbau. Weniger Unterhaltsarbeiten und Verschleiss machen sie zur idealen Maschine für sämtliche Spritzbetonarbeiten.

Anwendungsbereiche:

Nass- und Trockenspritzbeton

- Betonsanierungen
- Fugenverfüllungen
- Schwimmteiche, Schwimmbecken
- Hangsicherungen, Felssicherungen
- Kanalsanierungen
- Bergbau, Tunnelbau



Betonsanierungen mit Spritzbeton im Trockenspritzverfahren garantieren eine gute Haftung des Materials und eine ausgezeichnete Verdichtung. Je nach Anforderung kann die AL-237, die AL-257 oder die AL-267 eingesetzt werden.



Die AL-267 im Einsatz auf einer Tunnelbohrmaschine (TBM) bei der Kieshinterfüllung von Tübbing. Ausgerüstet mit einer Spezialfernbedienung, zwei Anzeigen und einer automatischen Stopferabschaltung machen Aliva zum Pionier bei der Weiterentwicklung von Rotormaschinen für den Einsatz auf TBM's.

Application

The AL-257 is the universal machine for the application of dry- and wet shotcrete in the thin-stream method. The new and very compact design of the machine impresses through its dimensions, weight and performance. With just 750 kg and dimensions as little as a small dry shotcrete machine, the AL-257 fits on every job site and is easy to install and operate. With its unbelievable output capacity range from 0.7–9.6 m³/h (with 3 rotor sizes) the machine works on small concrete renovation work as efficient as on big slope protection or in mines. Less maintenance and wear cost makes it the ideal shotcrete machine for all applications.

Fields of application:

Wet- and dry shotcrete application

- Concrete renovation
- Joint-fillings
- Swimming ponds, swimming pools
- Slope protection, rock consolidation
- Canal-renovation (sewage)
- Mining and tunnel applications



Der Spritzmanipulator AL-302 aufgebaut auf einem Kleinbagger ist die ideale Kombination um mit der AL-267 eine grosse Leistung, bis zu 21 m³ pro Stunde, zu fördern. Baugruben- und Felssicherungen sowie andere Anwendungen können damit effizient und ökonomisch ausgeführt werden.



Aliva setzt auch neue Massstäbe bei der Produktion von kundenspezifischen Anlagen im Tunnelbau und der Industrie. Für Spritzbetonapplikationen, Kieshinterfüllung oder für Unterhaltsarbeiten in der Stahl- oder Zementindustrie, Aliva hat immer die passende Antwort.

Concrete renovation with sprayed concrete in the dry-shotcrete method guarantees for good bond strength and impeccable compaction. Depending on the requirement one of the Aliva machines is the right one for your application (AL-237, AL-257, AL-267).

The AL-267 is working on a TBM for gravel back-filling of the segmental-lining. Equipped with a special remote control with two displays and automatic blockage recognition is making Aliva once more to a pioneer for rotor-machines on TBM's.

The shotcrete manipulator AL-302 mounted on a small excavator is the ideal combination in order to run the AL-267 with high, up to 21 m³ per hour, output. With this combination, slopes, excavations and rock can be protected in an efficient and economical way.

Aliva sets new standards for the production of customer specific equipment for sprayed concrete in tunnels, backfilling of gravel or for the maintenance of the steel- and cement-industry. Aliva has always the right answer.

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Innovation & Consistency | since 1910

Aliva®-263

Concrete Spraying Machine

Product Description

The Aliva®-263 is a very sturdily constructed two-axle concrete spraying machine for the processing of wet or dry mix.



Uses

The machine is suitable either for manual spraying or by means of a robotic arm. The Aliva®-263 is developed for the application of shotcrete in tunnels, mines and slopes. The machine has been designed especially for steel fibre spraying.

The Aliva®-263 is available in the following versions:

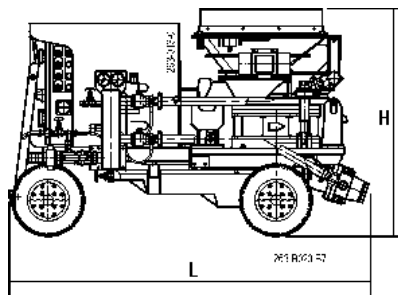
- **BASIC**
Electric drive, combined with BASIC-Dosing unit (not synchronized)
- **EXTENDED**
Electric drive, combined with EXTENDED-Dosing unit (synchronized)
- **AIR**
with air drive, combined with BASIC-Dosing unit (not synchronized)

Product Data

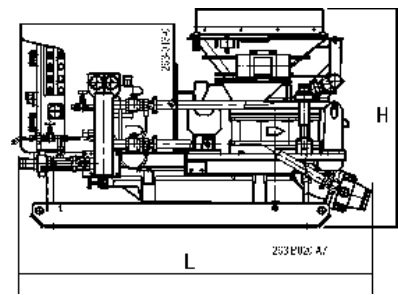
Technical Data

Dimensions

With chassis



With skid



Length L1	2035 mm
Width	1100 mm
Height H1	
with rotor 10 + 16 L	1290 mm
with rotor 25 L	1390 mm
with hose rotor 16 L	1390 mm
Weight	
BASIC/EXTENDED	approx. 1450 kg
AIR	approx. 1400 kg
Content of hopper	100 liters

Length L2	2035 mm
Width	1100 mm
Height H2	
with rotor 10 + 16 L	1190 mm
with rotor 25 L	1290 mm
with hose rotor 16 L	1290 mm
Weight	
BASIC/EXTENDED	approx. 1500 kg
AIR	approx. 1450 kg
Content of hopper	100 liters

Drive

Electric (BASIC/EXTENDED)

Motor output	5/7,5 kW
Speed range	1000/1500 rpm
Voltages	400 V 50 Hz
	400 V/440 V 60 Hz
	220 V 50 Hz
	220 V 60 Hz
Protection	IP 55

With air motor (AIR)

Motor output	8,5 kW
Speed range	800-1800 rpm
Pressure	5 bar
Air consumption	10 Nm ³ /min.

Theoretical Conveying Output

Conveying (dry and wet)

Rotor L	Hose Ø mm	Conveying output *m³/h			max. grain mm	max. conveying distance m horizontal/vertical
		BASIC+EXTENDED		AIR		
		Speed 1	Speed 2			
10	50 + 60	4	6	3.5-7	16 + 20	Dry:300/100 **** Wet: 40/30
16	50** + 60	6	9.5	5-11.5	16 + 20	
25	60** + 65	10	15	8-18	20	
16***	50** + 60	5.5	8.5	4.5-10.5	20	

* With theoretical filling degree of 100%, if motor with 60 Hz = 20% higher conveying capacity

** Only when dry spraying, with speed 1, for conveying distance of max. 60m

*** Hose rotor, specially suitable for dry spraying

**** more than 80 m conveying distance, use steel tubes



Tunneling & Mining



Theoretical Air Consumption

Hose Ø mm	Air consumption Nm ³ /min. *****		
	Dry spraying		Wet spraying
	60 m	120 m	40 m
50	8	10	11.5
60	11	13.5	15
65	13	15.5	18.5

***** Air consumption data are approximate values and are depending on conveying output, conveying distance and hose diameter.

Caution:
For the configuration AIR (with air motor) it has to be considered:
Total air consumption =
Air consumption
for conveying + Air
consumption for air motor!
1 Nm³/min = 35 cfm

Health and Safety Information

Important Notes

For the safe, correct operation of the unit please consult the current machine operating manual. Sika Schweiz AG cannot accept any liability for injury or damages caused by improper use, incorrect or inadequate operation, maintenance or repairs.

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Aliva-267
Betonspritzmaschine
Concrete Spraying Machine



Geschichte

Seit über einem halben Jahrhundert ist Sika involviert in der Herstellung von Rotor-Maschinen für Spritzbeton. In den Anfangsjahren von Aliva wurden noch Schneckenpumpen und Rotormaschinen hergestellt, bis dann in den 60-er Jahren die Rotormaschine die Schneckenpumpe endgültig ablöste. Seither wurden kontinuierlich Verbesserungen und Weiterentwicklungen an Aliva Rotormaschinen vorgenommen. In 2010, zum 100-jährigen Jubiläum der Sika AG, kann Aliva die neueste Generation der Rotormaschinen vorstellen.

Aliva equipment ist bekannt für unübertroffene Qualität und Funktionalität der Beton-Spritzmaschinen, welche von über 70 Vertretungen weltweit verkauft, beraten und betreut werden. Neben dem Unternehmensbereich der Bauindustrie ist Aliva auch eine der führenden Hersteller von Konverterspritzanlagen für die Stahlindustrie und Spezialanlagen auf TBM's.

History

Since more than half a century Sika is involved in the production of rotor machines for shotcrete, sprayed concrete. In the early years, Aliva produced screw pumps and rotor machines until the 60ties, when the rotor machines took the upper hand and removed the screw pumps. Ever since the rotor machines of Aliva underwent continuous improvements and developments. In 2010, to the 100-year anniversary of Sika AG, Aliva is able to introduce the newest generation of rotor machines.

Aliva equipment is known for superior quality and functionality of its machines, which are represented by more than 70 distributor's world wide. Aside the rotor machines for the construction industry, Aliva is one of the leading producers of equipment for the refractory-, steel industry and special equipment for TBM's.



Design und Sicherheit

Formschöne Abdeckung aller beweglichen Teile zum Schutz der einzelnen Komponenten und mit Not-Aus ausgerüstet zur Sicherheit der Maschinisten. Die Unfallgefahr wird so auf ein absolutes Minimum reduziert (gemäss EU Norm).

Eingebaute Komponenten

Abhängig vom Typ der AL-267 sind sämtliche Komponenten wie Dosierpumpe für Abbindebeschleuniger, automatische Zentralschmierung und stufenlose Regelung der Rotor-Drehgeschwindigkeit kompakt unter der Maschinenabdeckung eingebaut. Beim Öffnen der Abdeckung werden Rotor und Druckluft automatisch gestoppt.

Innovatives Spannsystem

Pneumatische Gegendruckfeinabstimmung der Spannvorrichtung. Je mehr Leitungs-Länge, desto mehr Spanndruck. Beide Rotoren sind aus Aluminium (15.51 und 26.51). Einfache Handhabung und Reinigung der Komponenten und LOftung.

Dichtung

Einzigartig entwickeltes Dichtungskonzept! Hochqualitative Stahl auf Stahl Verschleissplatten mit Gummidichtung. Verschleissarm, mit Leistungen bis zu 1500 m³/Platte, verringerte Standzeiten und verringerte Verschleiss-Kosten führen zu einem wirtschaftlichen Betrieb.

Design and Safety

Modern designed hoods and covers of all moving components with integrated emergency Stop to guarantee the highest level of safety for the operator. Danger of accidents is reduced to the absolute minimum (according to EU Norm).

Integrated Components

Depending on the Type of AL-267 all components as Dosing Unit for accelerators, automatic central lubrication system and regulation of the rotor-speed are compact integrated under the covers of the machine. Opening the covers stops the rotor from turning and shuts the air-flow automatic.

Innovative Clamping Device

Pneumatic fine-tuning of the 3-Pt. clamping device (longer hose length, more pressure on the clamping device). Both rotors made of aluminium. (15.5 l and 26.5 l). Easy handling and cleaning of the components and exhaust.

Sealing

Unique developed sealing system from Aliva made of special steel on steel with vulcanic dust sealing rotor plates. Very low wear of up to 1500 m³/plate guarantee economic operation, low wear and no more interruption for changing plates.

Technische Oaten /Technical Data



Type	Voltage	Rotor Speed	Remote Control	Autom. Lubrication	EU Norm Conform	CP Fine-Tuning	Integral Dosing Unit	Output
Standard	380-480 V/ 50-60 Hz	1 Speed/1 Gang	No/ Nicht erhaltl	Yes/Ya	Yes/Ya	Yes/Ya	No/ Nicht erhaltl	9-16 m ³ /h*
Advanced	380-480 V/ 50-60 Hz	2 Speed/2 Gang	Yes/Ya	Yes/Ya	Yes/Ya	Yes/Ya	No/ Nicht erhaltl	6-16 m ³ /h*
Advanced Plus	380-480 V/ 50-60 Hz	2 Speed/2 Gang	Yes/Ya	Yes/Ya	Yes/Ya	Yes/Ya	Yes/Ya	6-16 m ³ /h*
Top Plus	380-480 V/ 50-60 Hz	Stepless/Stufenlos	Yes/Ya	Yes/Ya	Yes/Ya	Yes/Ya	Yes/Ya	4-21 m ³ /h*

*

Conveying distance dry spraying horizontal 400m**

Conveying distance wet spraying horizontal 30-40m

Rotor size 26.5 l

All types available on double axle or skid mounted

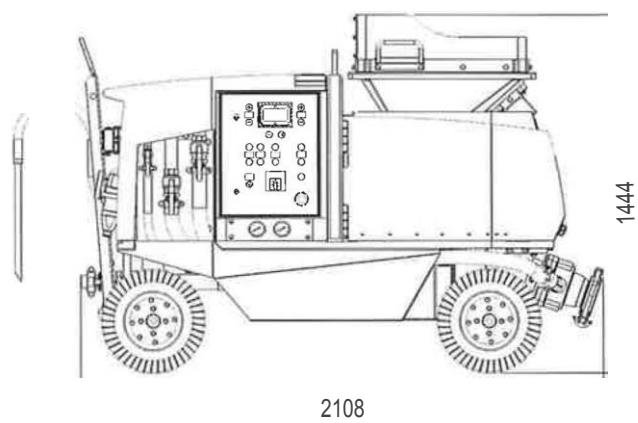
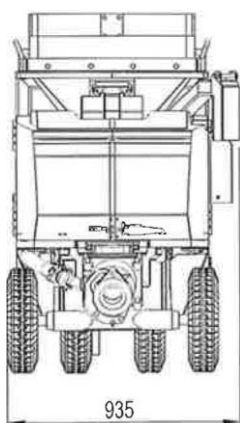
Air consumption dry spraying 10-17 m³/h

Air consumption wet spraying 12-19 m³/h

Weight approx. 1500 kg.

*Theoretical filling degree 100%

**Aliva suggests the use of steel pipes over 80m conveying distance



Anwendungen

Die AL-267 ist eine universelle Maschine zum Verarbeiten von Trocken- und Nassspritzbeton im Diinnstromverfahren. Durch modulare Bauweise kann die AL-267 jedem Bedürfnis angepasst werden. Mit einer Abdeckung der Förderleistung von 4-21 m³/h bietet sie sich für eine Anzahl von Anwendungen an wie: Baugrubensicherungen, Tunnelbau, Bergbau, Schwimmbadbau, Hangsicherungen, Felsicherungen, Wasserkraftwerke, etc.! Handlichkeit, Flexibilität und Funktionalität zeichnen die AL-267 aus.

Application

The AL-267 is a multi-functional machine for wet- and dry application of sprayed concrete in the thin stream method. The modular construction allows the right type for all requirements. With an output capacity of 4-21 m³/h the range of applications covers: Excavation-protection, rock stabilization, slope protection, swimming pool construction, hydropower projects, tunnelling, mining etc.! Easy handling, flexibility and functionality are unique for the AL-267.



Betonsanierungen mit Spritzbeton im Trockenspritzverfahren garantieren eine gute Haftung des Materials und eine ausgezeichnete Verdichtung. Je nach Anforderung kann die AL-237, die AL-257 oder die AL-267 eingesetzt werden.

Die AL-267 im Einsatz auf einer Tunnelbohrmaschine (TBM) aufgebaut auf einem Kleinbagger ist die ideale Kombination um mit der AL-267 eine grosse Leistung, bis zu 21 m³ pro Stunde, zu fördern. Baugruben- und Felsicherungen sowie andere Anwendungen können damit effizient und ökonomisch ausgeführt werden.

Der Spritzmanipulator AL-302 Aliva setzt auch neue Massstäbe bei der Produktion von kundenspezifischen Anlagen im Tunnelbau und der Industrie. Für Spritzbetonapplikationen, Kieshinterfüllung oder für Unterhaltsarbeiten in der Stahl- oder Zementindustrie, Aliva hat immer die passende Antwort.

Aliva sets new standards for the production of customer specific equipment for sprayed concrete in tunnels, backfilling of gravel or for the maintenance of the steel- and cement-industry. Aliva has always the right answer.

Concrete renovation with sprayed concrete in the dry-shotcrete method guarantees for good bond strength and impeccable compaction. Depending on the requirement one of the Aliva machines is the right one for your application (AL-237, AL-257, AL-267).

The AL-267 is working on a TBM for gravel back-filling of the segmental-lining. Equipped with a special remote control with two displays and automatic blockage recognition is making Aliva once more to a pioneer for Rotor-machines on TBM's.

The shotcrete manipulator AL-302 mounted on a small excavator is the ideal combination in order to run the AL-267 with high, up to 21 m³ per hour, output. With this combination, slopes, excavations and rock can be protected in an efficient and economical way.

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Aliva®-285

Concrete Spraying Machine

Construction

Description

The Aliva-285 is a very sturdily constructed two-axle concrete spraying machine for the processing of wet or dry mix.

Uses

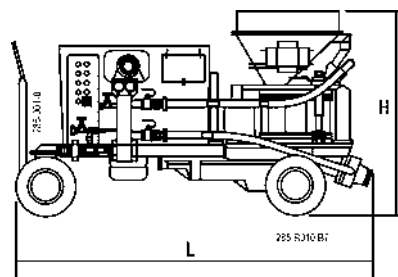
The machine is suitable either for manual spraying or by means of a robotic arm. The Aliva-285 is developed for the application of shotcrete in tunnels, mines and slopes.

- The machine has been designed especially for steel fibre spraying.
- The Aliva-285 is available as EXTENDED version with electric drive and synchronized to the EXTENDED Dosing unit.

Technical data

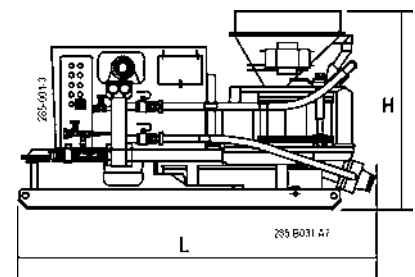
Dimensions

With chassis



Length L1	2460 mm
Width	1100 mm
Height H1	1410 mm
Weight	approx. 1550 kg
Content of hopper	100 liters

With skid



Length L2	2380 mm
Width	1100 mm
Height H2	1310 mm
Weight	approx. 1600 kg
Content of hopper	100 liters

Drive

Electric (BASIC/EXTENDED)

Motor output	11 kW
Speed range	900 - 2100 rpm
Voltages	400 V 50 Hz 400/440V 60 Hz 220 V 50 Hz 220 V 60 Hz
Protection	IP



Theoretical conveying

Conveying (dry and wet)

Rotor L	Hose Ø mm	Conveying output *m ³ /h	max. Grain mm	max. conveying distance m horizontal/vertical
25	60	8,0-11,0	20	Dry: 300/100** Wet: 40/30
	65	12,0-15,0	20	
	80	16,0-19,0	25	
	>80	>19,0	30	

* With theoretical filling degree of 100%, if motor with 60 Hz = 20% higher conveying capacity

** more than 80 m conveying distance, use steel tubes

Theoretical air consumption

Hose Ø mm	Air consumption Nm ³ /min. ***		
	Dry spraying		Wet spraying
	60 m	120 m	40 m
60	11	13,5	15
65	13	15,5	18,5
80	16	20	24
>80	>16	>20	>24

*** Air consumption data are approximate values and are depending on conveying output, conveying distance and hose diameter.

1 Nm³/min = 35 cfm

Safety instructions

Important safety regulations

For detailed informations please consult the latest edition of the machine operating manual.



Construction



Legal references

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Sika guarantees for its products the compliance of technical characteristics according to the Technical Data Sheets up to expiry of shelf life. Users of the products must always consult the latest edition of Technical Data Sheet under «www.sika.ch/stm». Our current General Conditions are applicable.



Aliva-285 EXTENDED

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Aliva®-302

Telescope Spraying Arm

Product Description

The telescope spraying arm Aliva®-302 is used for the application of sprayed concrete in mines, small galleries and excavations.



Uses

Thanks to its simple and rigid construction, the Aliva®-302 is very suitable for the mounting onto different types of carriers.

The telescope spraying arm Aliva®-302 is available in 2 different types:

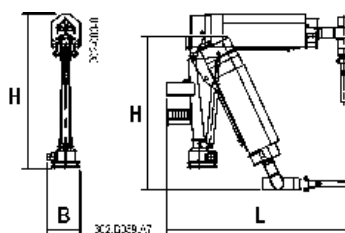
- Typ PROP
Electric remote control (wireless remote control optional) hydraulic aggregate with electric motor
- Typ AIR
Hydraulic remote control, hydraulic aggregate with air motor

Product Data

Technical Data

Dimensions

Aliva-302 PROP



Transport length	2.45 m
Transport width	0.5 m
Transport height	2.0 m
Weight arm	approx. 550 kg
Weight aggregate (empty)	approx. 200 kg

Hydraulic System

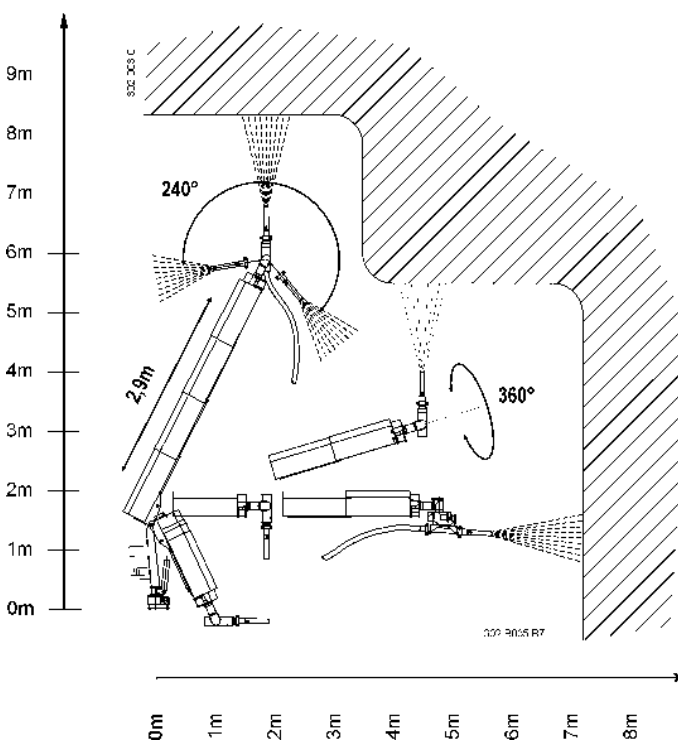
Electric

Motor output	5.5 kW
Voltages	400 V 50/60 Hz 440 V 60 Hz 220 V 50 Hz
Protection	IP 43
Oil pressure	180 bar
Oil quantity (big pump)	21 l/min.
Oil quantity (small pump)	3 l/min.
Tank volume	70 litres

With air motor

Motor output	7.5 kW
Pressure	4.5 bar
Air consumption	6,6 Nm³/min.
Oil pressure	180 bar
Oil quantity (only 1 pump)	20 l/min.

Working Range





Tunneling & Mining

Movement

Arm stroke		2,9 m
Arm rotation		360°
Spraying head		360°
Spraying head		240°
Nozzle		endless

Accessories

Standard

Remote control (AIR) hydraulic	5,5 m hose
Remote control (PROP) electric	15 m cable

Option

Remote control	wireless
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