

Superior mixing – Liquid, Gas and Powder

Alfa Laval IM 10 Rotary Jet Mixer

The patented IM 10 Rotary Jet Mixer (RJM) does not only mix fast, efficient and uniform but creates also the necessary process flexibility that makes it easy to switch to new product formulations with diverse viscosities, densities and volumes. Besides classic liquid to liquid mixing the RJM is excellent for gas and powder dispersion plus a superb tank cleaning machine.

Applications

Process and storage vessels between 1-10 m³ used in a wide range of industries such as: beer & beverage, food & ingredients, home & personal care, health care, biotech and chemical industry etc.

Operation

Secure that the mixer is positioned in the correct level and submerged into the liquid before round pumping or when adding any additional products from any up-stream pipe works.



TECHNICAL DATA

Lubricant:	Self-lubricating with the mixing/cleaning fluid
Standard thread:	1" BSP or NPT, female, Top cone 1" BSP with hygienic seal
Min. tank opening:	See dimension drawings

Pressure

Working pressure:	2-8 bar
Recommended pressure during mixing:	2-6 bar
Recommended pressure during CIP:	4-8 bar



PHYSICAL DATA

Materials

Materials:	AISI 316L, AISI 316, SAF 2205 (UNS 31803), EPDM, PEEK, PVDF, PFA, Ceramics
------------	--

Weight:	5.1 kg
---------	--------

Temperature

Max. working temperature:	95°C
Max. ambient temperature:	140°C

Certificates

2.1 material certificate ATEX.

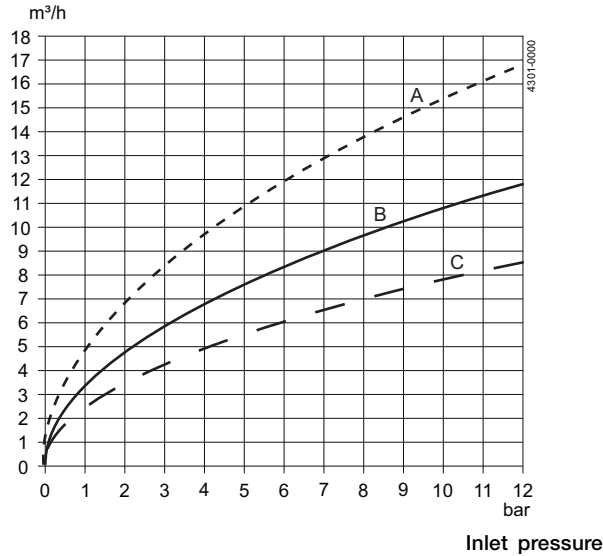
Benefits

Using the IM 10 Rotary Jet Mixer makes it possible, at a modest investment, to perform fast and efficient mixing in a hygienic system. In traditional systems, using propeller mixers, a rotating shaft penetrates the tank wall, and a mechanical seal and a gear box are installed. With the Rotary Jet Mixer technology the shaft, seal and gearbox are eliminated, and a more hygienic design is obtained. With the Rotary Jet Mixing technology good mixing is achieved without the use of baffles. The Rotary Jet Mixer can also be used for gas dispersion. The IM 10 can furthermore be used for efficient CIP when the tank is empty, saving liquid, chemicals and energy compared to a fixed spray ball CIP system.

Flow rate

Relationship between inlet pressure and flow rate for liquids with waterlike properties for the IM 10 Rotary Jet Mixer.

Volumetric flow rate [m³/h]

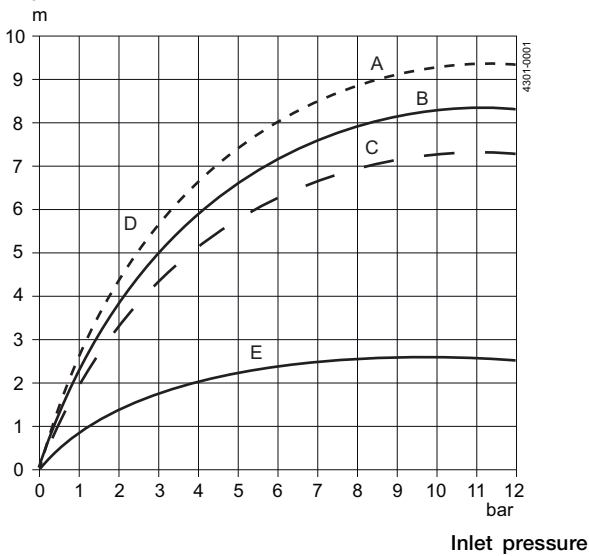


Nozzles
A) d = 5.5 mm
B) d = 4.6 mm
C) d = 3.9 mm

Reach of jet

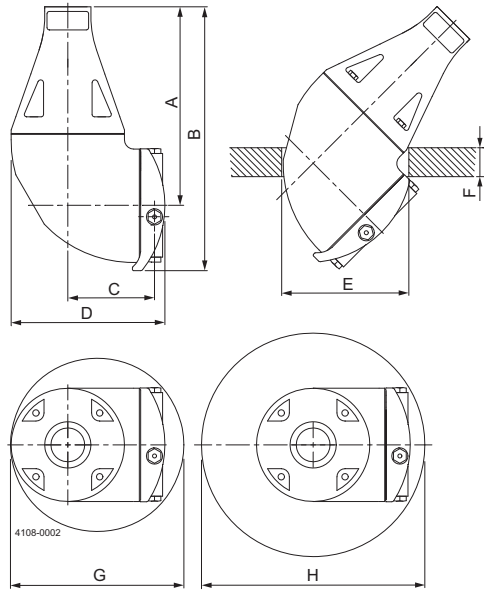
Reach of jet for the IM 10 during cleaning, and indicative reach of jet for mixing of liquids with water-like properties.

Reach of jet [m]

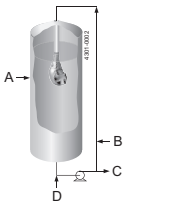


Nozzles
A) d = 5.5 mm
B) d = 4.6 mm
C) d = 3.9 mm
D) Cleaning
E) Mixing

Dimensions (mm)



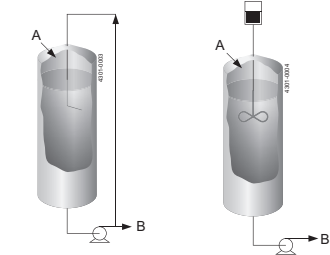
The Rotary Jet
Mixing technology



A = Rotary Jet Mixer
B = Gas
C = Product
D = Liquid feed

Traditional
Mixing technology

Round pumping Propeller mixing



A = Liquid feed
B = Product

A	B	C	D	E	F	G	H
173	230	75	133	ø110	Max. 25	ø150	ø200

Superior Mixing – Liquid, Gas and Powder

Alfa Laval IM 15 Rotary Jet Mixer

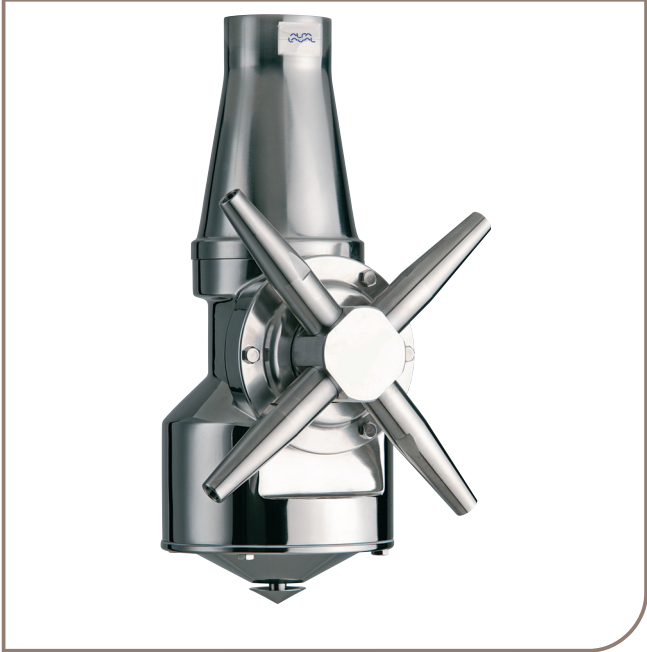
The patented IM 15 Rotary Jet Mixer (RJM) does not only mix fast, efficient and uniform but creates also the necessary process flexibility that makes it easy to switch to new product formulations with diverse viscosities, densities and volumes. Besides classic liquid to liquid mixing the RJM is excellent for gas and powder dispersion plus a superb tank cleaning machine.

Applications

Process and storage vessels between 2-100 m³ used in a wide range of industries such as: beer & beverage, food & ingredients, home & personal care, health care, biotech and chemical industry etc.

Operation

Secure that the mixer is positioned in the correct level and submerged into the liquid before round pumping or when adding any additional products from any up-stream pipe works.



TECHNICAL DATA

Lubricant:	Self-lubricating with the mixing/cleaning fluid
Connection:	Standard thread 1.5" BSP or NPT, female
Min. tank opening:	See dimension drawings

Pressure

Working pressure:	2-12 bar
Recommended pressure during mixing:	2-6 bar
Recommended pressure during CIP:	5-6.5 bar



PHYSICAL DATA

Materials

Materials:	AISI 316L, AISI 316, SAF 2205, PTFE, PEEK, Tefzel, Ceramics
------------	---

Weight:	6.1 kg
---------	--------

Temperature

Max. working temperature:	95°C
Max. ambient temperature:	140°C

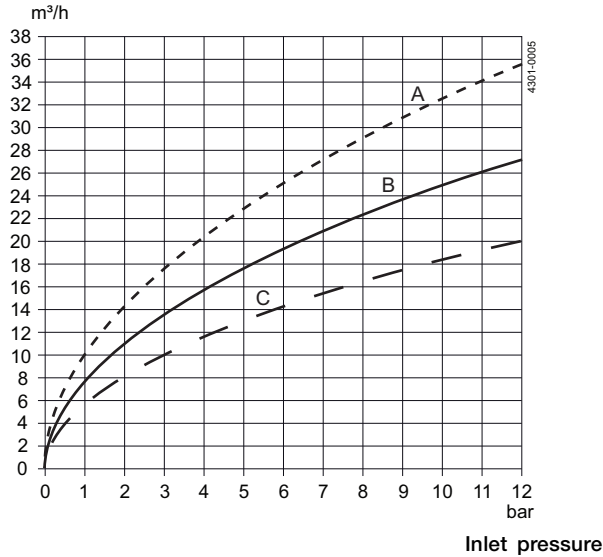
Benefits

Using the IM 15 Rotary Jet Mixer makes it possible, at a modest investment, to perform fast and efficient mixing in a hygienic system. In traditional systems, using propeller mixers, a rotating shaft penetrates the tank wall, and a mechanical seal and a gear box are installed. With the Rotary Jet Mixing technology the shaft, seal and gearbox are eliminated, and a more hygienic design is obtained. With the Rotary Jet Mixing technology good mixing is achieved without the use of baffles. The Rotary Jet Mixer can also be used for gas dispersion and for dispersion and dissolving of powder. The IM 15 can furthermore be used for efficient CIP when the tank is empty, saving liquid, chemicals and energy compared to a fixed spray ball CIP system.

Flow rate

Relationship between inlet pressure and flow rate for liquids with waterlike properties for the IM 15 Rotary Jet Mixer.

Volumetric flow rate [m³/h]

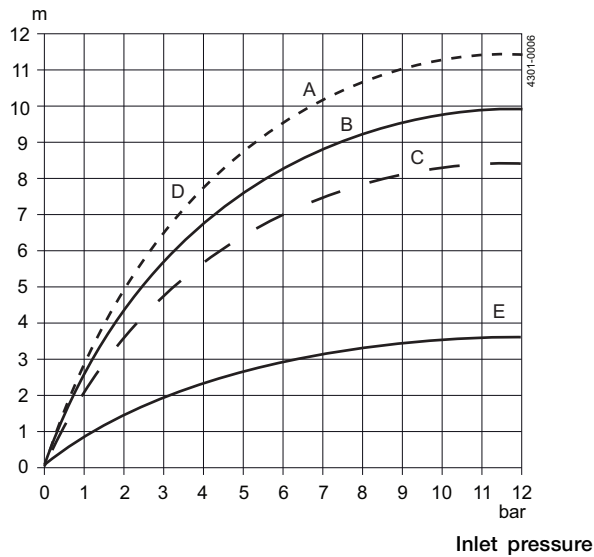


Nozzles
A) d = 8 mm
B) d = 7 mm
C) d = 6 mm

Reach of jet

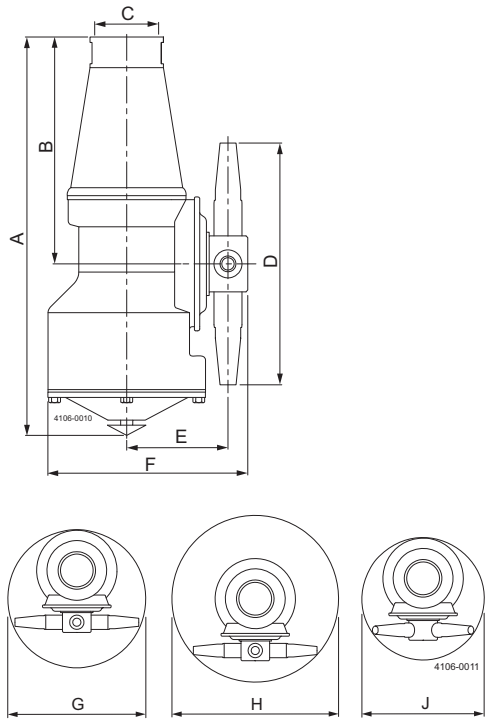
Reach of jet for the IM 15 during cleaning, and indicative reach of jet for mixing of liquids with water-like properties.

Reach of jet [m]

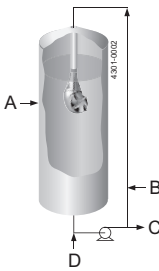


Nozzles
A) d = 8 mm
B) d = 7 mm
C) d = 6 mm
D) Cleaning
E) Mixing

Dimensions (mm)



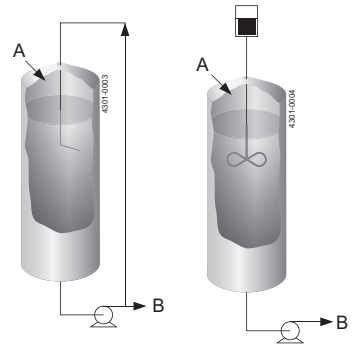
The Rotary Jet
Mixing technology



A = Rotary Jet Mixer
B = Gas
C = Product
D = Liquid feed

Traditional
Mixing technology

Round pumping Propeller mixing



A = Liquid feed
B = Product

A	B	C	D	E	F	G	H	J
297	170	50	204	78	152	ø216	ø264	ø180

Superior mixing – Liquid, Gas and Powder

Alfa Laval IM 20 Rotary Jet Mixer

The patented IM 20 Rotary Jet Mixer (RJM) does not only mix fast, efficient and uniform but creates also the necessary process flexibility that makes it easy to switch to new product formulations with diverse viscosities, densities and volumes. Besides classic liquid to liquid mixing the RJM is excellent for gas and powder dispersion plus a superb tank cleaning machine.

Applications

Process and storage vessels between 5-200 m³ used in a wide range of industries such as: beer & beverage, food & ingredients, home & personal care, health care, biotech and chemical industry etc.

Operation

Secure that the mixer is positioned in the correct level and submerged into the liquid before round pumping or when adding any additional products from any up-stream pipe works.



TECHNICAL DATA

Lubricant: Self-lubricating with the mixing/cleaning fluid
 Connection: Standard thread 2" BSP or NPT, female
 Min. tank opening: See dimension drawings

Pressure

Working pressure: 2-12 bar
 Recommended pressure during mixing: 2-6 bar
 Recommended pressure during CIP: 5-6.5 bar



PHYSICAL DATA

Materials

Materials: AISI 316L, AISI 316, SAF 2205, PEEK, PVDF, Tefzel, Ceramics

Weight: 12.2 kg

Temperature

Max. working temperature: 95°C
 Max. ambient temperature: 140°C

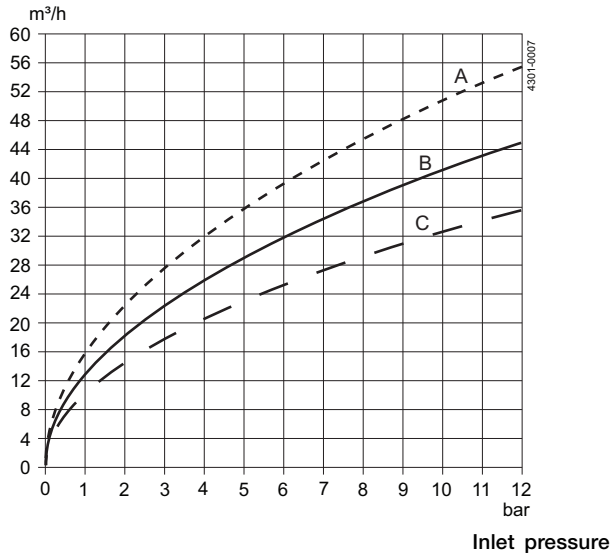
Benefits

Using the IM 20 Rotary Jet Mixer makes it possible, at a modest investment, to perform fast and efficient mixing in a hygienic system. In traditional systems, using propeller mixers, a rotating shaft penetrates the tank wall, and a mechanical seal and a gear box are installed. With the Rotary Jet Mixer technology the shaft, seal and gearbox are eliminated, and a more hygienic design is obtained. With the Rotary Jet Mixing technology good mixing is achieved without the use of baffles. The Rotary Jet Mixer can also be used for gas dispersion and for dispersion and dissolving of powder. The IM 20 can furthermore be used for efficient CIP when the tank is empty, saving liquid, chemicals and energy compared to a fixed spray ball CIP system.

Flow rate

Relationship between inlet pressure and flow rate for liquids with waterlike properties for the IM 20 Rotary Jet Mixer.

Volumetric flow rate [m³/h]

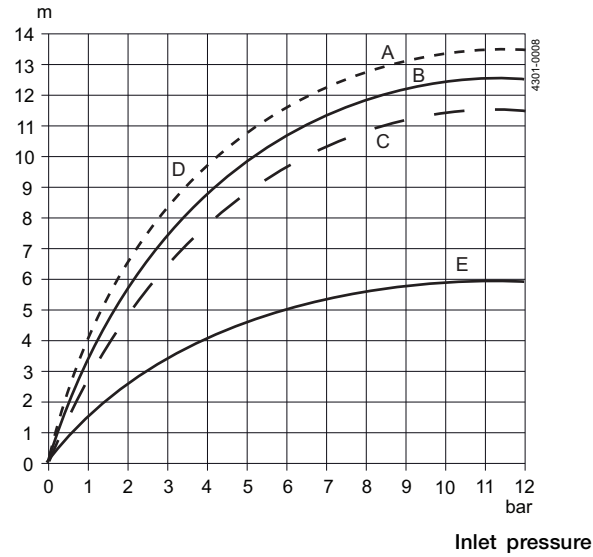


Nozzles
A) d = 10 mm
B) d = 9 mm
C) d = 8 mm

Reach of jet

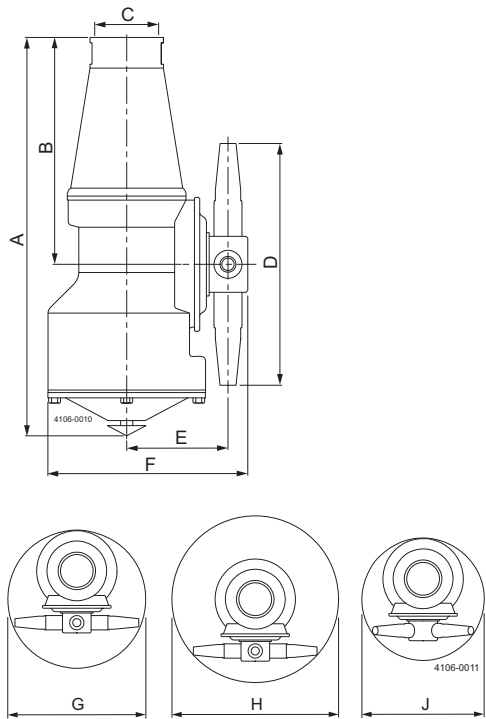
Reach of jet for the IM 20 during cleaning, and indicative reach of jet for mixing of liquids with water-like properties.

Reach of jet [m]



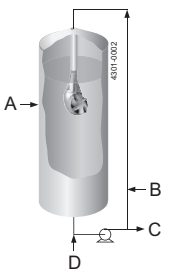
Nozzles
A) d = 10 mm
B) d = 9 mm
C) d = 8 mm
D) Cleaning
E) Mixing

Dimensions (mm)



A	B	C	D	E	F	G	H	J
356	220	65	268	98	195	ø280	ø343	ø232

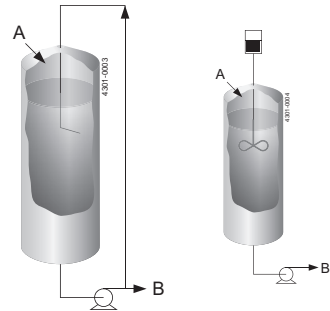
The Rotary Jet
Mixing technology



A = Rotary Jet Mixer
B = Gas
C = Product
D = Liquid feed

Traditional
Mixing technology

Round pumping Propeller mixing



A = Liquid feed
B = Product

Superior Mixing – Liquid, Gas and Powder

Alfa Laval IM 25 Rotary Jet Mixer

The patented IM 25 Rotary Jet Mixer (RJM) does not only mix fast, efficient and uniform but creates also the necessary process flexibility that makes it easy to switch to new product formulations with diverse viscosities, densities and volumes. Besides classic liquid to liquid mixing the RJM is excellent for gas and powder dispersion plus a superb tank cleaning machine.

Applications

Process and storage vessels between 10-1000 m³ used in a wide range of industries such as: beer & beverage, food & ingredients, home & personal care, health care, biotech and chemical industry etc.

Operation

Secure that the mixer is positioned in the correct level and submerged into the liquid before round pumping or when adding any additional products from any up-stream pipe works.



TECHNICAL DATA

Lubricant: Self-lubricating with the mixing/cleaning fluid
 Connection: Standard thread 2.5" BSP, female
 Min. tank opening: See dimension drawings

Pressure

Working pressure: 2-12 bar
 Recommended pressure during mixing: 4-8 bar
 Recommended pressure during CIP: 5-10 bar



PHYSICAL DATA

Materials

Materials: AISI 316L, AISI 316, SAF 2205, PEEK, PVDF, Carbon, Tefzel, Ceramics

Weight: 13.2 kg

Temperature

Max. working temperature: 95°C
 Max. ambient temperature: 140°C

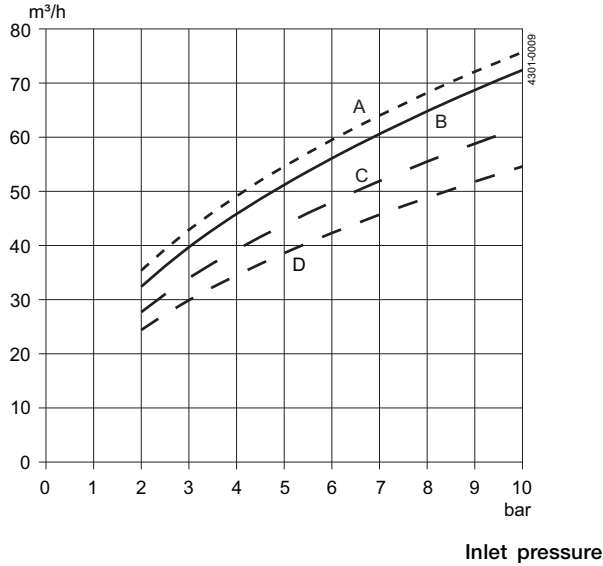
Benefits

Using the IM 25 Rotary Jet Mixer makes it possible, at a modest investment, to perform fast and efficient mixing in a hygienic system. In traditional systems, using propeller mixers, a rotating shaft penetrates the tank wall and a mechanical seal and a gear box are installed. With the Rotary Jet Mixing technology the shaft, seal and gearbox are eliminated, and a more hygienic design is obtained. With the Rotary Jet Mixing technology good mixing is achieved without the use of baffles. The Rotary Jet Mixing technology can also be used for gas dispersion and for dispersion and dissolving of powder. The IM 25 can furthermore be used for efficient CIP when the tank is empty, saving liquid, chemicals and energy compared to a fixed spray ball CIP system.

Flow rate

Relationship between inlet pressure and flow rate for liquids with waterlike properties for the IM 25 Rotary Jet Mixer.

Volumetric flow rate [m³/h]

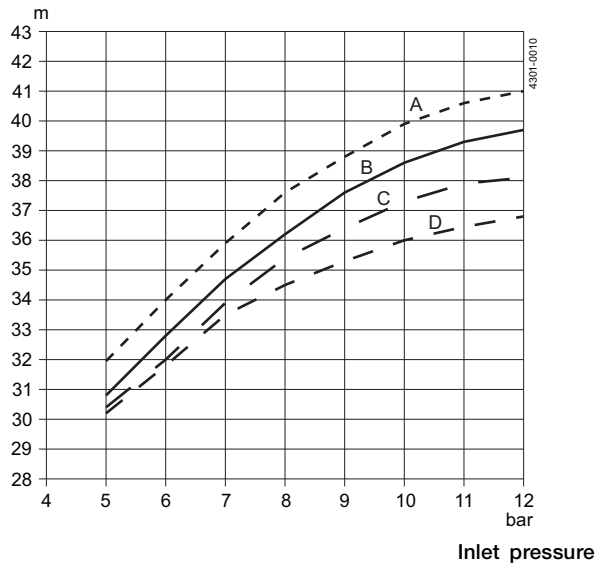


- Nozzles
- A) 2 x ø21 mm
 - B) 2 x ø19 mm
 - C) 2 x ø17 mm
 - D) 2 x ø15 mm

Reach of jet

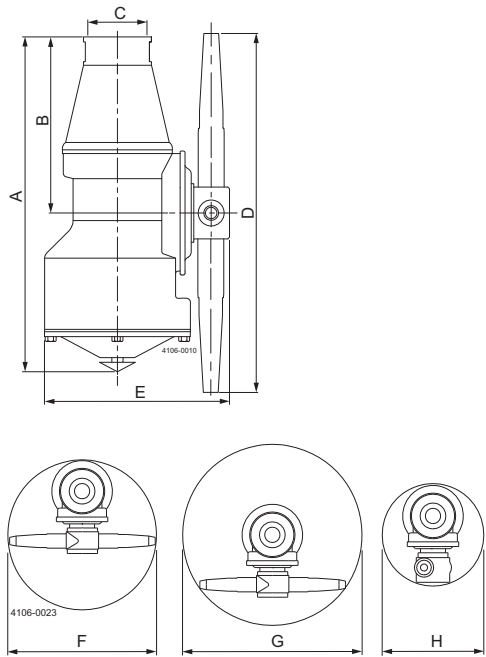
Reach of jet for the IM 25 during cleaning, and indicative reach of jet for mixing of liquids with water-like properties.

Reach of jet [m]



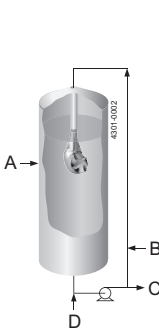
- Nozzles
- A) 2 x ø21 mm
 - B) 2 x ø19 mm
 - C) 2 x ø17 mm
 - D) 2 x ø15 mm

Dimensions (mm)



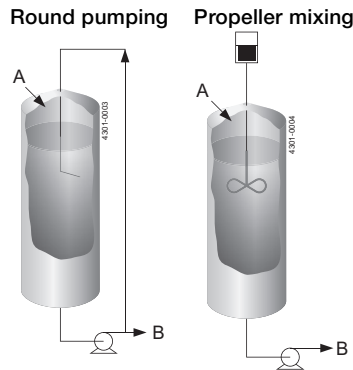
A = 2.5" BSP

The Rotary Jet Mixing technology



- A = Rotary Jet Mixer
- B = Gas
- C = Product
- D = Liquid feed

Traditional Mixing technology

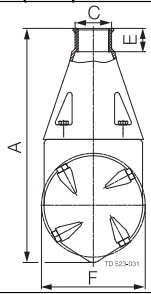
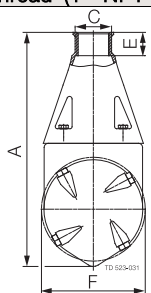
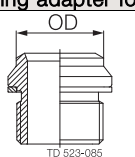



- A = Liquid feed
- B = Product

A	B	C	D	E	F	G	H
286	155	80	337	220	ø343	ø424	ø223

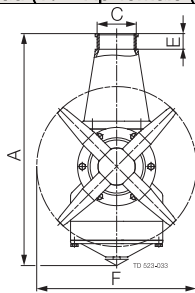
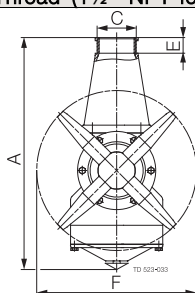
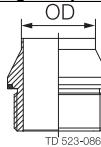

Product code: 5509 Mixer
 Product code: 5546 Welding Adaptor
 Product code: 5548 Tools

Surface treatment: Bright

Item No.	PPL EUR	Flow at 5 bar	No. of Nozzles/ Dimension	Dimension (mm)				Connection
PEEK		m³/h		A	C	E	F	Thread (1" Rp-female (BSP))
TE30B030	8590	7	4 x ø3.9	230	36	16	100	
TE30B040	8590	9.5	4 x ø4.6	230	36	16	100	
TE30B050	8590	12	4 x ø5.5	230	36	16	100	
PEEK		Thread (1" NPT-female)						
TE30N030	8590	7	4 x ø3.9	230	36	16	100	
TE30N040	8589	9.5	4 x ø4.6	230	36	16	100	
TE30N050	8589	12	4 x ø5.5	230	36	16	100	
		Connection						Welding adapter for IM 10
TE52D030	94	1" Rp-male (BSP)/1" ISO thread pipe (OD = 33.7 mm)						
TE52D031	94	1" NPT-male/1" ANSI pipe (OD = 33.4 mm)						
TE52D032	94	1" Rp-male (BSP)/1½" dairy pipe (OD = 38 mm) Gasket is included						
Add-on prices								
TE30B0XX70	489	ATEX						
TE30N0XX70	489	ATEX						
Standard tool kit								
TE81B085	153	Caliper (1 piece) Socket wrench with pin (1 piece) Spanner for IM 10, TJ20G and MultiJet 25 (1 piece) Spanner (1 piece)						
Add-on explanation								
TE30B0XX70		ATEX approved machine for use in explosive atmospheres.						
TE30N0XX70		Category 1 for installation in zone 0/20 in accordance to. EX II 1 GD c T175°C Tamp 0°C to +140°C;						

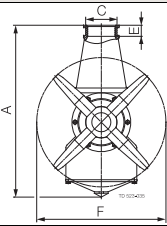
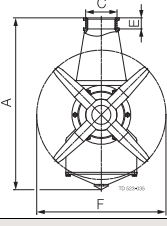
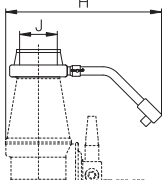


Product code: 5509 Mixer
 Product code: 5546 Welding Adaptor
 Product code: 5548 Tools

Surface finish: Bright

Item No.	PPL EUR	Flow at 5 bar	No. of Nozzles/ Dimension	Guide	Dimension (mm)				Connection
Stainless Steel		m³/h			A	C	E	F	Thread (1½" Rp-female (BSP))
TE31B061	9686	16	4 x ø6	100%	297	50	16	204	
TE31B071	9313	19	4 x ø7	100%	297	50	16	204	
TE31B070	9686	19	4 x ø7	0%	297	50	16	204	
TE31B080	9686	22.5	4 x ø8	0%	297	50	16	204	
TE31B181	9686	14	2 x ø8	100%	297	50	16	270	
TE31B182	9686	19	2 x ø10	0%	297	50	16	270	
TE31B183	9686	21	2 x ø11	0%	297	50	16	270	
									Thread (1½" NPT-female)
TE31B166	9686	16	4 x ø6	100%	297	50	16	204	
TE31B167	9686	19	4 x ø7	100%	297	50	16	204	
TE31B177	9687	19	4 x ø7	0%	297	50	16	204	
TE31B178	9686	22.5	4 x ø8	0%	297	50	16	204	
TE31B281	9687	14	2 x ø8	100%	297	50	16	270	
TE31B282	9687	19	2 x ø10	0%	297	50	16	270	
TE31B283	9687	21	2 x ø11	0%	297	50	16	270	
Connection									Welding adapter for IM 15
TE52D018	142	1½" Rp-male (BSP)/40 mm DIN pipe (OD = 40 mm)							
TE52D020	142	1½" Rp-male (BSP)/1½" ISO thread pipe (OD = 48.3 mm)							
TE52D021	142	1½" Rp-male (BSP)/2" dairy pipe (OD = 51 mm)							
Gasket is included									
									Add-on prices
TE31BXXX70	489	ATEX							
									Standard tool kit
TE81B055	193	Unbraco key for 3/16" screw (1 piece) Screw driver Unbraco 5/32" (2 pieces) 8 mm socket wrench with pin (1 piece)							
Special tools									
TE81B033	131	Pusher for 1½" machines							
TE81B129	1385	Pusher for collar bush, 1.5" gear frame							
TE81B130	1385	Tool for upper collar							
Item No. explanation									Add-on explanation
TE31BXXX70		ATEX approved machine for use in explosive atmospheres. Cataogry 1 for installation in zone 0/20 in accordance to EX II 1 GD c T175°C Tamp 0°C to +140°C							

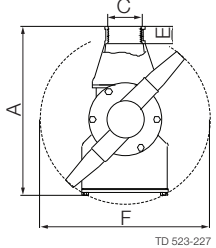


Product code: 5509 Mixer
 Product code: 5546 Welding adapter
 Product code: 5548 Tools

Surface finish: Bright

Item No.	PPL EUR	Flow at 5 bar	No. of Nozzles/ Dimension	Guide	Dimension (mm)				Connection
Stainless Steel		m³/h			A	C	E	F	Thread (2" Rp-female (BSP))
TE32B081	12128	23	4 x Ø8	100%	356	65	16	268	
TE32B091	12128	27.5	4 x Ø9	100%	356	65	16	268	
TE32B090	12128	27.5	4 x Ø9	0%	356	65	16	268	
TE32B100	12127	32.5	4 x Ø10	0%	356	65	16	268	
TE32B112	12128	24	2 x Ø12	0%	356	65	16	337	
TE32B113	12128	28	2 x Ø13	0%	356	65	16	337	
TE32B115	12128	37	2 x Ø15	0%	356	65	16	337	
									Thread (2" NPT-female (BSP))
TE32B181	12128	23	4 x Ø8	100%	356	65	16	268	
TE32B191	12128	27.5	4 x Ø9	100%	356	65	16	268	
TE32B190	12128	27.5	4 x Ø9	0%	356	65	16	268	
TE32B200	12128	32.5	4 x Ø10	0%	356	65	16	268	
TE32B212	12128	24	2 x Ø12	0%	356	65	16	337	
TE32B213	12128	28	2 x Ø13	0%	356	65	16	337	
TE32B215	12128	37	2 x Ø15	0%	356	65	16	337	
							J	H	Cleaning unit
TE52D140	975	Cleaning unit for IM 20, 2" Rp (BSP)					2" Rp	210	
TE52D240	1004	Cleaning unit for IM 20, 2" NPT					2" NPT	210	
									Welding adapter for IM 20
TE52D025	162	2" Rp (BSP)/2" ISO thread pipe (OD = 60.3 mm)							
TE52D026	162	2" Rp (BSP)/2½" dairy pipe (OD = 63.5 mm) Gasket is included							
									Add-on prices
TE32BXXX70		ATEX							
									Standard tool kit
TE81B055	193	Unbraco key for 3/16" screw (1 piece) Screw driver Unbraco 5/32" (2 pieces) Unbraco key for 1/4" screw (1 piece) Screw driver Unbraco 1/4" (1 piece) Caliper (1 piece) Socket wrench with pin (1 piece)							
Special tools									
TE81B031	340	Pusher for gear frame							
TE81B032	321	Fixture set for gear frame							
TE81B130	1385	Tool for upper collar							
TE81B132	1832	Tool for lower collar							
Item No. explanation									Add-on explanation
TE32BXXX70		ATEX approved machine for use in explosive atmospheres. Catagory 1 for installation in zone 0/20 in accordance to EX II 1 GD c T175°C Tamp 0°C to +140°C							

Product code: 5509 Mixer
Product code: 5548 Tools

Surface treatment: Bright

Item No.	PPL EUR	Flow at 8 bar	No. of Nozzles/ Dimension	Guide	Dimension (mm)			Connection
Stainless Steel		m³/h			A	C	F	Thread (2½" Rp-female (BSP))
TE33E015	13101	48	2 x ø15	0%	286	80	337	
TE33E017	13101	56	2 x ø17	0%	286	80	337	
TE33E019	13098	63	2 x ø19	0%	286	80	337	
TE33E021	13101	68	2 x ø21	0%	286	80	337	
								Welding adapter for IM 25
TE52D028	340	2½" Rp (BSP)/80 mm DIN pipe (OD = 85 mm)						
TE52D029	340	2½" Rp (BSP)/3" dairy pipe (OD = 76.1 mm) Gasket is included						
								Add-on prices
TE33B0XX70		ATEX						
								Standard tool kit
TE81B065	194	Unbraco key for 3/16" screw (1 piece) Screw driver Unbraco 5/32" (2 pieces) Unbraco key for 1/4" screw (1 piece) Screw driver Unbraco 1/4" (1 piece) Caliper (1 piece)						
Special tools								
TE81B031	340	Pusher for gear frame						
TE81B032	321	Fixture set for gear frame						
Item No. explanation								Add-on explanation
TE33B0XX70		ATEX approved machine for use in explosive atmospheres. Cataogry 1 for installation in zone 0/20 in accordance to EX II 1 GD c T175°C Tamp 0°C to +140°C						

Other connection available on request