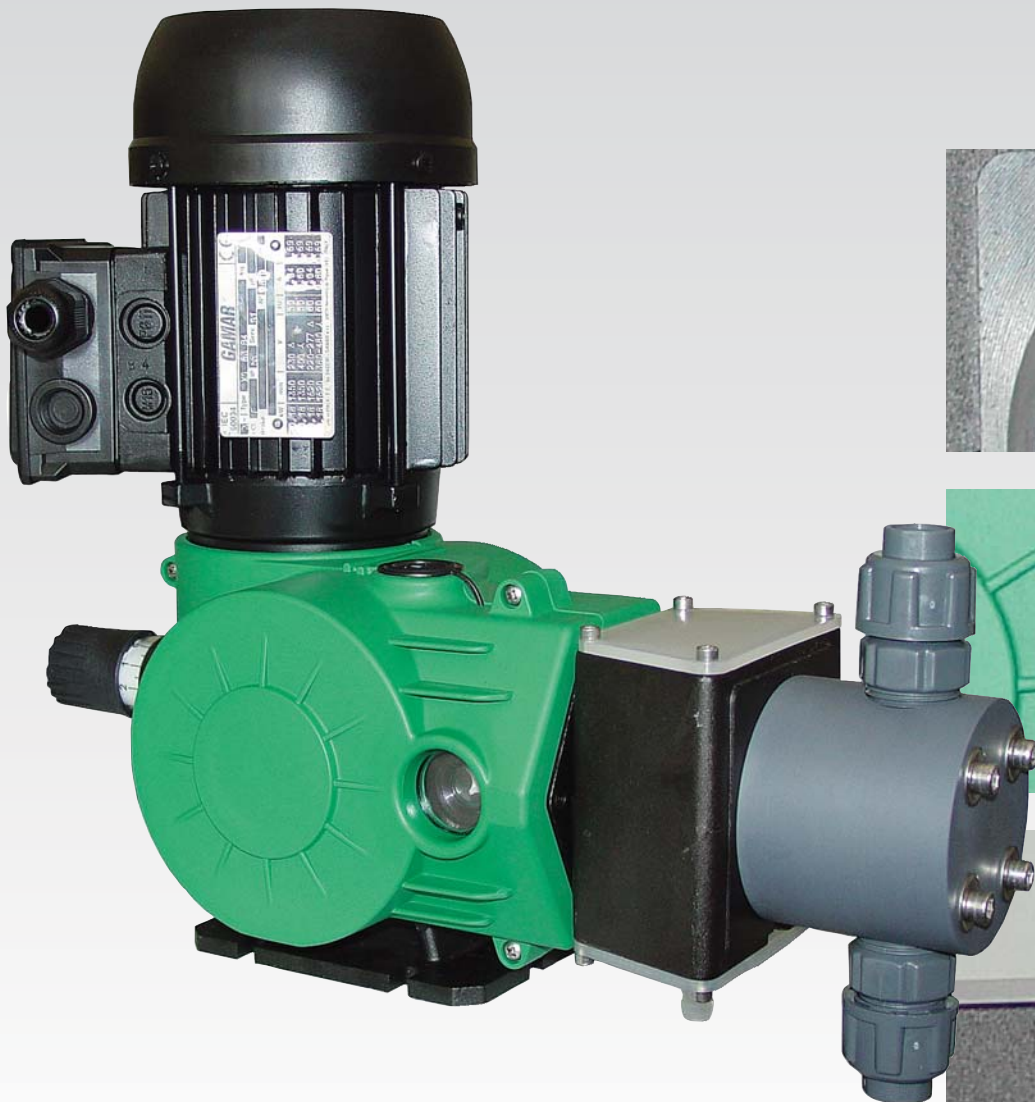


# MUTHO TECHNOLOGIES



## **R-D Series**

Motor Driven  
Pumps

# R1 Plunger piston metering pumps



## FEATURES

<b>Flow rate</b>	from 1,5 to 304 l/h
<b>Max. pressure</b>	20 bar
<b>Stroke rate</b>	58 • 78 • 116 strokes/minute
<b>Piston diameter</b>	from 6 to 89 mm
<b>Motor</b>	0,18 • 0,25 Kw standard (IP 55)
<b>Stroke length</b>	15 mm

Model	Piston diameter	Strokes/min	Flow rate l/h	Max pressure				Connections		3phases Motor kW
				bar		psi		AISI 316	PVC	
				AISI 316	PVC	AISI 316	PVC			
R1B006U	6	58	1,5	20	10	290	145	1/4" G F	1/4" G F	0,18
R1B006V		78	2							
R1B006X		116	3							
R1B011U	11	58	5	20	10	290	145	1/4" G F	1/4" G F	0,18
R1B011V		78	6,5							
R1B011X		116	10							
R1B017U	17	58	11	20	10	290	145	3/8" G F	3/8" G F	0,18
R1B017V		78	15							
R1B017X		116	22							
R1B025U	25	58	25	20	10	290	145	3/8" G F	3/8" G F	0,18
R1B025V		78	32							
R1B025X		116	50							
R1B030U	30	58	35	20	10	290	145	3/8" G F	3/8" G F	0,25
R1B030V		78	45							
R1B030X		116	70							
R1B038U	38	58	55	17	10	246,5	145	3/8" G F	3/8" G F	0,25
R1B038V		78	73							
R1B038X		116	110							
R1B048U	48	58	85	10	10	145	145	1/2" G F	1/2" G F	0,25
R1B048V		78	114							
R1B048X		116	170							
R1B054U	54	58	110	8	8	116	116	1/2" G F	1/2" G F	0,25
R1B054V		78	145							
R1B054X		116	220							
R1B064U	64	58	152	6	4	87	58	3/4" G F	3/4" G F	0,25
R1B064V		78	204							
R1B064X		116	304							

## LIQUID END

SS 316 or PVC pump head (standard).

## SS 316 OR CERAMIC PISTON

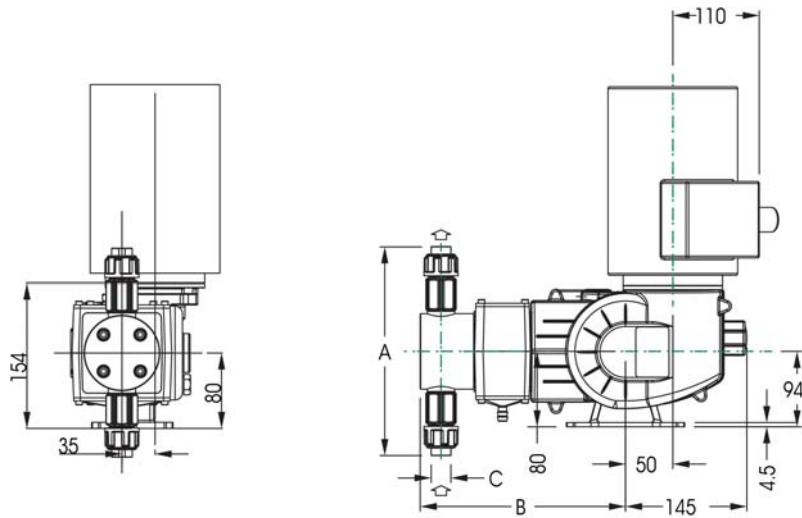
The material in contact with the liquid to be dosed are listed in the "pump head materials" table (special materials may be supplied on request).

## MAX DOSAGE TEMPERATURE

- SS 316 pump head: 40° C
- PP pump head: 40° C

## FLOW RATE ADJUSTMENT

Every pump can be equipped with an electric actuator which accepts a 4÷20 mA.



Piston diameter	AISI 316 L				PVC			
	A	B	C	Ø ext. head	A	B	C	Ø ext. head
6	120	210	1/4 G F	68	157	216	1/4 G F	80
11	120	210	1/4 G F	68	157	216	1/4 G F	80
17	120	210	3/8" G F	68	147	216	3/8" G F	80
25	120	215	3/8" G F	68	147	225	3/8" G F	80
30	120	215	3/8" G F	68	147	225	3/8" G F	80
38	160	227	3/8" G F	88	168	235	3/8" G F	100
48	160	227	1/2" G F	88	196	240	1/2" G F	100
54	173	229	1/2" G F	108	216	240	1/2" G F	120
64	202	238	3/4" G F	108	222	250	3/4" G F	120

## Pump Head materials

	STANDARD		ON REQUEST		
	AA	PV	AE	PA	PE
<b>PUMP HEAD</b>	AISI 316	PVC	AISI 316	PVC	PVC
<b>PISTON</b>	AISI 316	Ceramic	Ceramic	Ceramic	Ceramic
<b>PISTON SEAL</b>	FPM	FPM	EPDM	FPM	EPDM
<b>VALVES</b>	AISI 316	Ceramic	AISI 316	AISI 316	Ceramic
<b>VALVE SEATS</b>	AISI 316	PVC	AISI 316	AISI 316	PTFE

## Code

<b>R</b>	Model [ R= Piston • D=Diaphragm ]
<b>1</b>	Mechanism type [ 1 • 2 ]
<b>B</b>	Stroke length [ B=15mm ]
<b>064</b>	Piston diameter [ from 6 to 89 mm ]
<b>X</b>	Strokes/min [ U=58 • V=78 • X=116 ]
<b>PV</b>	Pump Head materials [ see table above ]
<b>B4</b>	Motor type
<b>O</b>	Adjustement stroke [ O = Manual • L = Linear ]
<b>000</b>	Optional

# R2 Plunger piston metering pumps



## FEATURES

<b>Flow rate</b>	from 40 to 1000 l/h
<b>Max. pressure</b>	20 bar
<b>Stroke rate</b>	58 • 78 • 116 strokes/minute
<b>Piston diameter</b>	from 6 to 89 mm
<b>Motor</b>	0,25 • 0,37 • 0,55 • 0,75 Kw standard (IP 55)
<b>Stroke length</b>	25 mm

Model	Piston diameter	Strokes/min	Flow rate l/h	Max pressure				Connections		3phases Motor kW
				bar		psi		AISI 316	PVC	
				AISI 316	PVC	AISI 316	PVC			
R2A025U	25	58	40	20	10	290	145	3/8" G F	3/8" G F	0,25
R2A025V		78	53							
R2A025X		116	80							
R2A030U	30	58	55	20	10	290	145	3/8" G F	3/8" G F	0,25
R2A030V		78	75							
R2A030X		116	112							
R2A038U	38	58	90	20	10	290	145	1/2" G F	3/8" G F	0,37
R2A038V		78	120							
R2A038X		116	180							
R2A048U	48	58	140	20	10	290	145	1/2" G F	1/2" G F	0,55
R2A048V		78	190							
R2A048X		116	284							
R2A054U	54	58	180	15	10	217,5	145	1/2" G F	1/2" G F	0,55
R2A054V		78	242							
R2A054X		116	365							
R2A064U	64	58	250	10	10	145	145	3/4" G F	3/4" G F	0,75
R2A064V		78	335							
R2A064X		116	505							
R2A076U	76	58	365	7	7	101,5	101,5	1" G F	1" G F	0,75
R2A076V		78	485							
R2A076X		116	730							
R2A089U	89	58	495	5	5	72,5	72,5	1" G F	1" G F	0,75
R2A089V		78	660							
R2A089X		116	1000							

## LIQUID END

SS 316 or PVC pump head (standard).

## SS 316 OR CERAMIC PISTON

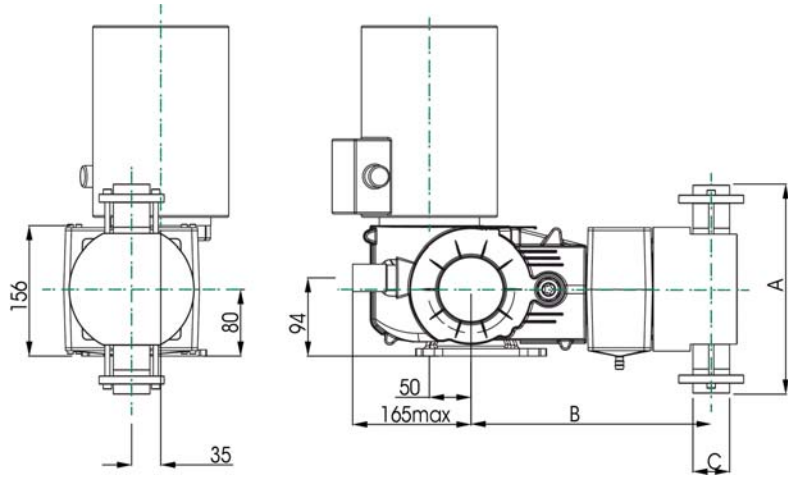
The material in contact with the liquid to be dosed are listed in the "pump head materials" table (special materials may be supplied on request).

## MAX DOSAGE TEMPERATURE

- SS 316 pump head: 40° C
- PP pump head: 40° C

## FLOW RATE ADJUSTMENT

Every pump can be equipped with an electric actuator which accepts a 4÷20 mA.



Piston diameter	AISI 316 L				PVC			
	A	B	C	Ø ext. head	A	B	C	Ø ext. head
25	120	258	3/8" G F	68	147	258	3/8" G F	80
30	120	258	3/8" G F	68	147	258	3/8" G F	80
38	160	268	1/2" G F	88	168	268	1/2" G F	100
48	160	268	1/2" G F	88	196	268	1/2" G F	100
54	173	268	1/2" G F	108	216	268	1/2" G F	120
64	202	273	3/4" G F	108	222	273	3/4" G F	120
76	238	288	1" G F	138	244	288	1" G F	148
89	252	288	1" G F	150	256	288	1" G F	160

## Pump Head materials

	STANDARD		ON REQUEST		
	AA	PV	AE	PA	PE
<b>PUMP HEAD</b>	AISI 316	PVC	AISI 316	PVC	PVC
<b>PISTON</b>	AISI 316	Ceramic	Ceramic	Ceramic	Ceramic
<b>PISTON SEAL</b>	FPM	FPM	EPDM	FPM	EPDM
<b>VALVES</b>	AISI 316	Ceramic	AISI 316	AISI 316	Ceramic
<b>VALVE SEATS</b>	AISI 316	PVC	AISI 316	AISI 316	PTFE

## Code

<b>R</b>	Model [ R= Piston • D=Diaphragm ]
<b>2</b>	Mechanism type [ 1 • 2 ]
<b>A</b>	Stroke length [ A=25mm ]
<b>089</b>	Piston diameter [ from 6 to 89 mm ]
<b>V</b>	Strokes/min [ U=58 • V=78 • X=116 ]
<b>PV</b>	Pump Head materials [ see table above ]
<b>E4</b>	Motor type
<b>O</b>	Adjustement stroke [ O = Manual • L = Linear ]
<b>000</b>	Optional

# D1 Mechanical diaphragm metering pumps



## FEATURES

<b>Flow rate</b>	from 5,5 to 500 l/h
<b>Max. pressure</b>	10 bar
<b>Stroke rate</b>	41 • 58 • 82 • 116 strokes/minute
<b>Diaphragm diameter</b>	from 64 to 165 mm
<b>Motor</b>	0,18 • 0,25 • 0,37 Kw standard (IP 55)
<b>Stroke length</b>	2 mm • 4 mm • 6 mm

Model	Diaphragm diameter	Stroke length (mm)	Strokes/min	Flow rate l/h	Max pressure				Connections		3phases Motor kW
					bar		psi		AISI 316	PP	
					AISI 316	PP	AISI 316	PP			
D1E064U	64	2	58	5,5	10	10	145	145	1/4" G F	1/4" G F	0,18
D1E064V			78	8							
D1E064X			116	11							
D1E094U	94	2	58	20	10	10	145	145	3/8" G F	3/8" G F	0,25
D1E094V			78	26							
D1E094X			116	40							
D1D108U	108	4	58	60	10	10	145	145	3/8" G F	3/8" G F	0,37
D1D108V			78	80							
D1D108X			116	120							
D1C138U	138	6	58	155	7	7	101,5	101,5	3/4" G F	3/4" G F	0,37
D1C138V			78	220							
D1C138X			116	310					1" G F	1" G F	
D1C165U	165	6	58	230	5	5	72,5	72,5	1" G F	1" G F	0,37
D1C165V			78	330							
D1C165X			116	500							

### LIQUID END

SS 316 or PP liquid end (standard).

### DIAPHRAGM IN PTFE

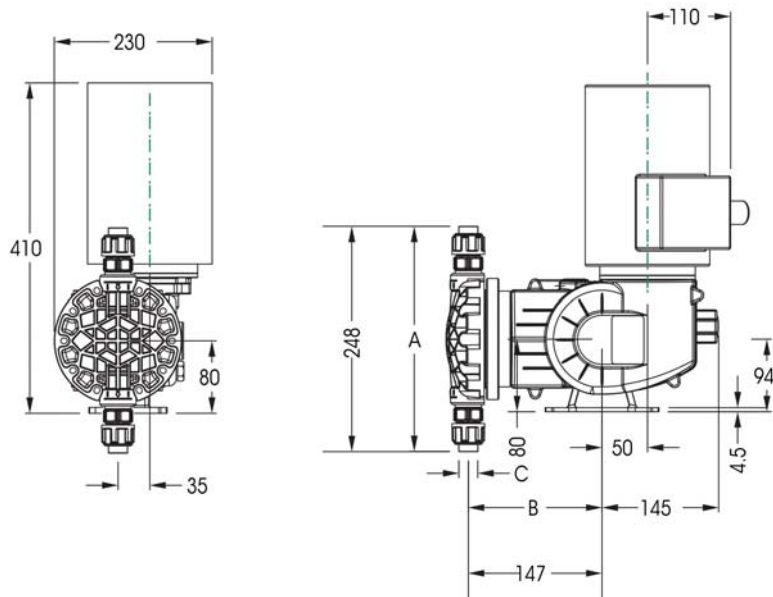
The material in contact with the liquid to be dosed are listed in the "pump head materials" table (special materials may be supplied on request).

### MAX DOSAGE TEMPERATURE

- SS 316 pump head: 40° C
- PP pump head: 40° C

### FLOW RATE ADJUSTMENT

Every pump can be equipped with an electric actuator which accepts a 4÷20 mA.



Diaphragm diameter	AISI 316 L				PVC			
	A	B	C	Ø ext. head	A	B	C	Ø ext. head
64	208	149	1/4" G F	98	150	144	1/4" G F	98
94	236	144	3/8" G F	117	172	146	3/8" G F	120
108	248	144	3/8" G F	131	212	146	3/8" G F	140
138	347	158	3/8" G F	160	258	157	3/8" G F	170
165	377	160	1" G F	193	296	157	1" G F	190

## Pump Head materials

	STANDARD			ON REQUEST
	AA	PV	PP	FF
<b>PUMP HEAD</b>	AISI 316	PVC	PP	PVDF
<b>DIAPHRAGM</b>	PTFE	PTFE	PTFE	PTFE
<b>VALVES</b>	AISI 316	Ceramic	Ceramic	Ceramic
<b>VALVE SEATS</b>	AISI 316	PTFE	PTFE	PVDF

## Code

<b>D</b>	Model [ R= Piston • D=Diaphragm ]
<b>1</b>	Mechanism type [ 1 • 2 • M ]
<b>E</b>	Stroke length [ E= 2mm • D=4mm • C=6mm ]
<b>064</b>	Diaphragm diameter [ from 64 to 165 mm ]
<b>U</b>	Strokes/min [ U=58 • V=78 • X=116 ]
<b>PP</b>	Pump Head materials [ see table above ]
<b>A4</b>	Motor type
<b>O</b>	Adjustement stroke [ O = Manual • L = Linear ]
<b>000</b>	Optional

# DM Mechanical diaphragm metering pumps



## FEATURES

<b>Flow rate</b>	from 15 to 60 l/h
<b>Max. pressure</b>	5 bar
<b>Stroke rate</b>	58 • 78 • 116 strokes/minute
<b>Diaphragm diameter</b>	50 mm
<b>Motor</b>	0,09 kw standard (IP 55)
<b>Stroke length</b>	5 mm

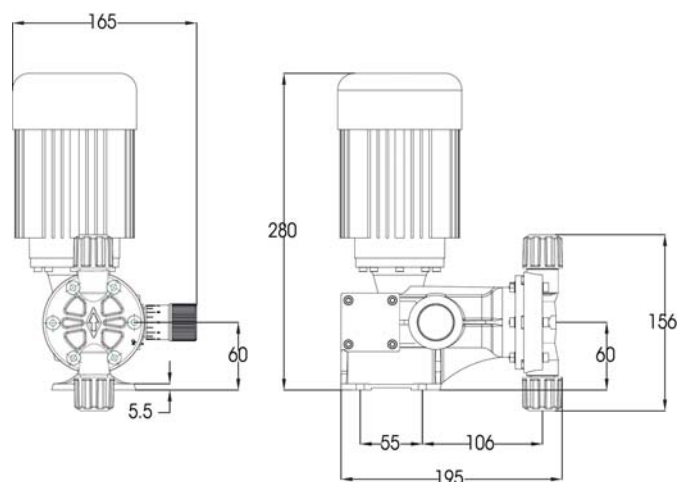
Model	Diaphragm diameter	Strokes/min	Flow rate l/h	Max pressure		Connections		3phases Motor kW
				bar	psi	AISI 316	PP	
DMF050T	50	41	15	5	72,5	1/2" G M	3/4" G M 1/2" G M	0,09
DMF050U		58	20					
DMF050W		82	30					
DMF050X		116	42					
DMF050Y		164	60					

## Pump Head materials

	STANDARD			ON REQUEST
	AA	PV	PP	FF
<b>PUMP HEAD</b>	AISI 316	PVC	PP	PVDF
<b>DIAPHRAGM</b>	PTFE	PTFE	PTFE	PTFE
<b>VALVES</b>	AISI 316	Ceramic	Ceramic	Ceramic
<b>VALVE SEATS</b>	AISI 316	PTFE	PTFE	PVDF

## Code

<b>D</b>	Model [ R= Piston • D=Diaphragm ]
<b>M</b>	Mechanism type [ 1 • M ]
<b>F</b>	Stroke length [ F=5mm ]
<b>050</b>	Diaphragm diameter
<b>Y</b>	Strokes/min [ T=41 • U=58 • W=82 • X=116 • Y=164 ]
<b>PP</b>	Pump Head materials [ see table above ]
<b>A4</b>	Motor type
<b>O</b>	Adjustement stroke [ O = Manual • L = Linear ]
<b>000</b>	Optional





# Accessories

## Adjustable safety valves (SS316/PTFE)

Model	Flow rate l/h	Pressure (bar)		Connections BSP	CODE
		min	max		
VS1S	250	0	19	1/2" F	VS1S250019
		20	45		VS1S250045
		46	150		VS1S250150
VS2S	650	0	13	3/4" F	VS2S650013
		14	30		VS2S650030
		31	100		VS2S650100



## Adjustable safety valves

Model (material)	Flow rate l/h	Pressure (bar)		Connections BSP	CODE
		min	max		
PRM-S (SS316)	300	0	5	3/8" F	PRM1S03005
	800			3/4" F	PRM2S08005
	1500			1" F	PRM3S15005
PRM-P (PVC)	300	0	5	3/8" F	PRM1P03005
	800			3/4" F	PRM2P08005
	1500			1" F	PRM3P15005



## Backpressure valves (SS316)

Model (material)	Flow rate l/h	Pressure (bar)	Connections BSP	CODE
VZX-S-02	50	2	1/4" M	VZX1S00502
	100		1/4" F	VZX3S01002
	200		3/8" F	VZX4S02002
	420		1/2" F	VZX5S04202
	800		3/4" F	VZX6S08002
	1650		1" F	VZX7S16502



## Adjustable Backpressure valves

Model (material)	Flow rate l/h	Pressure (bar)		Connections BSP	CODE
		min	max		
VSM-S (SS316)	300	0	5	3/8" F	VSM1S03005
	800			3/4" F	VSM2S08005
	1500			1" F	VSM3S15005
VSM-P (PVC)	300	0	5	3/8" F	VSM1S03005
	800			3/4" F	VSM2S08005
	1500			1" F	VSM3S15005



# Accessories

## "Y" Suction filters

Model (material)	Connections BSP	CODE
<b>FYP (PVC)</b>	3/8" F	FYP3240200
	1/2" F	FYP3230040
	3/4" F	FYP3230060
	1" F	FYP3230080
<b>FYS (SS316)</b>	3/8" F	FYS3240098
	1/2" F	FYS3240100
	3/4" F	FYS3240110
	1" F	FYS3240120



## Pulsation bag HSTPVC series

Volume (L)	Pressure (bar)		Material		Connc. BSP	CODE
	max	standard	body	membr.		
0,04	10	5	PVC	FPM	3/8" F	HSTPVC004
0,1					1/2" F	HSTPVC01
0,35					1/2" F	HSTPVC035
0,7					1/2" F	HSTPVC07
1,5					1" F	HSTPVC15
2,3					1" F	HSTPVC23



## Pulsation bag HSTX series

Volume (L)	Pressure (bar)		Material		Connc. BSP	CODE
	max	standard	body	membr.		
0,04	210	20	AISI 316	NBR	3/8" F	HSTX004
0,1					1/2" F	HSTX01
0,35					1/2" F	HSTX035
0,7					3/4" F	HSTX07
0,8					3/4" F	HSTX08
1,5					1" F	HSTX15
2,3					1" F	HSTX23



## Fitting-Testing unit AR series



Pressure (bar)	CODE
6	AR10PM0006
12	AR11PM0012
40	AR01PM0040
60	AR02PM0060
100	AR03PM0100
160	AR04PM0160
250	AR05PM0250

# Accessories

## Fast mixers (1400 RPM)

	Shaft (mm)	Propeller (mm)	Motor (kW)	Material	CODE	SER Model
3 PHASES	600	90	0,12	PVC	MF012T4P06D0900	100
				AISI 316	MF012T4A06D0900	
	800			PVC	MF012T4P08D0900	250
				AISI 316	MF012T4A08D0900	
	900			PVC	MF012T4P09D0900	300
				AISI 316	MF012T4A09D0900	
	1100			PVC	MF012T4P11D0900	500/1000
				AISI 316	MF012T4A11D0900	
1 PHASE	600	90	0,12	PVC	MF012M4P06D0900	100
				AISI 316	MF012M4A06D0900	
	800			PVC	MF012M4P08D0900	250
				AISI 316	MF012M4A08D0900	
	900			PVC	MF012M4P09D0900	300
				AISI 316	MF012M4A09D0900	
	1100			PVC	MF012M4P11D0900	500/1000
				AISI 316	MF012M4A11D0900	



## Slow mixers (200 RPM)

	Shaft (mm)	Propeller (mm)	Motor (kW)	Material	CODE	SER Model
3 PHASES	600	150	0,12	PVC	MS112T4P06E1500	100
				AISI 316	MS112T4A06E1500	
	800			PVC	MS112T4P08E1500	250
				AISI 316	MS112T4A08E1500	
	900	220		PVC	MS112T4P09E2200	300
				AISI 316	MS112T4A09E2200	
	1100			PVC	MS112T4P11E2200	500/1000
				AISI 316	MS112T4A11E2200	
1 PHASE	600	150	0,12	PVC	MS112M4P06E1500	100
				AISI 316	MS112M4A06E1500	
	800			PVC	MS112M4P08E1500	250
				AISI 316	MS112M4A08E1500	
	900	220		PVC	MS112M4P09E2200	300
				AISI 316	MS112M4A09E2200	
	1100			PVC	MS112M4P11E2200	500/1000
				AISI 316	MS112M4A11E2200	



## Tanks in polyethylene

Models and Technical Features			
Tank Code	Capacity (Lt)	Height (cm)	Diameter (cm)
SER 50	50	45,5	40
SER 100	100	64	46
SER 250	250	87	59,5
SER 300	300	95	67
SER 500	500	118,5	76
SER 1000	1000	122	108,5



