

Laboratory Series X10



Laboratory/Pilot Plant Series X40



Pilot Plant Series X50



Drives

 Drive X10/25 Voltage: 230 V 50/60 Hz 115 V 60 Hz Power: 500 W Speed (nominal): 11.000 – 24.000 1/min stepless speed adjustment via integrated speed controller	 Drive X10/25P Pneumatic Compr. air: 6 bar / 0,4 m ³ /min Power: 300 W Speed (nominal): 11.000 – 20.000 1/min stepless speed adjustment via integrated throttle valve	 Drive X10/20 E3 Voltage: 230 V 50/60 Hz 115 V 60 Hz Power: 1.050 W Speed (nominal): 4.000 – 25.000 1/min stepless speed adjustment via integrated speed controller
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 Drive X40/38 E3 Voltage: 230 V 50/60 Hz 115 V 60 Hz Power: 1.800 W Speed (nominal): 4.000 – 23.500 1/min in 6 steps via integrated speed controller	 Drive X40/37 Voltage: 3 x 230 V / 3 x 380 V 50 Hz Power: 550 W Speed (nominal): 10.000 1/min with integrated gear drive	 Drive X40/36 Voltage: 230 V 50 Hz 115 V 60 Hz Power: 650 W Speed (nominal): 10.000 1/min	 Drive X40/39P Pneumatic Compr. air: 6 bar / 0,85 m ³ /min Power: 470 W Speed (nominal): 6.000 – 12.000 1/min stepless speed adjustment via integrated throttle valve
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 Drive X50/10 (S/SL) Voltage: 3 x 400 V 50 Hz Power: S: 1,5 kW oder 2,2 kW SL: 0,37 / 1,5 kW Speed: S: stepless from 600 – 6.000 1/min via separate frequency converter SL: 1.500 / 3.000 1/min two fixed speeds	 Drive X50/10 Exd Voltage: 3 x 400 V 50 Hz Power: 1,5 kW oder 2,2 kW Speed: stepless from 600 – 6.000 1/min via separate frequency converter ATEX: ATEX II 2GD c IIB T4 T135*	 Drive X50/10 FU Voltage: 3 x 400 V 50 Hz Power: 1,5 kW oder 2,2 kW Speed: 600 – 6.000 1/min stepless via integrated frequency converter and separate operator interface	 Drive X50/10 P Pneumatic Compr. air: 6 bar / 2,5 m ³ /min Power: 1,3 kW Speed: 100 – 4.000 1/min stepless adjustable via separate throttle valve ATEX: ATEX II 2GD c T5
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Shafts

 Shaft 30D Mechanical seal ceramic/carbon Immersion depth: 190 mm (without generator)	 Shaft 40T with Teflon bearing Immersion depth: 300 mm (without generator)	 Shaft 41G Mechanical seals as to requirements and applications Immersion depth: 320 mm (without generator)	 Shaft Y-MD-RG Shaft Y-MD-RG/S with reduction gear 3:1 Immersion depth: Y-MD-RG: 380 mm without bearing Y-MD-RG/S: 620 mm with Teflon bearing (without generator)	 Shaft LDT-1 Shaft LDT-1/S Mechanical seals as to requirements and applications Immersion depth: LDT-1: 400 mm LDT-1/S: 600 mm (without generator)	 Shaft Y-MD Shaft Y-MD/S Mechanical seals as to requirements and applications Immersion depth: Y-MD: 380 mm without bearing Y-MD/S: 620 mm with Teflon bearing (without generator)
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 Mixing 500 – 5.000 ml Stator dia. 30 mm	 Mixing 500 – 7.500 ml Stator dia. 45/55 mm	 Dispersing 500 – 5.000 ml Stator dia. 40/55 mm Stator slots 4,0 mm	 Dispersing 500 – 2.500 ml Stator dia. 30 mm Coarse: stator slots 3,0 mm	 Dispersing 500 – 2.500 ml Stator dia. 30 mm Fine: stator slots 1,5 mm
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 Mixing 5 – 200 litres Stator dia. 45/45 mm Stator dia. 64/78 mm Stator dia. 84/98 mm Stator dia. 102/120 mm Stator dia. 114/135 mm	 Dispersing 2 – 20 litres Stator dia. 40 mm Coarse: stator slots 8,0 mm Medium: stator slots 3,0 mm Fine: stator slots 2,0 mm (not for Inline Z42)	 Dispersing 2 – 20 litres Stator dia. 40 mm Coarse: stator slots 8,0 mm Medium: stator slots 3,0 mm Fine: stator slots 2,0 mm (also for Inline Z42)	 Dispersing 2 – 20 litres dia. 30 mm dia. 50 mm	 Mixing 2 – 20 litres Stator dia. 45 mm (barrel mixer)	 Mixing 5 – 50 litres Stator dia. 64/78 mm Stator dia. 84/98 mm	 Dispersing 2 – 20 litres dia. 30 mm dia. 50 mm
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Generators

 Mixing 500 – 5.000 ml Stator dia. 30 mm	 Mixing 500 – 7.500 ml Stator dia. 45/55 mm	 Mix-dispersing 500 – 5.000 ml Stator dia. 40/55 mm Stator slots 4,0 mm	 Dispersing 500 – 2.500 ml Stator dia. 30 mm Coarse: stator slots 3,0 mm	 Dispersing 500 – 2.500 ml Stator dia. 30 mm Fine: stator slots 1,5 mm
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 Mixing 2 – 20 litres Stator dia. 40 mm Stator dia. 64/78 mm	 Dispersing 2 – 20 litres Stator dia. 40 mm Coarse: stator slots 8,0 mm Medium: stator slots 3,0 mm Fine: stator slots 2,0 mm (not for Inline Z42)	 Dispersing 2 – 20 litres Stator dia. 40 mm Coarse: stator slots 8,0 mm Medium: stator slots 3,0 mm Fine: stator slots 2,0 mm (also for Inline Z42)	 Dispersing 2 – 20 litres dia. 30 mm dia. 50 mm	 Mixing 2 – 20 litres Stator dia. 45 mm (barrel mixer)	 Mixing 5 – 50 litres Stator dia. 64/78 mm Stator dia. 84/98 mm	 Dispersing 2 – 20 litres dia. 30 mm dia. 50 mm
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 Mixing 5 – 200 litres Stator dia. 45/45 mm Stator dia. 64/78 mm Stator dia. 84/98 mm Stator dia. 102/120 mm Stator dia. 114/135 mm	 Mix-dispersing 5 – 100 litres Stator dia. 60/78 mm Stator slots 4,0 mm Stator dia. 86/98 mm Stator slots 4,0/2,0 mm Stator dia. 102/120 mm Stator slots 6,0/2,0 mm	 Dispersing 3 – 30 litres dia. 70 mm - closed Coarse: stator slots 4,0 mm Fine: stator slots 2,0 mm	 Dispersing 3 – 50 litres dia. 70 mm - open Coarse: stator slots 4,0 mm Fine: stator slots 2,0 mm	 Dispersing 3 – 100 litres dia. 50 mm dia. 70 mm dia. 80 mm dia. 100 mm dia. 125 mm dia. 150 mm	 Mixing 5 – 100 litres Stator dia. 45/45 mm Stator dia. 64/78 mm Stator dia. 84/98 mm	 Dispersing 3 – 100 litres dia. 50 mm dia. 70 mm dia. 80 mm dia. 100 mm dia. 125 mm dia. 150 mm
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Tools

 66 0,2 – 50 ml Shaft 6 mm Stator slots 0,5 mm	 10G / 10F / 10MG 30 – 150 ml 10G: stator slots 2,0 mm 10F: stator slots 0,5 mm 10MG: stator slots 2,0 mm with cutting knives (generators exchangeable)	 18G / 18F 150 – 1.500 ml 18G: stator slots 3,0 mm 18F: stator slots 1,5 mm	 25G / 25F 500 – 2.500 ml 25G: stator slots 3,0 mm 25F: stator slots 1,5 mm	 20DG / 20DF 250 – 1.500 ml Seal: ceramic/ceramic Seal: ceramic/carbon 20DG: stator slots 3,0 mm 20DF: stator slots 1,5 mm (generators exchangeable)	 25DG / 25DF 500 – 2.500 ml Seal: ceramic/ceramic Seal: ceramic/carbon 25DG: stator slots 3,0 mm 25DF: stator slots 1,5 mm (generators exchangeable)	 107Y 200 – 1.000 ml Stator dia. 20/26 mm
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 Y-FLT-1 Y-FLT-1/S 30 – 100 litres Stator dia. 102/120 mm Immersion depths: 400/600 mm	 D-FLT-1 D-FLT-1/S 30 – 100 litres Stator dia. 86/98 mm Stator slots 2,0/4,0 mm Stator dia. 102/120 mm Stator slots 2,0/6,0 mm Im. depths: 400/600 mm	 R-MD Stirrer R-MD/S Stirrer 20 – 50 litres Immersion depths: 380/540 mm	 D-MD Dissolver D-MD/S Dissolver 20 – 50 litres dia. 50 – 150 mm Immersion depths: 380/540 mm
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Stands/Accessories

 DA1 Digital speed indicator with sensor for drives X10/25 and X10/20	 Z22 Inline dispersing unit Connection: hose-fitting 20 x 26 mm For shafts 20DG and 20DF	 AH1 Cover hood for sterilisation of shafts/tools from the X10 series with mechanical seal	 GH1 Beaker clamping device for plate stand PS1	 KL1 Cross clamp for plate stand PS1	 PS1 Plate stand
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 DA2 Digital speed indicator with sensor for drives X40	 Z42 Inline dispersing unit Connection: Hose-, threaded diary- or clamp-fitting (without generator)	 RG/1 Reduction gear required for mixing and mix-dispersing in combination with a Jetstream mixing generator or a DISPERSMIX-generator	 AD1 Adapter to operate shafts from the X10 series with drives from the X40 series	 SKL1 Cross clamp for stands U1 / U2 GU1 / GU2	 U1 / U2 Stand Column lengths U1: 1.000 mm U2: 1.500 mm	 GU1 / GU2 Stand Spring loaded Column lengths GU1: 1.000 mm GU2: 1.500 mm Lifting range: 450 mm
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 Operator interface with frequency converter for drives X50/10 Voltage and type of operator interface according to requirement and type of drive	 Operator interface for drives X50/10 FU with integrated frequency converter Voltage and type of operator interface according to requirement and type of drive	 Manual control unit (LOP) and Emergency-Off switch for drives X50/10 FU with integrated frequency converter for manual operation of the drive	 AD2 Adapter to operate shafts from the X10 series with drives from the X50 series	 SSU1 / SSU2 Lift Spring-loaded Lifting range: 450 mm Column lengths: SSU1: 1.000 mm SSU2: 1.500 mm Material: stainless steel	 HG10 Lift Moveable lift for drives X50/10 with manual crank Lifting range: 1.000 mm Material: mild steel painted	 HG19/VA Lift Moveable lift for drives X50/10 with manual crank Lifting range: 1.000 mm Material: stainless steel
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Laboratory Series X10

Drives



Shafts



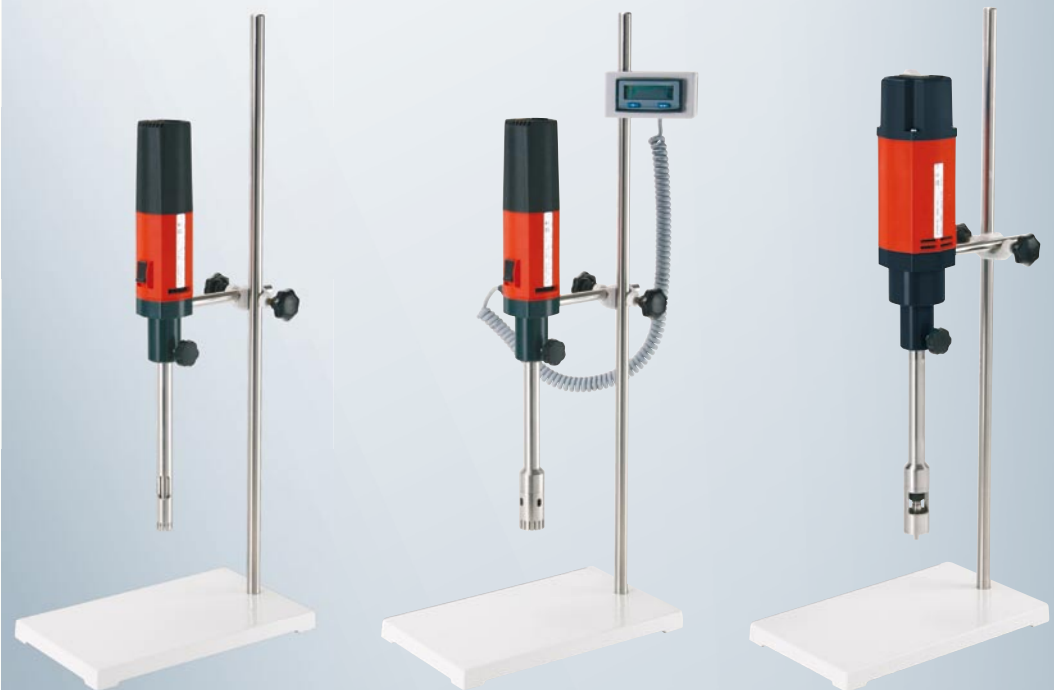
Generators



Tools



Stands/Accessories



- Drive X10/25
- Shaft 18G with Dispersing-generator "coarse"
- Plate stand PS1
- Cross clamp KL1

- Drive X10/25
- Shaft 30D
- Dispersing-generator "fine"
- Digital speed indicator DA1
- Plate stand PS1
- Cross clamp KL1

- Drive X10/20 E3
- Shaft 30D
- Jetstream mixing generator dia. 30 mm
- Plate stand PS1
- Cross clamp KL1

Pilot Plant Series X50



- Drive X50/10S
- Shaft LDT-1/S
- Jetstream mixing generator dia. 64/78 mm
- Stand SSU2 (stainless steel)

- Drive X50/10S
- Shaft LDT-1
- Dispermix-generator dia. 86/98 mm
- Stand SSU1 (stainless steel)

- Drive X50/10S
- Shaft LDT-1/S
- Dispermix-generator dia. 86/98 mm
- Operator interface with frequency converter
- Lift HG10 (mild steel painted)

- Drive X50/10FU
- Shaft LDT-1/S
- Dispersing-generator dia. 70 mm
- Operator interface for drive with integrated frequency converter
- Lift HG19 (stainless steel)

Laboratory/Pilot Plant Series X40



- Drive X40/38 E3
- Shaft 40T
- Dispersing-generator "medium"
- Digital speed indicator DA2
- Stand U1
- Cross clamp SKL1

- Drive X40/38 E3
- Shaft 41G
- Jetstream mixing generator (barrel mixer) dia. 40 mm
- Digital speed indicator DA2
- Stand U1
- Cross clamp SKL1

- Drive X40/38 E3
- Reduction gear RG1
- Shaft LDT
- Jetstream mixing generator dia. 64/78 mm
- Digital speed indicator DA2
- Stand U1
- Cross clamp SKL1

Production series X100/X200

- Production machine with exchangeable shafts**
- Removable / exchangeable shafts
 - Exchangeable generators
 - Easy to clean
 - No interruption of production during cleaning
 - Batch sizes approx. 50 – 2000 litres
 - Available generators:
 - Jetstream mixer
 - Mix-disperser (DISPERMIX)
 - Disperser (rotor/stator)
 - Disperser (dissolver)
 - Stirrer
- Series X100: 2,2 und 4,0 kW
Series X200: 5,5 und 7,5 kW



Pilot plants/Production systems

- Pilot plant/Production systems**
- For product development and production
 - For scale-up
 - Batch sizes approx. 3 – 50 litres
 - Process technologies:
 - Induction of powder into liquid
 - Inline dispersing
 - Jetstream mixing, mix-dispersing, batch dispersing in the vessel
 - Induction of powder from hopper or directly from any type of container
 - All drives controlled by frequency converter
 - Piping, armatures, sensors
 - Modular design



Laboratory/Pilot Plant



Ystral

Application is the focus



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Scope of supply:

Jetstream mixers
DISPERMIX mix-dispersing machines
Batch dispersing machines
Inline dispersing machines
TDS powder wetting machines
Processing systems

Ystral

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