



ceramic slip preparation solids suspension heavy slurry storage ceramic glaze preparation mud mixing mining sludge storage zirconium product preparation heavy duty applications grout/cement slurry homogenization kaolin mixing



Founded in 2000 and rapidly grown up thanks to the direct contact with several plant designers, our manufacturing workshop is now a young and dynamic Italian company engineering and manufacturing Vertical Agitators and Mixing Technologies for several industries, including Ceramic, Mining and Concrete.

The proximity of PRO-DO-MIX to the Sassuolo area (Modena, Italy), world well-known district for the production of ceramic, has been crucial in order to gain specific skills and experience in ceramic processes and heavy duty mixing applications.

Thanks to our technical expertise as well as an in-depth knowledge of mechanics and fluid-dynamics, we have been able to go beyond the Italian market, providing reliable heavy duty, long-lasting mixing solutions worldwide.

# Application expertise for high-efficiency, heavy-duty mixing solutions

PRO-DO-MIX can supply heavy duty equipment for Ceramic as well as Mining and Concrete industry by utilizing industry leading processes and mechanical design technology.

In the Ceramic field we have worked with both plant engineering and end-users to replace existing old-designed "gate" mixers with innovative agitators that combine treatment performances with superior energy efficiency thanks to our high-efficiency impellers.

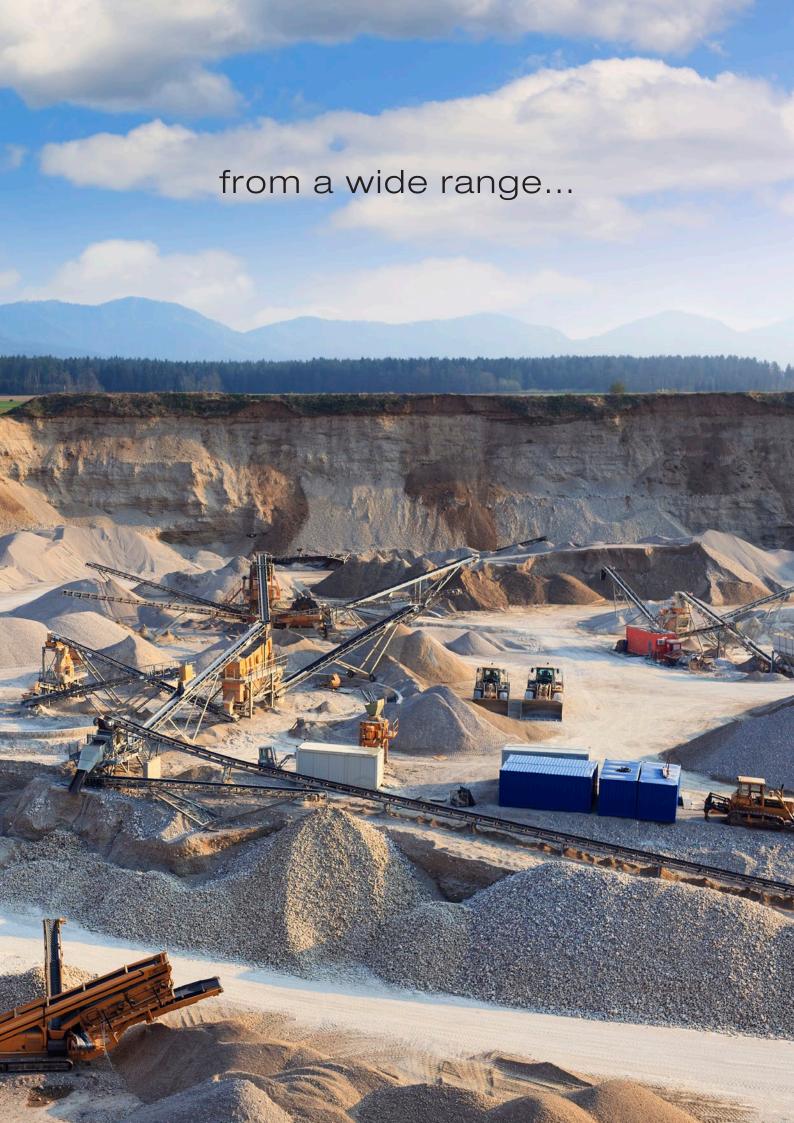
Also, our engineering team is able to provide competent and expert technical assistance in designing tanks with correct dimension for optimal mixing.



Reliability and responsiveness: aftermarket services and spare parts

Aftermarket services are a major interest for PRO-DO-MIX in order to assure quick maintenance, short or even no plant breakdown as well as long and safe uptime.

PRO-DO-MIX's highly trained technical team is ready to assist, providing extensive process analysis, fast supplying spare parts and carrying out field service.





Mixing is essential at different stages when dealing with ceramic or cement slurries, to keep the medium well homogenized in order to prevent product sedimentation. PRO-DO-MIX have engineered different mixing technologies according to the specific applications and products to be handled.

**Ceramic Slurry**, the so called "barbottina", is a viscous compound of water, clay and sometimes kaolin, used in the industrial production of ceramics. Specific gravity and viscosity are quite high but can vary according to the percentage of products dosed in the compound.

Ceramic Glaze is a layer or coating of a vitreous substance which is then fused to a ceramic body through firing. It can serve to color, decorate or waterproof a ceramic item. It generally includes silica, which is the main glass former; metal oxides, such as sodium, potassium and calcium; alumina; colorants, such as iron oxide, copper carbonate or cobalt carbonate, or opacifiers, such as tin oxide or zirconium oxide.

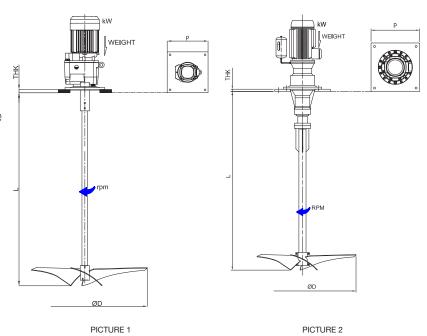
**Grout**, or cement slurry, is a mixture of water and cement with possible presence of sand and/or drilling mud; it may consist of sludge from soil washing (tank/cement mixer washing) or homogenization in sludge storage / sludge suspension tank.





## HEAVY SLURRY AGITATOR - ONE IMPELLER

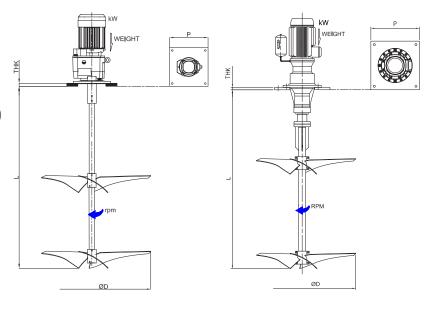
- Specially designed agitator range conceived for continuous, heavy duty operation (24/7/365)
- Up to 200 m³ volume mixing capacity with a single agitator per tank
- High-efficiency impeller for high-flow rate and optimal mixing performance



A PRO-DO-MIX'		_mc	otors	lenght shaft	impel	ller	flange	weight
PRODUJENI DOSAĜEJO MIJELIJANA	picture	kW	rpm	L	type	D	PxPxTHK	Kg
SCL.30121.Q.250	1	3	98	2500	3PM-0030	1200	500x500x20	200
SCL.40131.Q.290	1	4	91	2900	3PM-0030	1300	500x500x20	280
SCL.40141.Q.250	1	4	84	2500	3PM-0030	1350	500x500x20	260
SCL.40151.Q.330	1	4	73	3300	3PM-0030	1500	500x500x20	320
SCL.40161.Q.250	1	4	73	2500	3PM-0030	1550	500x500x20	290
SEL.55171.Q.370	2	5,5	69	3700	3PM-0030	1680	600x600x20	350
SEL.55181.Q.280	2	5,5	62	2800	3PM-0030	1800	600x600x20	330
SEL.55191.Q.400	2	5,5	59	4000	3PM-0030	1850	600x600x20	380
SEL.55211.Q.280	2	5,5	49	2800	3PM-0030	2050	600x600x20	360
SEL.75211.Q.420	2	7,5	53	4200	3PM-0030	2050	600x600x20	390
SEL.75221.Q.280	2	7,5	49	2800	3PM-0030	2200	600x600x20	380
SEL.75241.Q.380	2	7,5	42	3800	3PM-0030	2400	600x600x25	480
SEL.75241.Q.470	2	7,5	42	4700	3PM-0030	2400	600x600x25	450
SEL.92231.Q.490	2	9,2	49	4900	3PM-0030	2320	600x600x25	520
SEL.92251.Q.380	2	9,2	42	3800	3PM-0030	2500	600x600x25	490
SEL.92261.Q.470	2	9,2	42	4700	3PM-0030	2530	600x600x25	550
SEL.92251.Q.390	2	9,2	42	3900	3PM-0030	2500	600x600x25	470
SEL.92271.Q.480	2	9,2	40	4800	3PM-0030	2620	600x600x25	560
SEL.92281.Q.380	2	9,2	36	3800	3PM-0030	2800	600x600x25	530
SEL.A1321.Q.450	2	11	30	4500	3PM-0030	3200	650x650x30	630
SEL.A5311.Q.450	2	15	36	4500	3PM-0030	3100	650x650x30	650
SEL.A8321.Q.400	2	18,5	36	4000	3PM-0030	3200	650x650x30	720
SEL.A8331.Q.440	2	18,5	36	4400	3PM-0030	3300	650x650x30	750

## HEAVY SLURRY AGITATOR - MULTIPLE IMPELLERS

- The multiple impellers design is particularly suitable to fit all vat geometries (high, narrow tank)
- Perfect in order to deal with very high specific gravity and viscosity as well as in presence of blocks of product ("icebergs")
- The mixing power is spread into the whole vat and the mixing regime can be turbulent when needed, with high transfer rate
- That results in easy block break-up, good homogenization and no product sedimentation

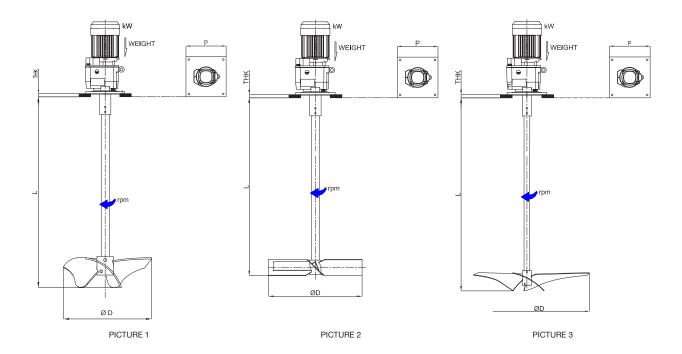


PICTURE 1 PICTURE 2

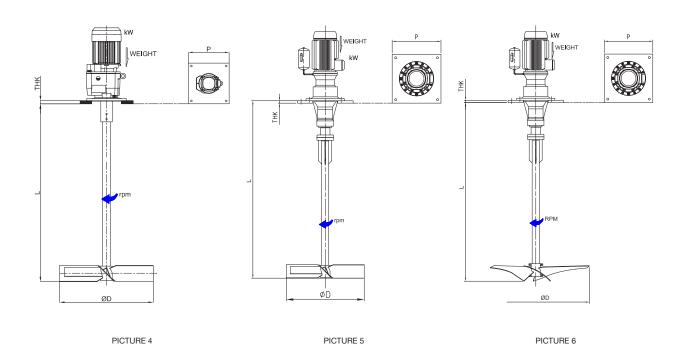
				la contra de afra	_imp	impeller		
PRODUȚIONI DOSAGGIO MECELAȚIONI	picture	kW	rpm	lenght shaft L	type	D	flange PxPxTHK	weight Kg
SCL.30101.Q.250 / 2	1	3	98	2500	3PM-0030	2x1050	500x500x20	230
SCL.40111.Q.290 / 2	1	4	91	2900	3PM-0030	2x1150	500x500x20	300
SCL.40121.Q.250 / 2	1	4	84	2500	3PM-0030	2x1200	500x500x20	270
SCL.40131.Q.320 / 2	1	4	73	3200	3PM-0030	2x1300	500x500x20	330
SCL.40141.Q.250 / 2	1	4	73	2500	3PM-0030	2x1350	500x500x20	300
SEL.55141.Q.370 / 2	2	5,5	69	3700	3PM-0030	2x1450	500x500x20	350
SEL.55161.Q.280 / 2	2	5,5	62	2800	3PM-0030	2x1550	500x500x20	350
SEL.55161.Q.400 / 2	2	5,5	59	4000	3PM-0030	2x1600	500x500x20	390
SEL.55181.Q.280 / 2	2	5,5	49	2800	3PM-0030	2x1800	500x500x20	350
SEL.75181.Q.420 / 2	2	7,5	53	4200	3PM-0030	2x1800	500x500x20	400
SEL.75191.Q.280 / 2	2	7,5	49	2800	3PM-0030	2x1900	500x500x20	400
SEL.75211.Q.470 / 2	2	7,5	42	4700	3PM-0030	2x2050	500x500x20	480
SEL.75211.Q.380 / 2	2	7,5	42	3800	3PM-0030	2x2050	500x500x20	450
SEL.92201.Q.490 / 2	2	9,2	49	4900	3PM-0030	2x2000	500x500x20	550
SEL.92221.Q.380 / 2	2	9,2	42	3800	3PM-0030	2x2150	500x500x20	470
SEL.92221.Q.470 / 2	2	9,2	42	4700	3PM-0030	2x2200	500x500x20	580
SEL.92221.Q.390 / 2	2	9,2	42	3900	3PM-0030	2x2200	500x500x20	480
SEL.92231.Q.480 / 2	2	9,2	40	4800	3PM-0030	2x2270	500x500x20	600
SEL.92241.Q.380 / 2	2	11	36	3800	3PM-0030	2x2400	500x500x20	560
SEL.A1281.Q.450 / 2	2	11	30	4500	3PM-0030	2x2800	600x600x25	710
SEL.A5271.Q.450 / 2	2	11	36	4500	3PM-0030	2x2700	600x600x25	750
SEL.A8281.Q.400 / 2	2	11	36	4000	3PM-0030	2x2800	600x600x25	840
SEL.A8291.Q.440 / 2	2	11	36	4400	3PM-0030	2x2850	600x600x25	860

## GROUT / SLURRY AGITATOR

- Agitator range for the suspension and homogenization of slurries, drilling mud and grout
- Up to 200 m³ volume mixing capacity with a single agitator per tank
- High-efficiency impellers for perfect mixing



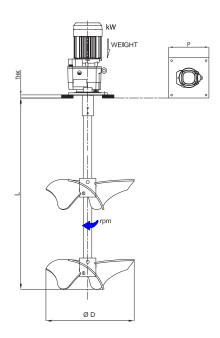
	mo	otors	lenght shaft	impeller		flange	weight
picture	kW	rpm	L	type	D	PxPxTHK	Kg
1	1,1	90	1600	3PM-1084	600	250x250x15	75
1	1,1	120	2150	3PM-1084	600	400x400x15	130
2	1,5	100	2300	4PBT	700	400x400x15	130
3	1,5	130	2500	3PM-0134	900	500x500x20	190
2	2,2	80	2500	4PBT	800	500x500x20	190
3	2,2	100	2600	3PM-0134	1100	500x500x20	190
3	3	100	2300	3PM-0134	1200	500x500x20	210
3	4	100	2700	3PM-0134	1300	500x500x20	260
3	4	100	3000	3PM-0134	1300	500x500x20	270
3	4	85	2500	3PM-0134	1400	500x500x20	260
3	4	100	3000	3PM-0134	1300	500x500x20	270
3	5,5	113	2900	3PM-0134	1300	500x500x20	300
	1 1 2 3 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3	picture         kW           1         1,1           1         1,1           2         1,5           3         1,5           2         2,2           3         2,2           3         3           4         3           4         3           4         3           4         3           4         3	1     1,1     90       1     1,1     120       2     1,5     100       3     1,5     130       2     2,2     80       3     2,2     100       3     3     100       3     4     100       3     4     85       3     4     100	picture         kW         rpm         L           1         1,1         90         1600           1         1,1         120         2150           2         1,5         100         2300           3         1,5         130         2500           2         2,2         80         2500           3         2,2         100         2600           3         3         100         2300           3         4         100         2700           3         4         100         3000           3         4         85         2500           3         4         100         3000	picture         kW         rpm         L         type           1         1,1         90         1600         3PM-1084           1         1,1         120         2150         3PM-1084           2         1,5         100         2300         4PBT           3         1,5         130         2500         3PM-0134           2         2,2         80         2500         4PBT           3         2,2         100         2600         3PM-0134           3         3         100         2300         3PM-0134           3         4         100         3000         3PM-0134           3         4         85         2500         3PM-0134           3         4         100         3000         3PM-0134           3         4         100         3000         3PM-0134	picture         kW         rpm         L         type         D           1         1,1         90         1600         3PM-1084         600           1         1,1         120         2150         3PM-1084         600           2         1,5         100         2300         4PBT         700           3         1,5         130         2500         3PM-0134         900           2         2,2         80         2500         4PBT         800           3         2,2         100         2600         3PM-0134         1100           3         4         100         2700         3PM-0134         1300           3         4         100         3000         3PM-0134         1300           3         4         85         2500         3PM-0134         1400           3         4         100         3000         3PM-0134         1400	picture         kW         rpm         L         type         D         PXPXTHK           1         1,1         90         1600         3PM-1084         600         250x250x15           1         1,1         120         2150         3PM-1084         600         400x400x15           2         1,5         100         2300         4PBT         700         400x400x15           3         1,5         130         2500         3PM-0134         900         500x500x20           2         2,2         80         2500         4PBT         800         500x500x20           3         2,2         100         2600         3PM-0134         1100         500x500x20           3         3         100         2300         3PM-0134         1200         500x500x20           3         4         100         3000         3PM-0134         1300         500x500x20           3         4         85         2500         3PM-0134         1400         500x500x20           3         4         100         3000         3PM-0134         1400         500x500x20           3         4         100         3000         3PM-0134



and the same of th		motors lenght s		lenght shaft	impel	ler	flange	weight
PRODUIDINE DOSAGGIO MISCELATIONE	picture	kW	rpm	L	type	D	PxPxTHK	Kg
SCP.40141.Q.190	4	4	42	1900	4PBT	1400	500x500x25	230
SCP.40153.Q.260	4	4	40	2600	4PBT	1500	500x500x25	350
SEP.55161.Q.260	5	5	36	2600	4PBT	1600	500x500x20	360
SEP.75161.Q.300	5	5	39	3000	4PBT	1600	500x500x20	380
SEP.75171.Q.220	5	7,5	39	2200	4PBT	1700	500x500x20	380
SEP.75172.Q.260	5	7,5	39	2600	4PBT	1700	500x500x20	390
SEP.75151.Q.340	5	7,5	46	3400	4PBT	1500	500x500x20	390
SEP.92161.Q.300	5	7,5	46	3000	4PBT	1600	500x500x20	400
SEP.92171.Q.260	5	9,2	39	2600	4PBT	1700	500x500x20	410
SEP.92162.Q.370	5	9,2	46	3700	4PBT	1600	500x500x20	450
SEP.92172.Q.260	5	9,2	39	2600	4PBT	1700	500x500x20	400
SEL.92201.Q.250	6	9,2	72	2500	3PM-0030	2000	500x500x20	350
SEP.A1171.Q.300	5	9,2	42	3000	4PBT	1700	500x500x25	550
SEL.A1181.Q.340	6	11	92	3400	3PM-0030	1850	500x500x25	430
SEL.A1201.Q.250	6	11	78	2500	3PM-0030	2000	500x500x25	430
SEL.A1202.Q.370	6	11	78	3700	3PM-0030	2000	500x500x25	450
SEL.A1221.Q.270	6	11	69	2700	3PM-0030	2200	500x500x25	490

# CERAMIC GLAZE AGITATOR

- Up to 16 m³ volume mixing capacity with a single agitator per tank
- High-efficiency impellers for perfect homogenization of the whole medium volume



PRO-DO-MIX*	mo	motors		lenght shaft impeller		flange	weight
	kW	rpm	L	type	D	PxPxTHK	Kg
SCC.05051.S.100 / 2	0,55	79	1000	3PM-1084	2x500	350x350x15	80
SCC.11061.S.150 / 2	1,1	67	1500	3PM-1084	2x600	350x350x15	130
SCC.15071.S.180 / 2	1,5	56	1800	3PM-1084	2x700	500x500x20	170
SCC.22081.S.180 / 2	2,2	56	1800	3PM-1084	2x800	500x500x20	180
SCC.30091.S.280 / 2	3	51	2800	3PM-1084	2x900	500x500x20	280
SCC.40101.S.310 / 2	4	45	3100	3PM-1084	2x1050	600x600x25	390



#### IMPFLL FRS



#### 3PM-1084 EXCELLENT IMPELLER

High-efficiency impeller with high hydrodynamic profile. It is designed to create high flow rate. Within our impeller models, it has the lowest torque for the same flow rate. Moreover, it can create the highest flow rate with the lowest peripheral speed. It can be manufactured with different diameters, 200 to 3500 mm. A completely disassemblable option is available as well, to ease the entering through the tank manhole.



#### 3PM-0134 HURRICANE IMPELLER

High-efficiency and high-shear impeller with high hydrodynamic profile. It can be manufactured with different diameters, 900 to 1500 mm. A completely disassemblable option is available as well, to ease the entering through the tank manhole.



## 3PM-0030 EVOLUTION IMPELLER

High-efficiency and high-shear impeller with high hydrodynamic profile. It is the "evolution" of Hurricane. Its internal velocity gradient, constant from the centre to the edge of the blade, allows the positioning of an impeller with large diameter very close to the bottom of the tank. That makes Evolution perfect for applications that require the mixer's continuous operation during the total draw-off of the tank. It can be manufactured with different diameters, 1200 to 3500 mm. A completely disassemblable option is available as well, to ease the entering through the tank manhole.



#### **COWLES IMPELLER**

Typically used when dealing with high viscosities. Its design, combined with its high shear at high output speed, allows the product dispersion and fosters a quick dissolution. It can be manufactured with different diameters, 75 to 750 mm. Different options of connection to the shaft are available.



#### 4PBT PITCHED IMPELLER

Both options, with 2 and 4 blades, are widely used in a broad range of applications due to its efficiency and cost-effectiveness. It can be manufactured with different diameters, 200 to 2000 mm. A completely disassemblable option is available as well, to ease the entering through the tank manhole.



## 3PM-0242 MASTER IMPELLER

High-efficiency impeller with high hydrodynamic profile. Due to its special design, it can produce a centrifugal, anti-clogging effect for which the impeller can be defined self-cleaning. It is specific for applications with presence of fibres. It can be manufactured with different diameters, 1600 to 3500 mm. A completely disassemblable option is available as well, to ease the entering through the tank manhole.



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