



cylinder repair services

cylinder repair & design services

seal-mart core business is the manufacturing & trading of sealing and gasket solutions. with our special manufacturing process, we cover a wide range of sealing materials and profiles to serve with just-in-time delivery preferably maintenance and repair organizations (MRO accounts). at the same time we represent well known seal manufacturer to provide also solutions for original equipment manufacturers (OEM accounts). with our activities in both, the MRO and OEM, we are unique.

we are also unique in regard of industry coverage. we serve oil and gas accounts, steel and rollingmills, food and beverage producer, mining plants, pulp and paper industries, hydropower plants, chemical plants and many more.

to expand further our business, we have diversified now into cylinder repair services.

our cylinder repair service includes:

- pick up and delivery service
- cylinder repair
- cylinder design
- cylinder upgrade
- cylinder fabrications
- metal works & chrome plating
- seal manufacturing
- cylinder testing
- cylinder management



our typical work process

1. dismantling, evaluation & documentation of initial condition

after dismantling the cylinder, a thorough check for contamination, scoring and denting is done.

an inspection is done to identify any obvious cause of failure.



2. cylinder rod recondition

rod straightness and chrome surface condition is checked.

if required, the rod gets straightened and polished to restore it to factory specifications.

rod gets replaced when necessary.



3. cylinder tube recondition

the cylinder tube is checked full length front to back to identify irregularities or bulges.

slight indentations and scratches can sometimes be removed by honing the tube I.D.

more severe damage will require the tube be replaced.



4. piston & covers inspection

piston grooves checked.

head grooves and head O.D. checked.

other parts replacements

parts inspection of condition.

manufacturing of parts when needed.



5. assembling and testing

assembly of cylinder components

thorough pressure test

application of primer and top coat of paint applied (depends on customer's request)

6. final documentation

documentation of cylinder (referring to the original drawing & specification for repairs & rebuilds or customer request for upgrades).

final drawing (if there is no original drawing)





standard cylinder condition

cylinder barrels

material : St 52 or better
 tolerance : H8-H9 (repair & rebuild)
 H10 – H11
 (prefabricated honed tubes)
 roughness : Ra = 0.2 – 0.8 µm
 (depends on finishing process)
 processing : grinding, honing.
 availability : honed tubes from 20mm – 350mm

housing, cover, etc

material : machinery steel or cast steel
 equivalent of C 45 or better
 tolerance : ISO 2768 – medium
 (or otherwise indicated)
 roughness : Ra = 3.2 µm (depends on requirements)
 processing : turning, milling, grinding

rod

material : C 45 or better
 tolerance : H8 – H9 (repair & rebuild)
 H10-H11 (depends on finishing process)
 roughness : Ra = 0.2 – 0.8 µm
 (depends on finishing process)
 processing : grinding, chroming, polishing
 hard chrome plating thickness: 0.3 - 0.5 µm
 hardness: 55 – 70 HRC
 availability : chromed bars from 8mm – 200mm

other specification *

working pressure : up to 10.000 psi (700 bar)
 working speed : up to 10 m/s
 working temp : - 200 to + 260 °C
 design pressure : 3 times of working pressure
 test pressure : 1.5 times of working pressure

* the specified data represent maximum values and should not be used simultaneously. if in doubt, please contact our technical department

ISO standard cylinder and piston rod diameters

cylinder bores - size in mm

8	10	12	16	20	25	32
40	50	63	80	(90)	100	(110)
125	(140)	160	(180)	200	(220)	250
(280)	320	(360)	400	(450)	500	

an extension upwards of the diameter ranges may, if required, be made using the series of preferred number: increment of 10 mm for diameter of cylinder bore ≤ 100 mm and 20 mm for diameter > 100 mm

piston rod diameter - size in mm

4	5	6	8	10	12	14
16	18	20	22	25	28	32
36	40	45	50	56	63	70
80	90	100	110	125	140	160
180	200	220	250	280	320	360

an extension upwards of the diameter ranges may, if required, be made using increment of 20 mm

piston strokes - size in mm

8	50	80	100	125	160	200
40	320	400	500			

facility information

center lathe turning

up to 520 mm and 4 meter length

milling

honing

bore diameter : 60 to 400 mm

bore length : up to 4 meter

3-D modeling cylinder design software

highly versatile and intelligent with simulation capability

seal production facility

in-house seal production, up to diameter 530 mm

seal up to 4000 mm in diameter

pressure testing facility

up to 10000 psi (700 bar)





integrated seal production in-house

we produce our own seals with CNC technology. our CNC lathe with pre-programmed standard seal profiles and geometries has the ability to produce seals with unlimited profile variation in various materials like : NBR, H-NBR, Viton, EPDM, PU and PTFE.

materials

top quality materials
standards + specials



tools

specialised
machining tools



software

wide range of seal profiles
and additional features



application engineering

technical advise
special solutions

technical & marketing literature

product range,
industry survey, etc



research & development

seals and materials



seal-mart |  group worldwide

- austria
- china
- croatia
- czech republic
- cyrprus
- germany
- india
- indonesia
- iran
- poland
- slovenia
- slovakia
- turkey

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