

**Production cooperation.**  
**Hydraulic cylinders**  
Reference list

Description	Year of delivery	Q-ty	Customer
<b>Telescoping hydraulic cylinders</b>			
35t Crane boom telescoping hydraulic cylinder	1992-2012	200	GKH Krayan, Odessa, Ukraine
50t Crane boom telescoping hydraulic cylinder	1993-2012	50	GKH Krayan, Odessa, Ukraine
Telescopic hydrocylinder	2002	4	EURO SIGMA LTD, India
Drilling rig mast lifting hydraulic cylinder	2003	1	State enterprise Works named after Malyshev, Kharkov, Ukraine
Hydraulic jack	2003	6	Ukrspetsexport, Kiev, Ukraine
Stripper plate No.1 telescoping hydraulic cylinder	2008	1	OJSC MMK, Magnitogorsk, Russia
Telescoping hydraulic cylinder	2012	4	OJSC MMK, Magnitogorsk, Russia
Telescoping hydraulic cylinder	2012	2	OJSC MMK, Magnitogorsk, Russia
Maintenance platform hoister telescoping hydraulic cylinder	2012	1	LCC Ekostroi Plus, Moscow, Russia
Telescoping hydraulic cylinder	2012	1	OJSC MMK, Magnitogorsk, Russia
<b>Long-stroke hydraulic cylinders</b>			
35t Crane boom telescoping hydraulic cylinder	1992	2	GKH Krayan, Odessa, Ukraine
40t Crane boom telescoping hydraulic cylinder	1993	60	GKH Krayan, Odessa, Ukraine
Hot dip galvanizing line hydraulic cylinder	2003	1	OJSC Severstal, Cherepovets, Russia
70t Railway crane boom tilt hydraulic cylinder	2004	2	Ukrzaliznytsa (Railway of Ukraine), Ukraine
70t Railway crane boom telescoping hydraulic cylinder	2004	2	Ukrzaliznytsa (Railway of Ukraine), Ukraine
2000-mm Rolling mill hydraulic coilers No.4, No.5 forming mechanism movement hydraulic cylinder	2007	4	OJSC MMK, Magnitogorsk, Russia
2000-mm Rolling mill carriage travel hydraulic cylinder	2007	3	OJSC MMK, Magnitogorsk, Russia
2000-mm Rolling mill descender hydraulic cylinder	2007	2	OJSC MMK, Magnitogorsk, Russia
2500-mm Rolling mill hydraulic coilers No.6, No.7, No.8 forming mechanism movement hydraulic cylinder	2008	6	OJSC MMK, Magnitogorsk, Russia
2500-mm Rolling mill carriage travel hydraulic cylinder	2008	4	OJSC MMK, Magnitogorsk, Russia
2500-mm Rolling mill descender headers movement hydraulic cylinder	2008	3	OJSC MMK, Magnitogorsk, Russia
2500-mm rolling mill slab charger hydraulic cylinder	2008	8	OJSC MMK, Magnitogorsk, Russia



2500-mm rolling mill transporter movement hydraulic cylinder	2008	2	OJSC MMK, Magnitogorsk, Russia
2500-mm rolling mill transporter movement hydraulic cylinder	2008	4	OJSC MMK, Magnitogorsk, Russia
Workpiece tilter hydraulic cylinder	2008	2	OJSC Severstal, Cherepovets, Russia
Workpiece tilter hydraulic cylinder	2009	2	OJSC Severstal, Cherepovets, Russia
Hydraulic cylinder	2009	1	OJSC Severstal, Cherepovets, Russia
Stripper plate hydraulic cylinder	2012	1	OJSC MMK, Magnitogorsk, Russia
Workpiece tilter hydraulic cylinder	2012	2	OJSC Severstal, Cherepovets, Russia
Shearing press pusher hydraulic cylinder	2012	1	NKMZ PJSC, Kramatorsk, Ukraine
<b>Hydro cylinders-dividers (piston accumulators)</b>			
Partitioning cylinder V=80 liters	2007	1	OJSC KUMZ, Kamensk-Uralsky, Russia
Partitioning cylinder V=300 liters for EAF-50 electric arc furnace hydraulic system	2007	2	NKMZ PJSC, Kramatorsk, Ukraine
Partitioning cylinder V=110 liters for ladle turret hydraulic system	2007	3	OJSC NLMK, Lipetsk, Russia
Partitioning cylinder V=40 liters for ladle turret hydraulic system	2007	1	OJSC NLMK, Lipetsk, Russia
Partitioning cylinder V=100 liters for pump accumulation station of cut-up line middle part (plate-straightening machine hydraulic system)	2008	1	OJSC MMK, Magnitogorsk, Russia
Partitioning cylinder V=125 liters for pump accumulation station of cut-up line head and tail parts	2008	2	OJSC MMK, Magnitogorsk, Russia
70t Forging manipulator partitioning cylinder	2010	2	NKMZ PJSC, Kramatorsk, Ukraine
Partitioning cylinder V=100 liters for plate-straightening machine pump accumulation station	2013	1	OJSC AMZ, Asha, Russia
450/160-1800 separator for CCM hydraulic system	2014	2	PJSC YeMZ, Yenakievo, Ukraine
450/280-1600 separator for CCM hydraulic system	2014	1	PJSC YeMZ, Yenakievo, Ukraine
<b>Screwdown hydraulic cylinders (manufacture and repair)</b>			
1700-mm Rolling mill (without servo control unit)	2003	2	ILYICH IRON AND STEEL WORKS, Mariupol, Ukraine
1700-mm Rolling mill (without servo control unit)	2006	4	ILYICH IRON AND STEEL WORKS, Mariupol, Ukraine
5000-mm Rolling mill (without servo control unit)	2008	2	OJSC Severstal, Sheet Rolling Shop-3, Kolpino, Russia
2500-mm rolling mill stand RR-1 (with servo control unit)	2009	2+1 (SPT A)	OJSC MMK, Magnitogorsk, Russia
2500-mm Rolling mill Edger E1 (without servo control unit)	2009	2+1 (SPT A)	OJSC MMK, Magnitogorsk, Russia



3000-mm Rolling mill (Bosch-Rexroth hydraulic cylinders repair and modernization)	2009	2	OJSC AMK, Alchevsk, Ukraine
2500-mm rolling mill stand RR-2 (with servo control unit)	2010	2+1 (SPT A)	OJSC MMK, Magnitogorsk, Russia
2500-mm Rolling mill Edger E2 (without servo control unit)	2010	2+1 (SPT A)	OJSC MMK, Magnitogorsk, Russia
2500-mm Rolling mill Stand F0 (with servo control unit)	2010	2+1 (SPT A)	OJSC MMK, Magnitogorsk, Russia
5000-mm Rolling mill (without servo control unit)	2010	1	OJSC Severstal, Sheet Rolling Shop-3, Kolpino, Russia
3000-mm (repair and upgrade of hydrocylinders Bosh-Reksrot)	2011	2	OJSC AMK, Alchevsk, Ukraine
2800-mm Rolling mill (with servo control unit)	2012	2	OJSC AMZ, Asha, Russia
3000-mm Rolling mill (Bosch-Rexroth hydraulic cylinders repair and modernization)	2012	1	OJSC AMK, Alchevsk, Ukraine
3000-mm Rolling mill (Bosch-Rexroth hydraulic cylinders repair and modernization)	2013	2	OJSC AMK, Alchevsk, Ukraine