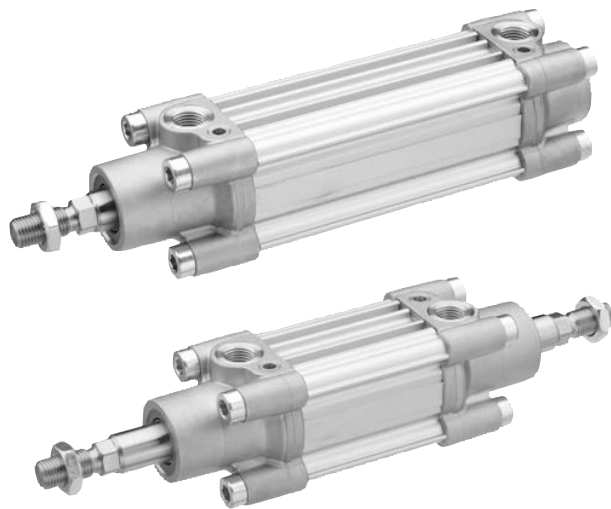


Piston rod cylinder ▶

ISO 15552, series PRA

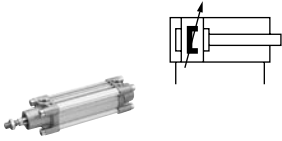
Brochure

Rexroth
Pneumatics



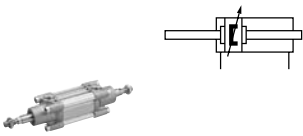
Piston rod cylinder ▶
ISO 15552, series PRA

Compressed air connections 1/8 NPTF - 1/2 NPTF



Profile cylinder, Series PRA - inch
 ▶ Ø 32 - 125 mm ▶ Ports: 1/8 NPTF - 1/2 NPTF ▶ double-acting ▶ with magnetic piston
 ▶ cushioning: pneumatically, adjustable, pneumatically ▶ Piston rod: external thread

3



Profile cylinder, Series PRA - inch
 ▶ Ø 32 - 125 mm ▶ Ports: 1/8 NPTF - 1/2 NPTF ▶ double-acting ▶ with magnetic piston
 ▶ cushioning: pneumatically, adjustable, pneumatically ▶ Piston rod: through, external thread

7



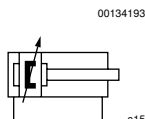
Core program, series PRA

on
line

Piston rod cylinder ▶

Profile cylinder, Series PRA - inch

▶ Ø 32 - 125 mm ▶ Ports: 1/8 NPTF - 1/2 NPTF ▶ double-acting ▶ with magnetic piston ▶ cushioning: pneumatically, adjustable, pneumatically ▶ Piston rod: external thread



Compressed air connection	internal thread
Working pressure min./max.	1.5 bar / 10 bar
Ambient temperature min./max.	-20 °C / +80 °C
Medium temperature min./max.	-20 °C / +80 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³
Pressure for determining piston forces	6,3 bar

Materials:	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel
Front cover	Die-cast aluminum
End cover	Die-cast aluminum
Seal	Polyurethane
Nut for piston rod	Steel, galvanized
Scraper	Polyurethane

Technical Remarks

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

Piston Ø		[mm]	32	40	50	63	80
Retracting piston force		[N]	435	660	1035	1765	2855
Extracting piston force		[N]	505	790	1235	1960	3165
Cushioning length		[mm]	16.5	19	17	16.5	19.5
Cushioning energy		[J]	4.8	9	15	27	54
Weight	0 mm stroke	[kg]	0.5	0.65	1.06	1.42	2.37
	+10 mm stroke	[kg]	0.022	0.032	0.047	0.054	0.085
Stroke max.		[mm]	1600	1900	2100	2500	2800

Piston Ø		[mm]	100	125			
Retracting piston force		[N]	4635	7220			
Extracting piston force		[N]	4945	7725			
Cushioning length		[mm]	19.5	22			
Cushioning energy		[J]	88	140			
Weight	0 mm stroke	[kg]	3.51	6.72			
	+10 mm stroke	[kg]	0.1	0.15			
Stroke max.		[mm]	2800	2750			

Supplementary products

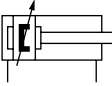
Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

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Piston rod cylinder ▶

Profile cylinder, Series PRA - inch

▶ Ø 32 - 125 mm ▶ Ports: 1/8 NPTF - 1/2 NPTF ▶ double-acting ▶ with magnetic piston ▶ cushioning: pneumatically, adjustable, pneumatically ▶ Piston rod: external thread

	Piston Ø Piston rod thread Ports Piston rod Ø	32	40	50	63	80	
		7/16-20 UNF 1/8 NPTF 12	1/2-20 UNF 1/4 NPTF 16	3/4-16 UNF 1/4 NPTF 20	3/4-16 UNF 3/8 NPTF 20	3/4-16 UNF 3/8 NPTF 25	
	Stroke 25.4	R480176154	R480176238	R480176328	R480176417	R480176506	
	50.8	R480176162	R480176251	R480176334	R480176427	R480176510	
	76.2	R480176169	R480176257	R480176345	R480176437	R480176523	
	101.6	R480176174	R480176263	R480176354	R480176441	R480176526	
	127	R480176187	R480176275	R480176363	R480176452	R480176534	
	152.4	R480176190	R480176280	R480176370	R480176459	R480176546	
	177.8	R480176201	R480176293	R480176377	R480176464	R480176554	
	203.2	R480176209	R480176298	R480176383	R480176472	R480176561	
	228.6	R480176218	R480176304	R480176395	R480176480	R480176567	
	254	R480176228	R480176316	R480176400	R480176490	R480176581	
	304.8	R480176232	R480176321	R480176412	R480176500	R480176585	
		Piston Ø Piston rod thread Ports Piston rod Ø	100 3/4-16 UNF 1/2 NPTF 25	125 1-14 UNF 1/2 NPTF 32			
	Stroke 25.4	R480176593	R480176685				
	50.8	R480176601	R480176689				
	76.2	R480176609	R480176694				
	101.6	R480176614	R480176707				
	127	R480176626	R480176712				
	152.4	R480176633	R480176721				
	177.8	R480176641	R480176729				
	203.2	R480176646	R480176736				
228.6	R480176660	R480176746					
254	R480176665	R480176754					
304.8	R480176676	R480176761					

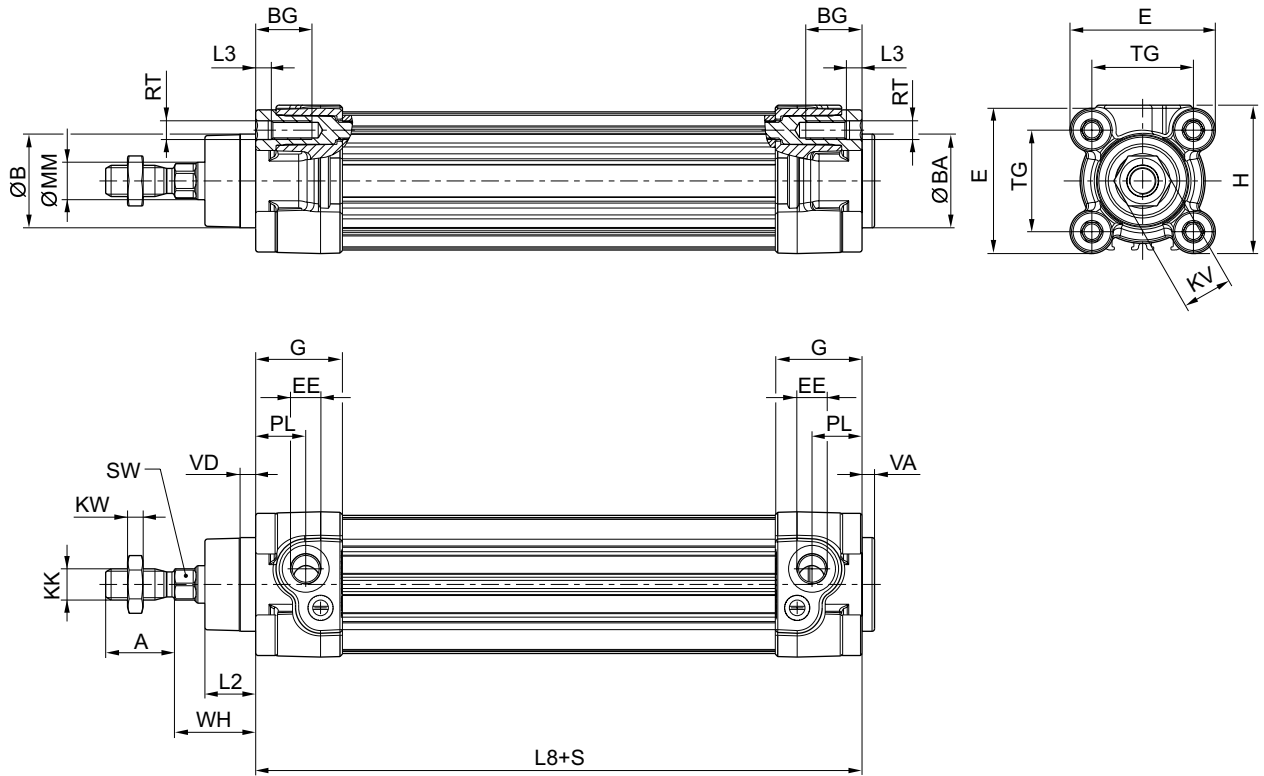
Note: The stroke values have been converted from inch to mm. (Conversion factor 1 inch = 25.4 mm)

Piston rod cylinder ▶

Profile cylinder, Series PRA - inch

▶ Ø 32 - 125 mm ▶ Ports: 1/8 NPTF - 1/2 NPTF ▶ double-acting ▶ with magnetic piston ▶ cushioning: pneumatically, adjustable, pneumatically ▶ Piston rod: external thread

Dimensions in inches



00134208

S = stroke

Dimensions in inches

Ø [mm]	Ø [inch]	A -0,04	ØB d11	ØBA d11	BG min.	E	EE	KK	G	H	KV	KW
32	1 1/4	0.87	1.18	1.18	0.63	1.83	1/8 NPT	7/16 - 20 UNF	1.09	1.87	0.63	0.2
40	1 1/2	0.94	1.38	1.38	0.63	2.09	1/4 NPT	1/2 - 20 UNF	1.31	2.09	0.71	0.24
50	2	1.26	1.57	1.57	0.63	2.56	1/4 NPT	3/4 - 16 UNF	1.22	2.56	0.94	0.31
63	2 1/2	1.26	1.77	1.77	0.64	2.95	3/8 NPT	3/4 - 16 UNF	1.51	2.95	0.94	0.31
80	3	1.57	1.77	1.77	0.67	3.74	3/8 NPT	3/4 - 16 UNF	1.51	3.74	1.18	0.39
100	3 1/2	1.57	2.17	2.17	0.68	4.53	1/2 NPT	3/4 - 16 UNF	1.66	4.53	1.18	0.39
125	4 1/2	2.13	2.36	2.36	0.79	5.51	1/2 NPT	1 - 14 UNF	2.12	5.51	1.61	0.53

Ø [mm]	Ø [inch]	ØMM f8	PL	L2	L3 ±0,02	L8	RT	SW	TG	VA -0,04	VD
32	1 1/4	0.47	0.63	0.64	0.18	3.7±0.02	M6	0.39	1.28±0.02	0.16	0.2
40	1 1/2	0.63	0.79	0.72	0.18	4.13±0.03	M6	0.51	1.5±0.02	0.16	0.2
50	2	0.79	0.75	0.98	0.18	4.17±0.03	M8	0.67	1.83±0.02	0.16	0.2
63	2 1/2	0.79	0.94	0.98	0.18	4.76±0.03	M8	0.67	2.22±0.03	0.16	0.2
80	3	0.98	0.93	1.3	0	5.04±0.03	M10	0.87	2.83±0.03	0.16	0.2
100	3 1/2	0.98	0.98	1.42	0	5.43±0.04	M10	0.87	3.5±0.03	0.16	0.2
125	4 1/2	1.26	1.3	1.77	0	6.3±0.04	M12	1.06	4.33±0.04	0.24	0.28

Ø [mm]	Ø [inch]	WH									
32	1 1/4	1.02±0.06									
40	1 1/2	1.18±0.06									

Supplementary products

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

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Piston rod cylinder ▶
Profile cylinder, Series PRA - inch

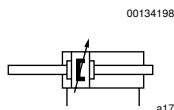
▶ Ø 32 - 125 mm ▶ Ports: 1/8 NPTF - 1/2 NPTF ▶ double-acting ▶ with magnetic piston ▶ cushioning: pneumatically, adjustable, pneumatically ▶ Piston rod: external thread

Ø [mm]	Ø [inch]	WH											
50	2	1.46±0.06											
63	2 1/2	1.46±0.07											
80	3	1.81±0.07											
100	3 1/2	2.01±0.07											
125	4 1/2	2.56±0.09											

Piston rod cylinder ▶

Profile cylinder, Series PRA - inch

▶ Ø 32 - 125 mm ▶ Ports: 1/8 NPTF - 1/2 NPTF ▶ double-acting ▶ with magnetic piston ▶ cushioning: pneumatically, adjustable, pneumatically ▶ Piston rod: through, external thread



Compressed air connection	internal thread
Working pressure min./max.	1.5 bar / 10 bar
Ambient temperature min./max.	-20 °C / +80 °C
Medium temperature min./max.	-20 °C / +80 °C
Medium	Compressed air
Max. particle size	50 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³
Pressure for determining piston forces	6,3 bar

Materials:	
Cylinder tube	Aluminum, anodized
Piston rod	Stainless steel
Front cover	Die-cast aluminum
End cover	Die-cast aluminum
Seal	Polyurethane
Nut for piston rod	Steel, galvanized
Scraper	Polyurethane

Technical Remarks

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

Piston Ø	[mm]	32	40	50	63	80	
Retracting piston force	[N]	435	660	1035	1765	2855	
Extracting piston force	[N]	435	660	1035	1765	2855	
Cushioning length	[mm]	16.5	19	17	16.5	19.5	
Cushioning energy	[J]	4.8	9	15	27	54	
Weight	0 mm stroke	[kg]	0.58	0.8	1.34	1.72	2.92
	+10 mm stroke	[kg]	0.031	0.048	0.072	0.079	0.124
Stroke max.	[mm]	1600	1900	2100	2500	2800	

Piston Ø	[mm]	100	125			
Retracting piston force	[N]	4635	7220			
Extracting piston force	[N]	4635	7220			
Cushioning length	[mm]	19.5	22			
Cushioning energy	[J]	88	140			
Weight	0 mm stroke	[kg]	4.08	8.92		
	+10 mm stroke	[kg]	0.139	0.22		
Stroke max.	[mm]	2800	2750			

Supplementary products

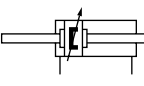
Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

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Piston rod cylinder ▶

Profile cylinder, Series PRA - inch

▶ Ø 32 - 125 mm ▶ Ports: 1/8 NPTF - 1/2 NPTF ▶ double-acting ▶ with magnetic piston ▶ cushioning: pneumatically, adjustable, pneumatically ▶ Piston rod: through, external thread

	Piston Ø Piston rod thread Ports Piston rod Ø	32 7/16-20 UNF 1/8 NPTF 12	40 1/2-20 UNF 1/4 NPTF 16	50 3/4-16 UNF 1/4 NPTF 20	63 3/4-16 UNF 3/8 NPTF 20	80 3/4-16 UNF 3/8 NPTF 25	
	Stroke 25.4	R480176152	R480176240	R480176332	R480176414	R480176507	
	50.8	R480176160	R480176248	R480176341	R480176423	R480176517	
	76.2	R480176173	R480176255	R480176348	R480176435	R480176519	
	101.6	R480176175	R480176267	R480176356	R480176440	R480176533	
	127	R480176182	R480176276	R480176359	R480176448	R480176535	
	152.4	R480176191	R480176283	R480176366	R480176454	R480176542	
	177.8	R480176204	R480176289	R480176378	R480176463	R480176555	
	203.2	R480176212	R480176300	R480176389	R480176477	R480176559	
	228.6	R480176214	R480176308	R480176391	R480176481	R480176573	
	254	R480176226	R480176313	R480176404	R480176489	R480176577	
	304.8	R480176236	R480176319	R480176408	R480176496	R480176582	
		Piston Ø Piston rod thread Ports Piston rod Ø	100 3/4-16 UNF 1/2 NPTF 25	125 1-14 UNF 1/2 NPTF 32			
	Stroke 25.4	R480176597	R480176680				
	50.8	R480176604	R480176693				
	76.2	R480176612	R480176700				
	101.6	R480176615	R480176706				
	127	R480176625	R480176715				
	152.4	R480176630	R480176724				
	177.8	R480176645	R480176726				
	203.2	R480176651	R480176740				
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304.8	R480176674	R480176762					

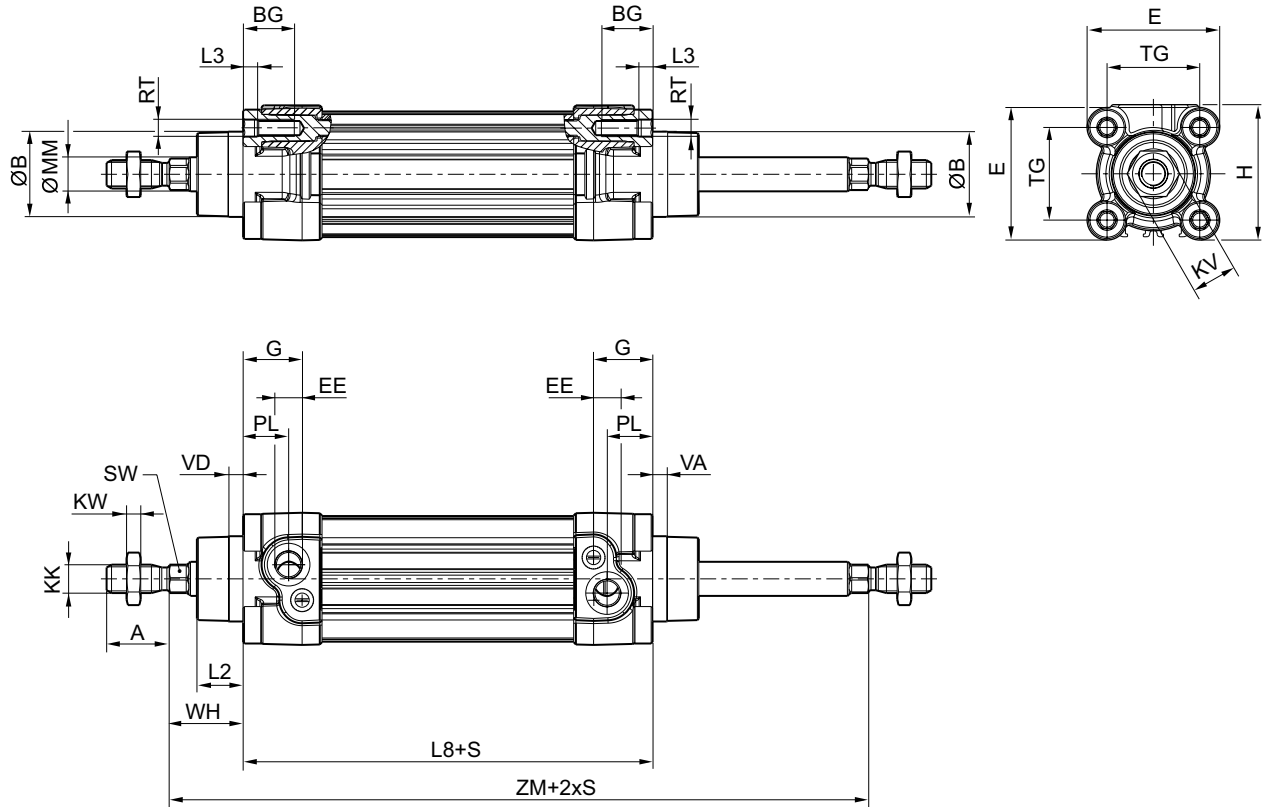
Note: The stroke values have been converted from inch to mm. (Conversion factor 1 inch = 25.4 mm)

Piston rod cylinder ▶

Profile cylinder, Series PRA - inch

▶ Ø 32 - 125 mm ▶ Ports: 1/8 NPTF - 1/2 NPTF ▶ double-acting ▶ with magnetic piston ▶ cushioning: pneumatically, adjustable, pneumatically ▶ Piston rod: through, external thread

Dimensions in inches



S = stroke

00134209

Dimensions in inches

Ø [mm]	Ø [inch]	A -0,04	ØB ↓ d11	BG	E	EE	KK	G	H	KV	KW	ØMM f8	PL
32	1 1/4	0.87	1.18	0.63	1.83	1/8 NPT	7/16 - 20 UNF	1.09	1.87	0.63	0.2	0.47	0.63
40	1 1/2	0.94	1.38	0.63	2.09	1/4 NPT	1/2 - 20 UNF	1.31	2.09	0.71	0.24	0.63	0.79
50	2	1.26	1.57	0.63	2.56	1/4 NPT	3/4 - 16 UNF	1.22	2.56	0.94	0.31	0.79	0.75
63	2 1/2	1.26	1.77	0.63	2.95	3/8 NPT	3/4 - 16 UNF	1.22	2.95	0.94	0.31	0.79	0.94
80	3	1.57	1.77	0.67	3.74	3/8 NPT	3/4 - 16 UNF	1.51	3.74	1.18	0.39	0.98	0.93
100	3 1/2	1.57	2.17	0.67	4.53	1/2 NPT	3/4 - 16 UNF	1.51	4.53	1.18	0.39	0.98	0.98
125	4 1/2	2.13	2.36	0.79	5.51	1/2 NPT	1 - 14 UNF	1.66	5.51	1.61	0.53	1.26	1.3

Ø [mm]	Ø [inch]	L2	L3	L8	RT	SW	TG	VA	WH	ZM
32	1 1/4	0.64	4.5	3.7±0.02	M6	0.39	1.28±0.02	0.2	1.02±0.06	5.75+0.12/-0.06
40	1 1/2	0.72	4.5	4.13±0.03	M6	0.51	1.5±0.02	0.2	1.18±0.06	6.5+0.12/-0.06
50	2	0.98	4.5	4.17±0.03	M8	0.67	1.83±0.02	0.2	1.46±0.06	7.09+0.12/-0.06
63	2 1/2	0.98	4.5	4.76±0.03	M8	0.67	2.22±0.03	0.2	1.46±0.07	7.68+0.12/-0.06
80	3	1.3	0	5.04±0.03	M10	0.87	2.83±0.03	0.2	1.81±0.07	8.66+0.12/-0.06

Supplementary products

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Piston rod cylinder ▶
Profile cylinder, Series PRA - inch

▶ Ø 32 - 125 mm ▶ Ports: 1/8 NPTF - 1/2 NPTF ▶ double-acting ▶ with magnetic piston ▶ cushioning: pneumatically, adjustable, pneumatically ▶ Piston rod: through, external thread

Ø [mm]	Ø [inch]	L2	L3	L8	RT	SW	TG	VA	WH	ZM
100	3 1/2	1.42	0	5.43±0.04	M10	0.87	3.5±0.03	0.2	2.01±0.07	9.45+0.14/-0.08
125	4 1/2	1.77	0	6.3±0.04	M12	1.06	4.33±0.04	0.28	2.56±0.09	11.42+0.14/-0.08

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It must be remembered that the products are subject to a natural process of wear and aging.

16-12-2014