

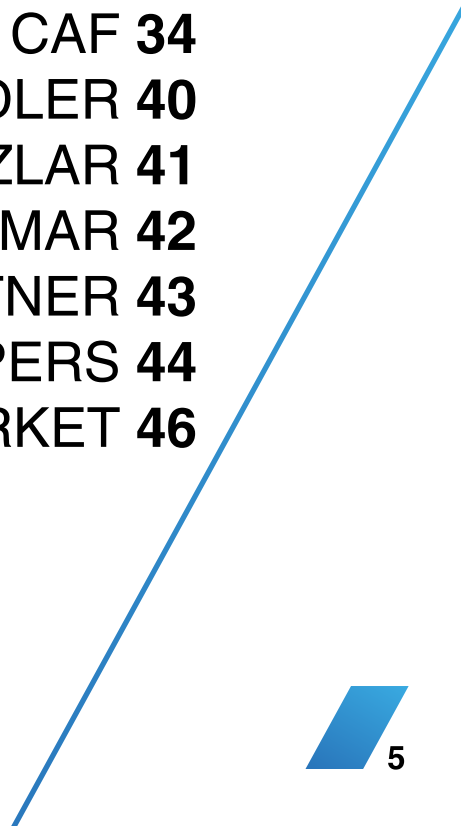
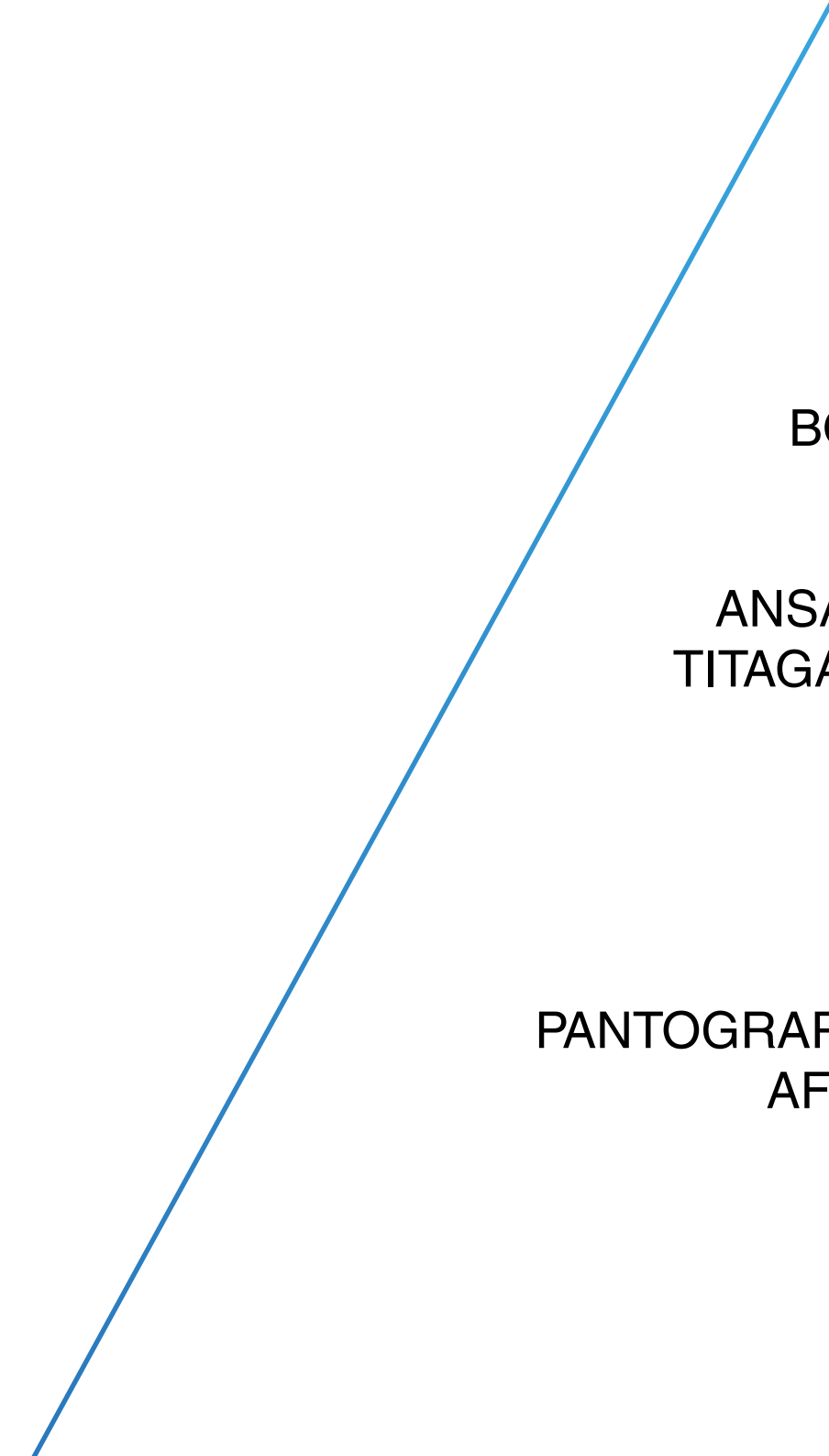


MSA
DAMPER

MSA
DAMPER

BEING **MSA** DAMPER SRL STAFF SPECIALIZED
SINCE MORE THAN 30 YEARS IN THE PRODUCTION
AND DESIGN OF SHOCK ABSORBERS AND THANKS
TO THE EXTREME FLEXIBILITY OF ITS ORGANIZATION
IS ABLE TO PRODUCE ANY KIND OF DAMPER
ON SPECIFIC CUSTOMER'S REQUESTS

INDEX



SIEMENS	6
BOMBARDIER	10
ALSTOM	16
HITACHI	22
ANSALDO BREDA	28
TITAGARH -FIREMA	31
CAF	34
STADLER	40
DURMAZLAR	41
GEISMAR	42
LEITNER	43
PANTOGRAPH DAMPERS	44
AFTERMARKET	46

The image features two teal diagonal lines that intersect to form a large, empty triangular shape. The lines are solid and extend from the corners of the frame towards the center. The word "SIEMENS" is centered within this triangular area.

SIEMENS

LOCO RH2016 OEGB, ER20 /ER20 VERTRIEB

since 2001

A2V00370058026 – 180074 vertical damper secondary suspension

A2V00370056844 – 180075 vertical damper primary suspension

A2V00370058028 – 180072 horizontal damper

A2V00370058027 – 180073 yaw damper

SF 5000 DESIRO UK , WEST COAST MAINLINE (ANGEL TRAINS), BANGKOK, SCOTRAIL

since 2002

A2V00001839510 – 45/180087 vertical damper primary suspension

A2V00370068203 - 180082 horizontal damper

A2V00001839508 – 54/180080 yaw damper

A2V00001839509 – 54/180081 yaw damper

SF 400 TRENITALIA – VIVALTO, FER, DOSTO

since 2004

A2V00370080492 – 180085 vertical damper primary suspension

A2V00370080941 – 180086 horizontal damper

SF 5000 BULGARIA/ ZOS VRUTKY

since 2006

A2V00370068204 - 180083 vertical damper primary suspension

A2V00001383862- 45/180088 horizontal damper

A2V00001383861 – 60/180090 yaw damper

SF 400 OEGB RAILJET

since 2007

A2V00001444886 – MSA 45/180092 horizontal damper

A2V00001749436 – MSA 60/180093 yaw damper

AUSTRALIA – QUEENSLAND

since 2007

A2V00001446567 - 45/180091 horizontal damper

ER24PC- Locomotive

since 2008

A2V00001821162 – 54/180095 vertical damper secondary suspension

A2V00001821163 – 54/180096 lateral damper

A2V00001821164 – 60/180097 yaw damper

X 4 LOCO PLATFORM

since 2009

A2V00001811513 – 54/180109 vertical damper secondary suspension
A2V00001811514 – 54/180108 horizontal damper
A2V00001811510 – 65/180107 vertical damper primary suspension
A2V00001811515 – 60/180110 yaw damper
A2V00001862462 – 45/180111 lateral damper motor unit

MRVC EMU MUMBAI

since 2009

A2V00001787733 – 45/180098 vertical damper primary suspension
A2V00001787734 – 45/180099 vertical damper secondary suspension
A2V00001787735 – 45/180100 horizontal damper

SF3+ LOCO

since 2010

A2V00001942475 – 65/180114 vertical damper primary suspension
A2V00001821162 – 54/180095 vertical damper secondary suspension
A2V00001952129 – 54/180115 vertical damper secondary suspension
A2V00001821163 – 54/180096 lateral damper
A2V00001942616 – 60/180116 yaw damper

SF100 NDW SBB

since 2010

A2V00001935626 – 45/180118 vertical damper secondary suspension
A2V00001935627 – 45/180119 horizontal damper

SF1000 METRO WARSAW

since 2012

A2V00002117521 – 45/180120 vertical damper secondary suspension
A2V00002117523 – 45/180121 horizontal damper

Sf1000 METRO MUNICH

since 2012

A2V00002143237 – 45/180122 vertical damper secondary suspension
A2V00002143238 – 45/180123 horizontal damper

DESIRO UK WMF

since 2012

A2V00002164522 – 45/180124 horizontal damper

THAMESLINK

since 2013

A2V00002197092 – 45/180131 vertical damper secondary suspension

SF4B FINNLAND

since 2014

A2V00002128320 – 54/180145 horizontal damper

A2V00002128319 – 54/180146 vertical damper secondary suspension

A2V00002128316 – 45/180147 motor damper

A2V00002128318 – 65/180148 yaw damper

A2V00001811510 – 65/180149 vertical damper primary suspension

ICX - DB

since 2014

A2V00002201612 – 45/180140 vertical damper primary suspension

A2V00002201614 – 45/180137 horizontal damper

A2V00002234495 – 54/180139 yaw damper

A2V00002201615 – 65/180138 yaw damper

DESIRO ML - ÖBB

since 2014

A2V00002321780 – 45/180141 vertical damper primary suspension

A2V00002321779 – 45/180142 vertical damper secondary suspension

A2V00002321778 – 45/180143 lateral damper

A2V00002321777 – 54/180144 yaw damper

VECTRON

since 2014

A2V00001811513 – 54/180109 vertical damper secondary suspension

A2V00001811514 – 54/180108 horizontal damper

A2V00001811510 – 65/180107 vertical damper primary suspension

A2V00001811515 – 60/180110 yaw damper

A2V00001862462 – 45/180111 lateral damper motor unit

Sf7000 - SWT South West Trains UK

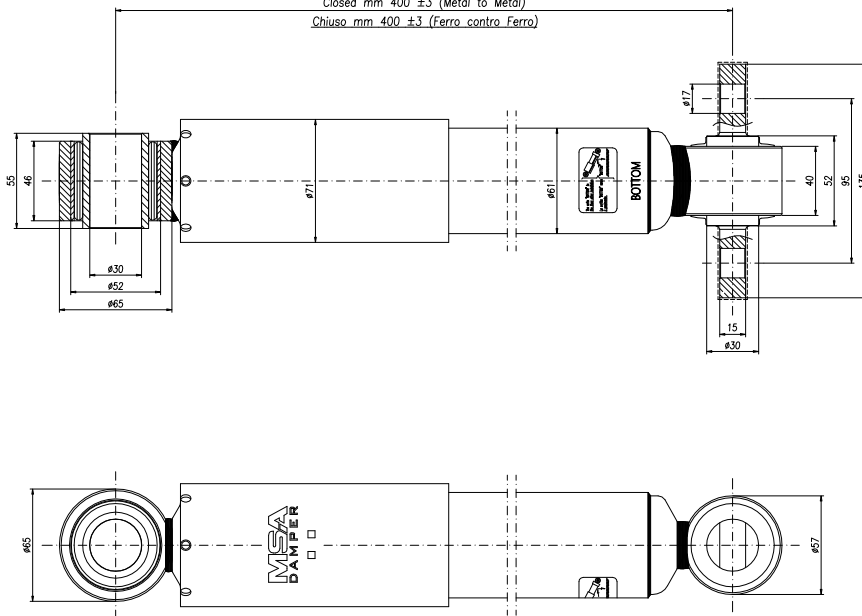
since 2016

A2V00002197092 – 45/180131 vertical damper secondary suspension

The image features the word "BOMBARDIER" in a bold, black, sans-serif font, centered horizontally. The text is set against a white background that is framed by two diagonal black lines forming a large, open triangle. The lines extend from the top corners towards the bottom center, creating a sense of depth and focus on the text.

BOMBARDIER

Aperlo mm 545 ±3 (Ferro contro Ferro)
 Open mm 545 ±3 (Metal to Metal)
 Closed mm 400 ±3 (Metal to Metal)
 Chiuso mm 400 ±3 (Ferro contro Ferro)



# MODIFICA	REV.	DATA	ESIBIZIONE/VERIFICAZIONE	DESCRIZIONE MODIFICA	Revisioni
01				DESIGNO CHIO VETABO MODIFICO MANUALE	
				DESCRIZIONE MODIFICA	
				HORIZONTAL DAMPER 03B	
				AMMORTIZZATORE 03B ORIZZONTALE	
				Nome Tab.	
				BOMBARDIER CANADA	
				LATERAL DAMPER	

BOGIE B5005 & HVP - CROSS COUNTRY- VIRGIN RAILWAYS UK - MML Midland Main Line

since 1999

561560000100S – 170015 yaw damper

561560000102S - 170017 vertical damper primary suspension

561560000101S - 170016 horizontal damper

TRAMWAY COLOGNE

since 2001

BEM-3V-422-1107-1 – 770694 horizontal damper

BEM-3V-422-1111-1 – 770695 vertical damper secondary suspension

BEM-3V-422-1112-1 – 770696 horizontal damper

TRAMWAY - DOCKLANDS LIGHT RAILWAYS

since 2001

DL-422-0006-1 – 770697 vertical damper secondary suspension

DL-422-0007-1 – 770698 horizontal damper

Tram TVR

since 2001

GL-444-0001-1 – 170040 yaw damper

GL-422-0015-1 – 170041 vertical damper secondary suspension

GL-422-0016-1 – 170042 vertical damper secondary suspension

GL-422-0017-1 – 170043 vertical damper secondary suspension

CROSS COUNTRY - TILTING – VIRGIN RAILWAYS -UK

since 2002

52756000079S - 170020 vertical damper primary suspension

527560000109S – 170019 horizontal damper

527560000106S – 170018 yaw damper

LOCO E464

since 2002

3ECP102265R0001 – 777032.1 vertical damper primary suspension

3ECP102266R0001 – 777033.1 vertical damper secondary suspension

3ECP102267R0001 – 777034.1 horizontal damper

3ECP102268R0001 – 777031 yaw damper

NM02 METRO MEXICO- STC – MEXICO CITY

since 2003

33456156000173S - 170045 vertical damper secondary suspension

33456156000174S - 170046 horizontal damper

FLEXCITY OUTLOOK (Valencia Alicante, Bruxelles, Porto, Marseille, Innsbruck, Krefeld)

since 2004

3EGS100001-4272 – 170062 vertical damper secondary suspension

3EGS100001-4556 – 170063 horizontal damper

CITY RUNNER - TPG (Geneve)

since 2004

902.431.015.099 – 170047 vertical damper secondary suspension

902.431.016.099 – 170048 horizontal damper

Metro CTA – Chicago Transit Authority

since 2007

07651020070S – 38/170076 horizontal damper

METRO TAIPEI, INNOVIA 2- NEIHU LINE

since 2004

59456000188S – 170061 vertical damper secondary suspension

59456000189S – 170060 horizontal damper

TTC TORONTO ROCKET PROJECT

since 2007

51020071S – 45/170077 vertical damper secondary suspension

51020072S - 45/170078 horizontal damper

KUALA LUMPUR - SCOMI

since 2007

51020004S – 45/170073 vertical damper secondary suspension

51020005S- 45/170074 horizontal damper

VANCOUVER

since 2007

510200030S – 45/170075 vertical damper secondary suspension

510200031S- 45/170074 horizontal damper

NJT New Jersey Transit Authority- AMT Montreal

since 2007

5351020074S – 45/170079 vertical damper secondary suspension

5351020075S – 45/170080 horizontal damper

B500X BOGIES – NSB5004 – ANGELTRAIN LOROL CHILTERN

since 2008

100118305 – 54/170081 vertical damper secondary suspension

METRO DEHLI RS2

since 2008

100107339 – 45/170064 lateral damper

LIRR M7 – Long Island

since 2008

51020077S – 45/170082 vertical damper primary suspension

LOCO E412 (ABB)

since 2008

3ECM102150 A – 777024 vertical damper primary suspension

3ECM102153 A – 777028 horizontal damper

3ECM102151 A – 777029 vertical damper secondary suspension

COACHES M137 - M145 - ATM

since 2008

3ECP102338– 777085 vertical damper secondary suspension

INNOVIA

since 2010

BSK-13723-1– 45/170084 vertical damper secondary suspension

BSK-13724-1- 45/170085 horizontal damper

ETR1000 – ZEFIRO TRENITALIA

since 2012

100360174 – 45/170087 vertical damper secondary suspension

100360176 – 65/170089 yaw damper

100360178 – 45/170086 vertical damper primary suspension

100360190 – 45/170088 lateral damper motor unit

TRAM TVA

since 2012

GL-444-0001-1 – 54/170090 vertical damper primary suspension

NAT SNCF

since 2013

100196291 – 45/170094 horizontal damper

100196294 - 45/170092 vertical damper secondary suspension
100196295 – 45/170093 vertical damper secondary suspension
100196286 – 45/170091 vertical damper primary suspension

C20 STOCKHOLM METRO

since 2013

3EST0000225-7870 – 45/170095 vertical damper secondary suspension
3EST0000225-7872 – 45/170096 horizontal damper

R179 NYCT

since 2014

520070256 – 45/1700104 lateral damper
520070255 – 45/170103 vertical damper secondary suspension

METRO CHICAGO

since 2015

59456000188S – 170061 vertical damper secondary suspension
59456000189S – 170060 horizontal damper

TRAMWAY INNSBRUCK

since 2016

3EGS100001-4272 – 170062 vertical damper secondary suspension
3EGS100001-4556 – 170063 horizontal damper

PROJECT STIB BS14 - RTM

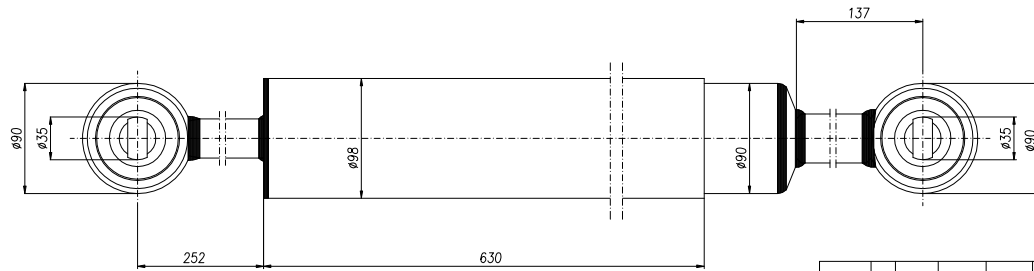
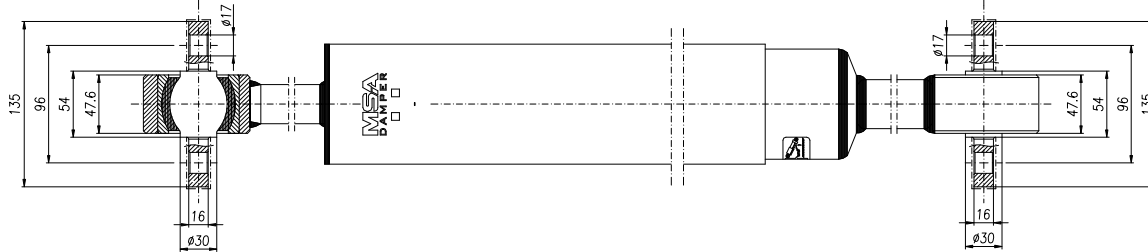
since 2016

3EGS100001-4272 – 170062 vertical damper secondary suspension
3EGS100001-4556 – 170063 horizontal damper



ALSTOM
• mobility by nature •

Aperto mm 1703 ±3 (Ferro contro Ferro)
 Open mm 1703 ±3 (Metal to Metal)
 Closed mm 1114 ±3 (Metal to Metal)
 Chiuso mm 1114 ±3 (Ferro contro Ferro)
 Mounting length - Lunghezza montaggio mm 1336 ±3



N° MODIFICA	REV.	DATA	DESSIGNATO DA	VERIFICATO DA	DESCRIZIONE MODIFICA
DESIGNO CAD VIETATO MODIFICHE MANUALI Formato A1					
INCOMPETENZA RISERVATA Questo disegno non può essere riprodotto né utilizzato per la costruzione dell'oggetto rappresentato o messo a disposizione di terzi senza la nostra autorizzazione scritta.					
MSA DAMPER		Descrizione AMMORTIZZATORE CASSA-CASSA		Data	
Cliente ALSTOM		N° Di Cliente -		Disegnato da	
Applicazioni		Problemi		Verificato da	
Tolleranze per quote senza indicazione Norme ISO 2768-01/02		Classi Entitabile		Scala -	
Materiali -		Impedimenti al disegno -		Piano Ig -	
Classi Entitabile		Origine		Numero Disegno -	

ETR 404 – 414 - 500

since 1998

2554000232312 – 770013 vertical damper primary suspension
2523000132312 – 770015 horizontal damper
2523020132312 – 770014 vertical damper secondary suspension
2528000232312 – 65/970001 yaw damper locomotive
2588401556511 – 970008 yaw damper coach

ETR 500 Freccia Rossa

since 2009

2554000232312 – 770013 vertical damper primary suspension
2523000132312 – 770015 horizontal damper
2523020132312 – 770014 vertical damper secondary suspension
2528000232312 – 65/970001 yaw damper locomotive
2588401556511 – 65/970006 yaw damper coach

PENDOLINO CECCHIA

since 2001

255420 00 640 12/01 – 770010/3 vertical damper primary suspension
252305 00 643 12/01 – 770012/4 horizontal damper
252303 00 640 12/01 – 770017 vertical damper secondary suspension

ETR 460 – 480 PENDOLINO ITALIA - SLOVENIA

since 1999

2554200053112 – 770010/1 vertical damper primary suspension
2523050043012 – 770012/1 horizontal damper
2523020158811 – 770011/1 vertical damper secondary suspension
2528221583909 - 970010 yaw damper

CTR MINUETTO – TRENITALIA- FNM

since 2003

1058620/9 - 778001 vertical damper primary suspension
1058171/9 - 778002 vertical damper secondary suspension
1058169/9 - 778003 vertical damper secondary suspension
1058172/9 - 778004 horizontal damper
1058174/9 - 778005 horizontal damper
10584140003 – 970040 inter-cars damper
10584150003 - 970041 inter-cars damper
10584160003 - 970042 inter-cars damper
1058179/9 - 970050 yaw damper

TRENTO – MALE'

since 2003

1282173201 – 777905 vertical damper primary suspension
1282228201 - 777906 horizontal damper

BARI NORD

since 2005

1323488366 – 777900 vertical damper primary suspension
1323488819 - 777901 vertical damper primary suspension
1323488378 - 777902 vertical damper secondary suspension
1323488192- 777903 horizontal damper
PEV-15-00002165- 777904 vertical damper primary suspension

ETR 600/610 NEW PENDOLINO – TRENITALIA/ CISALPINO

since 2006

Ax00000011488 – 54/770035 vertical damper primary suspension
Ax00000198924 – 54/770033 vertical damper secondary suspension
AX00000198846 – 54/770036 vertical damper secondary suspension
AX00000012525 – 45/770034 horizontal damper
Ax00000054892 – 45/770037 horizontal damper
AX00000011207 – 60/970043 yaw damper

HELSINKI – ST PETERSBOURG

since 2009

AR00000123729-AR – 54/770038 vertical damper primary suspension

H3 LOCOMOTIVES

since 2014

DTR0000340786-A – 65/778006/1 vertical damper
DTR0000340789-A – 65/778006/2 vertical damper
DTR0000340790-A – 65/778006/3 vertical damper
DTR0000340787-A – 54/778007/1 horizontal damper
DTR0000340791-A – 54/778007/2 horizontal damper
DTR0000340788-A – 54/778008 horizontal damper
DTR0000340785-A – 65/778009 yaw damper

SMART CORADIA platform

Since 2017

GI00000550251 - 54/970056 inter car damper
GI00000549221 - 54/970057 inter car damper
GL00000550209- 54/970058 inter car damper

D040150 CORADIA MERIDIAN TI JAZZ PROJECT

Since 2017

1058620/9 - 778001 vertical damper primary suspension
1058171/9 - 778002 vertical damper secondary suspension
1058169/9 - 778003 vertical damper secondary suspension
1058172/9 - 778004 horizontal damper
1058174/9 - 778005 horizontal damper
10584140003 – 970040 inter-cars damper
10584150003 - 970041 inter-cars damper
10584160003 - 970042 inter-cars damper
1058179/9 - 970050 yaw damper

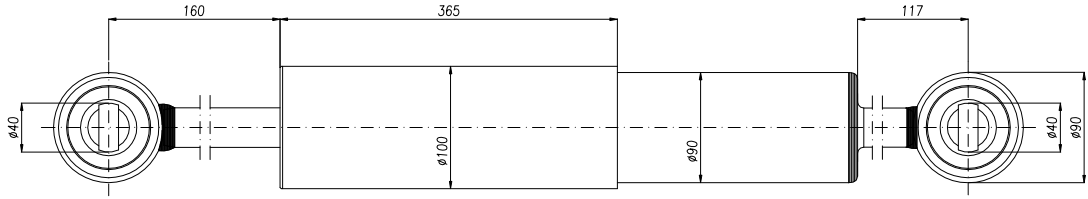
NGT MELBOURNE

Since 2023

590009293 - 54/778013 inter-cars damper

The image features the Hitachi logo centered on a white background. Two diagonal lines, one red and one black, intersect at the center, forming a large 'V' shape that frames the text. The red line starts from the top-left and goes towards the bottom-right. The black line starts from the top-right and goes towards the bottom-left.

HITACHI
Inspire the Next

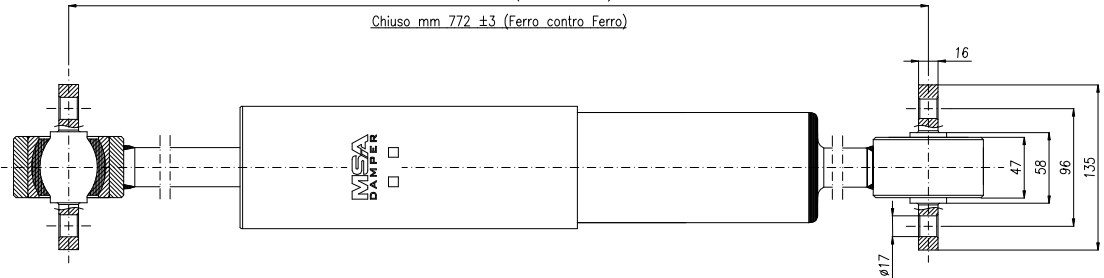


Aperto mm 1122 ±3 (Ferro contro Ferro)

Open mm 1122 ±3 (Metal to Metal)

Closed mm 772 ±3 (Metal to Metal)

Chiuso mm 772 ±3 (Ferro contro Ferro)



N° MODIFICA	REV.	DATA	DISIGNATO DA	VERIFICATO DA	DESCRIZIONE MODIFICA
DESIGNO CAD VIETATO MODIFICHE MANUALI					
<small>INCOMPETIA RISERVATA. Questo disegno non può essere riprodotto né utilizzato per la costruzione dell'oggetto rappresentato o messo a disposizione di terzi senza la nostra autorizzazione scritta.</small>					
		YAW DAMPER			
<small>Descrizione</small>		AMMORTIZZATORE ANTISERPEGGIO			
<small>Cliente</small>		ALSTOM		<small>N° Del. Cliente</small>	
<small>Applicazioni</small>		ANTISERPEGGIO			
<small>Classificazione criteri d'importanza secondo Norma Tab.</small>		<small>Scale</small>			
<small>Indirizzo per questo disegno</small>		<small>Numero Disegno</small>			
<small>Manifattura</small>					
<small>Disegnato da</small>					
<small>Verificato da</small>					
<small>Scale</small>					
<small>Plan Ig.</small>					

TRAMWAY VLC LILLE –Bogie J15

since 1990

2.52.030 – 770903 horizontal damper

2.52.020 – 770904/A vertical damper secondary suspension

ETR 500

Since 1995

2554000232312 – 770013 vertical damper primary suspension

2523000132312 – 770015 horizontal damper

2523020132312 – 770014 vertical damper secondary suspension

2528000232312 – 65/970001 yaw damper locomotive

2588401556511 – 970008 yaw damper coach

TRAMWAY LOS ANGELES

since 2004

AA02THX – 777210 horizontal damper

TAF – TRENITALIA

since 1996

J33255300 - 777000TR vertical damper primary suspension

J33260300 - 777001TR horizontal damper

J33(34)252400 777002TR vertical damper secondary suspension

J33252405 - 777003TR horizontal damper

J34255300 777004TR vertical damper primary suspension

J342524059 - 777005TR horizontal damper

TRAMWAY SIRIO (GTT Torino, Milano, Atene, Copenhagen, Firenze, Kaiserl Goteborg)

since 2000

AA015RC – 770950 vertical damper secondary suspension

AA015RD - 770951 horizontal damper

AA027Z4 - 770953 horizontal damper

AA01BPK – 970030 inter-cars damper

AA07EFX - 45/970031 inter-cars damper

06264EF01 – 54/970033 inter-cars damper

lc4 - DSB

since 2002

AA02JKM - 777204 vertical damper primary suspension
AA01JKP – 777201 vertical damper secondary suspension
AA01JKT – 777205 yaw damper
AA01ZWP – 777203 horizontal damper
AA01JKN – 777200 vertical damper secondary suspension
AA01JKR – 777202 horizontal damper

METRO ROMA

since 2004

AA00ZAG – 777211 horizontal damper

EMU MOROCCO – MOROCCO RAILWAYS

since 2004

J49.255.300– 777220 vertical damper primary suspension motor bogie
J50.255.300- 777225 vertical damper primary suspension trailer bogie
J49.252.415 – 777224 yaw damper motor bogie
J50.252.415 – 777228 yaw damper trailer bogie
J49.252.400/ J50.252.400 – 777222 vertical damper secondary suspension
J49.260.300 - 777221 horizontal damper
J49.252.405 – 777223 horizontal damper
J50.252.405 - 777227 horizontal damper

TSR – TRENITALIA

since 2005

AA0373J - 45/777323 vertical damper secondary suspension
AA0373K - 45/777324 horizontal damper
AA0375G - 45/777325 vertical damper primary suspension
AA03KTB - 45/777322 vertical damper primary suspension
AA0445J - 45/777320 vertical damper secondary suspension
AA0445K - 45/777321 horizontal damper

EMU V 250 – HOLLAND & BELGIUM RAILWAYS

since 2005

AA052RR – 45/777229 vertical damper primary suspension trailer bogie
AA04P9H – 45/777230 vertical damper primary suspension motor bogie
AA04P9J – 45/777231 vertical damper secondary suspension
AA04P9K – 45/777232 horizontal damper
AA07J02 – 65/777234 yaw damper

CIRCUMVESUVIANA

since 2006

AA064DW – 770709 anti-roll damper puntore
AA04VYM – 45/770702 trasversale sospensione secondaria
AA04VYL – 45/770701 vertical damper secondary suspension
AA064DX- 45/770693 inter-cars damper

METRO MILANO MENEGHINO

since 2006

AA04138 - 54/777328 vertical damper secondary suspension
AA0413A - 45/777329 lateral damper
AA064UZ – 45/777331 yaw damper

METRO FORTALEZA

since 2010

AA064DW – 770709 anti-roll damper
MFA252300 – 45/770711 trasversale sospensione secondaria
SPZ2517 – 45/770701 vertical damper secondary suspension
AA064DX- 45/770693 inter-cars damper

MLA METRO MILANO BRESCIA SALONICCO RIYADH

since 2010

AA04YRL – 770734 lateral damper
AA04YRP – 770733 vertical damper secondary suspension
AA06E34 – 54/970032 inter-cars damper Brescia

DOUBLE STOCK COACHES TRENITALIA – NUOVO VIVALTO

since 2011

006927ED02 - 45/770713 lateral damper
006924ED02 - 45/770712 vertical damper secondary suspension
008408ED01 - 45/770715 vertical damper primary suspension

TRAM-TRENO SIRIO GENOVA/CASELLA

since 2012

008373ED04/ 008374ED04 – 45/770716 vertical/horizontal damper secondary suspension

METRO MIAMI

since 2014

00033238ED02 - 45/770724 horizontal damper

METRO LIMA

since 2015

11146441ED04 - 45/770727 vertical damper secondary suspension

00046442ED04 - 45/770728 horizontal damper

METRO HONOLULU

since 2016

017083ED04 - 45/770729 lateral damper

040206ED04 - 45/770730 vertical damper secondary suspension

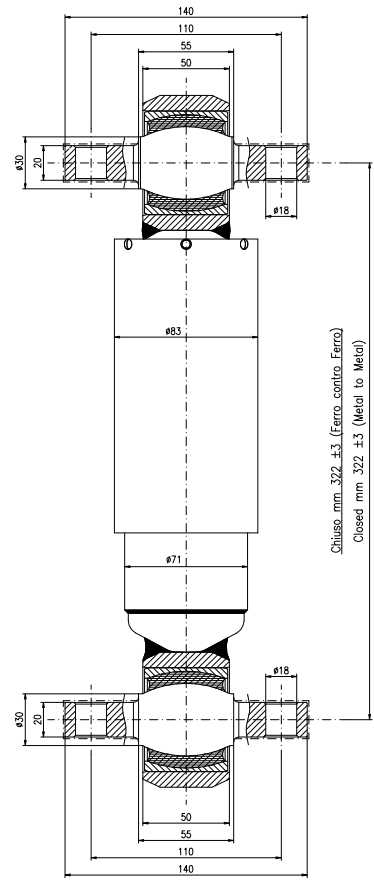
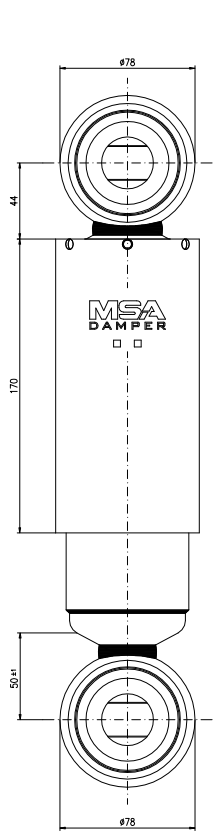
METRO GENOVA

HW00504061-00 - 38/770717 secondary suspension vertical damper

HW00504062-00 - 45/770718 secondary suspension horizontal damper

HW01566361-00 - 770720 anti roll strut

HW01566360-00 - 45/770719 intercar damper



Chiuso mm. 322 ±3.3 (Ferro contro Ferro)
 Closed mm 322 ±3.3 (Metal to Metal)
 Aperto mm. 470 ±3.3 (Ferro lo Metal)
 Open mm. 470 ±3.3 (Metal to Metal)

MODIFICA	REV.	DATA	REVISIONE	VERIFICATA	DESCRIZIONE MODIFICA
01	01				

PRODOTTORE		DESCRIZIONE	
MSA DAMPER		VERTICAL DAMPER 835	
MSA DAMPER		AMMORTIZZATORE 835 VERTICAL	
Qualificatore cliente Clientele secondo Forma tab. Modulo per il cliente		Nome Indirizzo Città Prov. Cap.	
Nome Indirizzo Città Prov. Cap.		Nome Indirizzo Città Prov. Cap.	



AnsaldoBreda

Una Società Finmeccanica

REGIONAL TRAINS FOR TRENITALIA (EX V250)

since 2017

AA052RR – 45/777229 vertical damper primary suspension trailer bogie

AA04P9H – 45/777230 vertical damper primary suspension motor bogie

AA04P9J – 45/777231 vertical damper secondary suspension

AA04P9K – 45/777232 horizontal damper

AA07J02 – 65/777234 yaw damper



LOCO DIESEL D 146

Since 2001

D1255400MW01000 – 770040 vertical damper primary suspension
D1252310MW01000 – 770041 vertical damper secondary suspension
D1252301MW01000 – 770042 horizontal damper

OSLO

Since 2009

645520 – 770685 vertical damper secondary suspension
645507 – 770686 horizontal damper

FERROVIE APPULO-LUCANE

Since 2009

NM1255401MF01– 38/770706 vertical damper primary suspension
NM1252302MF01– 45/770707 vertical damper secondary suspension
NM1252301MF01– 45/770708 horizontal damper
FALK02L05 – 45/770693 inter-cars damper
FALK02L04 – 770699 anti roll damper

FRECCIA FLAMINIA – FERROVIA ROMA-VITERBO

Since 2009

RV0-T02L22-V – 45/777081 vertical damper secondary suspension
RV0-T02L22-H – 45/777082 horizontal damper

METRO CAMPANIA – MCNE/ SEPSA

Since 2009

MCB255400XW01 – 45/770703 vertical damper primary suspension
MCB252300XW01 – 45/770704 vertical damper secondary suspension
MCB252301XW01 – 45/770705 horizontal damper
MCB210131XW01 - 54/770710 yaw damper

The image features the logo for CAF (Construction Africa Finance), which consists of the letters 'CAF' in a bold, red, sans-serif font. The 'C' is stylized with a horizontal bar extending to the left. The background is white, with two thin, dark grey diagonal lines forming a triangular shape that frames the logo.

CAF

METRO SAO PAULO

since 2009

Mc40690101– 45/160047 vertical damper secondary suspension

MC40690201 – 45/160048 lateral damper

EUSKOTREN

since 2010

MC90600200– 45/160069 lateral damper

METRO CARACAS/METRO ESTAMBUL

since 2010

MC60600901– 45/160064 lateral damper

MC60600801 – 45/160063 vertical damper secondary suspension

TREN TRAM CHICLANA/ BAYA DE CADIZ

since 2010

Md30600200 – 45/160084 vertical damper secondary suspension

MD30600100– 45/160085 horizontal damper

TREN ARABIA SAUDI

since 2010

Mb60500500– 45/160075 vertical damper primary suspension

MB60606000 – 45/160076 horizontal damper

Mb60606000 – 45/160077 vertical damper secondary suspension

MB60606000 –54/160078 yaw damper

METRO MEXICO LINEA 12

since 2011

Me40600501 – 45/160086 vertical damper secondary suspension

ME40600601 – 45/160087 horizontal damper

BOGIES DMU SARDINIA TILTING

since 2011

Md90500500 – 45/160104 vertical damper primary suspension

Md90601000 – 45/160106 vertical damper secondary suspension

MD90602100 – 45/160105 horizontal damper

Md90602200 – 54/160108 yaw damper

TRAM URBOS III (Nantes/Besancon/Beasain/Irun/Zaragoza)

since 2011

Q234207200 – 54/160107 yaw damper

CIVITY TRIESTE- MONTENEGRO- AUSTRIA

since 2012

Me10500601 – 45/160114 vertical damper primary suspension

Me20602801 – 45/160115 vertical damper secondary suspension

ME20603601 – 45/160117 horizontal damper

Me20602701 – 54/160119 yaw damper

ME20603801 – 54/160118 inter-cars damper

MG70603801- 45/160176 vertical damper secondary suspension

BOGIES Uds.FGC

since 2012

ME30600200 – 45/160121 horizontal damper

TRAM STOCKHOLM

since 2012

Mf00601000 - 45/160122 vertical damper secondary suspension

MF00601100 – 45/160123 horizontal damper

Q344205000 – 54/160124 inter-cars damper

METRO AUCKLAND, NEW ZEALAND

since 2012

M.F9.05.006.01 – 45/160139 vertical damper secondary suspension motor bogie

Mf90504001 – 45/160181 vertical damper secondary suspension trailer bogie

M.F9.06.004.01 – 45/160140 vertical damper secondary suspension

M.F9.06.003.01 – 45/160141 horizontal damper

METRO SAO PAULO Linea 5

since 2012

Mf40600500– 45/160134 vertical damper secondary suspension

MF40600600 – 45/160135 lateral damper

ATM MILANO

since 2012

Mf50600400– 45/160142 vertical damper secondary suspension

MF50600800 – 45/160143 lateral damper

METRO HUSTON

since 2012

Mf70602000 – 45/160144 vertical damper secondary suspension motor bogie

MF70601600 – 45/160145 lateral damper motor bogie

Mf80600700 – 45/160146 vertical damper secondary suspension trailer bogie

MF80600900– 45/160147 lateral damper trailer bogie

METRO BUCAREST

since 2012

Mg60600501 – 45/160148 vertical damper secondary suspension

MG60600601 – 45/160149 lateral damper

METRO ROMA

since 2013

M840600701 – 45/160167 horizontal damper

PORTO ALEGRE – BELO HORIZONTE

since 2013

Mi30500500 – 45/160204 vertical damper primary suspension

Mh30600501 – 45/160169 vertical damper secondary suspension

MH30600601– 45/160170 horizontal damper

TRAMWAY PLATFORM (Granada - Kaoshiung - Birmingham - Cincinnati- Cagliari- Sassari – Sydney)

since 2013

Md50600700– 45/160178 vertical damper secondary suspension

Md40600800 – 45/160179 vertical damper secondary suspension

MD40600900 – 45/160180 lateral damper

TALLIN

since 2014

Mi00602000 – 45/160202 vertical damper secondary suspension

MI00601100 – 38/160203 lateral damper

CPTM

since 2014

MI30600600 – 45/160206 horizontal damper

Mi30500500 – 45/160204 vertical damper primary suspension

MI30600500– 45/160205 vertical damper secondary suspension

CHILE

since 2015

Mi70600501 – 45/160214 vertical damper secondary suspension

MI70600601– 45/160213 horizontal damper

TRANVIAS LUXEMBURGO AND AMSTERDAM

since 2016 and 2017

Md50600700– 45/160178 vertical damper secondary suspension

Md40600800 – 45/160179 vertical damper secondary suspension

Md40600900 – 45/160180 lateral damper

CAF CIVITY MYANMAR

since 2022

P0000334965C– 45/160359 secondary transversal damper

P0000468637C – 45/160357 vertical damper primary suspensions

P0000693158C – 45/160358 vertical damper primary suspensions

STADLER

CITYLINK PLATFORM

since 2012

Bb12972310002 - 45/160160 vertical damper motor bogie
Bb12972330002 - 45/160161 vertical damper trailer bogie
Bb12972310001 - 45/160162 horizontal damper

UK LIGHT/ UK DUAL

Since 2013

Bb11472300001 - 54/160163 vertical damper primary suspension
Bb11472300002 - 45/160164 vertical damper secondary suspension
BB11472300003 - 45/160165 horizontal damper

METRO SANTOS - ROSTOCK

since 2014 and option 2016

Bb08472311000 - 45/160171 vertical damper secondary suspension
Bb11072311200 - 45/160172 horizontal damper
BB08430412001 - 54/160173 inter-cars damper



NEW EMU PROJECT

Since 2017

EM90.24.00.00007 - 45/160266 vertical damper primary suspension
EM90.24.00.00008 - 54/160269 yaw damper
EM90.24.00.00009 - 45/160268 secondary lateral damper
EM90.24.00.00010 - 45/160267 vertical damper secondary suspension



TRAMWAY PLATFORM

since 2010

BBTC1Y201110300 - 45/160071 secondary lateral damper

LRV BURSA

since 2014

L00108101000 - 45/160198 secondary lateral damper

L00108101100 - 45/160197 vertical damper secondary suspension



METRO KAYSERI

Since 2015

S510-7001 - 45/160235 yaw damper



RAILWAY MAINTENANCE VEHICLES

since 2002

- 324.006 – 770029 vertical damper secondary suspension
- 324.002 – 777043/1 vertical damper secondary suspension
- 324.013 – 770030 horizontal damper
- 324.012 - 770031 vertical damper secondary suspension
- 324.018 - 45/770048 horizontal damper
- 324.16 - 54/770046 vertical damper primary suspension
- 324.17 - 54/770047 vertical damper primary suspension
- 324.019 - 60/770049 yaw damper
- 324.021 - 60/770050 yaw damper



RAILWAY MAINTENANCE VEHICLES

since 2017

- Q063574 - 45/160280 horizontal damper
- Q060808 - 65/160210 yaw damper
- Q057540 - 54/160278 vertical damper

LEITNER®

ropeways

FUNICULAR RAILWAY MENDELBAHN

Since 2008

196977 – 45/160040

MINIMETRO MM100 PISA

since 2017

41055764 - 65/160230

41055765 - 45/160231



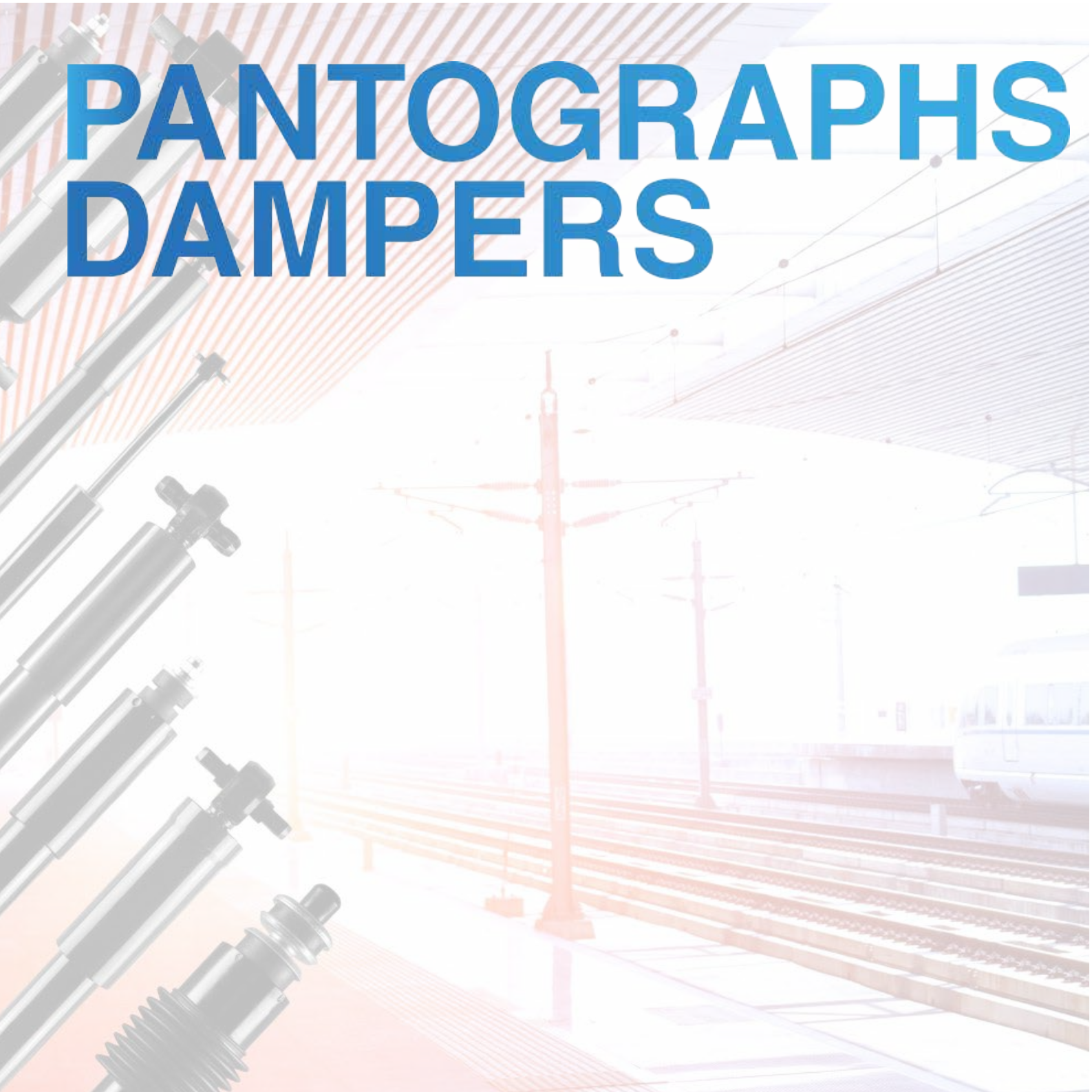
Since 2008

970020 – damper for energy transformer

FIATENGINEERING

512017-EP-L320-EBR-0001-03 – MSA 180072 damper for Agnelli Gallery (Pinacoteca)

PANTOGRAPH DAMPERS



production

manufacturing technologies

Since 2002

212PEM8117C - 38/777079

212VE03762D - 38/777086

212C11083C - 45/160032

212VE0326D01 - 777070

212PA00133D - 777074

372388 - 777040



melecs

SIEMENS

Since 2012

3-780-591- 38/180112

AFTER MARKET





SBB CFF FFS



PRECISION TECHNOLOGIES



A high-speed train is stopped at a station platform. The platform has a red tactile paving strip along the edge. The train is white with a blue stripe. The sky is bright and overcast. A large blue rectangular box with a white border is centered on the image, containing the text 'THE TAILOR MADE DAMPERS'.

THE TAILOR MADE DAMPERS



ASTI - ITALY
0141 17 83607
info@msadamper.com
msadamper.com