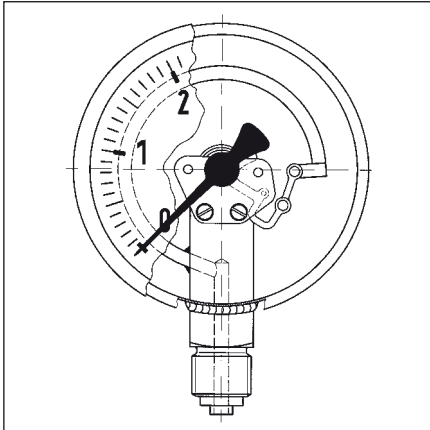


Bourdon tube pressure gauges for chemical applications EN 837-1



Application

For aggressive gaseous and liquid media which are not highly viscous and do not crystallize. Suitable for use in corrosive atmospheres.

! When measuring gas or vapour, the instruments must be used in accordance with the safety recommendations of EN 837-2 (see appendix).

Type

D 9

Nominal size

50 – 63

Accuracy class (EN 837-1/6)

1.6

Ranges (EN 837-1/5)

NG 50:

-1/0 to -1/+15 bar

0/0.6 to 0/600 bar

NG 63:

-1/0 to -1/+15 bar

0/0.6 to 0/1,000 bar

Application area

Static load:

$\frac{3}{4}$ x full scale value

Dynamic load:

$\frac{2}{3}$ x full scale value

Short term:

full scale value

Operating temperature range

Medium: $T_{max} = +150 \text{ }^\circ\text{C}$

Ambient: $T_{min} = -20 \text{ }^\circ\text{C}$

$T_{max} = +60 \text{ }^\circ\text{C}$

Temperature performance

Indication error when the temperature of the measuring element deviates from $20 \text{ }^\circ\text{C}$:

rising temp. approx. $\pm 0.4 \text{ } \%/10 \text{ K}$

falling temp. approx. $\pm 0.4 \text{ } \%/10 \text{ K}$

percentage of full scale value

Protection

IP 65 (EN 60529)

with housing vent ($\leq 25 \text{ bar}$)

IP 54

Standard version

Connection

Stainless steel 316 Ti or 316 L

NG 50 bottom or bottom back

NG 63 bottom or centre back

G $\frac{1}{4}$ B – spanner size 14

(EN 837-1/7.3)

Measuring element

Bourdon tube, stainless steel

316 Ti or 316 L

$\leq 60 \text{ bar}$ „C“ type bourdon tube

$> 60 \text{ bar}$ helical tube

leak tested (EN 837-1/9.5.6)

Movement

Stainless steel

Dial

Aluminium, white

Dial marking black

Pointer

Aluminium, black

Housing

Stainless steel 304 with pressure relief port

Crimped bezel

Stainless steel 304

Front glass

NG 50 plastic

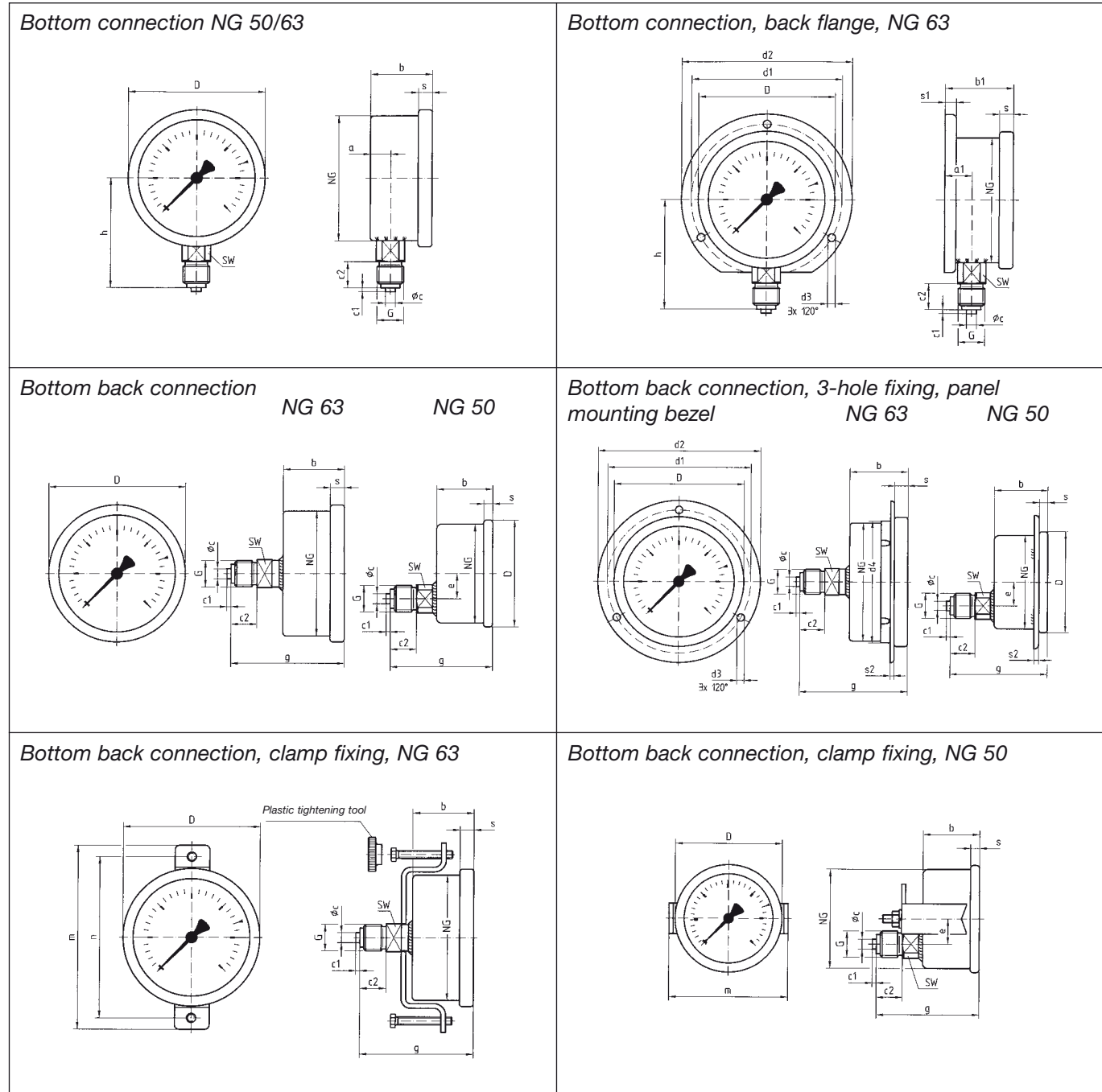
NG 63 laminated safety glass

Options

- Plastic front glass (NG 63)
- Brass movement
- Back flange (NG 63)
- Clamp fixing
- 3-hole fixing, panel mounting bezel (NG 63)
- Crimped bezel, polished
- Special scales

Bourdon tube pressure gauges for chemical applications Type D 9 – NG 50/63

Housing types and dimensions










Dimensions (mm)

Nominal size (NG)	a	a1	b	b1	Øc	c1	c2	d1*	d2*	d3*	d4	D	e	G	g	h	m	n	s	s1	s2
50	10.5	-	28	-	5	2	13	60	70	3.6	-	53	12.5	G1/4B	51	46	59	-	4.5	-	2.5
63	9.5	13	30.5	34	5	2	13	75	85	3.6	64	68	-	G1/4B	56	53	94	82	7	5.5	2
Nominal size (NG)	SW																				
50	14																				
63	14																				

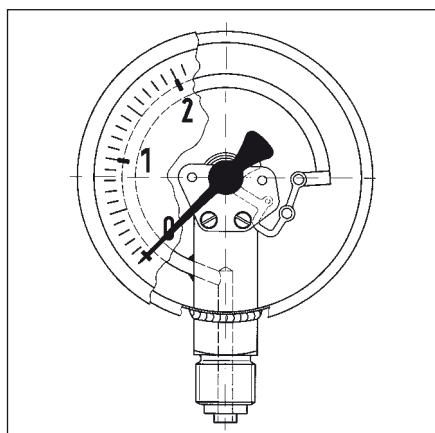
* Dimensions according to DIN 16063

Bourdon tube pressure gauges for chemical applications EN 837-1

DG: M

Type	RF50Ch,D902	RF50Ch,D912	RF50Ch,D952		RF63Ch,D902	RF63Ch,D912	RF63Ch,D932	RF63Ch,D952
Version								
Housing-Ø	50	50	50		63	63	63	63
Housing	Stainless steel 304 with crimped bezel 304							
Meas. elem.	Bourdon tube, stainless steel 316 Ti or 316 L							
Accuracy class	1.6	1.6	1.6		1.6	1.6	1.6	1.6
Connection	G ¹ / ₄ B	G ¹ / ₄ B	G ¹ / ₄ B		G ¹ / ₄ B	G ¹ / ₄ B	G ¹ / ₄ B	G ¹ / ₄ B
			Clamp fixing				3-hole fixing, panel mounting bezel 304, bare metal surface	Clamp fixing
Range (bar)	Part no.	Part no.	Part no.		Part no.	Part no.	Part no.	Part no.
Price €								
-1/0	85051902	85051912	85051952		85101902	85101912	85101932	85101952
-1/+0,6	85052902	85052912	85052952		85102902	85102912	85102932	85102952
-1/+1,5	85053902	85053912	85053952		85103902	85103912	85103932	85103952
-1/+3	85054902	85054912	85054952		85104902	85104912	85104932	85104952
-1/+5	85055902	85055912	85055952		85105902	85105912	85105932	85105952
-1/+9	85056902	85056912	85056952		85106902	85106912	85106932	85106952
-1/+15	85057902	85057912	85057952		85107902	85107912	85107932	85107952
Price €								
0/0,6	85059902	85059912	85059952		85109902	85109912	85109932	85109952
0/1	85060902	85060912	85060952		85110902	85110912	85110932	85110952
0/1,6	85061902	85061912	85061952		85111902	85111912	85111932	85111952
0/2,5	85062902	85062912	85062952		85112902	85112912	85112932	85112952
0/4	85063902	85063912	85063952		85113902	85113912	85113932	85113952
0/6	85064902	85064912	85064952		85114902	85114912	85114932	85114952
0/10	85065902	85065912	85065952		85115902	85115912	85115932	85115952
0/16	85066902	85066912	85066952		85116902	85116912	85116932	85116952
0/25	85067902	85067912	85067952		85117902	85117912	85117932	85117952
0/40	85068902	85068912	85068952		85118902	85118912	85118932	85118952
Price €								
0/60	85069902	85069912	85069952		85119902	85119912	85119932	85119952
0/100	85070902	85070912	85070952		85120902	85120912	85120932	85120952
0/160	85071902	85071912	85071952		85121902	85121912	85121932	85121952
0/250	85072902	85072912	85072952		85122902	85122912	85122932	85122952
0/400	85073902	85073912	85073952		85123902	85123912	85123932	85123952
Price €								
0/600	85074902	85074912	85074952		85124902	85124912	85124932	85124952
0/1000	---	---	---		85125902	85125912	85125932	85125952

Bourdon tube pressure gauges for chemical applications EN 837-1



Application

For aggressive gaseous and liquid media which are not highly viscous and do not crystallize. Suitable for use in corrosive atmospheres.

! When measuring gas or vapour, the instruments must be used in accordance with the safety recommendations of EN 837-2 (see appendix).

Type

D 4

Nominal size

100 – 160

Accuracy class (EN 837-1/6)

1.0

Ranges (EN 837-1/5)

-1/0 to -1/+15 bar

NG 100 0/0.6 to 0/1,000 bar

NG 160 0/0.6 to 0/1,600 bar

Application area

Static load:

≤ 600 bar = full scale value

> 600 bar = 3/4 x full scale value

Dynamic load:

≤ 600 bar = 0.9 x full scale value

> 600 bar = 2/3 x full scale value

Short term:

≤ 600 bar = 1.3 x full scale value

> 600 bar = full scale value

Operating temperature range

Medium: $T_{max} = +150\text{ °C}$

Ambient: $T_{min} = -20\text{ °C}$

$T_{max} = +60\text{ °C}$

Temperature performance

Indication error when the temperature of the measuring element deviates from 20 °C:

rising temp. approx. $\pm 0.4\text{ \%}/10\text{ K}$

falling temp. approx. $\pm 0.4\text{ \%}/10\text{ K}$

percentage of full scale value

Protection

IP 65 (EN 60529)

with housing vent ($\leq 25\text{ bar}$)

IP 54

Standard version

Connection

Stainless steel 316 Ti or 316 L,

bottom or bottom back

G1/2B – spanner size 22

(EN 837-1/7.3)

Measuring element

Bourdon tube, stainless steel

316 Ti or 316 L

≤ 60 bar „C“ type bourdon tube

> 60 bar helical tube

leak tested (EN 837-1/9.5.6)

Movement

Stainless steel

Dial

Aluminium, white

Dial marking black

Pointer

Aluminium, black

Housing

Stainless steel 304

with blow-out

Bayonet type bezel

Stainless steel 304

Front glass

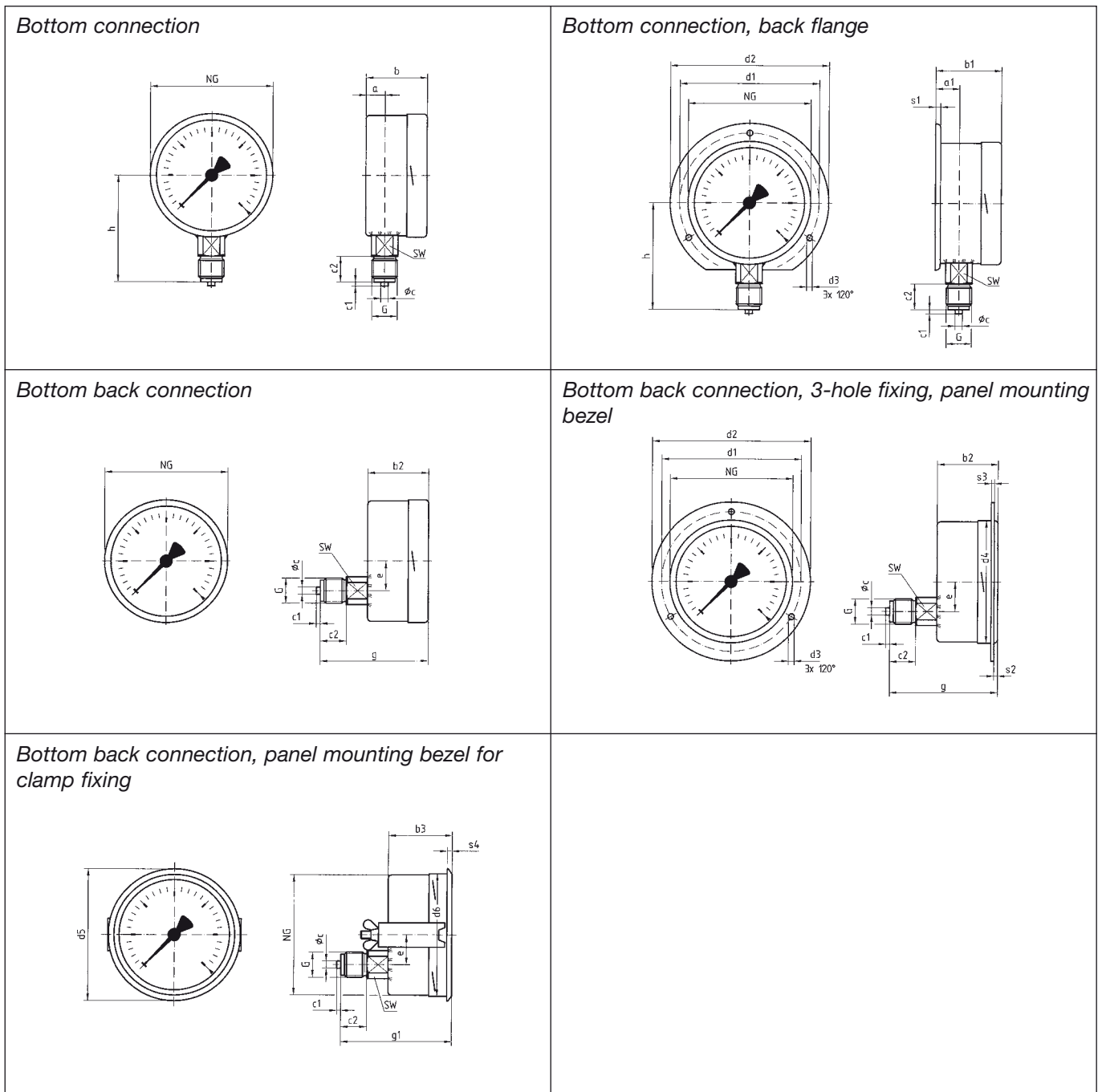
Laminated safety glass

Options

- Brass movement
- Back flange
- Panel mounting bezel for clamp fixing
- 3-hole fixing, panel mounting bezel
- Special scales
- Electrical contacts

Bourdon tube pressure gauges for chemical applications Type D 4 – NG 100/160

Housing types and dimensions











Dimensions (mm)

Nominal size (NG)	a	a ₁	b	b ₁	b ₂	b ₃	Øc	c ₁	c ₂	d ₁ *	d ₂ *	d ₃ *	d ₄	d ₅	d ₆	e	G	g	g ₁	h	s ₁
100	15.6	19.1	49	52.5	49	49	6	3	20	116	132	4.8	104	107	101	34.5	G ¹ /2B	83	83	86	5.5
160	17.5	20.5	50	53	50	52	6	3	20	178	196	5.8	164	167	161	34.5	G ¹ /2B	84	86	116	6
Nominal size (NG)	s ₂	s ₃	s ₄	SW																	
100	4	2	4	22																	
160	4	2	4.5	22																	

* Dimensions according to DIN 16064

Bourdon tube pressure gauges for chemical applications EN 837-1

DG: M

Type	RF100Ch,D402	RF100Ch,D412	RF100Ch,D432	RF100Ch,D452	RF160Ch,D802	RF160Ch,D412	RF160Ch,D432	RF160Ch,D452
Version								
Housing-Ø	100	100	100	100	160	160	160	160
Housing	Stainless steel 304 with bayonet type bezel, laminated safety front glass							
Meas. elem.	Bourdon tube, stainless steel 316 Ti or 316 L							
Accuracy class	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Connection	G $\frac{1}{2}$ B	G $\frac{1}{2}$ B	G $\frac{1}{2}$ B	G $\frac{1}{2}$ B	G $\frac{1}{2}$ B	G $\frac{1}{2}$ B	G $\frac{1}{2}$ B	G $\frac{1}{2}$ B
			3-hole fixing, panel mounting bezel, 304 polished	Panel mounting bezel, 304 polished, clamp fixing			3-hole fixing, panel mounting bezel, 304 polished	Panel mounting bezel, 304 polished, clamp fixing
Range (bar)	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.
Price €								
-1/0	85201402	85201412	85201432	85201452	85251402	85251412	85251432	85251452
-1/+0,6	85202402	85202412	85202432	85202452	85252402	85252412	85252432	85252452
-1/+1,5	85203402	85203412	85203432	85203452	85253402	85253412	85253432	85253452
-1/+3	85204402	85204412	85204432	85204452	85254402	85254412	85254432	85254452
-1/+5	85205402	85205412	85205432	85205452	85255402	85255412	85255432	85255452
-1/+9	85206402	85206412	85206432	85206452	85256402	85256412	85256432	85256452
-1/+15	85207402	85207412	85207432	85207452	85257402	85257412	85257432	85257452
Price €								
0/0,6	85209402	85209412	85209432	85209452	85259402	85259412	85259432	85259452
0/1	85210402	85210412	85210432	85210452	85260402	85260412	85260432	85260452
0/1,6	85211402	85211412	85211432	85211452	85261402	85261412	85261432	85261452
0/2,5	85212402	85212412	85212432	85212452	85262402	85262412	85262432	85262452
0/4	85213402	85213412	85213432	85213452	85263402	85263412	85263432	85263452
0/6	85214402	85214412	85214432	85214452	85264402	85264412	85264432	85264452
0/10	85215402	85215412	85215432	85215452	85265402	85265412	85265432	85265452
0/16	85216402	85216412	85216432	85216452	85266402	85266412	85266432	85266452
0/25	85217402	85217412	85217432	85217452	85267402	85267412	85267432	85267452
0/40	85218402	85218412	85218432	85218452	85268402	85268412	85268432	85268452
Price €								
0/60	85219402	85219412	85219432	85219452	85269402	85269412	85269432	85269452
0/100	85220402	85220412	85220432	85220452	85270402	85270412	85270432	85270452
0/160	85221402	85221412	85221432	85221452	85271402	85271412	85271432	85271452
0/250	85222402	85222412	85222432	85222452	85272402	85272412	85272432	85272452
0/400	85223402	85223412	85223432	85223452	85273402	85273412	85273432	85273452
Price €								
0/600	85224402	85224412	85224432	85224452	85274402	85274412	85274432	85274452
0/1000	85225402	85225412	85225432	85225452	85275402	85275412	85275432	85275452
0/1600	---	---	---	---	85276402	85276412	85276432	85276452