



FRIDLE
FRIDLE GROUP

Rondelle acciaio gomma **Bonded Seals**





QUANDO
TENERCI VUOL
DIRE CRESCERE.
PER SUPERARE
NOI STESSI.

OIL & GAS

MECCANICA
MECHANICS

FOOD & BEVERAGE

FARMACEUTICA
PHARMACEUTICAL

CHIMICA
CPI

PLASTICA
PLASTIC

LAVORAZIONE CARTA
PAPER MILL

LAVORAZIONE PELLI
LEATHER PROCESSING

LAVORAZIONE LEGNO
WOOD PROCESSING

MOVIMENTAZIONE TERRA
EARTH MOVING

MOVIMENTAZIONE CARICHI
MATERIAL HANDLING EQUIPMENT

SISTEMI DI TENUTA
FLUID CONNECTORS
OLEODINAMICA

SEALING SOLUTIONS
FLUID CONNECTORS
HYDRAULICS



I NOSTRI SERVIZI OUR SERVICES



CONSULENZA E ASSISTENZA TECNICA
CONSULTANCY AND TECHNICAL ASSISTANCE



MILIONI DI PRODOTTI A MAGAZZINO
MILLIONS OF PRODUCTS IN STOCK



LOGISTICA INTEGRATA E KANBAN
INTEGRATED LOGISTICS AND KANBAN



CONTROLLO QUALITÀ IN ENTRATA E IN USCITA
INBOUND AND OUTBOUND QUALITY CONTROL



PROGETTAZIONE E PRODUZIONE A DISEGNO DI GUARNIZIONI
DESIGN AND CUSTOMIZED SEALS PRODUCTION



ETICHETTE PERSONALIZZATE E QR CODE
CUSTOMISED LABELS AND QR CODES



ORDINI WEB
WEB ORDERS



RILEVAZIONE CAMPIONI E KIT DEL CLIENTE
ARTICLE DETECTION AND KIT ASSEMBLY



ASSEMBLAGGIO E COLLAUDO TUBI E RACCORDI
ASSEMBLY AND TESTING OF HOSES AND FITTINGS



EVENTI FORMATIVI
TRAINING EVENTS

RONDELLE ACCIAIO GOMMA | BONDED SEALS

Le rondelle di tenuta acciaio gomma rappresentano una combinazione metallo/gomma ad alta resistenza.

La parte in gomma viene vulcanizzata sulla parte interna della rondella metallica. La tenuta viene garantita dalla compressione e conseguente deformazione dell'elastomero verso la superficie di tenuta.

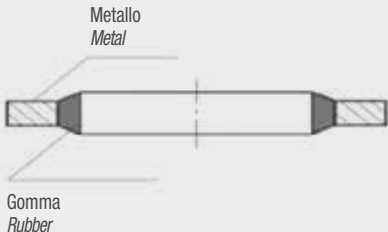
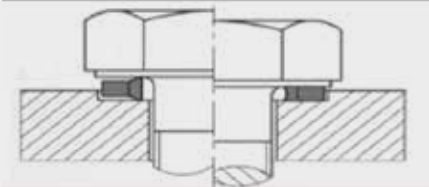
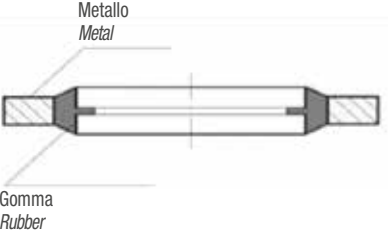
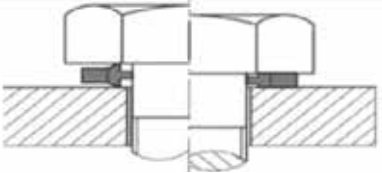
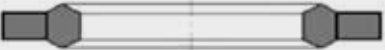
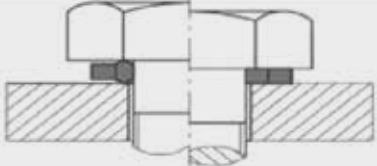
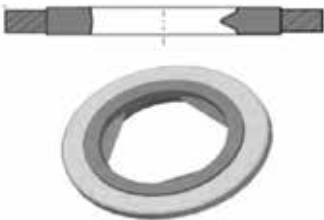
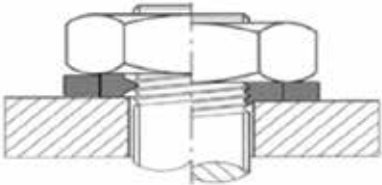
Steel and rubber bonded seals are highly resistant, thanks to the coupling of metal and rubber.

These seals are made of a synthetic rubber element vulcanized into a metal ring. The sealing effect is obtained by compression and deformation of the elastomeric/metal inside onto the surface of application.

RUGOSITÀ SUPERFICIALE SURFACE ROUGHNESS	
$R_{max} \mu m$	$R_z \mu m$
< 15	< 3.2

DATI TECNICI TECHNICAL DATA		
Materiale anello esterno Internal rubber insert	Materiale anello interno Internal rubber insert	Pressione max bar Pressure max bars
Acciaio AISI 1008 zincato giallo Yellow galvanized steel AISI 1008	NBR 70° Sh	700
	NBR 90° Sh	
Acciaio AISI 304 inox grigio Gray stainless steel AISI 304	FPM 70° Sh	
	FPM 90° Sh	

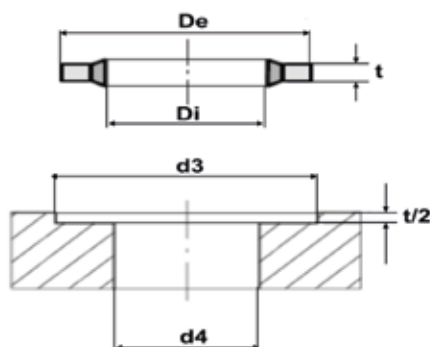
Profili più comuni e loro installazione | Common profile and their installation

Tenuta standard utilizzata in quasi tutte le applicazioni. <i>Standard bonded seal for most applications.</i>	 Metallo Metal Gomma Rubber	
Tenuta con profilo speciale per facilitare il centraggio in fase di serraggio. <i>Special self centering bonded seal for easy installation.</i>	 Metallo Metal Gomma Rubber	
Tenuta con profilo adatto per accoppiamenti aventi una minima coppia di serraggio. <i>Bonded seal suitable for elements with minimal tightening torque.</i>		A RICHIESTA UPON REQUEST 
Tenuta con profilo a tre lobi adatta per tenuta su filetti. <i>Three-lobbed bonded seal for threaded elements.</i>		A RICHIESTA UPON REQUEST 

Rondelle tenuta acciaio gomma I *Bonded seal*

Rondelle tenuta Acciaio/Gomma SERIE STANDARD Gas.

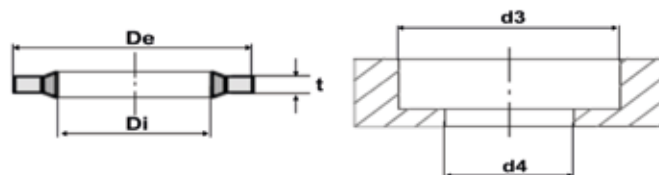
Steel rubber bonded seals STANDARD SERIES Gas.



Tipo I Type	GAS	Di	De	t	d3	d4
001		3.05	6.35	1.22	6.48	2.79
002		4.12	7.2	1.22	7.39	3.60
003		5.21	8.38	1.22	8.51	4.69
004		6.86	13.21	1.22	13.34	6.34
005		6.99	13.34	1.22	13.47	6.35
006		8.31	13.34	1.22	13.47	7.93
007		8.64	14.22	1.22	14.35	7.94
020	1/8	10.37	15.88	2.00	16.01	9.53
008		11.26	18.36	2.00	18.49	10.16
009		11.69	19.05	2.00	19.18	11.11
021	1/4	13.74	20.57	2.00	20.70	12.70
010		14.86	22.23	2.00	22.36	14.28
022		15.83	22.23	2.00	22.36	15.23
011		16.52	25.40	2.00	25.53	15.88
023	3/8	17.28	23.80	2.00	23.93	16.64
012		18.16	25.40	2.34	25.53	17.46
024		19.69	26.92	2.34	27.05	19.05
025	1/2	21.54	28.58	2.34	28.71	20.64
026	5/8	23.49	31.75	2.34	31.88	22.23
013		24.26	33.27	2.34	33.40	23.80
027	3/4	27.05	34.93	2.34	35.06	25.41
028		27.82	38.61	2.34	38.74	27.00
014		29.33	36.58	2.34	36.71	28.57
029	7/8	30.81	38.10	2.34	38.23	30.15
015		32.64	41.40	3.25	41.53	31.74
030	1	33.89	42.80	3.25	42.93	33.33
016		35.94	44.45	3.25	44.58	34.92
017		38.96	47.75	3.25	47.88	38.10
032	1 1/4	42.93	52.38	3.25	52.51	41.29
018		45.34	57.15	3.25	57.28	44.44
033	1 1/2	48.44	58.60	3.25	58.73	47.64
019		51.69	63.50	3.25	63.63	50.79
034	1 3/4	54.89	69.85	3.25	69.98	53.99
036	2	60.58	73.03	3.25	73.16	59.62
038	2 1/4	66.68	79.50	3.25	79.63	65.50
039	2 1/2	76.08	90.17	3.25	90.30	75.18

Rondelle tenuta Acciaio/Gomma SERIE CETOP.

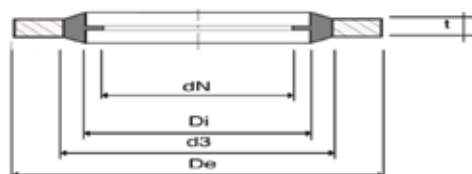
Steel rubber bonded seals CETOP SERIES.



Tipo I Type	GAS	Di	De	t	d3	d4
519	1/16	8.30	12.70	1.25	13.00	
510	1/8	10.40	14.70	1.25	15.00	
511	1/4	13.85	18.70	1.25	19.00	
512	3/8	17.35	22.70	1.25	23.00	
513	1/2	21.65	26.70	1.25	27.00	
514	3/4	27.30	32.50	1.25	33.00	
515	1	34.20	39.50	2.00	40.00	
516	1 1/4	42.80	49.50	2.00	50.00	
517	1 1/2	48.70	55.50	2.00	56.00	
518	2	60.50	68.50	2.00	69.00	

Rondelle tenuta Acciaio/Gomma SERIE AUTOCENTRANTE.

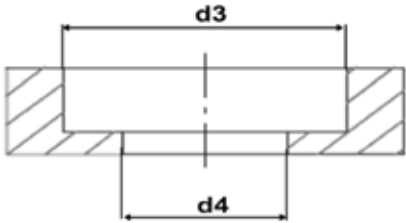
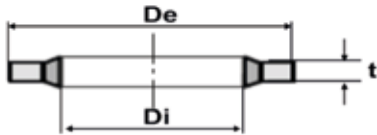
Steel rubber bonded seals SELF-CENTERING SERIES.



Tipo I Type	GAS	Di	De	d3	dn	t
866	M8	8.70	14.00	10.40	6.40	1.00
820	1/8	10.37	15.88	11.84	8.26	2.00
821	1/4	13.74	20.57	15.21	11.18	2.00
868	M14	14.70	22.00	16.40	11.38	1.50
870	M16	16.70	24.00	18.40	13.41	1.50
823	3/8	17.28	23.80	18.75	14.76	2.00
872	M18	18.70	26.00	20.40	14.76	1.50
873	M20	20.70	28.00	22.50	16.76	1.50
825	1/2	21.54	28.58	23.01	18.24	2.47
874	M22	22.70	30.00	24.40	18.74	2.00
826	5/8	23.49	31.75	24.97	20.27	2.47
827	3/4	27.05	34.93	28.53	23.83	2.47
829	7/8	30.81	38.10	32.29	27.51	2.47
830	1	33.89	42.80	36.88	29.92	3.40
832	1 1/4	42.93	52.38	45.93	38.45	3.40
834	1 1/2	48.44	58.60	51.39	44.45	3.40
836	2	60.58	73.03	63.63	56.26	3.40
839	2 1/2	76.08	90.17	79.38	71.50	3.40

Rondelle tenuta acciaio gomma | *Bonded seal*

Rondelle tenuta Acciaio/Gomma SERIE STANDARD Metrica.
Steel rubber bonded seals SELF-CENTERING SERIES.

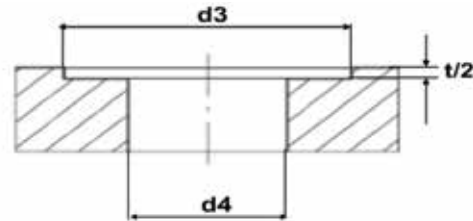
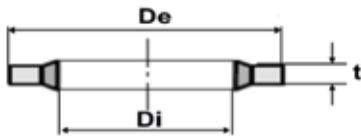


Tipo Type	GAS	Di	De	t	d3	d4
317		16.70	23.00	1.50	23.13	16.20
319		17.20	23.90	2.10	24.03	16.70
230		17.40	24.00	1.50	24.30	15.00
231		18.00	24.70	1.50	25.00	17.00
232	M18	18.70	26.00	1.50	26.30	17.00
320		18.70	27.00	2.00	27.13	18.20
233	M20	20.70	28.00	1.50	28.30	19.00
321		20.70	29.00	2.00	29.13	20.20
234		21.50	28.70	2.50	29.00	19.00
323		21.70	30.00	2.00	30.13	21.20
235		22.50	28.00	1.50	28.30	21.00
236	M22	22.70	30.00	2.00	30.30	21.00
237		22.70	30.00	3.00	30.30	21.00
324		22.70	31.00	2.00	31.13	22.20
325		23.70	32.00	2.00	32.13	23.20
238	M24	24.70	32.00	2.00	32.30	21.00
326		24.70	33.00	2.00	33.13	24.20
327		27.00	35.30	2.00	35.43	26.20
240		27.20	36.00	2.00	36.30	25.00
328		27.70	36.00	2.00	36.13	27.20

Tipo Type	GAS	Di	De	t	d3	d4
329		28.60	36.00	2.00	36.13	28.20
330		29.20	37.50	2.00	37.63	28.70
331		30.70	39.00	2.00	39.13	30.20
242		31.00	39.00	2.00	39.30	28.00
243	M33	33.70	42.00	2.00	42.30	28.00
244		34.30	43.00	2.00	43.30	31.00
245	M36	36.70	46.00	2.00	46.30	31.00
333		37.00	48.00	2.50	48.13	36.20
246		40.00	51.00	2.50	51.30	37.00
247	M42	42.70	53.00	3.00	53.30	37.00
335		43.00	54.00	2.50	54.13	42.20
336		46.00	57.00	2.50	57.13	45.20
248	M48	48.70	59.00	3.00	59.30	37.00
337		49.00	60.00	2.50	60.13	48.20
249		52.00	60.00	3.00	60.30	43.00
250		53.30	64.50	3.00	64.80	50.00
251		60.70	73.00	3.00	73.30	50.00
252		68.60	79.50	3.50	79.65	68.20
253		76.10	90.30	3.38	90.45	75.20
254		89.09	101.48	3.25	101.63	88.20

Rondelle tenuta acciaio gomma | *Bonded seal*

Rondelle tenuta Acciaio/Gomma SERIE STANDARD Metrica.
Steel rubber bonded seals STANDARD SERIES Gas-Metric.



Tipo Type	GAS	Di	De	t	d3	d4
301		3.60	7.50	1.00	3.73	3.20
201		4.10	7.20	1.00	7.50	3.20
202		4.50	7.00	1.00	7.35	4.20
302	M4	4.60	9.00	1.00	9.30	4.30
303		5.60	10,00	1.00	10.13	5.20
203	M5	5.70	9.00	1.00	9.30	5.30
204		5.70	10.00	1.00	10.30	5.30
205		6.20	9.20	1.00	9.50	5.30
304		6.60	11.00	1.00	11.13	6.20
206		6.70	10.00	1.00	10.30	6.40
207	M6	6.70	11.00	1.30	11.30	6.40
208		6.85	11.00	2.50	11.35	6.40
305		7.00	13.27	1.00	13.40	6.20
306		7.00	11.40	1.00	11.53	6.20
209		7.10	12.00	1.00	12.30	6.40
210		7.30	10.20	1.00	10.50	6.40
211		8.50	13.40	1.00	13.70	6.40
307		8.60	13.00	1.00	13.13	8.20
212	M8	8.70	13.00	1.00	13.30	8.40
213		8.70	14.00	1.00	14.30	8.40
214		8.70	16.00	1.00	16.30	8.40

Tipo Type	GAS	Di	De	t	d3	d4
215		9.30	13.30	1.00	13.60	8.40
216		10.35	16.00	2.00	16.17	9.95
217	M10	10.70	17.00	1.50	17.13	10.20
310		10.70	16.00	1.50	16.30	8.40
218		10.70	18.00	1.50	18.30	8.40
219		11.40	16.30	1.50	16.60	10.50
312		11.80	18.50	1.50	18.80	10.50
220		11.80	19.10	1.50	19.40	10.50
221		11.80	18.10	1.50	18.23	11.20
222		12.70	18.00	1.50	18.30	10.50
313		12.70	20.00	1.50	20.30	10.50
223	M12	12.70	19.0	1.50	19.13	12.20
224		13.70	20.00	1.50	20.30	13.00
225		13.70	22.00	1.50	22.30	13.00
315		13.80	20.10	1.50	20.23	13.20
226		14.00	18.70	1.50	19.00	13.00
316		14.70	22.00	1.50	22.30	13.00
227	M14	14.70	21.00	1.50	21.13	14.20
228		16.00	22.70	1.50	23.00	15.00
229	M16	16.70	24.00	1.50	24.30	15.00

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