

V-rings





V-RINGS

V-ring anelli tenuta frontale | V-ring front seals

Anelli tenuta frontale tipo V-ring.

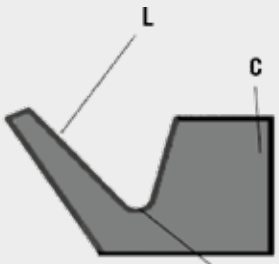
V-ring front seals.

CARATTERISTICHE PRINCIPALI | MAIN FEATURES

Anello a V per tenuta frontale su alberi rotanti realizzato in elastomero.

Elastomeric V-shaped axial seal for rotary shafts.

DESCRIZIONE | DESCRIPTION

	L Il corpo o spalla del v-ring, garantisce un'ottima adesione all'albero rotante. C The seal body or shoulder assures perfect adherence to the rotary shaft.
	L La struttura conica del labbro aderisce alla superficie assiale adattandosi anche ad eventuali inclinazioni dell'albero. L The conical and flexible sealing lip adheres to the axial surface and adapts to the shaft inclination.
	G La giunzione tra il labbro e la spalla avviene tramite un prolungamento che funge da molla. G The hinge acts as a sprung connection between the body and the lip.

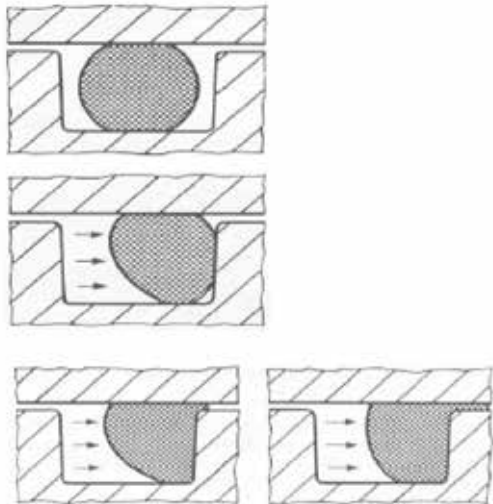
FUNZIONAMENTO | INSTALLATION AND OPERATION

L'anello V-ring viene calzato sull'albero con il labbro di tenuta aderente alla superficie assiale.

L'anello V-ring ruota assieme all'albero, il labbro viceversa striscia sulla parte fissa dove garantirà una tenuta nei due versi dall'interno verso l'esterno e che inquinanti non filtrino all'interno.

The V-ring is installed with the sealing lip adhering to the axial counter-face.

The V-Ring rotates with the shaft and seals against the stationary counter-face perpendicular to the shaft, preventing leakage of inner fluids from the inside and filtration of contaminants from the outside.



TIPI E PROFILI | TYPES AND PROFILES

VA	
	Tipo VA, profilo più comunemente usato per alberi da 3 mm a 1200 mm. Diametri maggiori sono realizzabili vulcanizzati. <i>Type VA is the most commonly used for shaft diameters between 3 mm and 1200 mm. Vulcanized V-Rings are available for larger diameters.</i>

VS	
	Tipo VS, profilo del labbro uguale al tipo VA. Differisce dal tipo VA per un'estensione del corpo o spalla aumentando così la forza dell'accoppiamento tra anello e albero anche del 50%. Questa tipologia si consiglia in presenza di alte velocità e lunghe esposizioni a contaminanti esterni. La gamma dei diametri va da 5 mm a 200 mm. <i>Type VS has the same sealing lip of type VA, but has a wider body to ensure higher radial force and improve the coupling between shaft and ring by up to 50%. Type VS is recommended for high velocity and long term exposure to contaminants. Diameters range between 5 mm and 200 mm.</i>

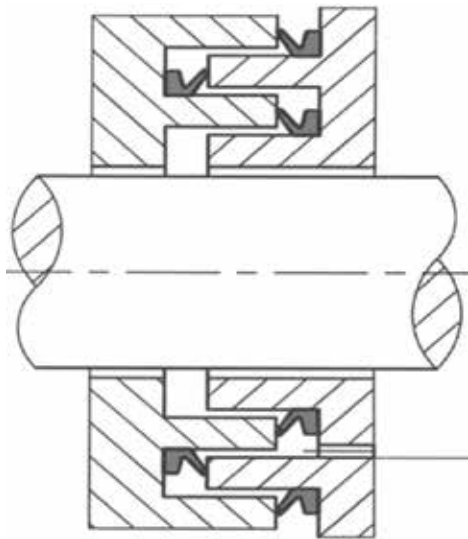
VL	
	Tipo VL, profilo caratterizzato per un ridotto ingombro indicato per applicazioni di tenuta a labirinto. La gamma dei diametri va da 120 mm a 600 mm. <i>Type VL is recommended for applications in confined spaces (e.g. Diameters range between 120 mm and 600 mm).</i>

VE	
	Tipo VE, profilo molto rigido per applicazioni molto gravose. La gamma dei diametri va da 300 mm a 1200 mm. <i>Type VE is a heavy-duty large diameter seal, ideal for heavy load applications. Diameters range between 300 mm and 1200 mm.</i>

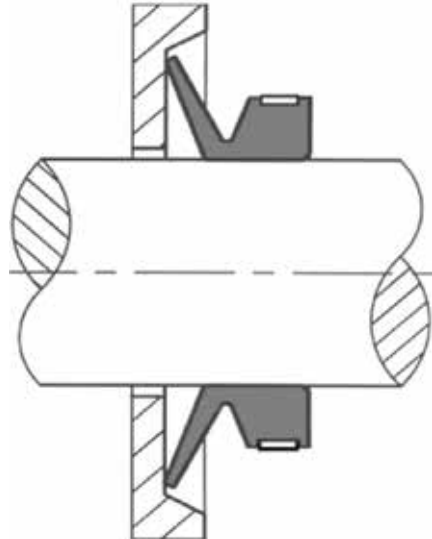
VB	
	Tipo VB, profilo con la stessa geometria e rigidità del VE. Viene utilizzato per impieghi gravosi e su diametri oltre i 300 mm fino ai 2000 mm. Nella parte esterna della spalla viene ricavata una cava per installare una fascetta metallica per un migliore montaggio radiale. Il tipo VB viene realizzato da estruso vulcanizzato. <i>Type VB is also a heavy-duty seal for heavy loads and diameters greater than 300 mm and up to 2000 mm. It comes with an external groove for clamping band installation and secure radial mounting. Type VB is made of extruded vulcanized rubber.</i>

Esempi di montaggio | *Installation samples*

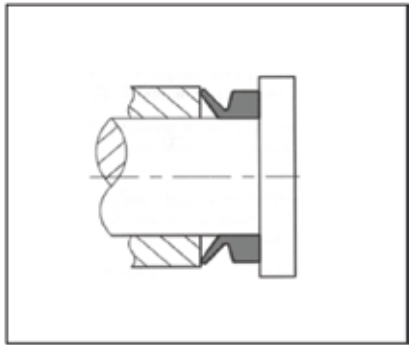
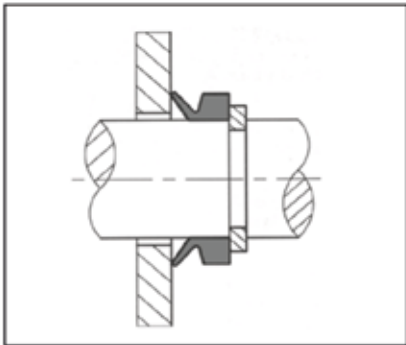
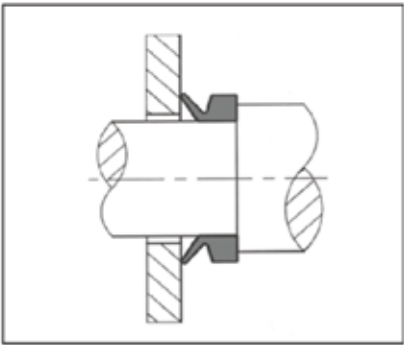
TENUTE A LABIRINTO | LABYRINTH SYSTEM



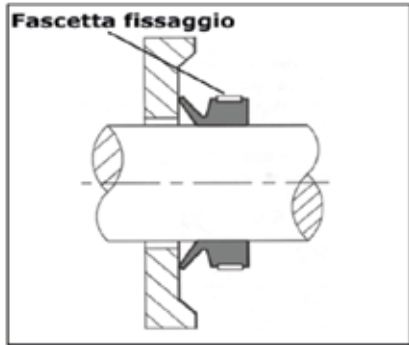
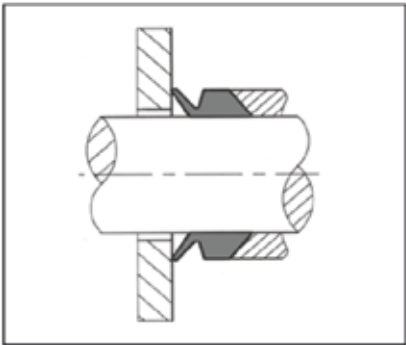
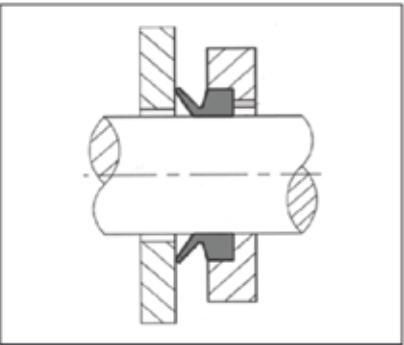
MONTAGGIO TIPO VB CON FASCETTA | TYPE VB INSTALLATION WITH CLAMPING BAND



APPOGGIO ASSIALE | AXIAL SUPPORT



APPOGGIO ASSIALE, RADIALE | AXIAL AND RADIAL SUPPORT



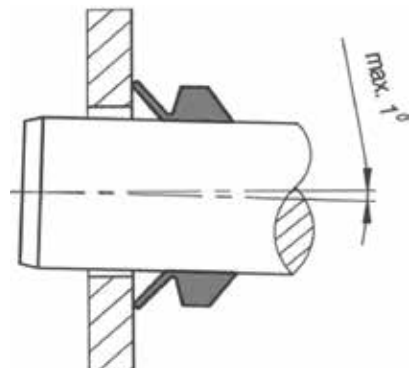
V-RINGS

Avvertenze | Instructions

INCLINAZIONI DELL'ALBERO | SHAFT INCLINATION

A differenza degli altri anelli di tenuta il V-ring può mantenere un ottimo grado di tenuta anche quando l'albero rotante presenta un'inclinazione rispetto all'asse di rotazione. Si consiglia di non superare mai di 1° l'inclinazione.

As opposed to other sealing rings, the V-Ring can maintain an excellent sealing capacity even when the rotary shaft is tilted with respect to its axis of rotation. An inclination no greater than 1° is recommended.



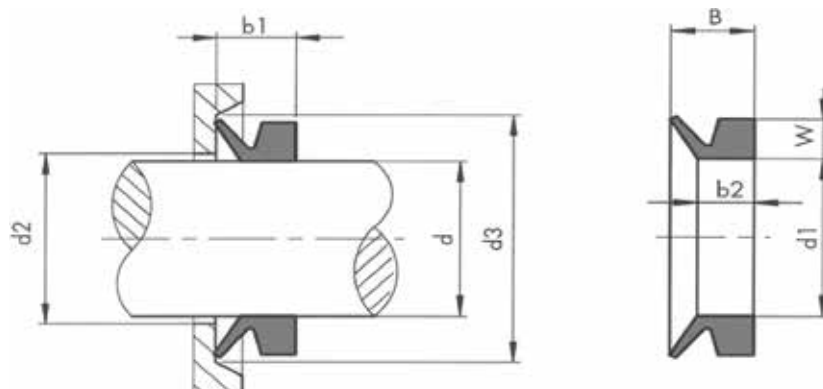
Rugosità superficiale | Surface roughness

Parametro Parameter	Valore Value
Rmax	10 - 16 µm
Rz	6.3 - 10 µm
Ra	1.6 - 3.2 µm

DATI TECNICI | TECHNICAL DATA

Parametro Parameter	Tipo montaggio V-ring V-Ring installation mode			Temperatura °C Temperature °C		Durezza Hardness
	Normale Normal	Appoggio assiale Axial support	Appoggio assiale, radiale Axial and radial support	NBR	FPM	
Velocità m/s Velocity m/s	8	8	12	-40 +100	-20 +180	
				60 Sh A	65 Sh A	

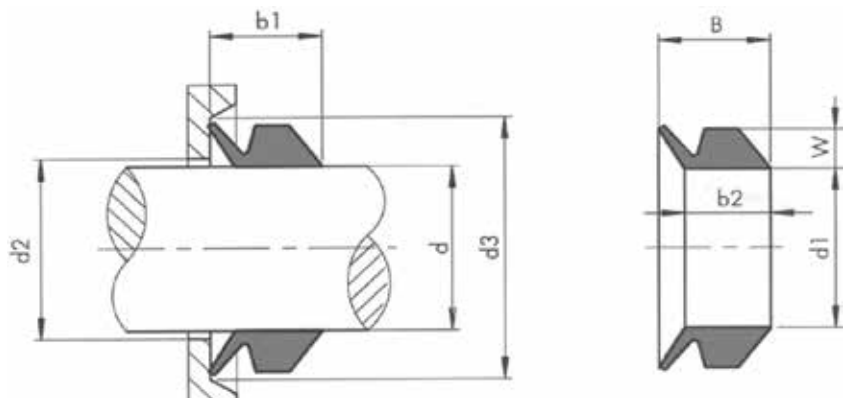
Anelli tipo VA | Type VA rings



Codice Code	Diametro albero d (mm) Shaft diameter d (mm)	d2 max	d2 min	larghezza installato b1 Mounting width b1	Diametro anello d1 Ring diameter d1	Altezza profilo W Profile height W	Larghezza profilo B Profile width B	b2
VA0003	2.7 - 3.4	d + 1	d + 4	2.5 ± 0.3	2.5	1.5	3.0	2.1
VA0004	3.5 - 4.4	d + 1	d + 6	3.0 ± 0.4	3.2	2.0	3.7	2.4
VA0005	4.5 - 5.4	d + 1	d + 6	3.0 ± 0.4	4.0	2.0	3.7	2.4
VA0006	5.5 - 6.4	d + 1	d + 6	3.0 ± 0.4	5.0	2.0	3.7	2.4
VA0007	6.5 - 7.5	d + 1	d + 6	3.0 ± 0.4	6.0	2.0	3.7	2.4
VA0008	8.0 - 9.0	d + 1	d + 6	3.0 ± 0.4	7.0	2.0	3.7	2.4
VA0010	9.5 - 11.0	d + 2	d + 9	4.5 ± 0.6	9.0	3.0	5.5	3.4
VA0012	11.5 - 12.0	d + 2	d + 9	4.5 ± 0.6	10.5	3.0	5.5	3.4
VA0014	13.5 - 15.0	d + 2	d + 9	4.5 ± 0.6	12.5	3.0	5.5	3.4
VA0016	15.5 - 17.0	d + 2	d + 9	4.5 ± 0.6	14.0	3.0	5.5	3.4
VA0018	17.5 - 18.5	d + 2	d + 9	4.5 ± 0.6	16.0	3.0	5.5	3.4
VA0020	19.0 - 20.5	d + 2	d + 12	6.0 ± 0.8	18.0	4.0	7.5	4.7
VA0022	21.0 - 23.5	d + 2	d + 12	6.0 ± 0.8	20.0	4.0	7.5	4.7
VA0025	24.0 - 26.5	d + 2	d + 12	6.0 ± 0.8	22.0	4.0	7.5	4.7
VA0028	27.0 - 28.5	d + 2	d + 12	6.0 ± 0.8	25.0	4.0	7.5	4.7
VA0030	29.0 - 30.5	d + 3	d + 12	6.0 ± 0.8	27.0	4.0	7.5	4.7
VA0032	31.0 - 32.5	d + 3	d + 12	6.0 ± 0.8	29.0	4.0	7.5	4.7
VA0035	33.0 - 35.5	d + 3	d + 12	6.0 ± 0.8	31.0	4.0	7.5	4.7
VA0038	36.0 - 37.5	d + 3	d + 12	6.0 ± 0.8	34.0	4.0	7.5	4.7
VA0040	38.0 - 42.0	d + 3	d + 15	7.0 ± 1.0	36.0	5.0	9.0	5.5
VA0045	43.0 - 47.0	d + 3	d + 15	7.0 ± 1.0	40.0	5.0	9.0	5.5
VA0050	48.0 - 52.0	d + 3	d + 15	7.0 ± 1.0	45.0	5.0	9.0	5.5
VA0055	53.0 - 57.0	d + 3	d + 15	7.0 ± 1.0	49.0	5.0	9.0	5.5
VA0060	58.0 - 62.0	d + 3	d + 15	7.0 ± 1.0	54.0	5.0	9.0	5.5
VA0065	63.0 - 67.0	d + 3	d + 15	7.0 ± 1.0	58.0	5.0	9.0	5.5
VA0070	68.0 - 72.0	d + 4	d + 18	9.0 ± 1.2	63.0	6.0	11.0	6.8
VA0075	73.0 - 77.0	d + 4	d + 18	9.0 ± 1.2	67.0	6.0	11.0	6.8
VA0080	78.0 - 82.0	d + 4	d + 18	9.0 ± 1.2	72.0	6.0	11.0	6.8
VA0085	83.0 - 87.0	d + 4	d + 18	9.0 ± 1.2	76.0	6.0	11.0	6.8
VA0090	88.0 - 92.0	d + 4	d + 18	9.0 ± 1.2	81.0	6.0	11.0	6.8
VA0095	93.0 - 97.0	d + 4	d + 18	9.0 ± 1.2	85.0	6.0	11.0	6.8
VA0100	98.0 - 104.0	d + 4	d + 18	9.0 ± 1.2	90.0	6.0	11.0	6.8
VA0110	105.0 - 114.0	d + 4	d + 21	10.5 ± 1.5	99.0	7.0	12.8	7.9
VA0120	115.0 - 124.0	d + 4	d + 21	10.5 ± 1.5	108.0	7.0	12.8	7.9
VA0130	125.0 - 134.0	d + 4	d + 21	10.5 ± 1.5	117.0	7.0	12.8	7.9
VA0140	135.0 - 144.0	d + 4	d + 21	10.5 ± 1.5	126.0	7.0	12.8	7.9
VA0150	145.0 - 154.0	d + 4	d + 21	10.5 ± 1.5	135.0	7.0	12.8	7.9
VA0160	155.0 - 164.0	d + 5	d + 24	12.0 ± 1.8	144.0	8.0	14.5	9.0
VA0170	165.0 - 174.0	d + 5	d + 24	12.0 ± 1.8	153.0	8.0	14.5	9.0

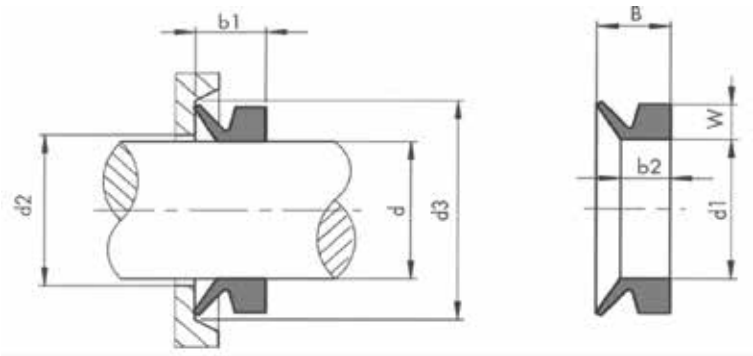
V-RINGS

Anelli tipo VS | Type VS rings



Codice Code	Diametro albero d (mm) Shaft diameter d (mm)	d2 max	d2 min	larghezza installato b1 Mounting width b1	Diametro anello d1 Ring diameter d1	Altezza profilo W Profile height W	Larghezza profilo B Profile width B	b2
VS006	5.5 - 6.4	d + 1	d + 6	4.5 ± 0.4	5.0	2.0	5.2	3.9
VS007	6.5 - 7.5	d + 1	d + 6	4.5 ± 0.4	6.0	2.0	5.2	3.9
VS008	8.0 - 9.0	d + 1	d + 6	4.5 ± 0.4	7.0	2.0	5.2	3.9
VS010	9.5 - 11.0	d + 2	d + 9	6.7 ± 0.6	9.0	3.0	7.7	5.6
VS012	11.5 - 13.0	d + 2	d + 9	6.7 ± 0.6	10.5	3.0	7.7	5.6
VS014	13.5 - 15.0	d + 2	d + 9	6.7 ± 0.6	12.5	3.0	7.7	5.6
VS016	15.5 - 17.0	d + 2	d + 9	6.7 ± 0.6	14.0	3.0	7.7	5.6
VS018	17.5 - 18.5	d + 2	d + 9	6.7 ± 0.6	16.0	3.0	7.7	5.6
VS020	19.0 - 20.5	d + 2	d + 12	9.0 ± 0.8	18.0	4.0	10.5	7.9
VS022	21.0 - 23.5	d + 2	d + 12	9.0 ± 0.8	20.0	4.0	10.5	7.9
VS025	24.0 - 26.5	d + 2	d + 12	9.0 ± 0.8	22.0	4.0	10.5	7.9
VS028	27.0 - 28.5	d + 3	d + 12	9.0 ± 0.8	25.0	4.0	10.5	7.9
VS030	29.0 - 30.5	d + 3	d + 12	9.0 ± 0.8	27.0	4.0	10.5	7.9
VS032	31.0 - 32.5	d + 3	d + 12	9.0 ± 0.8	29.0	4.0	10.5	7.9
VS035	33.0 - 35.5	d + 3	d + 12	9.0 ± 0.8	31.0	4.0	10.5	7.9
VS038	36.0 - 37.5	d + 3	d + 12	9.0 ± 0.8	34.0	4.0	10.5	7.9
VS040	38.0 - 42.0	d + 3	d + 15	11.0 ± 1.0	36.0	5.0	13.0	9.5
VS045	43.0 - 47.0	d + 3	d + 15	11.0 ± 1.0	40.0	5.0	13.0	9.5
VS050	48.0 - 52.0	d + 3	d + 15	11.0 ± 1.0	45.0	5.0	13.0	9.5
VS055	53.0 - 57.0	d + 3	d + 15	11.0 ± 1.0	49.0	5.0	13.0	9.5
VS060	58.0 - 62.0	d + 3	d + 15	11.0 ± 1.0	54.0	5.0	13.0	9.5
VS065	63.0 - 67.0	d + 3	d + 15	11.0 ± 1.0	58.0	5.0	13.0	9.5
VS070	68.0 - 72.0	d + 4	d + 18	13.5 ± 1.2	63.0	6.0	15.5	11.3
VS075	73.0 - 77.0	d + 4	d + 18	13.5 ± 1.2	67.0	6.0	15.5	11.3
VS080	78.0 - 82.0	d + 4	d + 18	13.5 ± 1.2	72.0	6.0	15.5	11.3
VS085	83.0 - 87.0	d + 4	d + 18	13.5 ± 1.2	76.0	6.0	15.5	11.3
VS090	88.0 - 92.0	d + 4	d + 18	13.5 ± 1.2	81.0	6.0	15.5	11.3
VS095	93.0 - 97.0	d + 4	d + 18	13.5 ± 1.2	85.0	6.0	15.5	11.3
VS100	98.0 - 104.0	d + 4	d + 18	13.5 ± 1.2	90.0	6.0	15.5	11.3
VS110	105.0 - 114.0	d + 4	d + 21	15.5 ± 1.5	99.0	7.0	18.0	13.1
VS120	115.0 - 124.0	d + 4	d + 21	15.5 ± 1.5	108.0	7.0	18.0	13.1
VS130	125.0 - 134.0	d + 4	d + 21	15.5 ± 1.5	117.0	7.0	18.0	13.1
VS140	135.0 - 144.0	d + 4	d + 21	15.5 ± 1.5	126.0	7.0	18.0	13.1
VS150	145.0 - 154.0	d + 4	d + 21	15.5 ± 1.5	135.0	7.0	18.0	13.1
VS160	155.0 - 164.0	d + 5	d + 24	18.0 ± 1.8	144.0	8.0	20.5	15.0
VS170	165.0 - 174.0	d + 5	d + 24	18.0 ± 1.8	153.0	8.0	20.5	15.0
VS180	175.0 - 184.0	d + 5	d + 24	18.0 ± 1.8	162.0	8.0	20.5	15.0
VS190	185.0 - 194.0	d + 5	d + 24	18.0 ± 1.8	171.0	8.0	20.5	15.0
VS199	195.0 - 210.0	d + 5	d + 24	18.0 ± 1.8	180.0	8.0	20.5	15.0

Anelli tipo VL | Type VL rings



Codice Code	Diametro albero d (mm) Shaft diameter d (mm)	d2 max	d2 min	larghezza installato b1 Mounting width b1	Diametro anello d1 Ring diameter d1	Altezza profilo W Profile height W	Larghezza profilo B Profile width B	b2
VL120	115 - 120	d + 5	d + 20	18.0 ± 1.8	108	6.5	10.5	6.0
VL130	125 - 130	d + 5	d + 20	18.0 ± 1.8	117	6.5	10.5	6.0
VL140	135 - 140	d + 5	d + 20	18.0 ± 1.8	126	6.5	10.5	6.0
VL150	145 - 150	d + 5	d + 20	18.0 ± 1.8	135	6.5	10.5	6.0
VL160	155 - 160	d + 5	d + 20	18.0 ± 1.8	144	6.5	10.5	6.0
VL170	165 - 170	d + 5	d + 20	18.0 ± 1.8	153	6.5	10.5	6.0
VL180	175 - 180	d + 5	d + 20	18.0 ± 1.8	162	6.5	10.5	6.0
VL190	185 - 190	d + 5	d + 20	18.0 ± 1.8	171	6.5	10.5	6.0
VL200	195 - 205	d + 5	d + 20	18.0 ± 1.8	182	6.5	10.5	6.0
VL220	210 - 230	d + 5	d + 20	18.0 ± 1.8	198	6.5	10.5	6.0
VL250	233 - 255	d + 5	d + 20	18.0 ± 1.8	225	6.5	10.5	6.0
VL275	260 - 280	d + 5	d + 20	18.0 ± 1.8	247	6.5	10.5	6.0
VL300	285 - 305	d + 5	d + 20	18.0 ± 1.8	270	6.5	10.5	6.0
VL325	310 - 330	d + 5	d + 20	18.0 ± 1.8	292	6.5	10.5	6.0
VL350	335 - 360	d + 5	d + 20	18.0 ± 1.8	315	6.5	10.5	6.0
VL375	365 - 380	d + 5	d + 20	18.0 ± 1.8	337	6.5	10.5	6.0
VL400	385 - 405	d + 5	d + 20	18.0 ± 1.8	360	6.5	10.5	6.0
VL425	410 - 435	d + 5	d + 20	18.0 ± 1.8	382	6.5	10.5	6.0
VL450	440 - 475	d + 5	d + 20	18.0 ± 1.8	405	6.5	10.5	6.0
VL500	480 - 525	d + 5	d + 20	18.0 ± 1.8	450	6.5	10.5	6.0
VL550	530 - 575	d + 5	d + 20	18.0 ± 1.8	485	6.5	10.5	6.0
VL600	580 - 630	d + 5	d + 20	18.0 ± 1.8	540	6.5	10.5	6.0
VL650	615 - 735	d + 5	d + 20	18.0 ± 1.8	600	6.5	10.5	6.0

FRIDLE

VICENZA

Via G. Galilei, 53 - 36030 Costabissara (VI) - Italy
T. +39 0444 971856 - info@fridle.com

BRESCIA

Via A. Maestri, 14 - 25125 Brescia (BS) - Italy
T. +39 030 6700301 - fridleBS@fridle.com

MANTOVA

Via Sabin, 12/a - 46029 Suzzara (MN) - Italy
T. +39 0376 274885 - fridleMN@fridle.com

MODENA

Via del Crociale, 34 - 41042 Fiorano Modenese (MO) - Italy
T. +39 0536 1795600 - fridleMO@fridle.com

TORINO

Via N. Bixio, 28 - 10048 Vinovo (TO) | Italy
T. +39 011 3170052 - fridleTO@fridle.com

Richieste d'offerta: richieste@fridle.com
Requests for quotation: enquiries@fridle.com
Ordini: ordini@fridle.com
Orders: orders@fridle.com

HT

Via Galvani, 10 - 36010 Zanè (VI) - Italy
T.+39 0445 540632 - info@ht-hydraulic.com
ht-hydraulic.com

FRIDLE ACADEMY

Via G. Galilei, 53 - 36030 Costabissara (VI) - Italy
T. +39 0444 971856
Segreteria didattica - frgacademy@fridle.com





fridle.com

Le indicazioni tecniche riportate in questo documento vengono fornite a Fridle Group S.r.l. dai partner, hanno carattere indicativo e non costituiscono istruzioni d'uso. Fridle Group S.r.l. declina ogni responsabilità per il loro contenuto.

The technical specifications contained in this document are provided to Fridle Group S.r.l. by the partners, it is to be considered indicative and it does not constitute instructions for use. Fridle Group S.r.l. declines any responsibility for its content.