

The logo for SUBEK, featuring the word "SUBEK" in a bold, blue, stylized font with a registered trademark symbol (®) to the upper right.

MOTORSPORTTECHNIK



Catalogue Produktkatalog



YOUR PARTNER IN:

Concepts
Development
Construction
Sample engineering
Research
Manufacturing
Procurement
Assembly
Quality assurance
CNC– processing

Product information

IHR PARTNER FÜR:

Konzepte
Entwicklung
Konstruktion
Musterbau
Versuche
Herstellung
Beschaffung
Montage
Qualitätssicherung
CNC-Bearbeitung

Produktinformation

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HRA Nr: 702597 Amtsgericht Mannheim

Our service for you:

- Problem analysing
- Technical drawings
- CAD construction
- Rapid sample manufacturing
- Fast procurement of motorsport parts from all over the world
- Welding of all materials
- Highly developed adhesive techniques
- Discretion, no know-how transfer

Mounting service for sensitive components with appropriate quality assurance

Realization of hydraulics, pneumatics and mechanical testing series

Touch up and restoration of valuable used parts

Manufacturing and distribution of:

- Lightweight, high performance hydraulic systems
- Valves, filters, strainers, connectors, adapters, hose
- Cables, switches and fuses, according to aircraft specifications
- Hydrostatic, high-performance fuel pumps with direct drive

Our reference:
All successful racing teams

Unser Service für Sie:

- Problemanalyse
- Technische Zeichnungen
- CAD Konstruktion
- Schneller Musterbau
- Schnellste Beschaffung von Rennsportzubehör aus weltweitem Angebot
- Schweißarbeiten an allen Werkstoffen
- Hochentwickelte Klebtechnik mit Konstruktionsklebstoffen
- Diskretion, kein Know-How-Transfer

Montageservice hochsensibler Komponenten mit entsprechender Qualitätssicherung

Durchführung von Hydraulik-, Pneumatik-, und Mechanik Versuchsreihen

Nacharbeitung und Instandsetzung von hochwertigen Verschleißteilen

Herstellung und Vertrieb von:

- Leichtbau-Hochleistungs-Hydraulik Systemen
- Ventilen, Filtern, Sieben, (nach Zeichnungen), Anschlüssen, Adaptern, Schläuchen
- elektrischen Kabeln, Schaltern, Sicherungen, nach Luftfahrtnormen (LN)
- hydrostatischen Hochleistungskraftstoffpumpen mit Direktantrieb

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Hoses / Schläuche

Datasheet / Datenblatt

Series	Dashsize	Material	Braid / Gewebe	Inner	Outer	Thread	Oper.	Burst	Oper.	Bend	Weight	Part No.
				diameter /mm	diameter /mm	UNF	press. / bar	press. / bar	temp. / C °	radius / mm	gr./ m	Art. Nr.
300	-6	PTFE	1 x V4A	9,14	13,71	9/16 -18	34,5	138	204	25,4	160	N-S 3060 0001
300	-6	PTFE	1 x Polyester	9,14	13,71	9/16 -18	17,25	69	125	25,4	90	N-S 3060 0002
300	-6	PTFE	1 x Nomex	9,14	13,71	9/16 -18	17,25	69	150	25,4	90	N-S 3060 0003
300	-6	PTFE	1 x HTP	9,14	13,71	9/16 -18	17,25	69	200	25,4	86	N-S 3060 0004
300	-8	PTFE	1 x V4A	10,92	15,74	03.04.2016	34,5	138	204	38,1	190	N-S 3080 0001
300	-8	PTFE	1 x Polyester	10,92	15,74	03.04.2016	17,25	69	125	38,1	120	N-S 3080 0002
300	-8	PTFE	1 x Nomex	10,92	15,74	03.04.2016	17,25	69	150	38,1	120	N-S 3080 0004
300	-8	PTFE	1 x HTP	10,92	15,74	03.04.2016	17,25	69	200	38,1	100	N-S 3080 0003
300	-10	PTFE	1 x V4A	13,71	19,05	07.08.2014	34,5	138	204	50,8	270	N-S 3100 0001
300	-10	PTFE	1 x Polyester	13,71	19,05	07.08.2014	17,25	69	125	50,8	190	N-S 3100 0002
300	-10	PTFE	1 x Nomex	13,71	19,05	07.08.2014	17,25	69	150	50,8	190	N-S 3100 0003
300	-10	PTFE	1 x HTP	13,71	19,05	07.08.2014	17,25	69	200	50,8	148	N-S 3100 0004
300	-12	PTFE	1 x V4A	16,76	22,35	1-1/16 -12	34,5	138	204	63,5	320	N-S 3120 0001
300	-12	PTFE	1 x Polyester	16,76	22,35	1-1/16 -12	17,25	69	125	63,5	200	N-S 3120 0002
300	-12	PTFE	1 x Nomex	16,76	22,35	1-1/16 -12	17,25	69	150	63,5	200	N-S 3120 0003
300	-12	PTFE	1 x HTP	16,76	22,35	1-1/16 -12	17,25	69	200	63,5	170	N-S 3120 0004
300	-16	PTFE	1 x V4A	22,1	27,43	1-5/16 -12	34,5	138	204	88,9	390	N-S 3160 0002
300	-16	PTFE	1 x Polyester	22,1	27,43	1-5/16 -12	17,25	69	125	88,9	250	N-S 3160 0001
300	-16	PTFE	1 x Nomex	22,1	27,43	1-5/16 -12	17,25	69	150	88,9	250	N-S 3160 0003
300	-16	PTFE	1 x HTP	22,1	27,43	1-5/16 -12	17,25	69	200	88,9	230	N-S 3160 0004
300	-20	PTFE	1 x V4A	29,3	36,1	1-5/8 -12	17,25	69	204	102	560	N-S 3200 0002
300	-20	PTFE	1 x Polyester	29,3	36,1	1-5/8 -12	10,3	41	125	102	370	N-S 3200 0001
400	-4	Nitril	2 x V4A	5,6	11,2	7/16 -20	69	413	150	50	164	N-S 4040 0005
400	-4 AE	Nitril	2 x V4A	5,20	11,70	7/16 -20	69	413	150	50	167	N-S 4040 0004
400	-5	Nitril	2 x V4A	6,40	12,70	1/2-20	69	413	150	57	184	N-S 4050 0002
400	-5 AE	Nitril	2 x V4A	6,80	12,90	1/2-20	69	413	150	57	217	N-S 4050 0003
400	-6	Nitril	2 x V4A	8,60	14,00	9/16 -18	69	413	150	63	235	N-S 4060 0003
400	-6 AE	Nitril	2 x V4A	8,40	14,50	9/16 -18	69	413	150	63	231	N-S 4060 0005
400	-8	Nitril	2 x V4A	11,20	16,50	3/4-16	69	345	150	89	254	N-S 4080 0002
400	-8 AE	Nitril	2 x V4A	10,60	17,10	3/4-16	69	345	150	89	254	N-S 4080 0004
400	-10	Nitril	2 x V4A	14,20	20,30	7/8-14	69	345	150	101	313	N-S 4100 0003
400	-10 AE	Nitril	2 x V4A	13,70	20,80	7/8-14	69	345	150	101	308	N-S 4100 0033
400	-12	Nitril	2 x V4A	17,50	23,90	1-1/16 -12	69	275	150	114	430	N-S 4120 0001
400	-12 AE	Nitril	2 x V4A	16,90	24,40	1-1/16 -12	69	275	150	114	421	N-S 4120 0004
400	-16	Nitril	2 x V4A	22,30	29,20	1-5/16 -12	52	207	150	140	567	N-S 4160 0002
400	-16 AE	Nitril	2 x V4A	21,40	29,80	1-5/16 -12	52	207	150	140	567	N-S 4160 0003
400	-20	Nitril	2 x V4A	28,70	35,80	1-5/8 -12	34	138	150	203	730	N-S 4200 0002
400	-20 AE	Nitril	2 x V4A	27,80	37,30	1-5/8 -12	34	138	150	203	730	N-S 4200 0003
400	-24	Nitril	2 x V4A	34,00	43,20	1-7/8 -12	18	74	150	228	1188	N-S 4240 0002
600	-3	PTFE	1 x V4A	3,2	6,4	3/8 -24	140	827	232	38	59	N-S 6030 0006
600	-3 AE	PTFE	1 x V4A	3,2	6,8	3/8 -24	204	840	232	38	59	N-S 6030 0005
600	-3	PTFE	1 x V4A Hi-Pac	3,2	6,7	3/8 -24	207	827	232	38	77	N-S 6030 0007
600	-4	PTFE	1 x V4A	4,8	8,7	7/16 -20	140	827	232	50	72	N-S 6040 0003
600	-4 AE	PTFE	1 x V4A	4,8	8,7	7/16 -20	204	840	232	50	72	N-S 6040 0022
600	-5 AE	PTFE	1 x V4A	6,4	10,3	1/2 -20	170	700	232	50	145	N-S 6050 0002
600	-6	PTFE	1 x V4A	8,2	10,7	9/16 -18	100	540	232	100	136	N-S 6060 0003
600	-6 AE	PTFE	1 x V4A	8,0	11,9	9/16 -18	170	630	232	101	172	N-S 6060 0001
600	-6	PTFE Hi-Pac	2 x V4A	7,6	12,1	9/16 -18	204	965	204	63	250	N-S 6061 0001
600	-8 AE	PTFE	1 x V4A	10,3	14,9	3/4-16	136	560	232	117	217	N-S 6080 0001
600	-8	PTFE Hi-Pac	2 x V4A	9,9	15,4	3/4-16	204	965	204	73	320	N-S 6081 0001
600	-4		304ss	4,93	8,77		207	827	232	51	113	N-S 6040 0081

Overview-Hoses / Übersicht-Schläuche

HOSE P.T.F.E SERIES 300

A convoluted P.T.F.E inner core with integral glass fibre reinforcement and static dissipating liner. Very lightweight, ultimate flexibility, compatible with nearly all fluids, suitable for aggressive and harsh environment.

Application:

Oil-, fuel-, water and air systems

SCHLAUCH P.T.F.E SERIE 300

gewellter P.T.F.E Innenkern mit integrierter Fieberglaseinlage und antistatischer Umman-
telung, leichte Ausführung, sehr flexibel ver-
wendbar mit nahezu allen Flüssigkeiten, ge-
eignet für aggressive und raue Umgebung.

Verwendung:

Öl-, Kraftstoff-, Wasser und Luftsysteme



RUBBER HOSE SERIES 400

Design: Synthetic rubber (nitrile) with two stainless steel braids to hold the pressure.

Application:

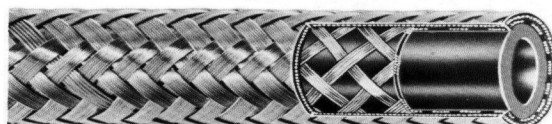
Oil-, fuel-, water and air systems

GUMMISCHLAUCH SERIE 400

Ausführung: Synthetischer Gummi (Nitril) mit
einem zweilagigen Drahtgeflecht aus rostfrei-
em Stahl als Druckträger.

Verwendung:

Öl-, Kraftstoff-, Wasser und Luftsysteme



TEFLON HOSE SERIE 600

Design: Extruded P.T.F.E
(polytetrafluoroethylene) resin with a stain-
less steel braid to hold the pressure.

Applications:

Brake, gearing and fuel systems

TEFLONSCHLAUCH SERIE 600

Ausführung: Stranggepreßtes P.T.F.E.
(Polytetrafluorethylen) mit einem zweilagigen
Drahtgeflecht aus rostfreiem Stahl als Druckträger.

Verwendung:

Brems-, Kupplungs- und Kraftstoffsysteme



our hose types meet the requirements
used in race cars and are manufactured
according to aircraft specifications.

Hi-Pac- and Viton hoses on inquiry.

Alle Schlauchtypen entsprechen höchsten
Anforderungen durch Motorsportfahrzeuge
und sind nach Luftfahrtnorm hergestellt.

Hi-Pac- und Vitonausführungen auf Anfrage.

Hose series 300 / Schlauch Serie 300

convoluted P.T.F.E.-hose / gewellter P.T.F.E.-schlauch



stainless steel braid / Edelstahlgewebe

Hose size	oper. press.	part number
-6	34,50 bar	N-S 3060 0001
-8	34,50 bar	N-S 3080 0001
-10	34,50 bar	N-S 3100 0001
-12	34,50 bar	N-S 3120 0001
-16	34,50 bar	N-S 3160 0002
-20	17,25 bar	N-S 3200 0002



Polyester braid / Polyestergewebe

Hose size	oper. press.	part number
-6	17,25 bar	N-S 3060 0002
-8	17,25 bar	N-S 3080 0002
-10	17,25 bar	N-S 3100 0002
-12	17,25 bar	N-S 3120 0002
-16	17,25 bar	N-S 3160 0001
-20	10,30 bar	N-S 3200 0001



high temp. polymer braid / Polymergewebe

Hose size	oper. press.	part number
-6	17,25 bar	N-S 3060 0004
-8	17,25 bar	N-S 3080 0003
-10	17,25 bar	N-S 3100 0004
-12	17,25 bar	N-S 3120 0004
-16	17,25 bar	N-S 3160 0004



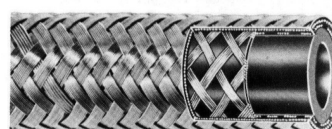
Nomex aramid braid / Nomexgewebe

Hose size	oper. press.	part number
-6	17,25 bar	N-S 3060 0003
-8	17,25 bar	N-S 3080 0004
-10	17,25 bar	N-S 3100 0003
-12	17,25 bar	N-S 3120 0003
-16	17,25 bar	N-S 3160 0003

Hose series 400 / Schlauch Serie 400

rubber hose with double stainless steel braid / Gummischlauch mit doppeltem Edelstahlgeflecht

Hose size	oper. press.	part number
-4	69 bar	N-S 4040 0005
-4 AE701	103 bar	N-S 4040 0004
-5	69 bar	N-S 4050 0002
-5 AE701	103 bar	N-S 4050 0003
-6	69 bar	N-S 4060 0003
-6AE701	103 bar	N-S 4060 0005
-8	69 bar	N-S 4080 0002
-8 AE701	86 bar	N-S 4080 0004
-10	69 bar	N-S 4100 0003
-10 AE701	86 bar	N-S 4100 0033
-12	69 bar	N-S 4120 0001
-12 AE701	86 bar	N-S 4120 0004
-16	51 bar	N-S 4160 0002
-16 AE701	69 bar	N-S 4160 0003
-20	34 bar	N-S 4200 0002
-20 AE701	55 bar	N-S 4200 0003
-24	18 bar	N-S 4240 0002



Alle Schlauchtypen entsprechen höchsten Anforderungen durch Motorsportfahrzeuge und sind nach Luftfahrtnorm hergestellt.

Hi-Pac- und Vitonausführungen auf Anfrage.

our hose types meet the requirements used in race cars and are manufactured according to aircraft specifications.

Hi-Pac- and Viton hoses on inquiry.

AE = Aeroquip / Luftfahrtausführung

Hose series 600 / Schlauch Serie 600

teflon hose with stainless steel braid / Teflonschlauch mit Edelstahlgewebe

Hose size	oper. press.	part number
-3	140 bar	N-S 6030 0006
-3 AE	204 bar	N-S 6030 0005
-3 Hytrel	207 bar	N-S 6030 0007
-4	140 bar	N-S 6040 0003
-4 AE	204 bar	N-S 6040 0022
-4 Hytrel	140 bar	N-S 6040 0001
-5 AE	170 bar	N-S 6050 0002
-6	100 bar	N-S 6060 0003
-6 AE	170 bar	N-S 6060 0001
-6 AE Hi-Pac	204 bar	N-S 6061 0001
-8 AE	136 bar	N-S 6080 0001
-8 AE Hi-Pac	204 bar	N-S 6081 0001



AE = Aeroquip / Luftfahrtausführung

Protection hose / Schutzschlauch

shrinking hose / Schrumpfschlauch

Hose size	inner dia.	colour	Material	part number
-3	9.5 mm	black	HTF	N-S 9000 0001
-4	12,7 mm	black	HTF	N-S 9000 0002
-6 / -8	19,0 mm	black	HTF	N-S 9000 0003
-10 / -12	25,4 mm	black	HTF	N-S 9000 0004
-16	38,1 mm	black	HTF	N-S 9000 0005
-2	6,4 mm	black	PST	N-S 9000 0021
-3	9,5 mm	black	PST	N-S 9000 0006
-3	9,5 mm	blue	PST	N-S 9000 0038
-4	12,7 mm	black	PST	N-S 9000 0009
-6 / -8	19 mm	black	PST	N-S 9000 0007
-10 / -12	25,4 mm	black	PST	N-S 9000 0008
-16	38,1 mm	black	PST	N-S 9000 0028

TECHNIKRAFT PRODUKTE

Protection hose / Schutzschlauch

fibreglass hose, heat resistant up to 250°C / Glasseidenschlauch, hitzebeständig bis 250°C

Hose size	inner dia.	part number
-3	7mm	N-S 9002 0001
-3/-4	8mm	N-S 9002 0002
-4	9mm	N-S 9002 0003
-6	14mm	N-S 9002 0004
-8	16mm	N-S 9002 0006
-10	20mm	N-S 9002 0008
-12	25mm	N-S 9002 0009
-16	30mm	N-S 9002 0010



Other sizes on request / Weitere Größen auf Anfrage

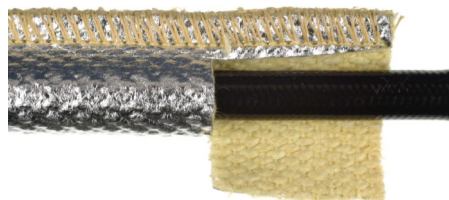
Protection hose / Schutzschlauch

Kevlar hose, heat resistant up to 500°C / Kevlarschlauch, hitzebeständig bis 500°C

size	part number		
-3 LW 08mm	FM 21mm	N-S 9001 0001	
-4 LW 10mm	FM 25mm	N-S 9001 0002	
-5 LW 13mm	FM 28mm	N-S 9001 0009	
-6 LW 15mm	FM 33mm	N-S 9001 0003	
-8 LW 19mm	FM 38mm	N-S 9001 0004	
-10 LW 22mm	FM 44mm	N-S 9001 0005	
-12 LW 26mm	FM 50mm	N-S 9001 0006	
-16 LW 31mm	FM 58mm	N-S 9001 0007	
-20 LW 38mm	FM 70mm	N-S 9001 0008	
LW 42mm	FM 75mm	N-S 9001 0013	
LW 50mm	FM 80mm	N-S 9001 0015	
LW 60mm	FM 105mm	N-S 9001 0011	
LW 65mm	FM 110mm	N-S 9001 0014	
LW 70mm	FM 120mm	N-S 9001 0010	
LW 80mm	FM 135mm	N-S 9001 0012	

LW = inner diameter / Innendurchmesser

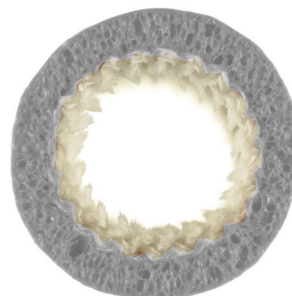
FM = flat measure / Flachmass



Protection hose / Schutzschlauch

firesleeve, heat resistant up to 250°C / Feuerschutzschlauch, hitzebeständig bis 250°C

size	colour	part number
Firesleeve -3	silver	N-S 9003 0010
Firesleeve -4	silver	N-S 9003 0011
Firesleeve -6	silver	N-S 9003 0012
Firesleeve -8	silver	N-S 9003 0016
Firesleeve -10	silver	N-S 9003 0015
Firesleeve -12	silver	N-S 9003 0014
Firesleeve -16	silver	N-S 9003 0017
Firesleeve -20	silver	N-S 9003 0013



Rubber hose / Gummischlauch

rubber hose textile braid/ Gummischlauch Textil-Bezug

Applications:

Fuel, diesel, water, air

Temperature range:

fuel -30°C up to +70°C

water -30°C up to +80°C

Anwendung:

Kraftstoff, Diesel, Wasser, Luft

Temperaturbereich:

Kraftstoff -30°C von bis +70°C

Wasser -30°C von bis +80°C

size	part number
LW 5.5 x 2.5mm	N-S 1000 0001
LW 7.5 x 2.5mm	N-S 1000 0003
LW 9.0 x 3.0mm	N-S 1000 0004
LW 11.0 x 3.0mm	N-S 1000 0005
LW 14.0 x 4.0mm	N-S 1000 0006



Wire helix hose / Spiralschlauch

size	part number
LW 16mm VS black GN 3	N-S 8000 0008
LW 19mm VS black GN 2	N-S 8000 0011
LW 22mm VS black GN 3	N-S 8000 0010
LW 30mm VS black GN 2	N-S 8001 0017
LW 32mm OS black GS 1	N-S 8001 0002
LW 32mm VS black GN 2	N-S 8001 0001
LW 44mm VS black GN 2	N-S 8001 0013
LW 51mm OS black GN 1	N-S 8001 0003
LW 51mm VS black GN 2	N-S 8001 0014
LW 57mm OS black GN 1	N-S 8001 0028
LW 63mm VS black GN 2	N-S 8001 0005
LW 70mm VS black GN 2	N-S 8001 0027
LW 76mm OS black GN 1	N-S 8001 0006
LW 76mm VS black GN 3	N-S 8001 0020
LW 80mm VS black GN 3	N-S 8001 0026
LW 81mm OS black GN 1	N-S 8001 0009
LW 89mm VS black GN 2	N-S 8001 0007
LW 95mm OS black GN 1	N-S 8001 0029
LW 100mm OS black GN 1	N-S 8001 0022
LW 102mm OS black GN 1	N-S 8001 0011
LW 102mm VS black GN 2	N-S 8001 0021
LW 121mm OS black GN 1	N-S 8001 0018
LW 121mm VS black GN 2	N-S 8001 0019
LW 127mm OS black GN 1	N-S 8001 0012
LW 152mm VS black GN 2	N-S 8001 0116



LW = inner diameter

GN = neoprene laminated fibreglass

GS = silicone laminated fibreglass

1 = one ply

2 = two plies

3 = three plies

OS = open helix

VS = closed helix

LW = Innendurchmesser

GN = neoprenbeschichtete Glasfaser

GS = silikonbeschichtete Glasfaser

1 = einlagig

2 = zweilagig

3 = dreilagig

OS = offene Spirale

VS = verdeckte Spirale

Air ducts / Turbomanschetten / Silikondruckschläuche

for air or water / für Luft oder Wasser

Silicon hose for turbo-charger system / Silikonschlauch für Turboladersysteme

size	part number
LW 42mm x WS 5mm 4TG 1SM	N-S 5000 0013
LW 51mm x WS 5mm 4TG 1SM	N-S 5003 0012
LW 54mm x WS 5mm 4TG 1SM	N-S 5000 0054
LW 60mm x WS 5mm 4TG 1SM	N-S 5003 0006
LW 63mm x WS 5mm 4TG 1SM	N-S 5000 0021
LW 65mm x WS 5mm 4TG 1SM	N-S 5000 0042
LW 70mm x WS 5mm 4TG 1SM	N-S 5000 0070
LW 75mm x WS 5mm 4TG 1SM	N-S 5000 0222
LW 90mm x WS 5mm 4TG 1SM	N-S 5000 0043
LW 95mm x WS 5mm 4TG 1SM	N-S 5000 0008



Silicon hose for air and water / Silikonschlauch für Luft und Wasser

size	part number
LW 16mm x WS 4.5mm 3TG 1SM	N-S 5001 0012
LW 19mm x WS 4.5mm 3TG 1SM	N-S 5001 0004
LW 22mm x WS 4.5mm 3TG 1SM	N-S 5001 0005
LW 25mm x WS 4.5mm 3TG 1SM	N-S 5001 0006
LW 30mm x WS 4.5mm 3TG 1SM	N-S 5000 0022
LW 32mm x WS 4.5mm 3TG 1SM	N-S 5001 0007
LW 35mm x WS 4.5mm 3TG 1SM	N-S 5001 0008
LW 38mm x WS 4.5mm 3TG 1SM	N-S 5001 0010
LW 40mm x WS 4.5mm 3TG 1SM	N-S 5000 0024
LW 42mm x WS 4.5mm 3TG 1SM	N-S 5001 0011
LW 45mm x WS 4.5mm 3TG 2SM	N-S 5000 0001
LW 48mm x WS 4.5mm 3TG 1SM	N-S 5000 0017
LW 51mm x WS 4.5mm 3TG 1SM	N-S 5000 0011
LW 53mm x WS 4.5mm 3TG 2SM	N-S 5000 0010
LW 54mm x WS 4.5mm 4TG 1SM	N-S 5001 0018
LW 55mm x WS 4.5mm 4TG 1SM	N-S 5000 0005
LW 58mm x WS 4.5mm 4TG 1SM	N-S 5000 0015
LW 60mm x WS 4.5mm 4TG 1SM	N-S 5000 0018
LW 63mm x WS 4.5mm 4TG 1SM	N-S 5000 0128
LW 65mm x WS 4.5mm 4TG 1SM	N-S 5000 0029
LW 70mm x WS 4.5mm 4TG 1SM	N-S 5000 0006
LW 75mm x WS 4.5mm 4TG 1SM	N-S 5000 0020
LW 80mm x WS 4.5mm 4TG 1SM	N-S 5000 0026
LW 83mm x WS 5.0mm 4TG 1SM	N-S 5000 0030
LW 89mm x WS 5.7mm 4TG 1SM	N-S 5000 0027
LW 95mm x WS 5.7mm 4TG 1SM	N-S 5000 0007
LW 105mm x WS 5.7mm 4TG 1SM	N-S 5000 0025



Air duct construction

LW = inner diameter

WS = wall thickness

TG = turbo braid

SM = silicone braid

Our air ducts and silicon hoses are temperature resistant up to 200°C, depending on pressure one hose construction. Wall thickness 4-5 mm

other dimensions on request

Aufbau des Silikondruckschlauches

Innendurchmesser

Wandstärke

Turbo Gewebe

Silikonmantel

Unsere Turbomanschetten und Silikondruckschläuche sind temperaturbeständig bis 200°C. Druckwerte je nach Aufbau. Wandstärke 4-5 mm

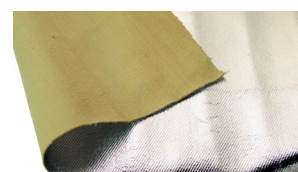
weitere Ausführungen auf Anfrage

Protection materials / Hitzeschutzmaterial

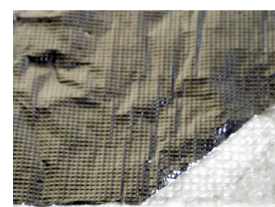
product	part number
heat shield pad adhesive radiant heat up to 1000°C	Hitzeschutzmatte selbstklebend Strahlung bis 1000°C Rolle N-S 9009 0020



product	part number
Kevlar pad aluminium coated heat shield up to 500°C pad w=1000mm	Kevlar Aluminium beschichtet Hitzeschutz bis 500°C Matte B=1000mm N-S 9009 0004



product	part number
heat shield pad adhesive 7mm, 1.6m x 1.0m	Hitzeschutzmatte selbstklebend 7mm, 1,6m x 1,0m N-S 9009 0010



product	part number
heat reflector silver foil adhesive roll 33m x 152mm x 0.2mm 315°C radiant heat up to 1000°C	Hitzereflektorband silber selbstklebend Rolle 33m x 152mm x 0,2mm 315°C Strahlung bis 1000°C N-S 9009 0033



product	part number
heat reflector gold foil to 360°C, thickness 0.16mm	Hitzereflektorband gold bis 360°C, Dicke 0,16mm
adhesive 45m x 155mm	selbstklebend 45m x 155mm N-S 9009 0034
adhesive each m x 155mm	selbstklebend je m x 155mm N-S 9009 0134



product	part number
heat reflector adhesive 25m w= 500mm x 0.05mm up to 100° C	Hitzereflektorband selbstkle- bend 25m B= 500mm 0,05mm bis 100°C N-S 9009 0044



Fittings / Fittings

explanation of abbreviations / Erklärungen zu Abkürzungen

CUTTER = Cutter technique

The Cutter system is the oldest and most safe technique, coming from aerospace, to connect metal protected rubberhose with a fitting in a removable way. The hose end is ringcutted. The inner part has a sealing function and the outer part of the hose has adhesive function. For hose series 400.

CUTTER = Fitting mit Schneidring

Das Cutter System ist das älteste, aber auch das aufwendigste Prinzip aus der Luftfahrt, metallbewehrten Gummischlauch lösbar mit einem Fitting zu verbinden. Das Schlauchende wird ringförmig eingeschnitten, der innere Teil übernimmt Dichtungsfunktion, der äußere und das Stahlgewebe die Haltefunktion. Für Schlauch Serie 400.

COMPR = The hose is pressed into the socket through a conical tube at the fitting with high holding efficiency. Compression fittings are reusable. For hose Series 400.

COMPR = Der Schlauch wird durch ein konisch ausgebildetes Rohr am Fitting mit hoher Haltekraft in die Schlauchfassung (Socket) gepreßt. Compressionssanschlüsse sind wiederverwendbar. Für Schlauch Serie 400.

REUS = reusable

All REUS fittings are equipped with an olive and a socket. For hose series 600.

REUS = Wiederverwendbar

Alle mit REUS gekennzeichneten Fittings sind mit Olive und Socket bestückt. Für Schlauch Serie 600.

CRIMP = The hose is pulled over a "ramped nipple" and will be crimped with a sleeve in a special machine. This ensures an optimized connection between hose and fitting using less space. The fittings are turnable. For hose series 600.

CRIMP = Der Schlauch wird über den "ramped nipple" geschoben und mit einer Preßhülse in einer besonderen Maschine gequetscht. Dies gewährleistet eine optimale Verbindung zwischen Schlauch und Fitting bei kleinsten Bauweise. Die Anschlüsse sind drehbar. Für Schlauch Serie 600.

PI = Push In

Works like the crimp system. For low pressure hoses up to max. 10 bar. For hose series 400 and series 600.

PI = Push In

Funktioniert nach dem Crimp System. Für Niederdruckschläuche bis max. 10 bar. Für Schlauch Serie 400 und Serie 600.

Thread labels / Gewindetabelle

On these tables you will find the most frequently used threads in American mechanical engineering, Besides there is a wide range of special threads. We can inform you about every kind of thread and can supply you with the fitting adapters. Parts with an outer thread are called "male", parts with an inner thread are

Our aluminium fittings are only available with U.N.F. threads and J.I.C. sealing area, special designs also with METRIC and BSP threads. For surface protection all parts are anodized. American threads do have a flank angle of 60° and are designated as diameter-no. of gears/1" e.g. 1/2-20 means norm thread F = fine thread,

F = fine thread

EF = extra fine

S = special thread

The size is the nominal width in 1/16", e.g. -8 = 1/2"

In diesen Tabellen finden Sie die am häufigsten im amerikanischen Maschinenbau verwendeten Gewindearten. Zusätzlich gibt es eine breite Palette Sondergewinde. Wir können Ihnen über jedes Gewinde Auskunft geben und entsprechende Adapter liefern. Teile mit Außengewinde nennt man "männlich" male, Teile mit Innengewinde

Unsere Aluminiumanschlüsse werden nur mit U.N.F-Gewinde und J.I.C. Dichtkegel geliefert, Sonderteile auch mit metrischen und BSP-Gewinden. Alle Teile sind zwecks Oberflächenschutz harteloxiert. Amerikanische Gewinde haben einen Flankenwinkel von 60° und werden mit Durchmesser-Gangzahl / 1" bezeichnet, z.B. 1/2-20 UN bedeutet Normgewinde,

F = Feingewinde

EF = Extra feines

S = Spezialgewinde.

Size ist die Nennweite in 1/16", z.B. Size -8 = 1/2"

thread marking Gewindebezeichnung	no. of gears / inch Gangzahl / Zoll	outer diameter Außendurchmesser	inner diameter Innendurchmesser	short marking Kurzbezeichnung
5/16-24 UNF	24	7,92	6,90	-2
3/8-24 UNF	24	9,50	8,50	-3
7/16-20 UNF	20	11,08	9,90	-4
1/2-20 UNF	20	12,67	11,50	-5
9/16-18 UNF	18	14,25	12,90	-6
3/4-16 UNF	16	19,00	17,50	-8
7/8-14 UNF	14	22,17	20,40	-10
1-1/16-12 UN	12	26,93	24,96	-12
1-5/16-12 UN	12	33,28	31,32	-16
1-5/8-12 UN	12	41,22	39,26	-20
1-7/8-12 UN	12	47,57	45,60	-24
2-1/4-12 UN	12	57,10	55,14	-28
2-1/2-12 UN	12	63,45	61,50	-32
3-12 UN	12	76,15	74,20	-40
3-1/2-12 UN	12	88,85	86,90	-48

Thread labels / Gewindetabelle

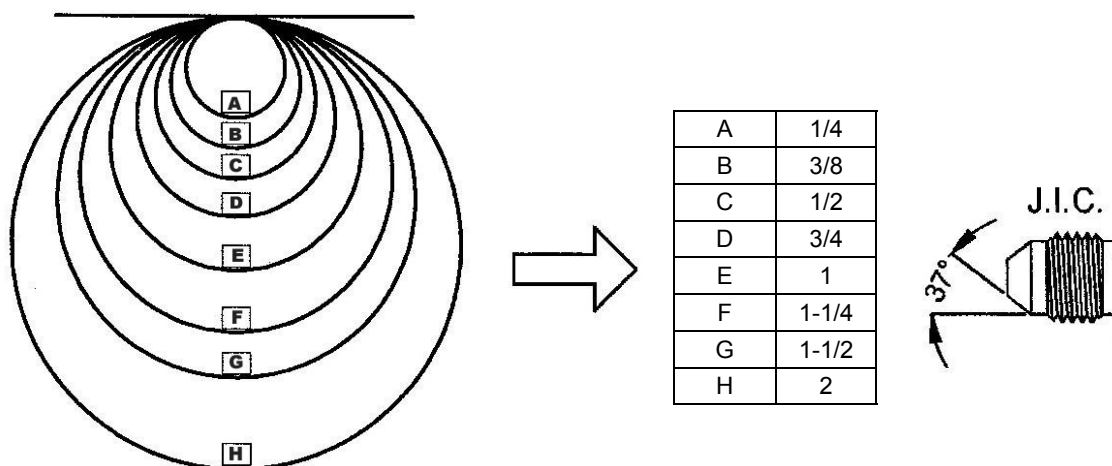
thread marking Gewindebezeichnung	no. of gears / inch Gangzahl / Zoll	outer diameter Außendurchmesser	inner diameter Innendurchmesser
R 1/8	28	9,73	8,80
R 1/4	19	13,16	11,80
R 3/8	19	16,66	15,25
R 1/2	14	20,96	19,00
R 5/8	14	22,91	21,00
R 3/4	14	26,44	24,50
R 7/8	14	30,18	28,25
R 1	11	33,25	30,75
R 1-1/2	11	47,80	45,25
R 1-3/4	11	53,75	51,00
R 2	11	59,61	57,00

NPT threads

To find out the nominal sizes of a NPT thread hold the end of the thread on the fitting circle.

NPT-Gewinde

Um das Nennmaß des NPT Gewindes zu bestimmen, hält man das Ende des Gewindes gegen den passenden Kreis.



Fittings series 300 / Fittings Serie 300

Straight, 45° bent tube / gerade, 45° Rohrbogen

Straight Fitting series 300

size		part number
-6D	Reus	N-F 3001 0001
-8D	Reus	N-F 3001 0002
-10D	Reus	N-F 3001 0014
-12D	Reus	N-F 3001 0015
-16D	Reus	N-F 3001 0016
-20D	Reus	N-F 3001 0017



Reus

size		part number
-6D	Crimp	N-F 3001 0005
-8D	Crimp	N-F 3001 0006
-10D	Crimp	N-F 3001 0007
-12D	Crimp	N-F 3001 0008
-16D	Crimp	N-F 3001 0003
-20D	Crimp	N-F 3001 0004



Crimp

45° Fitting series 300

size		part number
-6D	Reus	N-F 3046 0001
-8D	Reus	N-F 3046 0003
-10D	Reus	N-F 3046 0021
-12D	Reus	N-F 3046 0022
-16D	Reus	N-F 3046 0023
-20D	Reus	N-F 3046 0024
-6D	Reus DA	N-F 3046 0002
-8D	Reus DA	N-F 3046 0004
-10D	Reus DA	N-F 3046 0025
-12D	Reus DA	N-F 3046 0026
-16D	Reus DA	N-F 3046 0027
-6D	Crimp	N-F 3046 0009
-8D	Crimp	N-F 3046 0010
-10D	Crimp	N-F 3046 0011
-12D	Crimp	N-F 3046 0012
-16D	Crimp	N-F 3046 0005
-20D	Crimp	N-F 3046 0007
-6D	Crimp DA	N-F 3046 0013
-8D	Crimp DA	N-F 3046 0014
-10D	Crimp DA	N-F 3046 0015
-12D	Crimp DA	N-F 3046 0016
-16D	Crimp DA	N-F 3046 0006
-20D	Crimp DA	N-F 3046 0008



Reus



Reus DA



Crimp



Crimp DA

D = Aluminium

Crimp = crimped / verpreßt

Reus = reusable/ wiederverwendbar

DA = swivel version / Drehausgleich

Fittings series 300 / Fittings Serie 300

90°, 120° bent tube / 90°, 120° Rohrbogen

90° Fitting series 300

size		part number
-6D	Reus	N-F 3091 0001
-8D	Reus	N-F 3091 0003
-10D	Reus	N-F 3091 0023
-12D	Reus	N-F 3091 0024
-16D	Reus	N-F 3091 0025
-20D	Reus	N-F 3091 0026
-6D	Reus DA	N-F 3091 0002
-8D	Reus DA	N-F 3091 0004
-10D	Reus DA	N-F 3091 0027
-12D	Reus DA	N-F 3091 0028
-16D	Reus DA	N-F 3091 0029
-6D	Crimp	N-F 3091 0005
-8D	Crimp	N-F 3091 0007
-10D	Crimp	N-F 3091 0009
-12D	Crimp	N-F 3091 0010
-16D	Crimp	N-F 3091 0011
-20D	Crimp	N-F 3091 0012
-6D	Crimp DA	N-F 3091 0006
-8D	Crimp DA	N-F 3091 0008
-10D	Crimp DA	N-F 3091 0013
-12D	Crimp DA	N-F 3091 0014
-16D	Crimp DA	N-F 3091 0015
-20D	Crimp DA	N-F 3091 0016



Reus



Reus DA



Crimp



Crimp DA

120° Fitting series 300

size		part number
-6D	Reus DA	N-F 3120 0002
-8D	Reus DA	N-F 3120 0014
-10D	Reus DA	N-F 3120 0017
-12D	Reus DA	N-F 3120 0018
-16D	Reus DA	N-F 3120 0019
-6D	Crimp	N-F 3120 0003
-8D	Crimp	N-F 3120 0004
-10D	Crimp	N-F 3120 0015
-12D	Crimp	N-F 3120 0006
-16D	Crimp	N-F 3120 0007
-20D	Crimp	N-F 3120 0008
-6D	Crimp DA	N-F 3120 0009
-8D	Crimp DA	N-F 3120 0010
-10D	Crimp DA	N-F 3120 0011
-12D	Crimp DA	N-F 3120 0012
-16D	Crimp DA	N-F 3120 0013



Reus DA



Crimp



Crimp DA

D = Aluminium

Crimp = crimped / verpreßt

Reus = reusable/ wiederverwendbar

DA = swivel version / Drehausgleich

Fittings series 300 / Fittings Serie 300

150°, 180° bent tube / 150°, 180° Rohrbogen

150 ° Fitting series 300

size		part number
-6D	Reus DA	N-F 3150 0002
-8D	Reus DA	N-F 3150 0015
-10D	Reus DA	N-F 3150 0016
-12D	Reus DA	N-F 3150 0017
-16D	Reus DA	N-F 3150 0018
-6D	Crimp	N-F 3150 0003
-8D	Crimp	N-F 3150 0004
-10D	Crimp	N-F 3150 0014
-12D	Crimp	N-F 3150 0006
-16D	Crimp	N-F 3150 0007
-6D	Crimp DA	N-F 3150 0008
-8D	Crimp DA	N-F 3150 0009
-10D	Crimp DA	N-F 3150 0010
-12D	Crimp DA	N-F 3150 0011
-16D	Crimp DA	N-F 3150 0012



180° Fitting series 300

size		part number
-6D	Reus DA	N-F 3180 0009
-8D	Reus DA	N-F 3180 0011
-10D	Reus DA	N-F 3180 0012
-12D	Reus DA	N-F 3180 0013
-16D	Reus DA	N-F 3180 0014
-6D	Crimp DA	N-F 3180 0003
-8D	Crimp DA	N-F 3180 0004
-10D	Crimp DA	N-F 3180 0010
-12D	Crimp DA	N-F 3180 0006
-16D	Crimp DA	N-F 3180 0007



D = Aluminium
 Crimp = crimped / verpreßt
 Reus = reusable/ wiederverwendbar
 DA = swivel version / Drehausgleich

Fittings series 300 FC ferrule / Fittings Serie 300 FC Kelch

straight, 45°, 90° bent tube / gerade, 45°, 90° Rohrbogen

Straight Fitting series 300 FC ferrule

Hose size		Wiggins clamp size	part number
-6D	Crimp	-8D	N-F 3001 0009
-8D	Crimp	-8D	N-F 3001 0010
-10D	Crimp	-10D	N-F 3001 0011
-12D	Crimp	-12D	N-F 3001 0012
-16D	Crimp	-16D	N-F 3001 0013
-20D	Crimp	-20D	N-F 3001 0018



Crimp

45° Fitting series 300 FC ferrule

Hose size		Wiggins clamp size	part number
-6D	Crimp	-8D	N-F 3046 0028
-8D	Crimp	-8D	N-F 3046 0029
-10D	Crimp	-10D	N-F 3046 0030
-12D	Crimp	-12D	N-F 3046 0031
-16D	Crimp	-16D	N-F 3046 0032
-20D	Crimp	-20D	N-F 3046 0033



Crimp

90° Fitting series 300 FC ferrule

Hose size		Wiggins clamp size	part number
-6D	Crimp	-8D	N-F 3091 0017
-8D	Crimp	-8D	N-F 3091 0018
-10D	Crimp	-10D	N-F 3091 0019
-12D	Crimp	-12D	N-F 3091 0020
-16D	Crimp	-16D	N-F 3091 0021
-20D	Crimp	-20D	N-F 3091 0022



Crimp

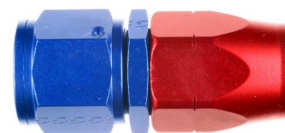
D = Aluminium
Crimp = crimped / verpreßt

Fittings series 400 / Fittings Serie 400

Straight, metric, UNF / gerade, metrisch, UNF

Straight Fitting metric series 400

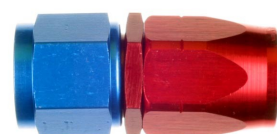
size		part number
M12x1.5 -06D	Cutter	N-F 8002 0001
M14x1.5 -06D	Cutter	N-F 8002 0002
M16x1.5 -06D	Cutter	N-F 8002 0003
M18x1.5 -08D	Cutter	N-F 8002 0007
M22x1.5 -10D	Cutter	N-F 8002 0004
M24x1.5 -10D	Cutter	N-F 8002 0006
M26x1.5 -12D	Cutter	N-F 8002 0008
M30x1.5 -16D	Cutter	N-F 8002 0005



Cutter

Straight Fitting series 400

size		part number
-4D	Compr	N-F 8001 0030
-4S/D	Compr	N-F 8001 0000
-6D	Compr AE	N-F 8001 0021
-6S/D	Compr AE	N-F 8001 0028
-8D	Compr AE	N-F 8001 0020
-8S/D	Compr AE	N-F 8001 0029
-10D	Compr AE	N-F 8001 0023
-12D	Compr AE	N-F 8001 0022
-16D	Compr AE	N-F 8001 0019
-20D	Compr AE	N-F 8001 0012
-6D	Cutter	N-F 8001 0003
-8D	Cutter	N-F 8001 0007
-10D	Cutter	N-F 8001 0025
-12D	Cutter	N-F 8001 0009
-16D	Cutter	N-F 8001 0010
-24D	Cutter	N-F 8001 0013
-6D	Crimp	N-F 8001 0039
-8D	Crimp	N-F 8001 0040
-10D	Crimp	N-F 8001 0041



Compr



Crimp

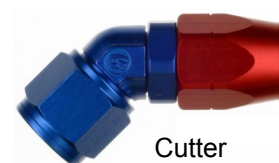
D = Aluminium
 S = Steel / Stahl
 Compr = compression
 Crimp = crimped / verpreßt
 Cutter = ringcutted / Schneidring
 AE = Aeroquip / Luftfahrtausführung

Fittings series 400 / Fittings Serie 400

45° bent tube, forged, metric, UNF / 45° Rohrbogen, Schmiedewinkel, metrisch, UNF

45° Fitting metric series 400 forged

size		part number
M12x1.5 -06D	Cutter	N-F 8047 0001
M14x1.5 -06D	Cutter	N-F 8047 0002
M16x1.5 -06D	Cutter	N-F 8047 0003
M22x1.5 -10D	Cutter	N-F 8047 0004
M26x1.5 -12D	Cutter	N-F 8047 0006
M30x1.5 -16D	Cutter	N-F 8047 0005



Cutter

45° Fitting series 400 forged

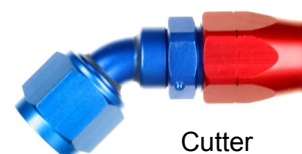
size		part number
-6D	Cutter DA	N-F 8045 0001
-8D	Cutter DA	N-F 8045 0004
-10D	Cutter DA	N-F 8045 0005
-12D	Cutter DA	N-F 8045 0006
-5D	Crimp	N-F 8045 0020
-6D	Crimp	N-F 8045 0021
-8D	Crimp	N-F 8045 0022
-10D	Crimp	N-F 8045 0023
-5D	Compr	N-F 8045 0013
-16D	Compr	N-F 8045 0018



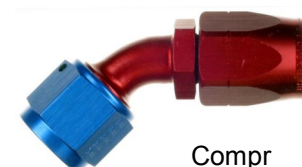
Crimp

45° Fitting series 400 bent tube

size		part number
-4S/D	Cutter	N-F 8046 0014
-5S/D	Cutter	N-F 8046 0015
-6C/D	Cutter	N-F 8046 0013
-10D	Cutter	N-F 8046 0019
-20D	Cutter	N-F 8046 0017
-24D	Cutter	N-F 8046 0012
-6D	Cutter DA	N-F 8046 0001
-8D	Cutter DA	N-F 8046 0003
-10D	Cutter DA	N-F 8046 0005
-12D	Cutter DA	N-F 8046 0007
-16D	Cutter DA	N-F 8046 0009
-4D	Compr	N-F 8046 0031
-6D	Compr AE	N-F 8046 0002
-8D	Compr AE	N-F 8046 0004
-10D	Compr AE	N-F 8046 0006
-12D	Compr AE	N-F 8046 0008
-16D	Compr AE	N-F 8046 0010
-20D	Compr AE	N-F 8046 0011



Cutter



Compr

C = Stainless steel / Edelstahl

D = Aluminium

S = Steel / Stahl

Compr = compression

Crimp = crimped / verpreßt

Cutter = ringcutted / Schneidring

DA = swivel version / Drehausgleich

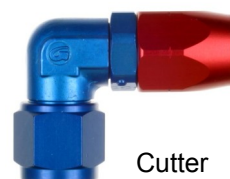
AE = Aeroquip / Luftfahrtausführung

Fittings series 400 / Fittings Serie 400

90° bent tube, forged, metric, UNF / 90° Rohrbogen, Schmiedewinkel, metrisch, UNF

90° Fitting metric series 400 forged

size		part number
12x1.5 -06D	Cutter	N-F 8092 0001
14x1.5 -06D	Cutter	N-F 8092 0002
16x1.5 -06D	Cutter DA	N-F 8092 0003
22x1.5 -10D	Cutter	N-F 8092 0004
26x1.5 -12D	Cutter	N-F 8092 0006
30x1.5 -16D	Cutter	N-F 8092 0005



Cutter

90° Fitting series 400 forged

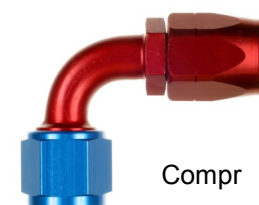
size		part number
-6D	Cutter DA	N-F 8090 0001
-8D	Cutter DA	N-F 8090 0004
-10D	Cutter DA	N-F 8090 0005
-12D	Cutter DA	N-F 8090 0006
-6D	Crimp	N-F 8090 0022
-8D	Crimp	N-F 8090 0023
-10D	Crimp	N-F 8090 0024
-5D	Compr	N-F 8090 0014
-16D	Compr	N-F 8090 0019



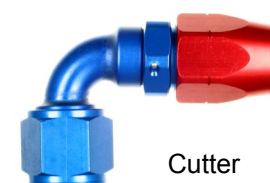
Crimp

90° Fitting series 400 bent tube

size		part number
-4D	Compr	N-F 8091 0000
-4S/D	Compr AE	N-F 8091 0021
-6D	Compr AE	N-F 8091 0004
-6S/D	Compr AE	N-F 8091 0026
-8D	Compr AE	N-F 8091 0008
-10D	Compr AE	N-F 8091 0010
-12D	Compr AE	N-F 8091 0012
-16D	Compr AE	N-F 8091 0014
-20D	Compr AE	N-F 8091 0015
-5S/D	Cutter	N-F 8091 0002
-24D	Cutter	N-F 8091 0016
-6D	Cutter DA	N-F 8091 0003
-8D	Cutter DA	N-F 8091 0007
-10D	Cutter DA	N-F 8091 0009
-12D	Cutter DA	N-F 8091 0011
-16D	Cutter DA	N-F 8091 0013



Compr



Cutter

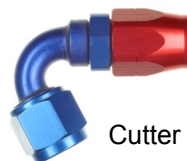
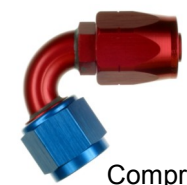
D = Aluminium
 S = Steel / Stahl
 Compr = compression
 Crimp = crimped / verpreßt
 Cutter = ringcutted / Schneidring
 DA = swivel version / Drehausgleich
 AE = Aeroquip / Luftfahrtausführung

Fittings series 400 / Fittings Serie 400

120°, 150°, 180° bent tube / 120°, 150°, 180° Rohrbogen

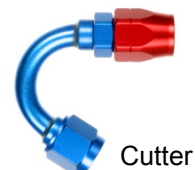
120° Fitting series 400 bent tube

size		part number
-6D	Compr AE	N-F 8120 0002
-8D	Compr AE	N-F 8120 0004
-10D	Compr AE	N-F 8120 0006
-12D	Compr AE	N-F 8120 0008
-6D	Cutter DA	N-F 8120 0001
-8D	Cutter DA	N-F 8120 0003
-10D	Cutter DA	N-F 8120 0005
-12D	Cutter DA	N-F 8120 0007
-16D	Cutter DA	N-F 8120 0009
-20D	Cutter	N-F 8120 0010



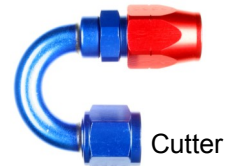
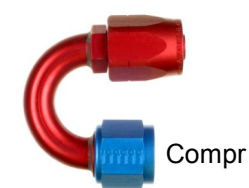
150° Fitting series 400 bent tube

size		part number
-6D	Compr AE	N-F 8150 0002
-8D	Compr AE	N-F 8150 0004
-10D	Compr AE	N-F 8150 0006
-12D	Compr AE	N-F 8150 0008
-6D	Cutter DA	N-F 8150 0001
-8D	Cutter DA	N-F 8150 0003
-10D	Cutter DA	N-F 8150 0005
-12D	Cutter DA	N-F 8150 0007
-16D	Cutter DA	N-F 8150 0009



180° Fitting series 400 bent tube

size		part number
-6D	Compr AE	N-F 8180 0002
-8D	Compr AE	N-F 8180 0004
-10D	Compr AE	N-F 8180 0006
-12D	Compr AE	N-F 8180 0008
-6D	Cutter DA	N-F 8180 0001
-8D	Cutter DA	N-F 8180 0003
-10D	Cutter DA	N-F 8180 0005
-12D	Cutter DA	N-F 8180 0007
-16D	Cutter DA	N-F 8180 0009



D = Aluminium
 Compr = compression
 Cutter = ringcutted / Schneidring
 DA = swivel version / Drehausgleich
 AE = Aeroquip / Luftfahrtausführung

Fittings series 400 / Fittings Serie 400

Banjo, T-Fitting / Ringanschluss, T-Anschluss

Banjo Fitting series 400

size	part number
R12d-06D long	N-F 8006 0002
R12d-06D big ball	N-F 8006 0003
R12d-06D short	N-F 8006 0001
R14d-06D long	N-F 8006 0005
R14d-06D big ball	N-F 8006 0015
R14d-06D short	N-F 8006 0016
R14d-08D short	N-F 8008 0001
R16d-06D short	N-F 8006 0017
R16d-08D short	N-F 8008 0002
R16d-10D short	N-F 8010 0001
R18d-06D long	N-F 8006 0014
R18d-08D big ball	N-F 8008 0003
R18d-10D short	N-F 8010 0003



short



long

Tees with hose adapting series 400

size	part number
-6HAor-6mor-6fos	N-F 8495 0001
-6HAor-6for-6mos	N-F 8495 0002
-6HAor-6mor-6mos	N-F 8495 0003
-6mor-6mor-6HAos	N-F 8495 0004
-6HAor-6mor-M12x1.5mos	N-F 8495 0007
-6HAor-M12x1.5mor-6mos	N-F 8495 0008
-6HAor-6mor-M14x1.5mos	N-F 8495 0009
-6HAor-6mor-M12x1.25mos	N-F 8495 0010
-6HAor-6for-M10x1fos	S-F 8495 0001
-6HAor-6mor-M10x1fos	S-F 8495 0002
-6HAor-M10x1for-6fos	S-F 8495 0003
-6mor-M10x1for-6HAos	S-F 8495 0004
-6for-6mor-6HAos	S-F 8495 0005
-6HAor-6for-3mos	Z-F 8495 0005
-6HAor-6mor-M14x1.5fos	Z-F 8495 0007



HA = hose adapting / Schlauchanschluß
 or = on run / durchgangsseitig
 os = on side / seitlich
 m = male / Außengewinde
 f = female / Innengewinde
 M = metric / metrisch
 D = Aluminium

Fittings series 600 / Fittings Serie 600

Straight, metric, UNF / gerade, metrisch, UNF

Straight Fitting metric, UNF, series 600

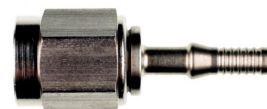
size		part number
R1/8 female -03S	Reus	N-F 6003 9001
-3 male konkav -03C	Reus	N-F 6401 0001
-3 male konvex -03C	Reus	N-F 6401 0002
M10x1 female konkav -03C	Reus	N-F 6002 0001
M10x1 female konvex -03C	Reus	N-F 6002 0002
M12x1.5 female -04D	Reus	Z-F 6002 0001
M14x1.5 female -06D	Reus	Z-F 6002 0002
-3D	Reus	N-F 6001 0005
-3C	Reus	N-F 6001 0001
-4D	Reus	Z-F 6001 0001
-6D	Reus	N-F 6001 0009
-6C	Reus AE	N-F 6001 0027
-8D	Reus	N-F 6001 0024
-3C	Reus AE	N-F 6001 0017
-4D/C	Reus AE	Z-F 6001 0006
-4C	Reus AE	N-F 6001 0016
-6D/C	Reus AE	Z-F 6001 0007
-8D/C	Reus AE	Z-F 6001 0009
-8C	Reus AE	Z-F 6001 0004
-6C	Reus AE HI-PAC	N-F 6001 0022
-8C	Reus AE HI-PAC	N-F 6001 0011
M12x1.5 female -04D	Crimp	N-F 6102 0001
-3C	Crimp	Z-F 6101 0001
-4D	Crimp	Z-F 6101 0002
-5D	Crimp	N-F 6100 0001
-6D	Crimp	N-F 6001 0020
-6C	Crimp AE	N-F 6001 0028
-4C	Crimp AE	Z-F 6101 0004
-5C	Crimp AE	N-F 6100 0002
M12x1.5 female -03S/D	PI	Z-F 6902 0001
-3C/D	PI	Z-F 6901 0001
-3C/C	PI	Z-F 6901 0002
-4D	PI oversize	Z-F 6101 0022



Reus



Reus



Crimp



Push in

C = Stainless steel / Edelstahl

D = Aluminium

S = Steel / Stahl

Reus = reusable/ wiederverwendbar

Crimp = crimped / verpreßt

PI = push in

AE = Aeroquip / Luftfahrtausführung

Fittings series 600 / Fittings Serie 600

45° bent tube, forged / 45° Rohrbogen, Schmiedewinkel

45° Fitting series 600

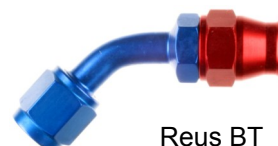
size		part number
-3D	Reus	N-F 6045 0016
-3C	Reus	N-F 6045 0001
-4D	Reus	Z-F 6045 0002
-6D	Reus	N-F 6045 0007
-8D	Reus	N-F 6045 0013
-3C	Reus AE	N-F 6045 0002
-4D/C	Reus AE	Z-F 6045 0006
-4C	Reus AE	N-F 6045 0009
-6D/C	Reus AE	Z-F 6045 0007
-6C	Reus AE	N-F 6045 0015
-6C	Reus AE HI-PAC BT	N-F 6046 0005
-8C/D	Reus AE	Z-F 6045 0009
-8C	Reus AE	Z-F 6045 0004
-8C	Reus AE HI-PAC BT	N-F 6046 0004
R1/8 -03S	Reus BT	N-F 6048 0001
-3D	Reus BT	N-F 6046 0001
-4D	Reus BT	N-F 6046 0006
-4D	Reus DA	Z-F 6045 0013
-3C	Crimp	Z-F 6145 0003
-4D	Crimp	Z-F 6145 0002
-6D	Crimp	N-F 6045 0066
-6C	Crimp AE	N-F 6045 0018
-3C	Crimp AE	N-F 6145 0003
-4C	Crimp AE	N-F 6145 0004
-5C	Crimp AE	N-F 6450 0003
-3C/D	PI	Z-F 6945 0001
-3C/C	PI	Z-F 6945 0002
-4D	PI oversize	Z-F 6145 0022



Reus



Reus



Reus BT



Crimp



Push in

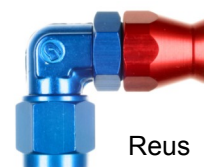
C = Stainless steel / Edelstahl
 D = Aluminium
 S = Steel / Stahl
 Reus = reusable/ wiederverwendbar
 Crimp = crimped / verpreßt
 PI = push in
 DA = swivel version / Drehausgleich
 AE = Aeroquip / Luftfahrtausführung
 BT = bent tube / Rohrbogen

Fittings series 600 / Fittings Serie 600

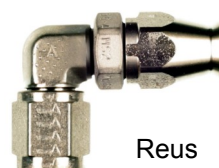
90° bent tube, forged / 90° Rohrbogen, Schmiedewinkel

90° Fitting series 600

size		part number
-3D	Reus	N-F 6090 0019
-3C	Reus	N-F 6090 0001
-6D	Reus	N-F 6090 0008
-8D	Reus	N-F 6090 0014
-3C	Reus AE	N-F 6090 0002
-4D/C	Reus AE	Z-F 6090 0006
-4C	Reus AE	N-F 6090 0009
-5C	Reus AE	N-F 6090 0018
-6D/C	Reus AE	Z-F 6090 0007
-6C	Reus AE	N-F 6090 0017
-6C	Reus AE HI-PAC BT	N-F 6091 0006
-8D/C	Reus AE	Z-F 6090 0009
-8C	Reus AE	Z-F 6090 0004
-8C	Reus AE HI-PAC BT	N-F 6091 0002
R1/8 -03S	Reus BT	N-F 6093 0001
-3D	Reus BT	N-F 6091 0001
-4D	Reus BT	N-F 6091 0007
-4D	Reus DA	Z-F 6090 0002
-3C	Crimp	Z-F 6190 0003
-4D	Crimp	Z-F 6190 0002
-5D	Crimp	N-F 6090 0016
-6C	Crimp AE	N-F 6090 0021
-6D	Crimp	N-F 6090 0066
-4C	Crimp AE	N-F 6190 0003
-5C	Crimp AE	N-F 6900 0003
-3C/D	PI	Z-F 6990 0001
-3C/C	PI	Z-F 6990 0002
-4D	PI oversize	Z-F 6190 0022



Reus



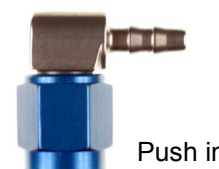
Reus



Reus BT



Crimp



Push in

C = Stainless steel / Edelstahl
 D = Aluminium
 S = Steel / Stahl
 Reus = reusable/ wiederverwendbar
 Crimp = crimped / verpreßt
 PI = push in
 DA = swivel version / Drehausgleich
 AE = Aeroquip / Luftfahrtausführung
 BT = bent tube / Rohrbogen

Banjos, Tees series 600 / Ringanschlüsse, T-Stücke Serie 600

Banjos, Tees / Ringanschlüsse, T-Stücke

Banjo Fitting series 600

size		part number
R10d-03C	Reus	N-F 6003 0003
R10d-04D	Reus	Z-F 6004 0001
R11d-04D	Reus	Z-F 6004 0002
R12d-04D	Reus	Z-F 6004 0003
R10d-03C	Reus extended	N-F 6007 0002
R10d-03C	Reus extended 20°	N-F 6008 0002
R10d-03C	Reus extended 30°	N-F 6008 0001
R10d-03D	Reus extended	N-F 6007 0003
R10d-03D	Reus extended 20°	N-F 6008 0003
R10d-03D	Reus extended 40°	N-F 6008 0004
R10d-03D	Reus extended 90°	N-F 6008 0005
R10d-03C	Crimp	N-F 6103 0001
R11d-03C	Crimp	N-F 6103 0003
R10d-04D	Crimp	N-F 6104 0001
R12d-04D	Crimp	N-F 6104 0002
R12d-04C	Crimp	N-F 6104 0007
R10d-4mmS	PI	N-F 6904 0002
R08d-03S	PI flat	N-F 6903 0005
R08d-03S	PI black	N-F 6903 0001
R08d-4mmS	PI black	N-F 6904 0001
R10d-03S	PI black	N-F 6903 0002
R12d-3mmS	PI black	N-F 6903 0004
R12d-4mmS	PI black	N-F 6904 0003
R10d-5mmS	PI black	N-F 6905 0001
R12d-5mmS	PI black	N-F 6905 0002
R10d-6mmS	PI black	N-F 6906 0001
R12d-6mmS	PI black	N-F 6906 0002
R12d-06S	PI black	N-F 6106 0002
R14d-6mmS	PI black	N-F 6906 0003
R12s-06S	PI black twin	N-F 6106 0001

C = Stainless steel / Edelstahl

D = Aluminium

S = Steel / Stahl

Reus = reusable/ wiederverwendbar

Crimp = crimped / verpreßt

PI = push in

extended = verlängert



Reus



Crimp extended



Crimp



Push in

Tee series 600

size	part number
-3C 3xHA	N-F 6495 0001
-3C 2xHA 1x-03Cmos	N-F 6495 0002
-3C 3xHA with bracket M5	N-F 6495 0003
-3C 2xHAor 1x-03mos with bracket M5	N-F 6495 0005

HA = hose adapting

or = on run

os = on side

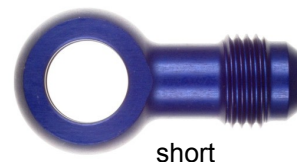
m = male



Banjos male thread / Ringstücke

Banjo male thread

size	part number
R08d-03S	N-A 1776 0001
R10d-03D	N-A 1776 0002
R10d-03C	N-A 1776 0003
R10d-04D	N-A 1776 0004
R10d-04C	N-A 1776 0005
R12d-03D	N-A 1776 0006
R12d-04D	N-A 1776 0007
R12d-04C	N-A 1776 0030
R12d-06D	N-A 1776 0008
R12d-06D extended	N-A 1776 0009
R12d-06D big ball	N-A 1776 0010
R12d-06C	N-A 1776 0011
R12d-08D	N-A 1776 0018
R14d-03D	N-A 1776 0012
R14d-04D	N-A 1776 0013
R14d-06D	N-A 1776 0014
R14d-06D extended	N-A 1776 0015
R14d-06D big ball	N-A 1776 0016
R14d-08D	N-A 1776 0019
R16d-06D	N-A 1776 0017
R16d-08D	N-A 1776 0020
R16d-10D	N-A 1776 0022
R18d-08D big ball	N-A 1776 0021
R18d-10D	N-A 1776 0023
R20d-10D	N-A 1776 0025
R22d-10D	N-A 1776 0026



short



short



extended

Banjo male double connectors

size	part number
-4D AN	N-A 0779 0001
R10d-03D	N-A 1779 0001
R10d-03S	N-A 1779 0002
R10d-04D	N-A 1779 0014
R12d-04D	N-A 1779 0013
R12d-04-06D big ball	N-A 1779 0003
R12d-06D	N-A 1779 0004
R12d-06D big ball	N-A 1779 0005
R12d-06D big ball 30°	N-A 1779 0006
R14d-04-06D big ball	N-A 1779 0007
R16d-06D big ball	N-A 1779 0009



extended



big ball 30°

C = Stainless steel / Edelstahl

D = Aluminium

S = Steel / Stahl

extended = verlängert

short = kurz

Banjo bolts / Hohlschrauben metric / metrisch

Banjo bolt metric

size	part number
M08x1D L=17mm	N-A 1775 0222
M08x1S L=17mm	N-A 1775 0020
M08x1D L=26mm double	N-A 1775 0048
M08x1S L=26mm double	N-A 1775 0021
M08x1.25S L=17mm	N-A 1775 0022
M10x1C L=20mm	N-A 1775 0012
M10x1C L=25mm	N-A 1775 0037
M10x1C L=31mm double	N-A 1775 0014
M10x1D L=20mm	N-A 1775 0001
M10x1D L=32mm double	N-A 1775 0038
M10x1S L=20 mm	N-A 1775 0023
M10x1S L= 30mm double	N-A 1775 0024
M12x1D L=25mm	N-A 1775 0002
M12x1D L=31mm	N-A 1775 0003
M12x1.5D L=25mm	N-A 1775 0004
M12x1.5D L=31mm	N-A 1775 0005
M12x1.5S L=24mm	N-A 1775 0026
M12x1.5S L=38mm double	N-A 1775 0027
M14x1.5D L=25mm	N-A 1775 0006
M14x1.5D L=31mm	N-A 1775 0007
M14x1.5S L=26mm	N-A 1775 0028
M14x1.5S L=41mm double	N-A 1775 0029
M16x1.5D L=30mm	N-A 1775 0008
M16x1.5D L=34mm	N-A 1775 0039
M16x1.5S L=28mm	N-A 1775 0030
M16x1.5S L=45mm double	N-A 1775 0031
M18x1.5D L=32mm	N-A 1775 0009
M18x1.5S L=32mm	N-A 1775 0032
M18x1.5S L=54mm double	N-A 1775 0033
M20x1.5D L=32mm	N-A 1775 0010
M22x1.5D L=38mm	N-A 1775 0040
M22x1.5S L=39mm	N-A 1775 0034
M26x1.5S L=45mm	N-A 1775 0035
M30x1.5S L=50mm	N-A 1775 0036

C = Stainless steel / Edelstahl

D = Aluminium

S = Steel / Stahl

double = for two banjo bolts / für zwei Ringstücke



standard



double

With diagonal arranged slots we obtain an increased tear-off resistance by 20% in comparison with ordinary banjo bolts (weight- and flow rate optimization).

Alloy and copper crush washers, metric and inch size, are available in all dimensions.
Prices on request.

Durch die diagonal angeordneten Schlitz erreichen wir eine um 20% höhere Abreißfestigkeit gegenüber herkömmlichen Hohlschrauben (Gewichts- und Durchflußoptimierung).

Dichtscheiben aus Aluminium und Kupfer, metrisch und zöllig, sind in allen Abmessungen erhältlich.
Preise auf Anfrage.

Banjo bolts / Hohlschrauben

BSP, metric with port, UNF / BSP, metrisch mit Abgang, UNF

Banjo bolt BSP

size	part number
R1/8D L=23mm	N-A 2775 0011
R1/8C L=24mm	N-A 2775 0008
R1/4D L=25mm	N-A 2775 0005
R1/4D L=30mm	N-A 2775 0001
R3/8D L=26mm	N-A 2775 0004
R3/8D L=32mm	N-A 2775 0003
R3/8D L=38mm	N-A 2775 0002
R1/2D L=45mm	N-A 2775 0006



standard

Banjo bolt UNF

size	part number
-3C L=20mm	N-A 0775 0003
-3C L=25mm	N-A 0775 0004
-3S L=20mm	N-A 0775 0005
-3C L=31mm Doppel	N-A 0775 0006
-3D L=20mm	N-A 0775 0018
-4S L=25mm	N-A 0775 0008
-4S L=25mm	N-A 0775 0009
-4D L=24mm	N-A 0775 0011
-6D L=31mm	N-A 0775 0015



standard

Banjo bolt metric with port

size	part number
M08x1-03C L=17mm	N-A 1774 0011
M10x1-03D L=20mm	N-A 1774 0002
M10x1-04D L=20mm	N-A 1774 0004
M12x1.5-03D L=25mm	N-A 1774 0005
M12x1.5-03D L=31mm	N-A 1774 0006
M12x1.5-04D L=25mm	N-A 1774 0007
M12x1.5-04D L=31mm	N-A 1774 0008
M12x1.5-06D L=25mm	N-A 1774 0009
M12x1.5-06D L=31mm	N-A 1774 0010
M14x1.5-12x1.5S L=24mm	N-A 1774 0012
M14x1.5-03D L=25mm	N-A 1774 0013
M14x1.5-03D L=31mm	N-A 1774 0014
M14x1.5-04D L=25mm	N-A 1774 0015
M14x1.5-04D L=31mm	N-A 1774 0016
M14x1.5-06D L=25mm	N-A 1774 0017
M14x1.5-06D L=31mm	N-A 1774 0018
M14x1.5-08D L=31mm	N-A 1774 0020
M16x1.5-06D L=29mm	N-A 1774 0019
M18x1.5-10D L=35mm	N-A 1774 0021



with port

C = Stainless steel / Edelstahl

D = Aluminium

S = Steel / Stahl

with port = mit Abgang

Alloy and copper crush washers, metric and inch size, are available in all dimensions. Prices on request.

Dichtscheiben aus Aluminium und Kupfer, metrisch und zöllig, sind in allen Abmessungen erhältlich. Preise auf Anfrage.

Elbows AN-norm / Winkelstücke AN-Norm

45°, 90°, NPT, with swivel nut / 45°, 90°, NPT (konisch), mit Überwurfmutter

45° Elbow AN-norm

size	part number
-3D AN 1/8"NPT	N-A 0823 0001
-4D AN 1/8"NPT	N-A 0823 0002
-6D AN 1/4"NPT	N-A 0823 0003
-6D AN 3/8"NPT	N-A 0823 0011
-8D AN 1/2"NPT	N-A 0823 0008
-8D AN 3/8"NPT	N-A 0823 0004
-10D AN 1/2"NPT	N-A 0823 0005
-12D AN 3/4"NPT	N-A 0823 0006
-16D AN 1"NPT	N-A 0823 0007



45° Elbow with swivel nut

size	part number
-3D	N-A 3823 0005
-4D	N-A 3823 0001
-6D	N-A 3823 0002
-8D	N-A 3823 0003



90° Elbow AN-norm

size	part number
-3D AN	N-A 0821 0001
-4D AN	N-A 0821 0002
-4C AN	N-A 0821 0012
-6D AN	N-A 0821 0003
-6C AN	N-A 0821 0011
-8D AN	N-A 0821 0004
-10D AN	N-A 0821 0005
-12D AN	N-A 0821 0006
-16D AN	N-A 0821 0007



90° Elbow AN-norm

size	part number
-3D AN 1/8" NPT	N-A 0822 0001
-3S AN 1/8" NPT	N-A 0822 0011
-4D AN 1/8" NPT	N-A 0822 0002
-6D AN 1/8" NPT	N-A 0822 0004
-6D AN 1/4" NPT	N-A 0822 0003
-6D AN 3/8" NPT	N-A 0822 0005
-8D AN 3/8" NPT	N-A 0822 0006
-10D AN 3/8" NPT	N-A 0822 0077
-10D AN 1/2" NPT	N-A 0822 0007
-12D AN 1/2" NPT	N-A 0822 0010
-12D AN 3/4" NPT	N-A 0822 0008
-16D AN 1" NPT	N-A 0822 0009



C = Stainless steel / Edelstahl
D = Aluminium
S = Steel / Stahl

Elbows AN-norm / Winkelstücke AN-Norm

90° with swivel nut, NPT / 90° mit Überwurfmutter, NPT (konisch)
bent tube 90° with swivel nuts / 90° Rohrbogen mit 2 x Überwurfmuttern

90° Elbow swivel version

size	part number
M12x1.5 -06D	N-A 4822 0001
-10D 3/8"NPT	N-A 3822 0002
-10D 1/2"NPT	N-A 3822 0001
-12D 1/2"NPT	N-A 3822 0004
-12D 3/4NPT	N-A 3822 0003
F-12D 1/2" NPT	N-A 3822 0005



90° Elbow with swivel nut

size	part number
-3D	Z-A 3821 0002
-4D	N-A 3821 0001
-4C	N-A 3821 0008
-6D	N-A 3821 0002
-6C	N-A 3821 0009
-8D	N-A 3821 0003
-10D	N-A 3821 0004
-12D	N-A 3821 0005
F12-10D	N-A 3821 0006



Bent tube with two swivel nuts

size	part number
-6D	N-A 3925 0001
-6D Elbow	Z-A 3925 0001
-8D	N-A 3925 0002
-10D	N-A 3925 0003
-12D	N-A 3925 0004
-16D	N-A 3925 0005



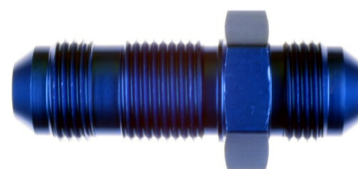
C = Stainless steel / Edelstahl
D = Aluminium

Bulk head AN-norm

straight, 45°, 90° AN-norm / gerade, 45°, 90° AN-Norm

Bulk straight AN-norm

size	part number
-3Ti AN	N-A 0832 0010
-3C AN	N-A 0832 0014
-3D AN	N-A 0832 0001
-3S AN	N-A 0832 0009
-4D AN	N-A 0832 0002
-4S AN	N-A 0832 0011
-6D AN	N-A 0832 0003
-6D AN	N-A 0832 0015
-8D AN	N-A 0832 0004
-10D AN	N-A 0832 0005
-10S AN	N-A 0832 0016
-12D AN	N-A 0832 0006
-12S AN	N-A 0832 0017
-16D AN	N-A 0832 0007
R1/8-M10x1S	N-A 2832 0002
R1/8 -03S	N-A 2832 0001



45° Bulk AN-norm

size	part number
-3C AN	N-A 0837 0013
-3D AN	N-A 0837 0001
-3S AN	N-A 0837 0009
-4D AN	N-A 0837 0002
-4S AN	N-A 0837 0017
-6D AN	N-A 0837 0008
-6C AN	N-A 0837 0014
-8D AN	N-A 0837 0004
-10D AN	N-A 0837 0005
-10S AN	N-A 0837 0010
-12D AN	N-A 0837 0006
-16D AN	N-A 0837 0007



90° Bulk AN-norm

size	part number
-3C AN	N-A 0833 0017
-3D AN	N-A 0833 0001
-3S AN	N-A 0833 0009
-4D AN	N-A 0833 0002
-4C AN	N-A 0833 0019
-6D AN	N-A 0833 0003
-6C AN	N-A 0833 0018
-6S AN	N-A 0833 0011
-8D AN	N-A 0833 0004
-8C AN	N-A 0833 0020
-10D AN	N-A 0833 0005
-12D AN	N-A 0833 0006
-16D AN	N-A 0833 0007
-20D AN	N-A 0833 0008



C = Stainless steel / Edelstahl
 D = Aluminium
 S = Steel / Stahl
 Ti = Titan

Tees AN-norm / T-Stücke AN-Norm

Tees AN-norm, NPT, UNF / T-Stücke AN-Norm, NPT (konisch) UNF

Tee NPT on side

size	part number
-3D AN 1/8"NPT	N-A 0825 0001
-4D AN 1/8"NPT	N-A 0825 0002
-6D AN 1/4"NPT	N-A 0825 0003
-8D AN 3/8"NPT	N-A 0825 0004
-10D AN 1/2"NPT	N-A 0825 0005
-12D AN 3/4"NPT	N-A 0825 0006



Tee NPT on run

size	part number
-3D AN 1/8" NPT	N-A 0826 0001
-4D AN 1/8" NPT	N-A 0826 0002
-6D AN 1/4" NPT	N-A 0826 0003
-8D AN 3/8" NPT	N-A 0826 0004
-10D AN 1/2" NPT	N-A 0826 0005
-12D AN 3/4" NPT	N-A 0826 0006



Tee JIC

size	part number
-3D AN	N-A 0824 0001
-3C AN	N-A 0824 0008
-4D AN	N-A 0824 0002
-4C AN	N-A 0824 0014
-4S AN	N-A 0824 0009
-6D AN	N-A 0824 0003
-6C AN	N-A 0824 0012
-8D AN	N-A 0824 0004
-10D AN	N-A 0824 0005
-12D AN	N-A 0824 0006
-16D AN	N-A 0824 0007
-20D AN	N-A 0824 0019



C = Stainless steel / Edelstahl
D = Aluminium
S = Steel / Stahl

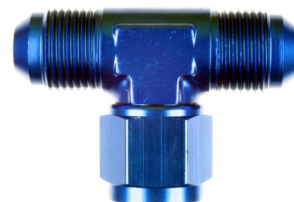
Special designs available
Sonderanfertigungen möglich

Tees AN-norm / T-Stücke AN-Norm

AN-norm with swivel nut/ AN-Norm mit Überwurfmutter

Tee with swivel nut on side

size	part number
-3D	Z-A 3824 0005
-4C	N-A 3824 0015
-4D	N-A 3824 0003
-6C	N-A 3824 0055
-6D	N-A 3824 0005
-8D	N-A 3824 0007
-10D	N-A 3824 0009
-12D	N-A 3824 0011
-16D	N-A 3824 0013



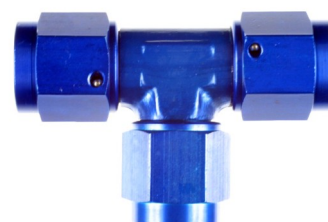
Tee with swivel nut on run

size	part number
-3D	Z-A 3824 0004
-4C	N-A 3824 0016
-4D	N-A 3824 0004
-6C	N-A 3824 0054
-6D	N-A 3824 0006
-8D	N-A 3824 0008
-10D	N-A 3824 0010
-12D	N-A 3824 0012
-16D	N-A 3824 0014



Tee with 3 swivel nuts

size	part number
-3D	S-A 3824 0009
-4D	S-A 3824 0001
-6D	S-A 3824 0004
-8D	S-A 3824 0003
-10D	S-A 3824 0010
-12D	S-A 3824 0020
-20D	S-A 3824 0021



C = Stainless steel / Edelstahl
D = Aluminium

Special designs available
Sonderanfertigungen möglich

T-Bulk head AN-norm

T-Bulks AN-norm / T-Stück AN-Norm

T-bulk AN-norm on run

size	part number
-3D AN	N-A 0804 0001
-3S AN	N-A 0804 0008
-4D AN	N-A 0804 0002
-6D AN	N-A 0804 0003
-8D AN	N-A 0804 0004
-10D AN	N-A 0804 0005
-12D AN	N-A 0804 0006
-16D AN	N-A 0804 0007



T-bulk AN-norm on side

size	part number
-3C AN	N-A 0834 0012
-3D AN	N-A 0834 0001
-3S AN	N-A 0834 0008
-4D AN	N-A 0834 0002
-6D AN	N-A 0834 0003
-8D AN	N-A 0834 0004
-10D AN	N-A 0834 0005
-12D AN	N-A 0834 0006
-16D AN	N-A 0834 0007



T-bulk AN-norm female on side

size	part number
-3C AN	N-A 0783 0010
-3D AN	N-A 0783 0001
-4D AN	N-A 0783 0002
-6D AN	N-A 0783 0003
-8D AN	N-A 0783 0004
-10D AN	N-A 0783 0005
-12D AN	N-A 0783 0006
-16D AN	N-A 0783 0007



T-bulk AN-norm female on run

size	part number
-3C AN	N-A 0784 0009
-3D AN	N-A 0784 0001
-4D AN	N-A 0784 0002
-6D AN	N-A 0784 0003
-8D AN	N-A 0784 0004
-10D AN	N-A 0784 0005
-12D AN	N-A 0784 0006
-16D AN	N-A 0784 0007



C = Stainless steel / Edelstahl
D = Aluminium
S = Steel / Stahl

Crosses AN-norm / Kreuzstücke AN-Norm

Crosses, nuts, conical seals / Kreuzstücke, Flachmuttern, konische Dichtringe

Cross AN-norm

size	part number
-3D AN	N-A 0827 0001
-4D AN	N-A 0827 0002
-4D AN 1xR1/8 female	N-A 0827 0022
-6D AN	N-A 0827 0003
-8D AN	N-A 0827 0004
-10D AN	N-A 0827 0005
-12D AN	N-A 0827 0006



Special designs available
Sonderanfertigungen möglich

Bulkhead nut AN-norm

size	part number
-3D AN	N-A 0924 0001
-3S AN	N-A 0924 0011
-4D AN	N-A 0924 0003
-4S AN	N-A 0924 0033
-6C AN	N-A 0924 0016
-6D AN	N-A 0924 0004
-6S AN	N-A 0924 0014
-8C AN	N-A 0924 0015
-8D AN	N-A 0924 0005
-10D AN	N-A 0924 0006
-12D AN	N-A 0924 0007
-16D AN	N-A 0924 0008
-20D AN	N-A 0924 0009
-24D AN	N-A 0924 0012



Conical seal

size	part number
-3D	N-X 1009 0007
-4D	N-X 1009 0006
-6D	N-X 1009 0001
-8D	N-X 1009 0002
-10D	N-X 1009 0003
-12D	N-X 1009 0004
-16D	N-X 1009 0005
-20D	N-X 1009 0008
-24D	N-X 1009 0009



C = Stainless steel / Edelstahl
D = Aluminium
S = Steel / Stahl

For increased security at connectors with damaged sealing areas. Applications: critical connections, high pressures, to improve security in general.

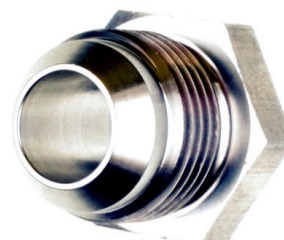
Zur Erhöhung der Sicherheit bei Anschlüssen mit beschädigten Dichtkegeln. Anwendungen: für kritische Verbindungen, bei hohen Drücken.

Welding studs AN-norm / Anschweißstutzen AN-Norm

Male, female, metric / Aussengewinde, Innengewinde, metrisch

Male weld adapter

size	part number
-3C	S-A 5806 0028
-3D	N-A 5806 0001
-3S	S-A 5806 0022
-4C	S-A 5806 0031
-4D	N-A 5806 0002
-4S	S-A 5806 0023
-5D	N-A 5806 0004
-6C	S-A 5806 0010
-6D	N-A 5806 0003
-6S	S-A 5806 0012
-8C	N-A 5806 0014
-8D	N-A 5806 0005
-8S	S-A 5806 0017
-10C	S-A 5806 0024
-10D	N-A 5806 0006
-10S	S-A 5806 0011
-12C	N-A 5806 0012
-12D	N-A 5806 0007
-12S	S-A 5806 0018
-16C	N-A 5806 0013
-16D	N-A 5806 0009
-16S	S-A 5806 0027
-20C	N-A 5806 0020
-20D	N-A 5806 0015
-20S	S-A 5806 0030
-24S	S-A 5806 0029



Female weld adapter

size	part number
-4D	N-A 0871 0001
-6D	N-A 0871 0002
-8D	N-A 0871 0003
-10D	N-A 0871 0004
-12D	N-A 0871 0005
-16D	N-A 0871 0006
-20D	N-A 0871 0007



Female metric weld adapter

size	part number
M08x1D	X-X 0867 0008
M10x1D	X-X 0867 0010
M12x1.5D	X-X 0867 0012
M14x1.5D	X-X 0867 0014
M16x1.5D	X-X 0867 0016
M18x1.5D	X-X 0867 0018
M20x1.5D	X-X 0867 0019
M22x1.5D	X-X 0867 0022
M30x1.5D	X-X 0867 0030



C = Stainless steel / Edelstahl

D = Aluminium

S = Steel / Stahl

Reducers

metric / BSP / JIC / NPT / hex head

The stated diameters are valid for reducers, which do not contain significant differences between metric and dash-side. At the beginning of the bore is a chamfer with varying sizes located, depending on the size of the reducer. If there is a significant difference between metric and dash-side, the metric side is conically machined.

Doppelstutzen

metrisch / BSP / JIC / NPT / Sechskant

Die angegebenen Bohrungsdurchmesser gelten für Doppelstutzen, bei denen keine allzu großen Unterschiede zwischen metrischer und Dash-Seite vorhanden sind. Am Beginn der Bohrung befindet sich eine Fase, deren Größe bei verschiedenen Stützengrößen variiert. Findet eine Reduzierung von der metrischen Seite auf die Dash-Seite statt, ist die metrische Seite konisch ausgeräumt.

thread Gewinde	wrench in length Einschraublänge	width across flats Schlüsselweite	height of hexagon Sechskanthöhe	bore Bohrung
M08x1	8	13 / 14*	4,5	3,5
M10x1	9 D / 10 C	14	4,5	4,4
M12x1	9	17	5	6
M12x1,5	10	17 / 19*	5	5,7
M14x1,5	10	19	5	7,7
M16x1,5	12	22	5	9,5
M18x1,5	12	22	5	10,6
M20x1,5	14	27	5 / 5,5*	12,4
M22x1,5	14	27	5 / 5,5*	15,5
M24x1,5	14	30	5,5	17
M26x1,5	14	32 / 36*	5,5	19,5
M30x1,5	14	36	5,5	21,4

* je nach Dashgröße der gegenüberliegenden Seite

* depending on dashside

Alle Maße in mm

all measures in mm

C = Stainless steel / Edelstahl

D = Aluminium

Reducers / Doppelstutzen

Metric, JIC / metrisch, JIC

Adapter male metric / JIC

size	part number
M08x1-03D	N-A 1919 0001
M08x1-03C	N-A 1919 0074
M08x1-04D	N-A 1919 0002
M08x1-04S	N-A 1919 0003
M10x1.25-03S	N-A 1919 0011
M10x1-03D	N-A 1919 0004
M10x1-03S konvex	N-A 1919 0006
M10x1-03C	N-A 1919 0105
M10x1-04D	N-A 1919 0007
M10x1-04S	N-A 1919 0008
M10x1-06D	N-A 1919 0009
M10x1-06C	N-A 1919 0010
M12x1-04D	N-A 1919 0012
M12x1-04D konkav	N-A 1919 0013
M12x1-06D	N-A 1919 0014
M12x1.5-03D	N-A 1919 0015
M12x1.5-03C	N-A 1919 0116
M12x1.5-04D	N-A 1919 0017
M12x1.5-05D	N-A 1919 0107
M12x1.5-06D	N-A 1919 0018
M12x1.5-08D	N-A 1919 0019
M14x1.5-03D	N-A 1919 0020
M14x1.5-04D	N-A 1919 0021
M14x1.5-06D	N-A 1919 0022
M14x1.5-08D	N-A 1919 0023
M14x1.5-08S	N-A 1919 0024
M16x1.5-03D	N-A 1919 0025
M16x1.5-04D	N-A 1919 0026
M16x1.5-06D	N-A 1919 0027
M16x1.5-08D	N-A 1919 0028
M16x1.5-08C	N-A 1919 0029
M16x1.5-10D	N-A 1919 0030
M16x1.5-12D	N-A 1919 0032
M18x1.5-03D	N-A 1919 0033
M18x1.5-04D	N-A 1919 0034
M18x1.5-06D	N-A 1919 0036
M18x1.5-06C	N-A 1919 0057
M18x1.5-08D	N-A 1919 0037
M18x1.5-08S	N-A 1919 0038
M18x1.5-10D	N-A 1919 0039
M18x1.5-10S	N-A 1919 0040
M18x1.5-12D	N-A 1919 0041
M20x1.5-03D	N-A 1919 0042
M20x1.5-04D	N-A 1919 0043
M20x1.5-06D	N-A 1919 0044
M20x1.5-08D	N-A 1919 0045
M20x1.5-10D	N-A 1919 0046
M20x1.5-12D	N-A 1919 0047



All reducers manufactured by SOBEK are equipped with a seat on the metric side and streamlined transitions with a tapered outlet.

we also supply special design and sizes.

Alle von uns hergestellten Doppelstutzen haben auf der metrischen Seite eine Dichtringführung und strömungsoptimierte Übergänge mit konischem Auslauf.

Sonderanfertigungen und Normabweichungen lieferbar.

C = Stainless steel / Edelstahl
D = Aluminium
S = Steel / Stahl

Reducers / Doppelstutzen

Metric, JIC, BSP / metrisch, JIC, BSP

Adapter male metric / JIC

size	part number
M22x1.5-03D	N-A 1919 0048
M22x1.5-04D	N-A 1919 0049
M22x1.5-06D	N-A 1919 0050
M22x1.5-08D	N-A 1919 0051
M22x1.5-10D	N-A 1919 0052
M22x1.5-12D	N-A 1919 0053
M22x1.5-16D	N-A 1919 0054
M24x1.5-06D	N-A 1919 0055
M24x1.5-08D	N-A 1919 0056
M24x1.5-10D	N-A 1919 0058
M24x1.5-12D	N-A 1919 0059
M26x1.5-10D	N-A 1919 0060
M26x1.5-12D	N-A 1919 0061
M26x1.5-16D	N-A 1919 0062
M26x1.5-20D	N-A 1919 0063
M28x1.5-20D	N-A 1919 0064
M30x1.5-12D	N-A 1919 0065
M30x1.5-16D	N-A 1919 0066
M30x1.5-20D	N-A 1919 0067



Adapter male BSP / JIC

size	part number
R1/8-03D	N-A 2919 0001
R1/8-03S	N-A 2919 0003
R1/8-04D	N-A 2919 0004
R1/8-04S	N-A 2919 0006
R1/4-03D	N-A 2919 0017
R1/4-04D	N-A 2919 0007
R1/4-06D	N-A 2919 0009
R3/8-04D	N-A 2919 0020
R3/8-06D	N-A 2919 0010
R3/8-08D	N-A 2919 0011
R1/2-06D	N-A 2919 0024
R1/2-08D	N-A 2919 0025
R1/2-10D	N-A 2919 0013
R1/2-12D	N-A 2919 0014
R3/4-12D	N-A 2919 0015
R3/4-16D	N-A 2919 0016



All reducers manufactured by SOBEK are equipped with a seat on the metric side and streamlined transitions with a tapered outlet.

we also supply special design and sizes.

D = Aluminium
S = Steel / Stahl

Alle von uns hergestellten Doppelstutzen haben auf der metrischen Seite eine Dichtringführung und strömungsoptimierte Übergänge mit konischem Auslauf.

Sonderanfertigungen und Normabweichungen lieferbar.

Reducers AN-norm / Doppelstutzen AN-Norm



JIC / JIC

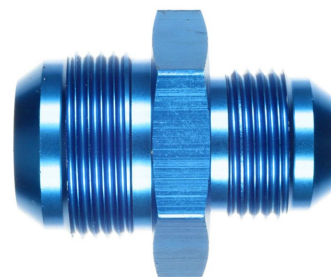
Adapter male JIC / JIC equal

size	part number
-3C	N-A 0815 0017
-3D	N-A 0815 0001
-3D flat	N-A 0815 0024
-3S	N-A 0815 0014
-3S konkav long	N-A 0815 0016
-3S konkav short	N-A 0815 0015
-3S flat	N-A 0815 0013
-3S	N-A 0815 0012
-4D SW14	N-A 0815 0004
-4D SW17	N-A 0815 0003
-4C	N-A 0815 0020
-4S flat	N-A 0815 0021
-4S	N-A 0815 0022
-4Ti SW17	N-A 0815 0018
-4Ti SW13	N-A 0815 0026
-4Ti flat	N-A 0815 0019
-6D AN	N-A 0815 0005
-8D AN	N-A 0815 0006
-10D AN	N-A 0815 0007
-12D AN	N-A 0815 0008
-16D AN	N-A 0815 0009
-20D AN	N-A 0815 0010
-24D AN	N-A 0815 0011



Adapter male JIC / JIC unequal

size	part number
-3/-02D AN	N-A 0919 0001
-4/-02D AN	N-A 0919 0002
-4/-03D AN	N-A 0919 0003
-5/-04D AN	N-A 0919 0005
-6/-03C AN	N-A 0919 0031
-6/-03D AN	N-A 0919 0006
-6/-04C AN	N-A 0919 0077
-6/-04D AN	N-A 0919 0007
-6/-05D AN	N-A 0919 0008
-8/-03D AN	N-A 0919 0009
-8/-04D AN	N-A 0919 0010
-8/-05D AN	N-A 0919 0011
-8/-06D AN	N-A 0919 0012
-10/-04D AN	N-A 0919 0013
-10/-06D AN	N-A 0919 0014
-10/-08D AN	N-A 0919 0015
-12/-04D AN	N-A 0919 0016
-12/-06D AN	N-A 0919 0017
-12/-08D AN	N-A 0919 0018
-12/-10D AN	N-A 0919 0019
-16/-08D AN	N-A 0919 0021
-16/-10D AN	N-A 0919 0022
-16/-12D AN	N-A 0919 0023
-20/-12D AN	N-A 0919 0024
-20/-16D AN	N-A 0919 0025
-24/-16D AN	N-A 0919 0026
-24/-20D AN	N-A 0919 0027

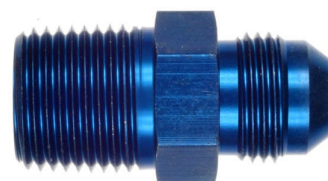


C = Stainless steel / Edelstahl
D = Aluminium
S = Steel / Stahl
Ti = Titan

Reducers, Couplings / Doppelstutzen, Muffen NPT / JIC

Adapter male NPT / JIC

size	part number
-3D AN 1/8"	N-A 0816 0001
-3S AN 1/8"	N-A 0816 0019
-3D AN 1/4"	N-A 0816 0023
-4D AN 1/8"	N-A 0816 0002
-4D AN 1/4"	N-A 0816 0003
-4S AN 1/4"	N-A 0816 0020
-6D AN 1/8"	N-A 0816 0005
-6D AN 1/4"	N-A 0816 0004
-6D AN 3/8"	N-A 0816 0006
-6D AN 1/2"	N-A 0816 0007
-8D AN 1/4"	N-A 0816 0008
-8C AN 3/8"	N-A 0816 0025
-8D AN 3/8"	N-A 0816 0009
-8D AN 1/2"	N-A 0816 0010
-10D AN 3/8"	N-A 0816 0012
-10D AN 1/2"	N-A 0816 0011
-10D AN 3/4"	N-A 0816 0013
-12D AN 3/4"	N-A 0816 0014
-12D AN 1"	N-A 0816 0016
-12D AN 1/2"	N-A 0816 0015
-16D AN 3/4"	N-A 0816 0018
-16D AN 1"	N-A 0816 0017
-20D AN 1"	N-A 0816 0022



Coupling female BSP

size	part number
R 1/8"D AN	N-A 2910 0001
R 1/4"D AN	N-A 2910 0002
R 3/8"D AN	N-A 2910 0003
R 1/2"D AN	N-A 2910 0004
R 3/4"D AN	N-A 2910 0005



Coupling female-female JIC swivel

size	part number
-3C	S-A 3815 0006
-3D	N-A 3815 0001
-4C	S-A 3815 0005
-4D	N-A 3815 0002
-6C	S-A 3815 0007
-6D	N-A 3815 0003
-8D	N-A 3815 0004
-10D	N-A 3815 0005
-12D	N-A 3815 0006
-16D	N-A 3815 0007
-20D	S-A 3815 0003



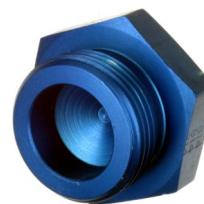
C = Stainless steel / Edelstahl
D = Aluminium
S = Steel / Stahl

Plugs / Stopfen

Allen wrench, hex-head, UNF, metric
Innensechskant, Sechskant, UNF, metrisch

Plugs hex-head UNF

size	part number
-3D AN	N-A 0814 0001
-4D AN	N-A 0814 0002
-6D AN	N-A 0814 0003
-8D AN	N-A 0814 0004
-10D AN	N-A 0814 0005
-12D AN	N-A 0814 0006
-16D AN	N-A 0814 0007



Plugs hex-head metric

size	part number
M10x1D	N-A 1814 0001
M12x1.5D	N-A 1814 0002
M14x1.5D	N-A 1814 0003
M16x1.5D	N-A 1814 0021
M18x1.5D	N-A 1814 0022
M20x1.5D	N-A 1814 0023
M22x1.5D	N-A 1814 0024
M24x1.5D	N-A 1814 0025
M26x1.5D	N-A 1814 0026
M27x1.5D	N-A 1814 0014
M30x1.5D	N-A 1814 0020

Magnet plugs hex-head metric

size	part number
M10x1D	N-A 2814 0010
M12x1.5D	N-A 2814 0012
M14x1.5D	N-A 2814 0014
M16x1.5D	N-A 2814 0016



Plugs metric DIN 908 allen wrench

size	part number
M08x1D	N-A 1814 0011
M08x1.25D	N-A 1814 0017
M10x1D	N-A 1814 0004
M12x1.5D	N-A 1814 0005
M14x1.5D	N-A 1814 0006
M16x1.5D	N-A 1814 0007
M18x1.5D	N-A 1814 0008
M20x1.5D	N-A 1814 0009
M22x1.5D	N-A 1814 0013



D = Aluminium

Plugs / Stopfen

Allen wrench, BSP, NPT, UNF / Innensechskant, Sechskant, konisch

Plug BSP DIN 908 allen wrench

size	part number
R1/8"C	N-A 1814 0012
R1/8"ME	N-A 1814 1215
R1/8"S	N-A 1814 1212
R1/4"C	N-A 1814 0019
R3/8"ME	N-A 1814 1211
R1/2"ME	N-A 1814 1214
R 1"C	N-A 1814 1213



Plug NPT allen wrench

size	part number
1/16"D AN	N-A 0932 0001
1/8"D AN	N-A 0932 0002
1/8"S AN	N-A 0932 0009
1/4"D AN	N-A 0932 0003
1/4"S AN	N-A 0932 0008
3/8"D AN	N-A 0932 0004
1/2"D AN	N-A 0932 0005
3/4"D AN	N-A 0932 0006
1"D AN	N-A 0932 0007



Plug JIC

size	part number
-2D AN	N-A 0806 0000
-3D AN	N-A 0806 0001
-3S AN	N-A 0806 0002
-3C AN	N-A 0806 0003
-4D AN	N-A 0806 0004
-4S AN	N-A 0806 0005
-4C AN	N-A 0806 0006
-6D AN	N-A 0806 0007
-6S AN	N-A 0806 0008
-6C AN	N-A 0806 0009
-8D AN	N-A 0806 0010
-8S AN	N-A 0806 0011
-8C AN	N-A 0806 0012
-10D AN	N-A 0806 0013
-10S AN	N-A 0806 0014
-10C AN	N-A 0806 0015
-12D AN	N-A 0806 0016
-12S AN	N-A 0806 0017
-12C AN	N-A 0806 0018
-16D AN	N-A 0806 0019
-16S AN	N-A 0806 0020
-16C AN	N-A 0806 0021
-20D AN	N-A 0806 0022
-20S AN	N-A 0806 0023
-24D AN	N-A 0806 0028
-24S AN	N-A 0806 0029



C = Stainless steel / Edelstahl
D = Aluminium
S = Steel / Stahl
ME= Brass / Messing

Caps, Nuts / Verschlußkappen, Überwurfmuttern

UNF, metric / UNF, metrisch

Caps JIC

size	part number
-2D AN	N-A 0929 0000
-3D AN	N-A 0929 0001
-3C AN	N-A 0929 0012
-4D AN	N-A 0929 0002
-4C AN	N-A 0929 0010
-5D AN	N-A 0929 0003
-6D AN	N-A 0929 0004
-8C AN	N-A 0929 0013
-8D AN	N-A 0929 0005
-10D AN	N-A 0929 0006
-12D AN	N-A 0929 0007
-16D AN	N-A 0929 0008
-20D AN	N-A 0929 0009
-24D AN	N-A 0929 0011



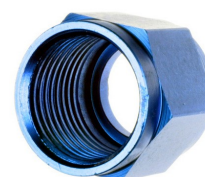
Cap metric

size	part number
M12x1.5D	N-A 1929 0001
M14x1.5D	Z-A 1929 0002
M16x1.5D	N-A 1929 0003



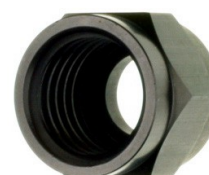
Nut UNF

size	part number
-3D AN	N-A 0818 0001
-3C AN	N-A 0818 0002
-4C AN	N-A 0818 0033
-4D AN	N-A 0818 0003
-5C AN	N-A 0818 0011
-6C AN	N-A 0818 0044
-6D AN	N-A 0818 0004
-8D AN	N-A 0818 0005
-10D AN	N-A 0818 0006
-12D AN	N-A 0818 0007
-16D AN	N-A 0818 0008
-20D AN	N-A 0818 0009
-24D AN	N-A 0818 0012



Nut metric

size	part number
M10x1D	N-A 1818 0000
M12x1.5C	N-A 1818 0016
M12x1.5D	N-A 1818 0001
M12x1.5S	N-A 1818 0005
M14x1.5C	N-A 1818 0015
M14x1.5D	N-A 1818 0002
M16x1.5C	N-A 1818 0017
M16x1.5D	N-A 1818 0003



C = Stainless steel / Edelstahl

D = Aluminium

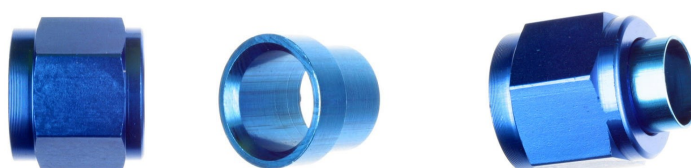
S = Steel / Stahl

Sleeves, Y-distributors / Stützhülsen, Y-Verteiler

AN-norm - JIC, metric / AN-Norm - JIC, metrisch

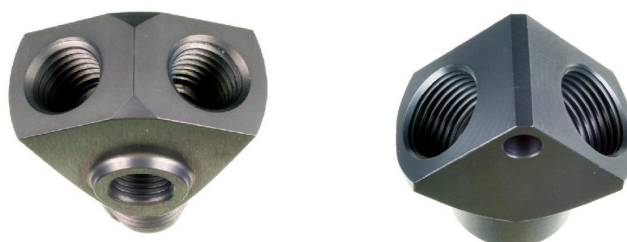
Sleeve AN-norm

size	part number
-3D AN	N-A 0819 0001
-3C AN	N-A 0819 0002
-4D AN	N-A 0819 0003
-6D AN	N-A 0819 0004
-8D AN	N-A 0819 0005
-10D AN	N-A 0819 0006
-12D AN	N-A 0819 0007
-16D AN	N-A 0819 0008



Y-distributors*

size	part number
2xM12x1.5 / 1xM14x1.5 female	N-A 9010 0008
2xM12x1.5 female / 1x-06 male	N-A 9010 0001
2xM12x1.5 female / 1x-06 male / 1xM10x1 female	N-A 9010 0003
2xM12x1.5 female / 1x swivel -06 female / 1xM10x1 female	N-A 9010 0004
2xM12x1.5 female / 1x-08 male	N-A 9010 0002
2xM18x1.5 / 1xM20x1.5 female	N-A 9010 0009
3xM30x1.5 female / 1xM08x1 female	N-A 9010 0007
3x-06 male / 1xM10x1 female	Z-A 9010 0001
2x-08 male / 1x-10 male	Z-A 9010 0003



C = Stainless steel / Edelstahl

D = Aluminium

* weitere Ausführungen auf Anfrage.

* other designs on request.

Tube connector systems / Rohrverbindungssysteme

WIG-O-FLEX / WIG-O-FLEX

WIGGINS
W900 Flexible Connectors
MIL-C-22263 Spec.



Design and Function

Clam shell closures locks automatically when two halves are snapped together and it can not disengage accidentally since all four latch pawls must be lifted simultaneously to disengage the latch. Quick disconnect action of the latch simplifies and facilitates assembly and removal by one hand. Visual inspection from a distance provides positive indication that the closure is fully engaged and securely locked. Axial adjustment 1/4" minimum; angular misalignment for full coupling 8°. Coupling design conforms to and has been qualified for all applicable military and commercial specification requirements for flexible fuel- and oilsystems.

Ausführung und Funktion

Der Schellenverschluß schließt automatisch, sobald die beiden Schellenhälften zuschnappen. Der Verschluß kann sich nicht versehentlich öffnen, denn dazu ist ein gleichzeitiges Anheben der vier Krallen des Schnappverschlusses notwendig. Dieser Schnellverschluß ermöglicht montieren und entfernen durch Einhandbedienung. Man kann mit einem Blick überprüfen, ob die Verbindung korrekt und sicher sitzt. Axiales Spiel 6,4mm; Winkelbewegung 8° gesamt. Die Ausführung dieser Kupplung entspricht sämtlichen militärischen und kommerziellen Anforderungsmerkmalen für elastische Kraftstoff- und Ölsysteme.

Technical data:

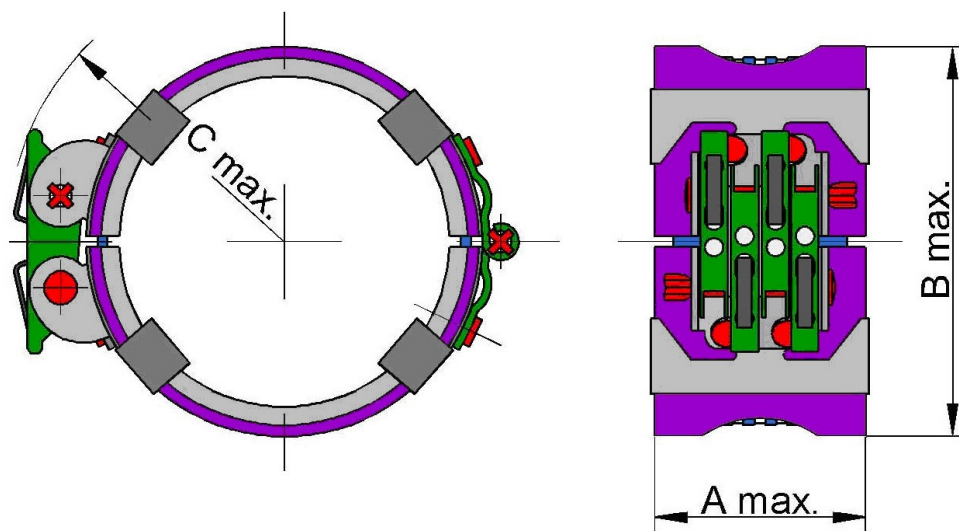
Operating pressure:	125 psi (could be higher, depending on size and system)
Proof pressure:	250 psi
Burst pressure:	375 psi
Temperature:	up to 450°F, depending primarily on O-ring material.
Flexibility:	8° total angular tube flexure (+/-4° per tube end centerline)
Axial movement:	up to +/- 1/8 inch from initially centered installation for a total of 1/4 inch
Seals:	standard MS33666 O-Ring sizes. Material: Viton

Technische Angaben:

Betriebsdruck:	8,5 bar (Druck kann beträchtlich höher sein, abhängig von der Größe und anderen Systemanforderungen.)
Testdruck:	17 bar
Platzdruck:	26 bar
Temperatur:	bis +230° C, abhängig vom Material der O-Ringe
Flexibilität:	insgesamt 8° Flexibilität (+/-4°, ausgehend vom Rohrzentrum.)
Axialspiel:	gesamt: bis zu 6,4 mm
Dichtungen:	Standard MS33666 O-Ring-Größen. Material: Viton

Tube connector systems / Rohrverbindungssysteme

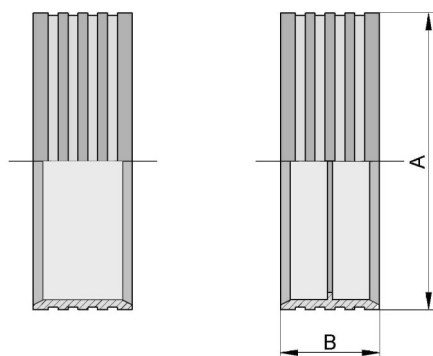
WIG-O-FLEX coupling assembly / WIG-O-FLEX Kupplung



part number Artikelnummer	size Grösse	tube Rohr	A max [inch]	B max [inch]	C max [inch]	A max [mm]	B max [mm]	C max [mm]
H-Q 9000 0008	-8	1/2"	0.739	0.851	0.801	18.77	21.62	20.35
H-Q 9000 0000	-10	5/8"	0.739	0.976	0.863	18.77	24.79	21.92
H-Q 9000 0007	-12	3/4"	0.829	1.156	0.954	21.06	29.36	24.23
H-Q 9000 0001	-16	1"	0.923	1.432	1.091	23.44	36.37	27.71
H-Q 9000 0002	-20	1-1/4"	0.923	1.682	1.216	23.44	42.72	30.89
H-Q 9000 0003	-24	1-1/2"	0.923	1.952	1.351	23.44	49.58	34.32
H-Q 9000 0009	-28	1-3/4"	0.923	2.211	1.481	23.44	56.16	37.62
H-Q 9000 0004	-32	2"	0.923	2.490	1.620	23.44	63.25	41.15
H-Q 9000 0005	-40	2-1/2"	0.989	2.996	1.873	25.12	76.10	47.57
H-Q 9000 0006	-48	3"	0.989	3.554	2.152	25.12	90.27	54.66
H-Q 9000 0010	-56	3-1/2"	0.989	4.088	2.419	25.12	103.80	61.44

Tube connector systems / Rohrverbindungssysteme

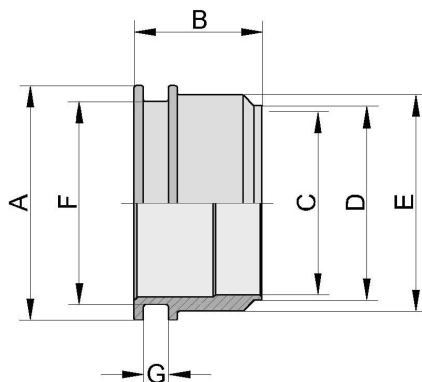
Sleeves for WIG-O-FLEX / Innenringe für WIG-O-FLEX



size Grösse	tube Rohr	A max [inch]	B max [inch]	A max [mm]	B max [mm]
-8	1/2"	0.766	0.595	19.46	15.11
-10	5/8"	0.891	0.595	22.63	15.11
-12	3/4"	1.071	0.675	27.20	17.15
-16	1"	1.347	0.755	34.21	19.18
-20	1-1/4"	1.597	0.755	40.56	19.18
-24	1-1/2"	1.867	0.755	47.42	19.18
-28	1-3/4"	2.118	0.755	53.80	19.18
-32	2"	2.391	0.785	60.73	19.94
-40	2-1/2"	2.891	0.785	73.43	19.94
-48	3"	3.391	0.785	86.13	19.94
-56	3-1/2"	3.905	0.785	99.19	19.94

Tube connector systems / Rohrverbindungssysteme

WIG-O-FLEX welding flanges / WIG-O-FLEX Anschweis-Flansche

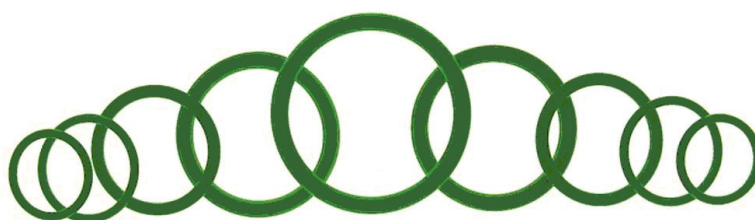


part number Artikelnummer	size Grösse	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	weight Gewicht
H-Q 9003 0008	-8	17.40	18.77	10.92	12.70	15.88	14.76	2.25	4.1 g
H-Q 9003 0000	-10	20.57	18.77	14.10	15.88	19.05	17.93	2.25	5.3 g
H-Q 9003 0007	-12	25.15	19.63	17.27	19.05	22.61	21.29	3.10	6.8 g
H-Q 9003 0001	-16	32.16	21.03	23.62	25.40	29.01	26.92	4.10	9.5 g
H-Q 9003 0002	-20	38.51	21.03	29.97	31.75	35.36	33.27	4.10	11.3 g
H-Q 9003 0003	-24	45.36	21.03	36.32	38.10	41.71	40.13	4.10	14.5 g
H-Q 9003 0009	-28	51.71	21.03	42.67	44.45	48.06	46.48	4.10	17.2 g
H-Q 9003 0004	-32	58.65	21.44	49.02	50.80	54.48	53.16	4.10	20.4 g
H-Q 9003 0005	-40	71.35	21.44	61.72	63.50	67.18	65.86	4.10	26.7 g
H-Q 9003 0006	-48	84.05	21.44	74.42	76.20	79.88	78.56	4.10	32.6 g
H-Q 9003 0010	-56	97.05	21.44	87.12	88.90	92.58	91.57	4.10	39.0 g
H-Q 9003 0011	-64	110.0	21.44	99.82	101.6	105.5	104.5	4.10	44.9 g

Tube connector systems / Rohrverbindungssysteme

for WIG-O-FLEX connectors / für WIG-O-FLEX Verbinder

Material:	Viton	Material:	Viton
Shore:	70	Shore:	70
Colour:	green	Farbe	grün



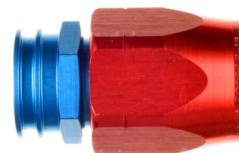
part number Artikelnummer	flange-size Flansch-Grösse	inches Zoll	Schnurstärke [mm]	A [mm]	B [mm]
N-X 3000 0020	-8	1/2"	1.78	14.00	17.56
N-X 3000 0025	-10	5/8"	1.78	17.17	20.73
N-X 3000 0077	-12	3/4"	2.62	20.29	25.53
N-X 3000 0031	-16	1"	3.53	24.99	32.05
N-X 3000 0022	-20	1-1/4"	3.53	31.34	38.40
N-X 3000 0033	-24	1-1/2"	3.53	37.69	44.75
N-X 3000 0021	-28	1-3/4"	3.53	40.80	47.80
N-X 3000 0044	-32	2"	3.53	50.39	57.45
N-X 3000 0055	-40	2-1/2"	3.53	63.09	70.15
N-X 3000 0066	-48	3"	3.53	75.79	82.85
N-X 3000 0023	-56	3-1/2"	3.53	88.49	95.55
N-X 3000 0024	-64	4"	3.53	101.19	108.25

FC-Systems / FC-Systeme

FC flange fittings / FC Flanschfittings

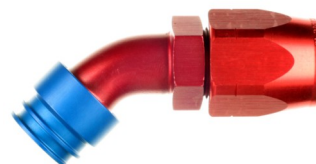
FC flange fitting straight

size	part number
-6D Gerade für Kelch -08	Z-Q 8001 0002
-8D Gerade für Kelch	Z-Q 8001 0003
-10D Gerade für Kelch	Z-Q 8001 0005
-12D Gerade für Kelch	Z-Q 8001 0007
-16D Gerade für Kelch	Z-Q 8001 0009
-20D Gerade für Kelch	Z-Q 8001 0011



FC flange fitting 45°

size	part number
-6D 45° für Kelch -08	Z-Q 8046 0001
-8D 45° für Kelch	Z-Q 8046 0003
-10D 45° für Kelch	Z-Q 8046 0005
-12D 45° für Kelch	Z-Q 8046 0007
-16D 45° für Kelch	Z-Q 8046 0009
-20D 45° für Kelch	Z-Q 8046 0011



FC flange fitting 90°

size	part number
-6D 90° für Kelch -08	Z-Q 8091 0002
-8D 90° für Kelch	Z-Q 8091 0003
-10D 90° für Kelch	Z-Q 8091 0005
-12D 90° für Kelch	Z-Q 8091 0007
-16D 90° für Kelch	Z-Q 8091 0009
-20D 90° für Kelch	Z-Q 8091 0011



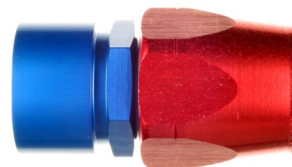
D = Aluminium

FC-Systems / FC-Systeme

FC ferrule fittings / FC Kelchfittings

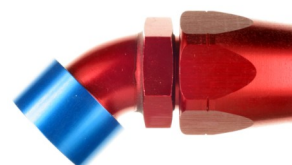
FC ferrule fitting straight

size	part number
-6D Gerade für Flansch -08	Z-Q 8001 0015
-8D Gerade für Flansch	Z-Q 8001 0001
-10D Gerade für Flansch	Z-Q 8001 0004
-12D Gerade für Flansch	Z-Q 8001 0077
-16D Gerade für Flansch	Z-Q 8001 0014
-20D Gerade für Flansch	Z-Q 8001 0012



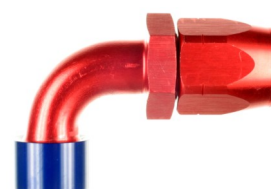
FC ferrule fitting 45°

size	part number
-6D 45° für Flansch -08	Z-Q 8046 0013
-8D 45° für Flansch	Z-Q 8046 0002
-10D 45° für Flansch	Z-Q 8046 0004
-12D 45° für Flansch	Z-Q 8046 0008
-16D 45° für Flansch	Z-Q 8046 0010
-20D 45° für Flansch	Z-Q 8046 0012



FC ferrule fitting 90°

size	part number
-6D 90° für Flansch -08	Z-Q 8091 0014
-8D 90° für Flansch	Z-Q 8091 0001
-10D 90° für Flansch	Z-Q 8091 0006
-12D 90° für Flansch	Z-Q 8091 0008
-16D 90° für Flansch	Z-Q 8091 0010
-20D 90° für Flansch	Z-Q 8091 0012



FC ferrule fitting 120°

size	part number
-8D 120° für Flansch	Z-Q 8120 0008
-12D 120° für Flansch	Z-Q 8120 0002
-16D 120° für Flansch	Z-Q 8120 0001



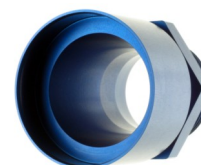
D = Aluminium

FC-Systems / FC-Systeme

FC ferrule adapters, flange adapters / FC Kelchadapter, Flanschadapter

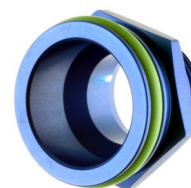
FC ferrule adapters

size	part number
-8D M16x1,5 male	H-Q 9004 0008
-8D M18x1,5 male	H-Q 9004 0108
-10D M18x1,5 male	H-Q 9004 0010
-10D M22x1,5 male	H-Q 9004 0110
-12D M18x1,5 male	H-Q 9004 0212
-12D M22x1,5 male	H-Q 9004 0012
-12D M24x1,5 male	H-Q 9004 0112
-12D M26x1,5 male	H-Q 9004 0050
-16D M26x1,5 male	H-Q 9004 0015
-16D M30x1,5 male	H-Q 9004 0116
-20D M30x1,5 male	H-Q 9004 0120



FC flange adapters

size	part number
-8D M16x1,5 male	H-Q 9004 0009
-8D M18x1,5 male	H-Q 9004 0019
-10D M18x1,5 male	H-Q 9004 0013
-10D M22x1,5 male	H-Q 9004 0021
-10D R1/2 male	Z-Q 9004 0113
-12D M18x1,5 male	H-Q 9004 0024
-12D M22x1,5 male	H-Q 9004 0014
-12D M24x1,5 male	H-Q 9004 0022
-12D M26x1,5 male	H-Q 9004 0001
-12D R1/2 male	Z-Q 9004 0112
-12D R1 male	H-Q 9004 0071
-16D M24x1,5 male	H-Q 9004 0065
-16D M26x1,5 male	H-Q 9004 0018
-16D M30x1,5 male	H-Q 9004 0023
-16D R1 male	H-Q 9004 0072
-20D M30x1,5 male	H-Q 9004 0049



D = Aluminium

Tube connector systems / Rohrverbindungssysteme

WIG-O-FLEX coupling assembly / WIG-O-FLEX Kupplung

WIG-O-FLEX coupling

size		part number
-8D	-1/2"	H-Q 9000 0008
-10D	-5/8"	H-Q 9000 0000
-12D	-3/4"	H-Q 9000 0007
-16D	-1"	H-Q 9000 0001
-20D	-1 1/4"	H-Q 9000 0002
-24D	-1 1/2"	H-Q 9000 0003
-28D	-1 3/4"	H-Q 9000 0009
-32D	-2"	H-Q 9000 0004
-40D	-2 1/2"	H-Q 9000 0005
-48D	-3"	H-Q 9000 0006
-56D	-3 1/2"	H-Q 9000 0010
-64D	-4"	H-Q 9000 0011



Sleeve Alu

size		part number
-8D	alu standard	H-Q 9002 0007
-10D	alu standard	H-Q 9002 0000
-12D	alu standard	H-Q 9002 0008
-16D	alu standard	H-Q 9002 0001
-20D	alu standard	H-Q 9002 0002
-24D	alu standard	H-Q 9002 0003
-28D	alu standard	H-Q 9002 0004
-32D	alu standard	H-Q 9002 0009
-40D	alu standard	H-Q 9002 0005
-48D	alu standard	H-Q 9002 0006
-56D	alu standard	H-Q 9002 0010
-64D	alu standard	H-Q 9002 0011



D = Aluminium

Tube connector systems / Rohrverbindungssysteme

Sleeves for WIG-O-FLEX, with hump / Innenringe für WIG-O-FLEX, mit Steg

Sleeve alu hard coated

size		part number
-8D	alu hard coated	H-Q 9002 0077
-10D	alu hard coated	H-Q 9002 0014
-12D	alu hard coated	H-Q 9002 0013
-16D	alu hard coated	H-Q 9002 0015
-20D	alu hard coated	H-Q 9002 0016
-24D	alu hard coated	H-Q 9002 0017
-28D	alu hard coated	H-Q 9002 0037
-32D	alu hard coated	H-Q 9002 0032
-40D	alu hard coated	H-Q 9002 0034
-48D	alu hard coated	H-Q 9002 0035
-56D	alu hard coated	H-Q 9002 0039
-64D	alu hard coated	H-Q 9002 0040



Sleeve with hump hard coated

size		part number
-8D	alu hard coated	H-Q 9002 0030
-10D	alu hard coated	H-Q 9002 0027
-12D	alu hard coated	H-Q 9002 0018
-16D	alu hard coated	H-Q 9002 0019
-20D	alu hard coated	H-Q 9002 0020
-24D	alu hard coated	H-Q 9002 0021
-28D	alu hard coated	H-Q 9002 0031
-32D	alu hard coated	H-Q 9002 0041
-40D	alu hard coated	H-Q 9002 0028
-48D	alu hard coated	H-Q 9002 0042
-56D	alu hard coated	H-Q 9002 0043



Sleeve stainless steel

size		part number
-8C	stainless steel	H-Q 9000 1081
-10C	stainless steel	H-Q 9000 1101
-12C	stainless steel	H-Q 9000 1121
-16C	stainless steel	H-Q 9000 1161
-20C	stainless steel	H-Q 9000 1201
-24C	stainless steel	H-Q 9002 0012
-28C	stainless steel	H-Q 9000 1281
-32C	stainless steel	H-Q 9000 1321
-40C	stainless steel	H-Q 9000 1401
-48C	stainless steel	H-Q 9000 1481
-56C	stainless steel	H-Q 9000 1561
-64C	stainless steel	H-Q 9000 1641



Sleeve with hump stainless steel

size		part number
-8C	stainless steel	H-Q 9002 0029
-12C	stainless steel	H-Q 9002 0023
-16C	stainless steel	H-Q 9002 0024
-20C	stainless steel	H-Q 9002 0025
-24C	stainless steel	H-Q 9002 0026
-48C	stainless steel	H-Q 9002 0036



Tube connectors / Rohrverbindungssysteme

welding flanges alu / Anschweiß-Flansche Alu

Welding flange alu

size			part number
-8D	-1/2"	alu	H-Q 9003 0008
-10D	-5/8"	alu	H-Q 9003 0000
-12D	-3/4"	alu	H-Q 9003 0007
-16D	-1"	alu	H-Q 9003 0001
-20D	-1 1/4"	alu	H-Q 9003 0002
-24D	-1 1/2"	alu	H-Q 9003 0003
-28D	-1 3/4"	alu	H-Q 9003 0009
-32D	-2"	alu	H-Q 9003 0004
-40D	-2 1/2"	alu	H-Q 9003 0005
-48D	-3"	alu	H-Q 9003 0006
-56D	-3 1/2"	alu	H-Q 9003 0010
-64D	-4"	alu	H-Q 9003 0011



Welding flange stainless steel

size			part number
-8C	-1/2"	stainless steel	H-Q 9003 0032
-10C	-5/8"	stainless steel	H-Q 9003 0033
-12C	-3/4"	stainless steel	H-Q 9003 0029
-16C	-1"	stainless steel	H-Q 9003 0027
-20C	-1 1/4"	stainless steel	H-Q 9003 0026
-24C	-1 1/2"	stainless steel	H-Q 9003 0028
-28C	-1 3/4"	stainless steel	H-Q 9003 0031
-32C	-2"	stainless steel	H-Q 9003 0030

Plug

size	part number
-8D	S-B 1001 0033
-10D	S-B 1001 0034
-12D	S-B 1001 0021
-16D	S-B 1001 0027
-20D	S-B 1001 0028
-24D	S-B 1001 0029
-28D	S-B 1001 0037

Cap

size	part number
-8D	S-B 1001 0031
-10D	S-B 1001 0030
-12D	S-B 1001 0022
-16D	S-B 1001 0025
-20D	S-B 1001 0024
-24D	S-B 1001 0023
-28D	S-B 1001 0032
-32D	S-B 1001 0041
-40D	S-B 1001 0040
-48D	S-B 1001 0039

O-ring

size	part number
-8D	N-X 3000 0020
-10D	N-X 3000 0025
-12D	N-X 3000 0077
-16D	N-X 3000 0031
-20D	N-X 3000 0022
-24D	N-X 3000 0033
-28D	N-X 3000 0021
-32D	N-X 3000 0044
-40D	N-X 3000 0055
-48D	N-X 3000 0066
-56D	N-X 3000 0023
-64D	N-X 3000 0024



FPM 70 shore green



C = Stainless steel / Edelstahl
D = Aluminium

andere Grössen auf Anfrage / other sizes on request

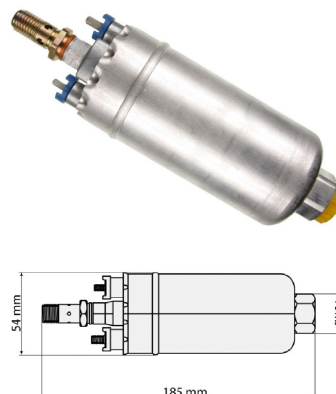
Pump systems / Pumpensysteme

Fuel pumps / Kraftstoffpumpen

Bosch Fuel Pump FP 125

Fuel delivery > 125 l/h, 5bar

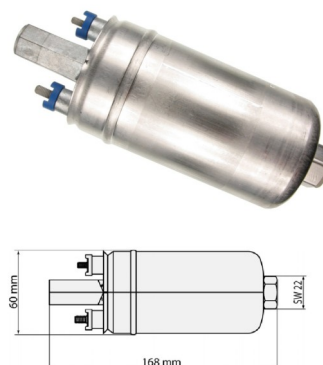
Fuel flow	>125 l/h
Supply voltage	13,5V
Amperage	5A (5bar)
Weight	725g
Non return valve	external
Intake side	M16x1.5
Pressure side	M12x1.5
Electrical	+:M4 / -:M5
Part number	H-P 1000 0011
Bosch number	Y 580 700 118



Bosch Fuel Pump FP 165

Fuel delivery > 165 l/h, 5bar

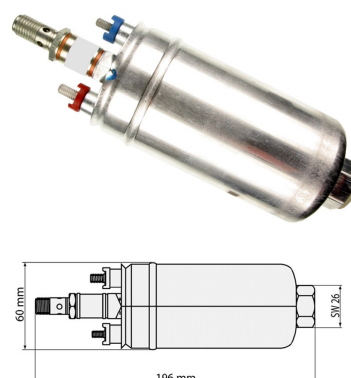
Fuel flow	>165 l/h
Supply voltage	13,5V
Amperage	10A (5bar)
Weight	980g
Non return valve	Internal
Intake side	M14x1.5
Pressure side	M12x1.5
Electrical	+:M4 / -:M5
Part number	H-P 1000 0009
Bosch number	0 580 254 979



Bosch Fuel Pump FP 200

Fuel delivery >200l/h, 5/8 bar

Fuel flow	>200 l/h
Supply voltage	13,5V
Amperage	13A
Weight	1030g
Non return valve	external
Intake side	M18x1.5
Pressure side	M12x1.5
Electrical	+:M6 / -:M5
Part number 5 bar	H-P 1000 0088
Bosch number 5 bar	0 580 254 044
Part number 8 bar	H-P 1000 0007
Bosch number 8 bar	B 261 205 413



Weitere Ausführungen auf Anfrage
Other designs on request

Pump systems / Pumpensysteme

Fuel pumps / Kraftstoffpumpen

Facet Fuel Pump Blue Top	
Fuel delivery 170 l/h 500 mbar	
Fuel flow	170 l/h
Supply voltage	12V
Current consumption	4A
Weight	715g
Connectors	1/4NPT
Part number	H-P 1000 0003



Intank Fuel Pumps	
Fuel delivery 200 l/h 500 mbar	
Fuel flow	200 l/h
Supply voltage	13,5V
Amperage	4A
Weight	180g
Pump with original nipple 9.5mm	H-P 1000 0010
Pump with connector -06D	Z-P 1000 0012
Pump with nipple 8mm	Z-P 1000 0013



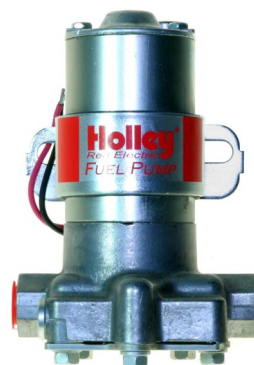
Intank Fuel Pumps	
Fuel delivery 170 l/h 200 mbar	
Fuel flow	170 l/h
Supply voltage	13,5V
Amperage	2,2A
Weight	149g
Part number	H-P 1000 0014



Holley Fuel Pump 350 GPH Dominator	
Fuel delivery 1300 l/h 1 bar	
Fuel flow	>1300 l/h
Supply voltage	13,5V
Amperage	10A
Weight	2788g
Intake side	-10D
Pressure side	-08D
Part number	H-P 1000 0016



Holley Fuel Pump 97 GPH RED Electric	
Fuel delivery 250 l/h, 475mbar	
Fuel flow	>250 l/h
Supply voltage	13,5V
Amperage	4A
Weight	1162g
Connectors	3/8NTP
Part number	H-P 1000 0005



Fuel pump equipment / Zubehör Kraftstoffpumpen

Half pipe for pump bracket	
Part number	H-P 1000 0019

Pump bracket CFK	
for 60mm Bosch pump and filter	
Part number	H-P 1000 0006



Pump connectors suction side	
size	part number
R14d-08S 70mm	Z-A 9000 0027
R14d-08D 90mm	Z-A 9000 0005
R16d-08S 87mm	Z-A 9000 0018
R18d-08S 70mm	Z-A 9000 0026

Other bridges on request.



Pump connectors pressure side	
	part number
turnable -06D on side	Z-A 9000 7000
turnable -06D on side with FCV	Z-A 9000 7001
turnable -06D on side with pressure exit	Z-A 9000 7002
turnable -06D on side + FCV + pressure exit	Z-A 9000 7003
turnable -06D on both sides with FCV	Z-A 9000 7004



Filter bag	
	part number
Filter bag 70µm	Z-C 0011 0007



Oil pumps / Ölpumpen

Gear oil pump Denso	
12V / 6A / 230 l/h, max. 1,5 bar	part number
in M20x1.5 out M16x1.5	H-P 2000 0001
in -06D out -06D	Z-P 2000 0003
in -06D out -06D with filter T3 150µm	Z-P 2000 0005
in -08D out -08D with filter T3 150µm	Z-P 2000 0006



Gear oil pump Sobek	
Type 3-540	
12V / 4A / 540 l/h 5 bar	part number
in M22x1.5 out M18x1.5	Z-P 6000 0004



Gear oil pump Sobek	
Type 4-xxx	
12V / 11A	part number
Type 4-650 650l/h 5 bar M22x1.5 in M18x1.5 out	Z-P 6000 0003
Type 4-900 900l/h 5 bar M22x1.5 in M18x1.5 out	Z-P 6000 0005



Mini oil pump	
12V / 2,5A / 160 l/h 0,5 bar	part number
in nipple 15mm / out nipple 8mm	H-P 2000 0111
in nipple 15mm / out nipple 8mm / with cabel	Z-P 2000 0112



Universal diaphragm pumps / Universal Membranpumpen

Twin cam diaphragm pumps	
Connectors 3/8" NPT	part number
12V/8A 450l/h 3,5bar FPM sealings	H-P 2000 0033
12V/8A 360l/h 4,5bar FPM sealings	H-P 2000 0035
230V 270l/h 4,1bar FPM sealings	H-P 2000 0034
230V 360l/h 4,2bar EPDM sealings	H-P 2000 0040



Quad cam diaphragm pumps	
	part number
12V/8A 1100l/h Nitril sealings	H-P 2000 0019
115V 1020l/h Santoprene sealings	H-P 2000 0038
230V 720l/h Santoprene sealings	H-P 2000 0036



Connectors for Quad cam pump	
	part number
straight nipple hose adapting	H-P 2000 0030
straight AN -08D	S-A 2000 0001
90° G1/2 female with CPC	Z-P 2000 0020
90° G1/2 male	H-P 2000 0020

- * Special solutions can be offered as per customers request
- * Sonderlösungen auf Kundenanfrage



Filter modules / Filtermodule

Filter technique / Filtertechnik

The mesh size of a filter element is stated in μm (1/1000mm). There are absolute and nominal values. We always state the absolute value, i.e. the biggest diameter of a particle that may pass the filter.

Der Filtergrad eines Filterelements wird in μm (1/1000mm) angegeben. Man unterscheidet zwischen absoluten und nominalen Werten. Wir geben immer den Absolutwert an, d.h. den größten Durchmesser eines Körpers, der das Filtergewebe passieren kann.

The selection of an appropriate filter element depends on the components that have to be protected, viscosity of the medium, the quality of fluid and the degree of contamination. The required filter surface may be determined by testing, while the current of fluid in the filter element should be lower than in the hose system.

Die Auswahl des richtigen Filterelements richtet sich nach den zu schützenden Komponenten, der Mediumviskosität, der Durchflußmenge und dem Verschmutzungsgrad. Die erforderliche Filterfläche ist gegebenenfalls im Versuch zu ermitteln, wobei die Strömungsgeschwindigkeit im Filterelement geringer sein sollte als im Leitungssystem.

Some of our experiences:

fuel systems:

suction side: 40-60 μm
pressure side: 10-20 μm

transmission oil-cycle:

suction side: 120-150 μm

hydraulic systems:

suction side: 15-20 μm
pressure side: 5-10 μm

Einige unserer eigenen Erfahrungen:

Kraftstoffsysteme:

Saugseite: 40-70 μm
Druckseite: 10-20 μm

Getriebeöl-Kreislauf:

Saugseite: 120-150 μm

Hydrauliksysteme:

Saugseite: 15-20 μm
Druckseite: 5-10 μm

Comparison of well known particles / Vergleichstabelle bekannter Partikel		
Substance / Substanz	μm / micron	inches/ Zoll
salt grain / Körnchen Tafelsalz	100	0.004
human hair / Menschliches Haar	70	0.0027
talc powder / Talkpuder	10	0.0004
lowest sight limit / untere Sichtgrenze	40	0.00156

Filter modules / Filtermodule

Filters type 3, 5, inlets / Typen 3, 5, Filtereinsätze

Filter type 3

Ø23mm l=90mm

size		part number
-4D	60µm	Z-C 2000 0015
-4D	150µm	Z-C 2000 0016
-4D	320µm	Z-C 2000 0110
-4D / f06D	320µm	Z-C 2000 0010
-6D	60µm	Z-C 2000 0005
-6D	150µm	Z-C 2000 0004
-6D	320µm	Z-C 2000 0017
-6D / M20x1.5	60µm	Z-C 2000 0006
-6D / M20x1.5	150µm	Z-C 2000 0003
-8D	60µm	Z-C 2000 0013
-8D	150µm	Z-C 2000 0007
-8D	320µm	Z-C 2000 0018
-8D / M20x1.5	150µm	Z-C 2000 0008
M16x1.5 female	150µm	Z-C 2000 0001



Filter insert type 3

size		part number
-6D	60µm	Z-C 0002 0005
-6D	150µm	Z-C 0002 0044
-8D	60µm	Z-C 0002 0001
-8D	150µm	Z-C 0002 0004



Filter type 5

Ø36 l=120mm

size		part number
-4D	70µm	Z-C 1000 0038
-6D	60µm	Z-C 1000 0011
-6D	150µm	Z-C 1000 0001
-6D	200µm	Z-C 1000 0076
-8D	25µm	Z-C 1000 0078
-8D	70µm	Z-C 1000 0077
-8D	150µm	Z-C 1000 0007
-10D	25µm	Z-C 1000 0029
-10D	70µm	Z-C 1000 0014
-10D	150µm	Z-C 1000 0079
-12D	150µm	Z-C 1000 0003
-12D	70µm	Z-C 1000 0049



D = Aluminium

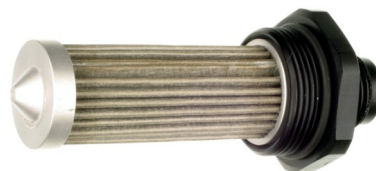
Weitere Ausführungen auf Anfrage
Other designs on request

Filter modules / Filtermodule

Filters type 5, 6, 7, inlets / Typen 5, 6, 7, Filtereinsätze

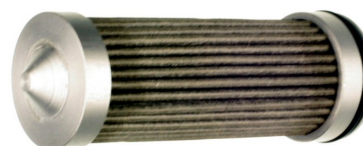
Filter insert type 5

size		part number
-6D	70µm	Z-C 0002 0170
-6D	150µm	Z-C 0002 0047
-8D	25µm	Z-C 0002 0269
-8D	70µm	Z-C 0002 0270
-8D	150µm	Z-C 0002 0150



Filter cartridge type 5

	part number
10µm	N-C 0001 0021
25µm	N-C 0001 0017
70µm	N-C 0001 xxxx
150µm	N-C 0001 0020



Filter type 6

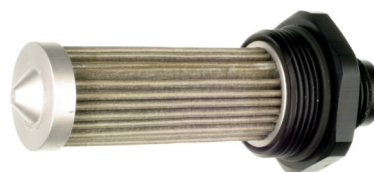
Ø36mm l=85mm

size		part number
-6D	10µm	Z-C 1000 1020
-6D	25µm	Z-C 1000 0051
-6D	60µm	Z-C 1000 0046
-6D	70µm	Z-C 1000 0044
-6D	150µm	Z-C 1000 0048
-8D	25µm	Z-C 1000 0050
-8D	70µm	Z-C 1000 0055
-8D	150µm	Z-C 1000 0047



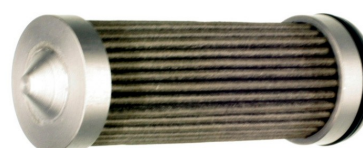
Filter insert type 6

size		part number
-6D	10µm	Z-C 0002 0020
-6D	25µm	Z-C 0002 0023
-6D	70µm	Z-C 0002 0070
-6D	150µm	Z-C 0002 0045
-8D	10µm	Z-C 0002 0021
-8D	70µm	Z-C 0002 0071
-8D	150µm	Z-C 0002 0046



Filter cartridge type 6

	part number
10µm	N-C 0001 0110
25µm	N-C 0001 xxxx
70µm	N-C 0001 xxxx
150µm	N-C 0001 0062



D = Aluminium

Weitere Ausführungen auf Anfrage
Other designs on request

Filter modules / Filtermodule

Filters type 7, inlets / Typen 7, Filtereinsätze

Filter type 7

Ø36mm l=57mm

size		part number
-6D	10µm	Z-C 0001 0016
-6D	25µm	Z-C 0001 0015
-6D	60µm	Z-C 0001 0013
-6D	150µm	Z-C 0001 0014
-8D	150µm	Z-C 0007 8150
-12D	150µm	Z-C 0001 0018



Ø36mm l=57mm

Filter insert type 7

size		part number
-6D	10µm	Z-C 0002 0026
-6D	25µm	Z-C 0002 0025
-6D	60µm	Z-C 0002 0011
-6D	150µm	Z-C 0002 0017
-8D	150µm	Z-C 0002 0016



Filter cartridge type 7

	part number
10µm	N-C 0001 0014
25µm	N-C 0001 xxxx
60µm	N-C 0001 0016
150µm	N-C 0001 0015



Filter bracket CFK

	part number
for filter type 5, 6,	H-P 1000 0066



High pressure hydraulic filter

200bar, 6l/min

size		part number
-6C	10µm	Z-C 1000 0021
M14x1.5 female	10µm	Z-C 1000 0033
cartridge	10µm	N-C 2002 0006

C = Stainless steel / Edelstahl

D = Aluminium

Weitere Ausführungen auf Anfrage

Other designs on request



Filter modules / Filtermodule

Oilfilters, filter parts / Oelfilter, Zubehörteile

Filter cartridge fuel

size		part number
M14x1.5 in / M12x1.5 out	20µm	H-C 1000 0001
M14x1.5 female	10µm	H-C 1000 0025



Filter cartridge engine oil

size	part number
PC 202 (1")	N-C 2002 0002
PC 38 (3/4-16UNF)	N-C 2002 0001



Adapter Spin on

size	part number
-8f 2xR1/2female top port	N-C 0002 9007
-8f 2xM18female side port	N-C 0002 9013
M18f 2xR1/2female top port	N-C 0002 9006



Filterhead with bracket

size	part number
-8female 2xR1/2female, top port	N-C 0002 9008
-8male 2xM18x1.5 female M10x1	Z-C 0002 0003
4x-08female, side port	N-C 0002 9009
1"male, 2xM18x1.5female, M10x1, side port	N-C 0002 9002
1"male, 2xR3/4female, side port	N-C 0002 9001



Oil refilling systems / Ölbefüllsysteme

Oilstick Magnum v=2,5 l

Pressurized bottle to refill oil into the car in a quantity up to 1.5 litres in the pit lane.
Total capacity 2.5 litres. Working pressure 6 bars. Proofed 25 bar.
Easy to fill, load with Schrader valve, easy to stick on the receiver nipple.
Dry break, non spillage.

Oilstick Magnum with LiTec system part number
Z-B 1000 1026



Oilpick 9 litres

Pressurized bottle to refill oil into the car in quantity of 6-7 litres in the pit lane with more than one car.
Total capacity 9.0 litres. Working pressure 6 bar, proof 25 bar.
Easy to fill, load with Schrader, valve easy to stick on the receiver nipple.
Dry break, non spillage.

Oilpick container with filter 150 µm part number
Z-B 1001 1109



Oilpick 19 litres

Pressurized bottle to refill oil in the car in quantity of 13 litres in the pit lane with more than one car. Total capacity 19.0 litres. Working pressure 6 bar, proof 25 bar.
Easy to fill, load with Schrader valve, easy to stick on the receiver nipple.
Dry break, non spillage.

Oilpick container with filter 150 µm part number
Z-B 1000 1118



Oilpick tools

Oilpick lance system LiTec
Z-Q 0001 8101



Oilpick gun system LiTec
Z-Q 0001 8103



Oilpick hose length 1.5m
B-S 1080 1500



LiTec Oilrefilling system
part number
Litec Receiver Z-Q 0001 8034
Litec Dispenser Z-Q 0001 8046



Water refilling systems / Wasserbefüllsystem

Waterpick

Refilling water on the pit lane if the engine is hot.
The receiver could be fitted inside or outside the car.
The pressurized container allows to inject water without spillage into the hot cooling system .

Part numbers:

Z-B 1000 1209 Waterpick container 9 litre with filter 70µm -06D

Z-B 1000 1119 Waterpick container 19 litre with filter 70µm -06D



Waterpick tools

Waterpick tool **CPC** with 1.5m hose
for injection in Porsche coolant circuit
Part number Z-B 1014 0001



Waterpick tool **Stäubli** with 1.5m hose
for injection in Porsche coolant circuit
Part number Z-B 1014 0004



Waterpick gun
Z-V 9000 0008



Waterpick receiver
Z-V 9000 0007



Waterpick dust cap for receiver
Z-V 9000 0088



Waterpick hose 1.5m
B-S 1060 0015



Waterflush / Wasserbefüllsystem

With the WF-unit you are able to fill and evacuate water from any cooling systems without air.
 The container storage is 30 litres.
 A strong pump supplies a continued circulation.
 A mixing valve allows to regulate pressure / flow.
 Power 12V DC, 115V AC, 230V AC

Part numbers:

Z-B 1000 3023 Waterflush with hose and pump 12V DC for Porsche GT3R
 Z-B 1000 3022 Waterflush with hose and pump 115V AC for Porsche GT3R
 Z-B 1000 3021 Waterflush with hose and pump 230V AC for Porsche GT3R
 Z-B 1000 3019 Waterflush with hose and pump 12V DC for Porsche 997 RSR & GT3R2008
 Z-B 1000 3018 Waterflush with hose and pump 115V AC for Porsche 997 RSR & GT3R2008
 Z-B 1000 3017 Waterflush with hose and pump 230V AC for Porsche 997 RSR & GT3R2008

Z-B 1000 3020 Waterflush jumper tool CPC to Stäubli QDV



Jumper tool to connect
 The CPC Waterflush to a
 2007 Stäubli QDV car



Air blow tool

Part number Z-B 1000 3026

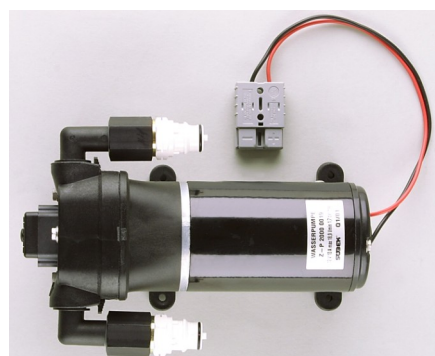


Spare pumps

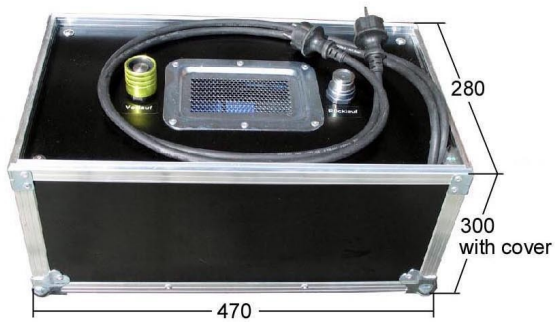
12V Diaphragm
 115V Diaphragm
 230V Diaphragm

Part number

H-P 2000 0019
 H-P 2000 0038
 H-P 2000 0036



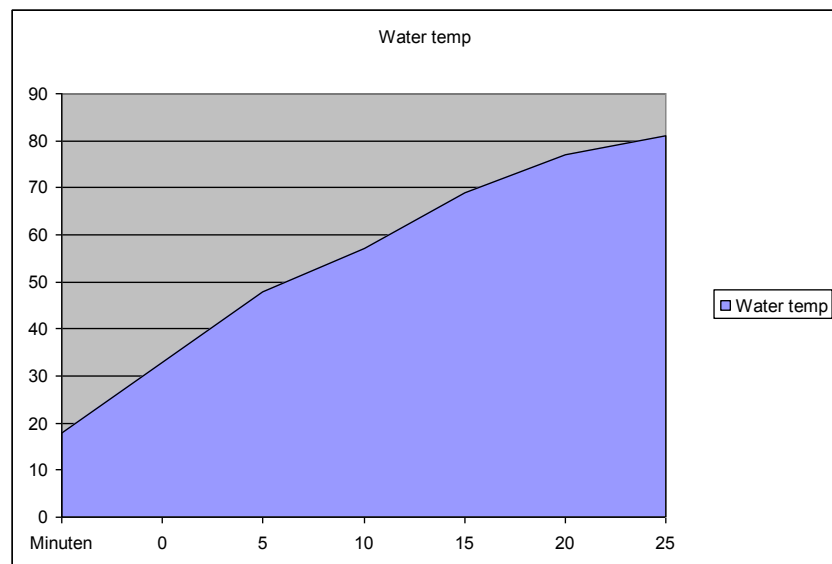
Engine Preheater for Porsche 997 RSR



Preheater unit for
Porsche 996 & 997 RSR 230V AC 2 x 10A
Part number Z-B 2000 0008



Heat rating:
17 l water at 22°C room
40°C 6 min
50°C 10 min
60°C 15 min
70°C 18 min
75°C 20 min
77°C switch off



Splitter box
IN 1 x 360 V Cekon
OUT 3 x 230 V
Part number N-I 0002 0019

Fuel supply equipment tool for Porsche 996 and 997

The refill bottle is designed for a fast and comfortable refuelling at the race track. It's especially made to use it at models 996 and 997, that means that the position of the handles and the angle of the new compact push-pull valve with the tube meet perfectly the original filler neck of these models.

At a fuel fill you insert the run out tube into the filler neck until the rubber bumper meets the neck. While pushing the bottle forward in this direction the valve will open and the fuel flows out into the fuel cell. The process will stop at any time when pulling the bottle. To shorten the filling time it is recommended to open the refill cap of the bottle while filling.

The stainless steel base is made to fit the bottle properly and safe.

Technical details:

- Bottle made of transparent HDPE with two handles and a scale from 5 to 25 litres
- Valve and housing made of black anodised aluminium F38 and stainless steel 1.4305
- Flow optimised contour
- Sealing and bumper made of Viton®
- closing spring made of stainless steel 1.4310
- filling time approx. 30 seconds for 25 litres (while cap is open)



25 litres refill bottle with rack for Porsche 996 & 997

Part number

Z-T 9025 0007

Twin Dry Break unit GTP for FIA rubber cell



Bottle 25 litres with probe
Rack for the bottle

Part numbers
Z-T 9001 0003
H-T 9001 0009



Probe



Rack

Dry break dispenser

Part number H-T 9001 0001



Receiver for dry brake

Part number H-T 9001 0002



Air lance

1.



2.



3.



1.

Air lance conventional Type 60
Coupled against the counter pressure
System Porsche and Ferrari
Part number Z-V 9000 0011

3.

Air Lance -SPEEDY- Type 100
Coupled with counter pressure,
activated with a trigger
Part number Z-V 9000 0015

2.

Air lance -SPEEDY- Type 60
Coupled without counter pressure,
activated with a trigger
Part number Z-V 9000 0013

Air lance systems

	part number
Repair kit air lance type 60	H-V 9000 0002
Repair kit air lance Speedy 60	H-V 9000 0000
Repair kit air lance Speedy 100	H-V 9000 0005
Ergo Vent -04D	Z-V 9000 0005
Ergo Vent -06D	Z-V 9000 0003
Ergo Vent -08D	Z-V 9000 0006
Nipple type 60 3/8 BSP male	N-Q 4000 0015
Nipple type 60 3/8 BSP female	N-Q 4000 0016
Nipple type 100 3/8 BSP male	N-Q 4000 0012
Nipple type 100 3/8 BSP female	N-Q 4000 0011
Nipple type 100 -08D / -10D	Z-V 9000 0023



Central high performance dump valve for rear air jacks

This dump valve allows to bleed the rear jacks in less than 0.4 sec.
Easy to install in the existing system.
To fit in tubing and hose systems.
Works together with a front dump Valve.

Saves a lot of time in the pit.



	part number
Central dump valve	Z-V 9001 0060
Front dump valve	N-V 9001 0012



Speed Bleeder HD

	part number
Customer Triple Kit	Z-V 9001 0005



Air jack and air lance reconditioning and repair service



We are the manufacturer of the black Porsche air jacks and many air lance systems well known since some decades.

Every air jack and air lance will be tested carefully before leaving the factory.

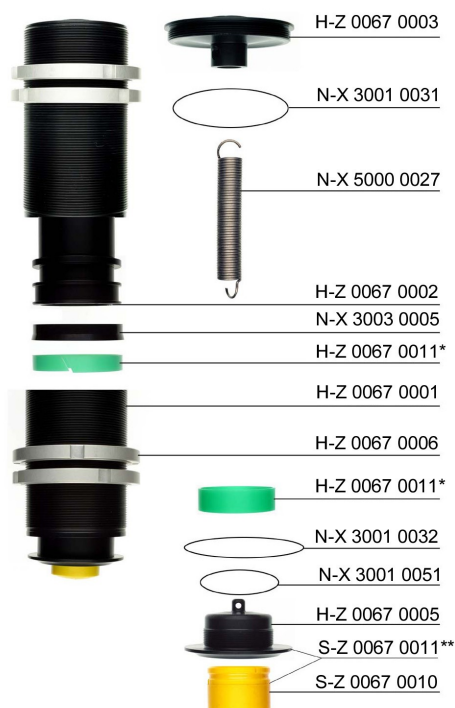
Not only manufacturing but also repairs and overhaul service, that can be done very quickly, is a part of our business.

It doesn't matter if you need a reassembly with new seals, fences and springs or if there has to be an exchange of cylinder, foot or other components – **we do it for you!**

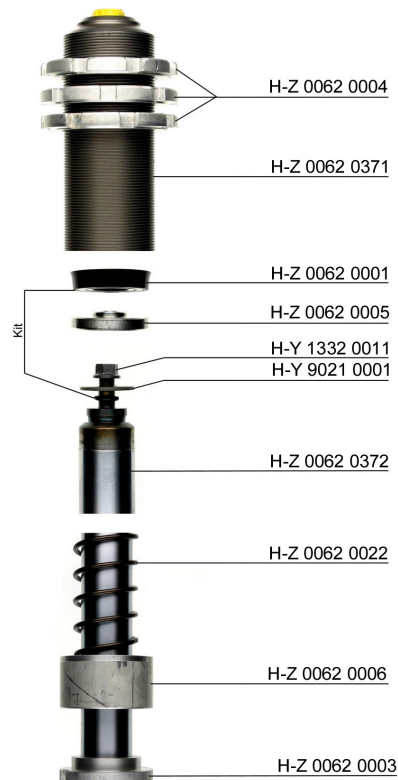
For any questions don't hesitate to contact us.



Air jack Z-Z 0067 0251 stroke 246mm



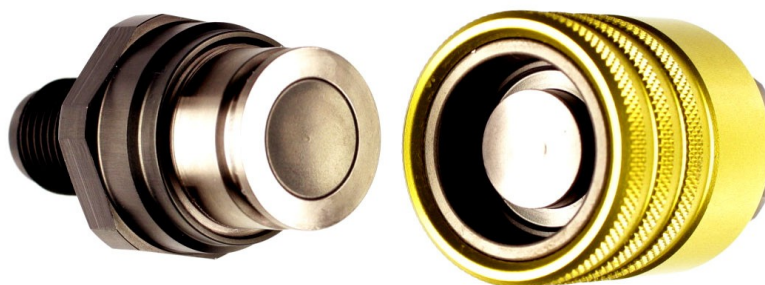
Air jack H-Z 0062 0370 stroke 220mm
H-Z 0062 0410 stroke 260mm



Sobek Series

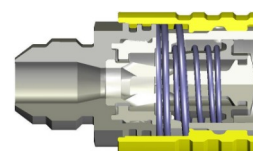
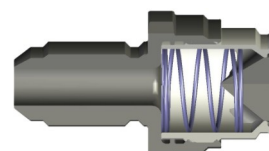
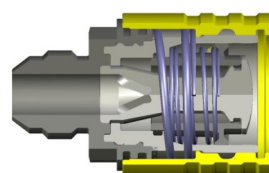


<u>Description:</u>	Light weight, small size and high pressure quick connect and quick disconnect couplings for hydraulic, pneumatic, fuel and other applications.
<u>Advantages:</u>	Dry break system Valved male and valved female end Push-pull operating system, no retracting of release sleeve Totally covered and sealed mechanism Correct locked condition control
<u>Material:</u>	Body and valves anodized aluminium alloy AlZnMgCu1,5 (F50) Male housing hc, locking parts, bolt and springs stainless steel 1.4305
<u>Seals:</u>	FPM (Fluorocarbon, Viton®) EPDM (Ethylen-Propylen-Dien-Rubber) (other elastomers on request) BF 750 (Fluorokautschuk)
<u>Operating pressure:</u>	150 bar / 220 psi
<u>Burst pressure:</u>	Min. 450 bar / 6500psi (also for the disconnected halves)
<u>Operating temperatures:</u>	Dependent upon sealing material FPM: -20°C to +200°C EPDM: -50°C to +150°C BF 750 -15°C to +200°C



QDV's Serie LiTec

Nipple -6 / Body -6		part number
Standard	FPM	Z-Q 0001 6020
Standard	EPDM	Z-Q 0001 6021
Bulk	FPM	Z-Q 0001 6030
Coupler -6 / Body -6		part number
Standard	FPM	Z-Q 0001 6040
Standard	EPDM	Z-Q 0001 6041
Bulk	FPM	Z-Q 0001 6060
Receiver -6 / Body -6		part number
Bulk	FPM	Z-Q 0001 6022
Nipple -8 / Body -6		part number
Standard	FPM	Z-Q 0001 8023
Standard	EPDM	Z-Q 0001 8022
Bulk	FPM	Z-Q 0001 8032
Bulk	EPDM	Z-Q 0001 8033
Coupler -8 / Body -6		part number
Standard	FPM	Z-Q 0001 8042
Standard	EPDM	Z-Q 0001 8043
Receiver -8 / Body -6		part number
Standard	FPM	Z-Q 0001 8024
Standard	EPDM	Z-Q 0001 8025
Bulk	FPM	Z-Q 0001 8034
Bulk	EPDM	Z-Q 0001 8035
Nipple -8 / Body -8		part number
Standard	FPM	Z-Q 0001 8020
Standard	EPDM	Z-Q 0001 8021
Bulk	FPM	Z-Q 0001 8030
Bulk	EPDM	Z-Q 0001 8031
Coupler 8 / Body -8		part number
Standard	FPM	Z-Q 0001 8040
Standard	EPDM	Z-Q 0001 8041
Bulk	EPDM	Z-Q 0001 8061
Caps for nipple		
Body -6		Z-Q 0001 6100
Body -8		Z-Q 0001 8102



Weitere Ausführungen auf Anfrage
Other designs on request

Stäubli quick disconnect valves

size	part number			
-3C	SPH03	nipple	EPDM	H-Q 0003 0003
-3C	SPH03	coupler bulk	EPDM	H-Q 0003 0033
-3D	SPH03	nipple yellow	EPDM	H-Q 0003 0333
-3D	SPH03	nipple red	EPDM	H-Q 0033 0333
-3D	SPH03	coupler	EPDM	H-Q 0003 3333
-3D	SPH03	coupler bulk	EPDM	H-Q 0033 0033
-4C	SPH03	nipple	FPM	H-Q 0003 0444
-4C	SPH03	coupler	FPM	H-Q 0003 0044
-4D	SPH03	nipple yellow	EPDM	H-Q 0004 0004
-4D	SPH03	nipple red	EPDM	H-Q 0004 0444
-4D	SPH03	coupler	EPDM	H-Q 0004 0044
-4D	SPH03	nipple red	FPM	H-Q 0004 0555
-4D	SPH03	coupler	FPM	H-Q 0004 0055
-4D	SPH05	nipple red	EPDM	H-Q 0003 0006
-4D	SPH05	coupler	EPDM	H-Q 0003 0007
-4D	SPH05	nipple yellow	FPM	H-Q 0003 0055
-4D	SPH05	coupler	FPM	H-Q 0003 0005
-6D	SPH05	nipple yellow	FPM	H-Q 0003 0066
-6D	SPH05	coupler yellow	FPM	H-Q 0003 0012
-6D	SPH05	coupler bulk yellow	FPM	H-Q 0003 0010
-6D	SPH05	coupler bulk red	FPM	H-Q 0003 0009
-6D	SPH08	nipple yellow	FPM	H-Q 0003 0088
-6D	SPH08	coupler	FPM	H-Q 0003 0008
-8D	SPH08	nipple yellow	FPM	H-Q 0003 0089
-8D	SPH08	coupler	FPM	H-Q 0003 0090
-6D	SPT08	nipple	FPM	H-Q 0005 0004
-6D	SPT08	coupler	FPM	H-Q 0005 0003
-8D	SPT08	nipple	FPM	H-Q 0005 0001
-8D	SPT08	coupler	FPM	H-Q 0005 0002
	RMI	nipple 13mm	FPM	N-Q 6000 0001
	RMI	coupler 13mm	FPM	N-Q 6000 0002
	RMI	coupler -6D	FPM	N-Q 6000 0003



SPH



SPH



SPH

Attention!! The couplings of the SPH series is the nipple the female part and the coupling the male part.



RMI



RMI



RMI



RMI

C = Stainless steel / Edelstahl
D = Aluminium

Aeroquip couplings

size				part number
-4D	AE1011 coupler	EPDM		N-Q 1011 0004
-4D	AE1014 nipple	EPDM		N-Q 1014 0004
-4D	AE1011 nipple bulk	EPDM		N-Q 1012 0004
-4D	AE1801 coupler	EPDM		N-Q 1801 0001
-4D	AE1801 nipple bulk	EPDM		N-Q 1801 0002
-4D	AE1801 compl. nipple bulk	EPDM		N-Q 1801 0003
-6D	AE3900 compl.	FPM		H-Q 3900 0006
-6D	AE3900 compl. nipple bulk	FPM		H-Q 3900 0007
-8D	AE3900 compl.	FPM		H-Q 3900 0008
-8D	AE3900 compl. nipple bulk	FPM		H-Q 3900 0088

* Other Aeroquip couplings on request

D = Aluminium



Nipple AE 1014



Nipple Bulk AE 1012



Coupler AE 1011



Nipple AE 1801



Coupler AE 1801



Nipple AE 3900



Compl. AE 3900



Coupler AE 3900

Filler caps

		part number
Monza cap 2" venting	aluminium	H-T 0001 0006
flange 2" screw on	aluminium	H-T 0001 6666
flange 2" weld on	aluminium	H-T 0001 0666
Monza cap 2.5" venting	aluminium	H-T 0001 0007
flange 2.5" screw on	aluminium	H-T 0001 7777
flange 2.5" weld on	aluminium	H-T 0001 0777
2" ACFT	aluminium	H-T 0001 0005
2" srew cap	aluminium	H-T 0001 0010
3" lockable	aluminium	H-T 0001 0001
3" without lock	aluminium	H-T 0001 0002
3" Cessna	plastic	H-T 0001 0003



Tankfiller HDPE

Ø	V	part number
25mm	8,2cm³	N-T 1000 0000
45mm	47,7cm³	N-T 1000 0007
50mm	65,4cm³	N-T 1000 0001
70mm	179,6cm³	N-T 1000 0002
100mm	523,6cm³	N-T 1000 0003
125mm	1022,7cm³	N-T 1000 0004



Tank flapper valves

Mousetrap Type 5

	part number
Ø 38mm 4 x M3	Z-V 2000 0011



TANK FLAPPER VALVES

for catchtanks.

The flaps can be weld in, screwed in and cured in.

Diameters on flaps: 39mm

The Tank Flapper Valve is used by every popular racing tank manufacturer.

TANKKLAPPENVENTIL / MAUSEFALLE

für Beschleunigungsfüllsysteme.

Die Klappen können eingeschweißt, eingeschraubt und einvulkanisiert werden.

Durchmesser d. Klappen: 39mm

Die Mausefalle wird von allen namhaften Renntankherstellern verwendet.

Screw-in plate valves

size		Part number
-12D	50mbar	Z-V 6000 0022
-12D	100mbar	Z-V 6000 0005
-12D	150mbar	Z-V 6000 0006
-12D	200mbar	Z-V 6000 0007
-12D	250mbar	Z-V 6000 0008
-12D	350mbar	Z-V 6000 0002
-12D	500mbar	Z-V 6000 0009
-12D	820mbar	Z-V 6000 0003



D = Aluminium

Valves / Ventile

Flapper-, poppet- and vent valves / Klappen-, Kolben-, Entlüftungsventile

We supply and produce all kinds of valves that are needed in motorsport.

Activation through:

spring, tension or gravity

1. PVC - POPPET VALVES
2. BCV - BALL VALVES
3. TCV - PLATE VALVES
4. DCV - DIAPHRAGM VALVES
5. FCV - FLAPPER VALVES

All valves, except flapper valves, are adjustable in mbar steps and are supplied with the required adjustment. Combinations in a modular system are possible. Besides the shown designs we supply a wide range of other valve variations. We can send you sketches, drawings and solutions for certain applications on request.

FLAPPER VALVES

We supply

1. separate flaps to be integrated in your own constructions, with and without mounting part.
2. complete flapper valves in aluminium body. With Nitrile-, FPM- or Fluorocarbon-sealing.

CHECKVALVES, POPPET

We manufacture poppet valves with required backpressure.

materials:

body: aluminium

poppet: steel, flat or sharp or Composit

CHECK VALVES, POPPET and BALL DESIGN of the PCV 815 SERIES

Manufactured in a very compact design nevertheless a maximum of flow ensuring a minimum of leakage. It is not bigger than an AN adapter.

body: aluminium

poppet, ball: stainless steel TI AL6 V4

Wir führen und stellen alle Ventilarten her, die im Rennsport benötigt werden.

Betätigung durch:

Feder- oder Schwerkraft

1. PCV - KOLBENVENTILE
2. BCV - KUGELVENTILE
3. TCV - TELLERVENTILE
4. DCV - MEMBRANVENTILE
5. FCV - KLAPPENVENTILE

Alle Ventile, außer Klappenventile, sind im Millibarbereich einstellbar und werden mit der gewünschten Justierung geliefert. Kombinationen in Modulbauweise sind möglich. Neben den dargestellten Ausführungen führen wir noch weitere Ventilvariationen. Skizzen, Zeichnungen und Vorschläge zur jeweiligen Anwendung erhalten Sie gerne auf Anfrage.

KLAPPENVENTILE

Wir liefern

1. Separate Ventilkappen zum Integrieren in Ihre eigenen Konstruktionen, mit und ohne Befestigungsteil.
2. Klappenventil komplett mit Alu Gehäuse. Mit Nitril-, Viton- oder Fluorcarbon-Dichtlippe.

RÜCKSCHLAGVENTILE, KOLBEN

Wir stellen Kolbenventile mit dem vom Kunden gewünschten Gegendruck her.

Material:

Gehäuse: Aluminium

Kolben: Stahl, flach, spitz oder Composit

RÜCKSCHLAGVENTILE, KOLBEN- und KUGELVENTILE der PCV 815 SERIE

Hergestellt in sehr kompakter Bauweise, die dennoch maximalen Durchfluß bei minimaler Leckage gewährleistet. Sie sind nicht größer als ein AN Adapter.

Gehäuse: Aluminium

Kolben, Kugel: Edelstahl TI AL6 V4

Valves / Ventile

Ventilation valves / Be- und Entlüftungsventile

TANK VENT VALVE, DIAPHRAGM VERSION

A fuel resistant valve, that is used for tank ventilation in both directions. The valve is installed in the ventilation system. While driving, the fuel tank is ventilated through the input valve, opening pressure 5 mbar. When the car stops, a spring-loaded output valve, opening pressure optional, keeps the tank under an excess pressure and avoids losses through evaporation and overflow.

length	84 mm
diameter	33 mm
weight	94 g
threads	-10 D

TANK VENT VALVE

A fuel-resistant valve, that is used for tank ventilation in both directions. The valve is installed in the ventilation system. While driving, the fuel tank is ventilated through the input valve, opening pressure 10 mbar, keeps the tank under an excess pressure and avoids losses through evaporation and overflow.

length	69 mm
diameter	29 mm
weight	27 g
threads	
	8 mm-nipple (to motor)
	10 mm-nipple (to tank)

PLATE VALVES

Plate valves are manufactured in a very compact design. Only low pressure is required to activate this valve.

material	aluminium
weight	39 g
threads	-6 D

PLATE VALVES FOR CATCHTANKS

Adjustable from 150 mbar to 800 mbar. The valves allow to hold your catch tank under the required pressure. When the valve opens, fuel flows back into the main tank. Your fuel pumps have a required priming pressure.

When ordering, please state the needed pressure adjustment.

TANKBE- UND ENTLÜFTUNGSVENTIL, MEMBRANVERSION

Ein doppelt wirkendes, kraftstoffbeständiges Ventil, das zur Tankbe- und Entlüftung eingesetzt wird. Es wird in die Be- bzw. Entlüftungsleitung eingebaut. Während des Fahrbetriebes wird der Kraftstofftank über das Einlaßventil belüftet, Öffnungsdruck 5 mbar. Im Stand hält ein federbelastetes Auslaßventil, Öffnungsdruck frei wählbar, den Tank unter Druck und verhindert Verdunstungsverluste und Überlaufen.

Länge	84 mm
Durchmesser	33 mm
Gewicht	94 g
Anschlußgewinde	-10 D

TANKBE- und ENTLÜFTUNGSVENTIL

Ein doppelt wirkendes, kraftstoffbeständiges Ventil, das zur Tankbe- und -Entlüftung eingesetzt wird. Das Ventil wird in die Be- und Entlüftungsleitung eingebaut. Während der Fahrt wird der Kraftstofftank über das Einlaßventil belüftet, Öffnungsdruck 10 mbar. Im Stand hält ein federbelastetes Auslaßventil, Öffnungsdruck 20 mbar, den Tank unter einem Überdruck und verhindert somit Verluste durch Verdunsten sowie das Überlaufen.

Länge	69 mm
Durchmesser	29 mm
Gewicht	27 g
Anschlußgewinde	
	8 mm-nipple (Motorseite)
	10 mm-nipple (Tankseite)

TELLERVENTILE

Tellerventile zeichnen sich durch kompakte Bauweise und geringe Betätigungskräfte aus.

Material	Aluminium
Gewicht	39 g
Anschlußgewinde	-6 D

TELLERVENTILE FÜR CATCHTANK - ÜBERLAUF IM TANK

Einstellungen von 150 mbar bis 800 mbar sind möglich. Die Ventile erlauben es, den Catchtank unter einem genau definierten Druck zu halten (Vordruck für EKP). Nach Erreichen des Einstellwertes öffnet das Ventil und der Überschuß fließt zurück in den Haupttank.

Bei Bestellung bitte den gewünschten Öffnungsdruck angeben.

Check valves / Rückschlagventile

Flapper check valves

size		part number
-4D male	Nitril	N-V 2000 0009
-4D male	FPM	Z-V 2000 0099
-6D male	Flourocarbon	N-V 2000 0001
-6D bulk	Nitril	Z-V 2000 0012
-6D male	FPM	Z-V 2000 0014
-6D male	Flourocarbon	Z-V 2000 0200
M12x1.5 male in / -6D male out	FPM	Z-V 2000 0010
-6D female in / -6D male out	FPM	Z-V 2000 0017
-8D male	Flourocarbon	N-V 2000 0014
-8D male	FPM	Z-V 2000 0002
-10D male	Nitril	N-V 2000 0003
-10D male	FPM	N-V 2000 0004
-12D male	FPM	N-V 2000 0011
-16D male	Nitril	N-V 2000 0010
-20D male	Nitril	N-V 2000 0013



Poppet check valves

size	opening pressure	part number
-6D male	30mbar	N-V 1000 0022
-8D male	140mbar	N-V 1000 0001
-8D female in / -8D male out	200mbar	N-V 1000 0004
-10D male	400mbar	N-V 1000 0007
-10D male	sharp poppet	N-V 1000 0003
-10D male	steel poppet	N-V 1000 0005
-10D male	5 bar	Z-V 1000 0001
-10D male	6 bar	Z-V 1000 0005
-12D male	800mbar	N-V 1000 0012



Check valve, flat poppet version material flat poppet: Stainless Steel

Rückschlagventil, Flachkolbenversion Material Flachkolben: Edelstahl

Check valve, sharp poppet version material sharp poppet: Stainless Steel

Rückschlagventil, Spritzkolbenversion Material Spritzkolben: Edelstahl

PCV 815 series

size	opening pressure	part number
815-04C	200mbar	N-V 1001 0001
815-04D	160mbar	N-V 1001 5040
815-06C	200mbar	N-V 1001 0006
815-06D	200mbar	N-V 1001 0002
815-06D	100mbar	N-V 1001 0008
815-08D	180mbar	N-V 1001 0003



C = Stainless steel / Edelstahl

D = Aluminium

Ball valves / Pressure Regulator valves

Kugelhähne / Druckregelventile

Ball valves / Kugelhähne

size	pressure	part number
M10x1 female PTFE	200 bar	Z-V 3001 0001
-3D male PTFE	200 bar	Z-V 3001 0002
-6D bulk R3/8 NPT female	6 bar	N-V 3000 0001
-6D bulk R3/8 BSP female	6 bar	S-V 3000 0001
-8D male / female	10 bar	N-V 3001 0001
-8D male R3/8 BSP female	6 bar	N-V 3000 0002
4xM10x1, 2way T-switching		Z-V 3002 0001
4xM10x1, 3way L-switching		Z-V 3002 0002
M16x1.5 female PTFE with bracket	50 bar	N-V 3000 0007
M20x1.5 female PTFE with bracket	50 bar	Z-V 3000 0006



Pressure Regulator valves

in	out	opening pressure	sealing	modell	part number
M08x1 female	-4D	1.5 bar	EPDM	in line	Z-V 7000 1150
M10x1 female	-4D	1.5 bar	EPDM	in line	Z-V 7000 1501
-4D	-4D	1.0 bar	EPDM	in line	Z-V 7000 0100
-4D	-4D	1.5 bar	EPDM	in line	Z-V 7000 1500
-4D	-4D	1.8 bar	EPDM	in line	Z-V 7000 1801
-4D	-4D	2.5 bar	EPDM	in line	Z-V 7000 2500
-4D	-6D	1.0 bar	FPM	with bracket	Z-V 7000 1001
Cartridge adjustable		1.0 bar	FPM	cartridge	Z-V 7000 1000
Cartridge adjustable		1.8 bar	EPDM	cartridge	Z-V 7000 1800
Cartridge adjustable		2.5 bar	EPDM	cartridge	Z-V 7000 2501
Cartridge adjustable		7.0 bar	FPM	cartridge	Z-V 7000 6000



In line model



Valve cartridge adjustable



Bracket model



Adjusting tool

Part number Z-W 7000 0001

D = Aluminium

Tank vent valves with integrated pressure keeping system

A multiple operating combination valve, which is simultaneously used as tank ventilation in both directions, pressure keeping valve and roll over valve. Outlet pressure keeping part can be chosen as required. The valve will be vertically fitted into the ventilating system. It guarantees the tank ventilation keeps the desired excess pressure and prevents fuel penetration at a car angle of more than 90°. The modular design enables customer to use the valve respectively only with one of the described or any combined function.

Tankentlüftungsventil mit integriertem Druckhaltesystem

Ein mehrfach wirkendes Kombinationsventil, das gleichzeitig als Tankbe- und -Entlüftungsventil, Druckhalteventil und Sicherheitsventil bei Überschlag des Fahrzeugs eingesetzt wird. Beim Druckhalteteil ist der Öffnungsdruck frei wählbar. Das Ventil wird senkrecht in die Entlüftungsleitung eingebaut. Es gewährleistet die Ventilation des Tanks, hält den gewählten Überdruck und verhindert das Austreten von Kraftstoff bei einem Neigungswinkel von mehr als 90°. Durch die Modulbauweise ist es möglich, das Ventil mit jeweils nur einer der beschriebenen Funktionen oder mit beliebig kombinierten Funktionen einzusetzen.



Tank vent valve with pressure keeping function

connection	pressure keeping	pressure inlet	part number
-6D male	150mb	0mb	Z-V 9009 0020
-10D male	200mb	0mb	Z-V 9009 0027
M16x1.5 female	150mb	0mb	Z-V 9009 0007

Tank vent valve with pressure keeping & rollover function

connection	pressure keeping	pressure inlet	part number
M16x1.5 female	50mb	0mb	Z-V 9009 0001
M16x1.5 female	150mb	0mb	Z-V 9009 0151

Tank vent valve with rollover function

conformable to FIA article 258 *6.3.4)

connection	max. pressure	part number
-6D male Hollow PDVF Ball	200mb	Z-V 9009 0026
-6D male Hollow Alu Ball	200mb	Z-V 9009 0036

Other versions on customers request.

Appendix J - Art. 258

*6.3.4)

The fuel cell ventilation system must include the following elements :

- a gravity activated roll-over valve
- a float chamber ventilation valve
- a blow-off valve with a maximum over pressure of 200 mbar, working when the float chamber ventilation valve is closed.

D = Aluminium



Automatic fuel shut-off valve

This valve is constructed especially to fulfill the reglement about identifying of damages in fuel lines. The decisive points in construction have been: high flow at low pressure loss, compact and light body construction, high reliability and independence from other components.

Function:

At a pressure drop under 3 bar in the fuel discharge line the valve interrupts fuel supply; an electrical supply is not necessary. The valve can be accelerated by hand for instance when the fuel line is empty.



ASOV Druckwächter

IN	OUT	part number
-06M	-06M	Z-V 0067 0100
-06F	-06M	Z-V 0067 0110
-06F	-06F	Z-V 0067 0111
-06M	-06F	Z-V 0067 0112
M12x1.5	-06M	Z-V 0067 0120
M12x1.5	-06F	Z-V 0067 0121

Automatisches Kraftstoffabsperrventil

Dieses Ventil ist speziell zur Erfüllung des Reglements zur Erkennung von Schäden an Kraftstoffleitungen entwickelt. Maßgebend bei der Konstruktion waren hoher Durchfluß bei geringstem Druckverlust, kompakte und leichte Bauweise, höchste Zuverlässigkeit und Unabhängigkeit von anderen Komponenten

Funktion:

Bei einem Druckabfall unter 3 bar in der Kraftstoffdruckleitung unterbricht das Ventil die Kraftstoffversorgung selbsttätig; eine elektrische Ansteuerung ist nicht erforderlich. Mittels Handbetätigung kann das System bei entleertem Leitungssystem wieder befüllt werden.

BOSCH Fuel Pressure Regulators

Modell	Pressure	Flow rate	Bosch part number	part number
max. 12.0 bar				
20x120	3.0 ... 12.0 bar	15 ... 220 l/h	B 280 500 742-02	H-R 1000 0010
max. 10.0 bar				
Mini 100	10.0 bar	30 ... 400 l/h	B 261 208 109	
Mini M 100	10.0 bar	30 ... 400 l/h	B 261 208 123	H-R 1000 0021
max. 8.0 bar				
Mini 80	8.0 bar	30 ... 400 l/h	B 261 208 108	
Mini M 80	8.0 bar	30 ... 400 l/h	B 261 208 122	
max. 6.0 bar				
20x120	3.0 ... 6.0 bar	15 ... 220 l/h	B 280 500 714	H-R 1000 0004
Mini 60	6.0 bar	30 ... 400 l/h	B 261 208 106	
Mini M 60	6.0 bar	30 ... 400 l/h	B 261 208 121	
max. 5.0 bar				
14-50	1.4 ... 5.0 bar	15 ... 220 l/h	B 280 500 701	
15-50	1.5 ... 5.0 bar	15 ... 220 l/h	B 280 500 743	
19-50	1.9 ... 5.0 bar	15 ... 220 l/h	B 280 500 737	H-R 1000 0008
20x120	2.0 ... 5.0 bar	15 ... 220 l/h	B 280 500 741	H-R 1000 0001
Mini A	3.5 ... 5.0 bar	15 ... 220 l/h	B 280 550 341	H-R 1000 0019
Mini 50	5.0 bar	15 ... 220 l/h	B 280 550 113	H-R 1000 0016
max. 4.0 bar				
05-40A	0.5 ... 4.0 bar	15 ... 220 l/h	B 280 500 139	
Mini A	2.2 ... 3.5 bar	15 ... 220 l/h	B 280 550 340	H-R 1000 0018
Mini 38	3.8 bar	15 ... 220 l/h	0 280 160 616	

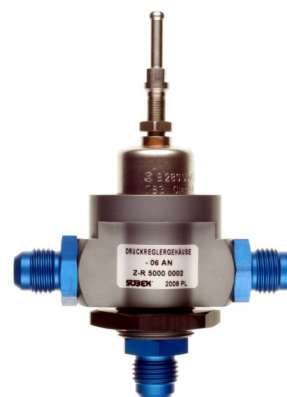
Attention!!! Mini M is methanol version



Standard regulator



Mini regulator



Regulator / Regler

Housing for Bosch Mini cartridge regulator

models	part number
Housing 3 x M14x1.5 female	Z-R 5000 0004
Housing 3 x -06D male	Z-R 5000 0002
Housing 2 x nipple 8mm	Z-R 5000 0005
Housing with cartridge 2.2 - 3.5 bar 3 x M14x1.5 female	Z-R 5000 2235
Housing with cartridge 3.5 - 5.0 bar 3 x M14x1.5 female	Z-R 5000 3555
Housing with cartridge 3.5 - 5.0 bar 3 x -6 D	Z-R 5000 0006
Housing with cartridge 3,5 - 5 bar 3 X M14x1,5 male	Z-R 1000 0006
Mini cartridge 2.2 - 3.5 bar	H-R 1000 0018
Mini cartridge 3.5 - 5.0 bar	H-R 1000 0019
Mini cartridge 5.0 bar	H-R 1000 0016



Boost regulator

model	part number
0.05 - 4.0 bar with aluminium knob	Z-R 3000 0002
0.05 - 4.0 bar with plastic knob	H-R 3000 0002

The precision boost regulator IR 200 is made for steering pneumatic adjustments for process steering and generally to reach very precise pneumatic pressures that are almost independent of changes in input pressure and different floating rates.

Internal threads R 1/4



Brake proportioning regulator

aluminium M10x1 female
continuously variable

	part number
$P_A = 0.25 \dots 0.65^*$ P_E	N-B 2000 0004
$P_A = 0.40 \dots 0.90^*$ P_E	N-B 2000 0044

D = Aluminium



Radiator caps / Kühlerdeckel

pressure			part number
1.3 bar	id=31mm	bayonet lock	H-T 1003 0007
1.5 bar	id=31mm	bayonet lock	H-T 1003 0003
1.7 - 2.1bar	id=31mm	bayonet lock	H-T 1003 0055
2.0 - 2.1 bar	id=41mm	bayonet lock	H-T 1003 0010



Radiator flange / Kühlerflansch

		part number
id=31mm	bayonet lock	H-T 1003 0004
id=41mm	bayonet lock	H-T 1003 0009



Oil thermostat

Filter adapter	part number
-10D with thermostat 74°C	Z-C 0002 0007
R 1/2" female with thermostat 74°C	N-C 0002 9003



High performance oil thermostat

	part number
2 way 71°C -10D female standard 400g	N-Ö 5000 0001
2 way 71°C M22x1.5 female lightweight 320g	S-Ö 5000 0001
2 way 83°C M26x1.5 female	N-Ö 5000 0002
2 way 96°C M26x1.5 female	N-Ö 5000 0003



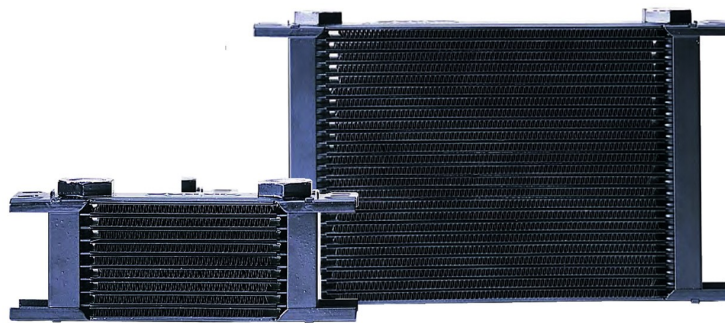
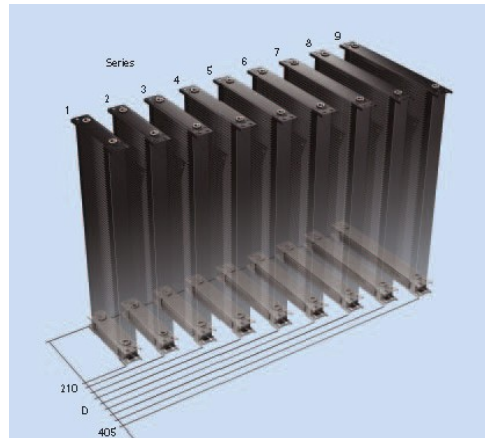
High performance oil thermostat

Joints / Gelenke

size	od	id	length	part number
APEX B06 3/8"	9.45mm	6.35mm	51mm	N-G 1000 0001
APEX B08 1/2"	12.57mm	9.52mm	59mm	N-G 1000 0011
APEX B10 5/8"	15.75mm	12.70mm	70mm	N-G 1000 0002
APEX B12 3/4"	18.92mm	15.88mm	81mm	N-G 1000 0003
APEX B14 7/8"	22.10mm	19.05mm	92mm	N-G 1000 0004
APEX B16 1"	25.27mm	20.62mm	103mm	N-G 1000 0005
APEX B20 5/4"	31.62mm	26,97mm	117mm	N-G 1000 0006

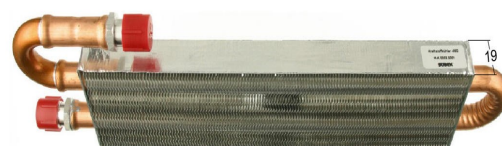
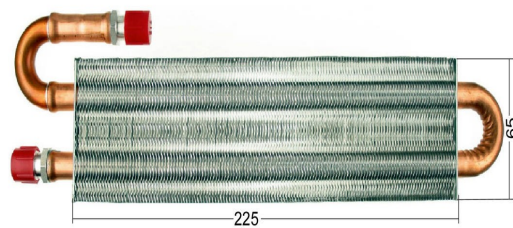


Oilcoolers / Ölkühler

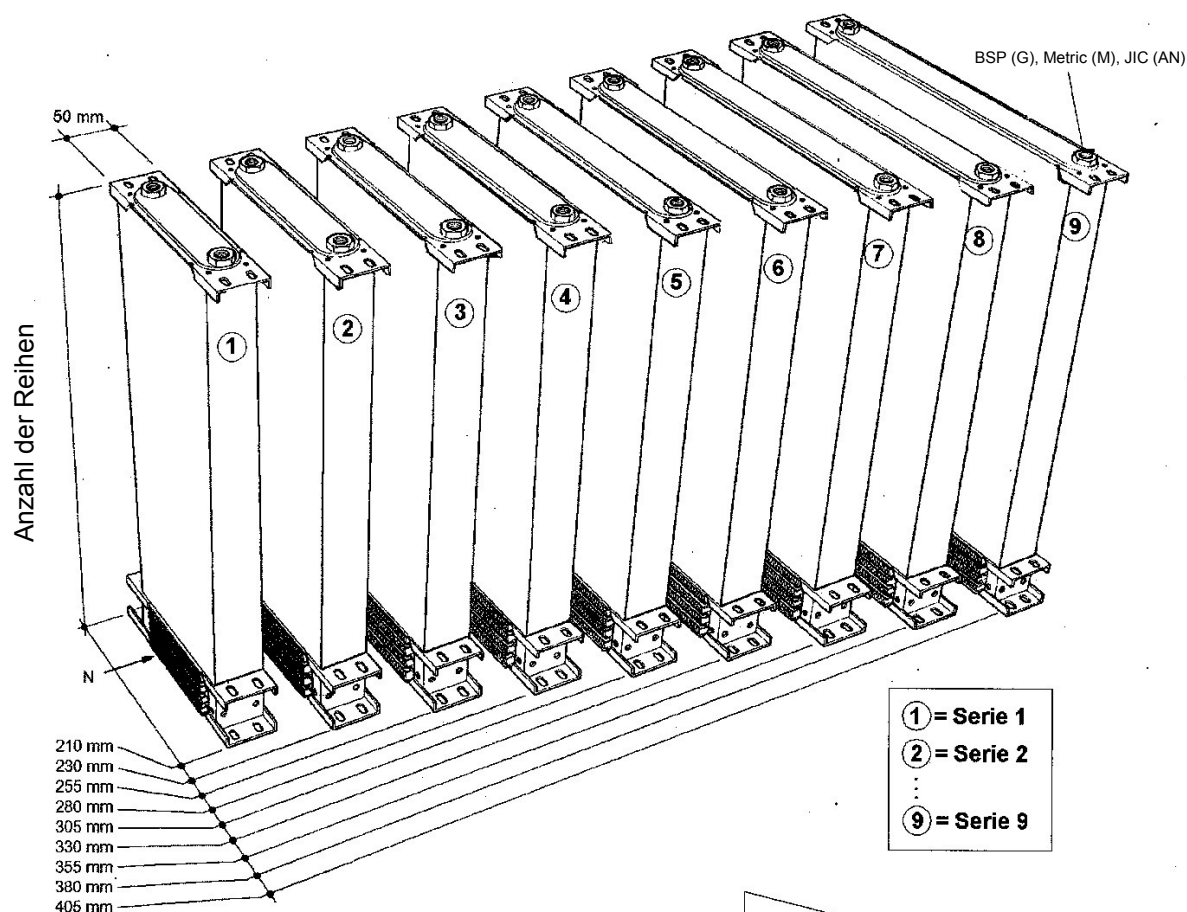


Fuel cooler / Kraftstoffkühler

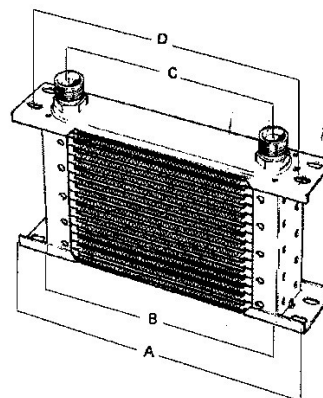
size	part number
-6D	H-K 0003 0001



Oilcoolers / Ölkühler



Type	A total width	B matrix width	C centre distance conn. Adaptors	D centre distance fixing holes
1	210	163	130	190
2	230	183	150	210
3	255	208	175	235
4	280	233	200	260
5	305	258	225	285
6	330	283	250	310
7	355	308	275	335
8	380	333	300	360
9	405	358	325	385



Cooler connections: BSP (G), Metric (M), JIC (AN)

Kühler-Anschlüsse: BSP (G), Metrisch (M), JIC (AN)

The dimensions for oilcoolers in this list are given as follows: cooler series, amount of rows (=height) and connecting threads. To find out the amount of rows, please use following page.

Die Maße der Ölkühler sind in dieser Liste wie folgt angegeben: Ölkühlerserie, Anzahl der Reihen (=Höhe) und Anschlußgewinde. Zum Feststellen der benötigten Reihenzahl verwenden Sie bitte die folgende Seite.

andere Größen auf Anfrage / other sizes on request

Exchange table / Umrechnungstabelle

rows, mm high / Reihen, mm Höhe

		0
		1
		2
		3
		4
	7 rows	5
	7 Reihen	6
		7
	10 rows	8
	10 Reihen	9
		10
	13 rows	11
	13 Reihen	12
		13
	16 rows	14
	16 Reihen	15
		16
	19 rows	17
	19 Reihen	18
		19
	22 rows	20
	22 Reihen	21
		22
	25 rows	23
	25 Reihen	24
		25
	30 rows	
	30 Reihen	
	33 rows	
	33 Reihen	

Electric parts / Elektrik

Toggle switch

pins	switching function	type	part number
3	ON-ON	1TL1-3	N-I 2000 0001
2	ON-MOM OFF	1TL1-4	N-I 2000 0006
2	OFF-MOM ON	1TL1-6	N-I 2000 0003
3	ON-OFF-ON	1TL1-1	N-I 2000 0002
6	ON-ON	2TL1-3	N-I 2000 0004
3	MOM ON-OFF-MOM ON	1TL1-7	N-I 2000 0066
6	ON-OFF-ON	2TL1-1	N-I 2000 0011
6	MOM ON-ON-MOM ON	2TL1-72	N-I 2000 0067
3	ON locked-ON	1TL1-3D	N-I 2000 0005
6	ON-OFF-ON locked	2TL1-1M	N-I 2000 0009
12	ON-ON	4TL1-3	N-I 2000 0012
6	MOM ON-OFF-ON	2TL1-5	N-I 2000 0014

MOM = momentary switch

locked = pull to unlock



Micro 15/32" toggle switch

pins	switching function	type	part number
3	ON-OFF-ON	11TW1-5	N-I 2004 0003
3	ON-OFF-ON	11TW19-5	N-I 2004 0004
3	ON-ON	11TW1-3	N-I 2004 0005
3	ON-ON	11TW19-3	N-I 2004 0006
3	ON locked-ON locked	11TW1-3F/G	N-I 2004 0010

locked = pull to unlock

11TW19-5

with red

11TW19-3

rocker level



Toggle switch guard covers

version	part number
Toggle switch / aluminium	N-I 2000 0000
Toggle switch automatic shut off / plastic	N-I 2000 0008



Protect switch / Schutzschalter

ampere	part number
6	N-I 1000 0001
8	N-I 1000 0002
10	N-I 1000 0003
15	N-I 1000 0004
16	N-I 1000 0008
20	N-I 1000 0005
25	N-I 1000 0006
30	N-I 1000 0007
35	N-I 1000 0009



Electric parts / Elektrik

Pushbutton switches

pins	switching function	part number
2	MOM NO	N-I 2005 0001
pushbutton shield		N-I 2005 0009
button for N-I 2005 0001		N-I 2005 0010
8	MOM 2xNO 2xNC	N-I 2005 0003
3	ON-OFF	N-I 2005 0011
4	MOM 1xNO 1xNC	N-I 2005 1036



MOM = momentary switch

Ignition aid connector

amps	color	part number
175A plug or socket	grey	N-I 5001 0003
175A plug or socket	red	N-I 5001 0006
175A set plug with socket and handle	grey	N-I 5001 0033
175A handle	grey	N-I 5001 0004
50A plug or socket	grey	N-I 5001 0005
50A handle	red	N-I 5001 0050
50A Canon plug 1/4 turn		N-I 5001 0002
50A Canon socket 1/4 turn		N-I 5001 0001



Emergency switch

pins	switching function	ring diameter	part number
4	1xNO 1xNC	35mm	Z-I 2005 0010
4	1xNO 1xNC	23mm	Z-I 2005 2310
8	2xNO 2xNC	35mm	Z-I 2005 0015

Pip pin for emergency switch

Ø	part number
35mm	Z-I 2005 0014
23mm	Z-I 2005 2314



The emergency switch is conformable to FIA article 257

15.5.2 Master switch

There must be also an exterior switch, with a handle which can be operated from a distance by a hook

Impeller / Gebläse

diameter	version	material	part number
78mm	standard	CFK	Z-I 4000 1310
78mm	standard	GFK	Z-I 4000 2310
78mm	high temperature	CFK	Z-I 4000 1311
78mm	high temperature	GFK	Z-I 4000 2311
90mm	standard	CFK	Z-I 4080 1308
90mm	standard	GFK	Z-I 4080 2308
90mm	high temperature	CFK	Z-I 4080 1310
90mm	high temperature	GFK	Z-I 4080 2310

Performance:

78mm	90mm
12 VDC 7A	12 VDC 7,5A
22ms at 13,5 V	28ms at 13,5 V
319 cbm/h	405 cbm/h
310 g mass	351 g mass



Preheater

electrical rating	size	version	part number
115V 1500W	R3/4 male	with pump	H-B 2001 0002
230V 3000W	R3/4 male	with pump	H-B 2001 0001
230V 3000W	R3/4 male	without pump	H-B 2001 0003

Preheater with:

Water temperature regulating thermostat 0°C up to 80°C

Overheat thermostat off temperature 110°C with a cutting capacity of 25 A and a manual reset.

Water circulating pump with protection level IP44.

Three running speeds.

Unblockable motor. Wet rotor pump.



Level switch

switching function	part number
NC	H-T 0002 0003
NC with housing	Z-T 0002 0022
NO	H-T 0002 0004
NO with housing	Z-T 0002 0021

op. Pressure
liquids

10 bar
oil, fuel, water

temp. Range
supply voltage
switch capacity
ext. thread

-10°C to +60°C
12V DC
6W at 12V DC
1/8" BSP

LINER CLAMPS CRES

for soft hoses such as silicone . The integral extension of the band has a liner - no rivets or weld - protects soft surface (silicone and others) from damage caused by extrusion or shearing through the band slots. Breeze liner clamps give the most concentric seal of any clamp made.

effective range

mm		inch		part number
11 -	20	7/16	25/32	N-F 9000 0008
13 -	23	1/2	29/32	N-F 9000 0009
14 -	27	9/16	1-1/16	N-F 9000 0010
17 -	32	11/16	1-1/4	N-F 9000 0001
21 -	38	13/16	1-1/2	N-F 9000 0011
21 -	44	13/16	1-3/4	N-F 9000 0002
27 -	51	1-1/16	2	N-F 9000 0012
33 -	57	1-5/16	2-1/4	N-F 9000 0003
40 -	64	1-9/16	2-1/2	N-F 9000 0013
46 -	70	1-13/16	2-3/4	N-F 9000 0004
52 -	76	2-1/16	3	N-F 9000 0005
59 -	83	2-5/16	3-1/4	N-F 9000 0006
65 -	89	2-9/16	3-1/2	N-F 9000 0007
71 -	95	2-13/16	3-3/4	N-F 9000 0014
78 -	102	3-1/16	4	N-F 9000 0015
84 -	108	3-5/16	4-1/4	N-F 9000 0016
91 -	114	3-9/16	4-1/2	N-F 9000 0017
105 -	127	4-1/8	5	N-F 9000 0018
117 -	140	4-5/8	5-1/2	N-F 9000 0019
130 -	152	5-1/8	6	N-F 9000 0020
143 -	165	5-5/8	6-1/2	N-F 9000 0021
156 -	178	6-1/8	7	N-F 9000 0022



Pip pins

Ø	length	version	part number
6.3mm	13mm	knob handle	N-K 1001 6318
6.3mm	18mm	ring	N-K 0011 6318
6.3mm	18mm	ring	N-K 1000 6318
6.3mm	28mm	knob handle	N-K 1000 6328
6.3mm	32mm	T-handle	N-K 1000 6332
6.3mm	38mm	ring	N-K 1000 6338
6.3mm	48mm	ring	N-K 1000 6348
6.3mm	65mm	ring	N-K 1000 6301
7.9mm	25mm	T-handle	N-K 1000 7925
7.9mm	25mm	L-handle	N-K 1001 7925
7.9mm	30mm	knob handle	N-K 1001 7930
7.9mm	36mm	ring	N-K 1001 7936
7.9mm	46mm	T-handle	N-K 1000 7945
7.9mm	46mm	L-handle	N-K 1001 7945
7.9mm	63mm	L-handle	N-K 1000 7963
7.9mm	63mm	T-handle	N-K 1001 7963
7.9mm	66mm	T-handle	N-K 1001 7966
7.9mm	71mm	T-handle	N-K 1001 7971
12.5mm	32mm	T-handle	N-K 1001 1230
12.5mm	35mm	T-handle	N-K 1000 1238
12.5mm	38mm	T-handle	N-K 1001 1238
12.5mm	44mm	T-handle	N-K 1001 1244



Typ: T HANDLE



Typ: KNOB



Typ: Ring B



Typ: L HANDLE

Hex nut metric 6 kant

thread	material	surface	temperature class	A/F	part number
M03x0.50	35CD4S	MoS ²	235°C	4	H-Y 1332 0000
M03x0.50	Z6NCT25	silver plated	425°C	4	H-Y 1342 0000
M04x0.70	35CD4S	MoS ²	235°C	5	H-Y 1332 0001
M04x0.70	Z6NCT25	silver plated	425°C	5	H-Y 1342 0004
M05x0.80	35CD4S	MoS ²	235°C	6	H-Y 1332 0022
M05x0.80	Z6NCT25	silver plated	425°C	6	H-Y 1342 0005
M06x1.00	35CD4S	MoS ²	235°C	7	H-Y 1332 0003
M06x1.00	Z6NCT25	silver plated	425°C	7	H-Y 1342 0006
M07x1.00	35CD4S	MoS ²	235°C	8	H-Y 1332 0007
M07x1.00	Z6NCT25	silver plated	425°C	8	H-Y 1342 0007
M08x1.00	35CD4S	MoS ²	235°C	10	H-Y 1332 0044
M08x1.25	35CD4S	MoS ²	235°C	10	H-Y 1332 0004
M08x1.25	Z6NCT25	silver plated	425°C	10	H-Y 1342 0008
M10x1.00	35CD4S	MoS ²	235°C	12	H-Y 1332 0011
M10x1.25	35CD4S	MoS ²	235°C	12	H-Y 1332 0008
M10x1.50	35CD4S	MoS ²	235°C	12	H-Y 1332 0005
M10x1.50	Z6NCT25	silver plated	425°C	12	H-Y 1342 0010
M12x1.25	35CD4S	MoS ²	235°C	14	H-Y 1332 0013
M12x1.25	Z6NCT25	silver plated	425°C	14	H-Y 1342 0001
M12x1.50	35CD4S	MoS ²	235°C	14	H-Y 1332 0006
M12x1.50	Z6NCT25	silver plated	425°C	14	H-Y 1342 0009
M12x1.75	35CD4S	MoS ²	235°C	14	H-Y 1332 0010
M14x1.50	35CD4S	MoS ²	235°C	16	H-Y 1332 0009

Hex nut UNF

size	thread	material	surface	temperature class	part number
-2	5/16-24 UNF	35CD4S	MoS ²	235°C	H-Y 3332 0004
-3	3/8-24 UNF	35CD4S	MoS ²	235°C	H-Y 3332 0001
-4	7/16-20 UNF	35CD4S	MoS ²	235°C	H-Y 3332 0005
-5	1/2-20 UNF	35CD4S	MoS ²	235°C	H-Y 3332 0008

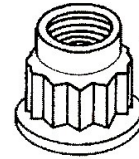
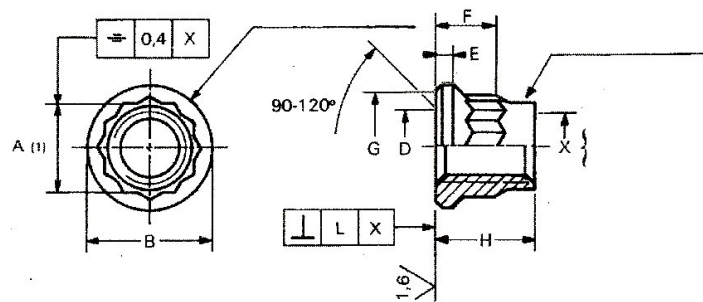
Double hex nut metric 12kant

thread	material	surface	temperature class	A/F	part number
M05x0.08	Z6NCT25	silver plated	425°C	7	H-Y 1343 0005
M06x1.00	35CD4S	MoS ²	235°C	8	H-Y 1333 0006
M06x1.00	Z6NCT25	silver plated	425°C	8	H-Y 1343 0009
M08x1.25	35CD4S	MoS ²	235°C	10	H-Y 1333 0008
M08x1.00	Z6NCT25	silver plated	425°C	10	H-Y 1343 0007
M08x1.25	35CD4S	MoS ²	450°C	10	H-Y 1343 0008
M10x1.50	35CD4S	MoS ²	235°C	12	H-Y 1333 0010
M10x1.25	35CD4S	MoS ²	235°C	12	H-Y 1333 0011
M10x1.25	Z6NCT25	silver plated	425°C	12	H-Y 1343 0010
M12x1.50	35CD4S	MoS ²	235°C	14	H-Y 1333 0012
M12x1.50	Z6NCT25	silver plated	425°C	14	H-Y 1343 0012
M14x1.50	35CD4S	MoS ²	235°C	16	H-Y 1333 0014

Other sizes on request



Double hex nuts / Zwölfkantmuttern



Ra max 6,3 $\sqrt{(\vee)}$

thread / Gewinde	A [1]	B h12	E $\pm 0,2$	F $\pm 0,2$	G min	H h14	L	Weight / Gewicht kg / 100 pcs
M5x0,80-4H5H	7	9	1,3	4,4	8,3	7,2	0,1	0,16
M6x1,00-4H5H	8	10,5	1,4	5,0	9,8	8,2	0,1	0,2
M7x1,00-4H5H	9	12	1,7	5,5	11,3	9	0,1	0,27
M8x1,25-4H5H	10	13,5	1,8	6,3	12,8	10,5	0,1	0,4
MJ8x1,00-4H5H	10	13,5	1,8	6,3	12,8	10,5	0,1	0,4
M10x1,50-4H5H	12	16,5	2,2	7,8	15,8	13	0,13	0,73
MJ10x1,25-4H5H	12	16,5	2,2	7,8	15,8	13	0,13	0,73
M12x1,50-4H5H	14	19,5	2,8	9	18,8	15	0,13	1,14
MJ12x1,25-4H5H	14	19,5	2,8	9	18,8	15	0,13	1,14
M14x1,50-5H	17	23	2,8	11	22,3	17	0,15	2,25
M16x1,50-5H	19	26	3	12	25,3	19	0,18	2,75
M18x1,50-5H	22	29	3,2	14	28,3	22	0,18	3,92
M20x1,50-5H	24	32	3,4	16	31,3	24,5	0,18	5,1

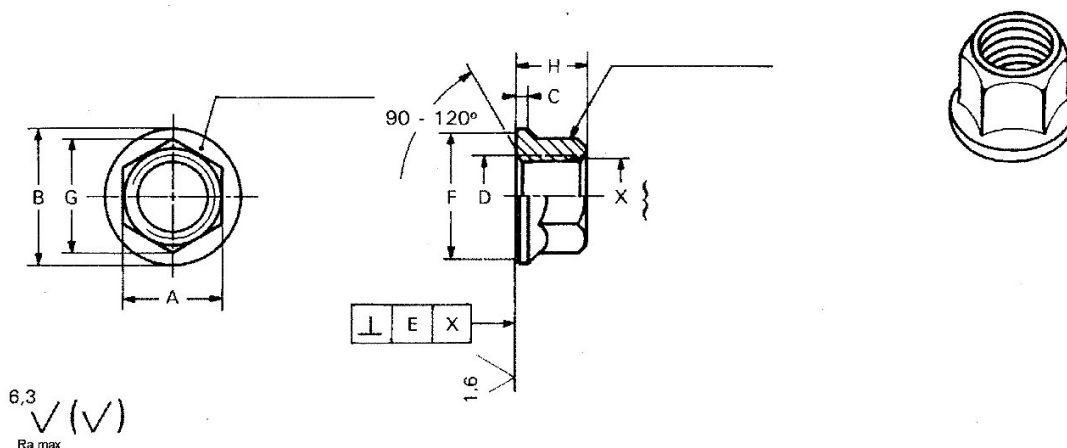
Materialcode	Material	HRC Härte	strength Festigkeit	surface Oberfläche	Temperatur-klasse
35CD4S	Vergütungs Stahl	40-43	1100 MPa	Cd+MoS ₂	235°C
Z6NCT25	nichtrostender austenitischer Vakuumstahl	27-37	1100 MPa	Silber	425°C

thread Gewinde	Code	profile / Profil	tolerances Toleranzen	marking Markierung
ISO	M	NFL 05220 AICMA 0501A	NFL 05224 AICMA 2011A	none / keine
MJ [8-10-12]	MJ	ISO 5855	ISO 5855	MJ-SD

DHE 235 M
LN 29919

andere Ausführungen auf Anfrage / other design on request

Hex nuts / Sechskantmuttern



thread / Gewinde D	A h12	B max	C min	E max	F min	G min	H max	weight Gewicht kg/100 pcs
M 3 x 0,50	4	6	0,4	0,06	5,3	4,2	3	0,028
M 4 x 0,70	5	7,4	0,5	0,06	6,7	5,3	4	0,05
M 5 x 0,80	6	9,1	0,6	0,08	8,3	6,5	5	0,08
M 6 x 1,00	7	10,6	0,7	0,08	9,8	7,6	5,4	0,115
M 7 x 1,00	8	12,1	1	0,09	11,3	8,7	6,2	0,17
M 8 x 1,00	10	13,6	1,1	0,09	12,8	10,9	7	0,315
M 8 x 1,25	10	13,6	1,1	0,09	12,8	10,9	7	0,315
M 10 x 1,00	12	16,8	1,3	0,1	15,8	13,2	8,5	0,475
M 10 x 1,25	12	16,8	1,3	0,1	15,8	13,2	8,5	0,475
M 10 x 1,50	12	16,8	1,3	0,1	15,8	13,2	8,5	0,475
M 12 x 1,50	14	19,9	2	0,13	18,8	15,5	10,5	1
M 12 x 1,75	14	19,9	2	0,13	18,8	15,5	10,5	1
M 14 x 1,50	16	23	2	0,15	21,9	17,9	12,0	1,18

Materialcode	Material	HRC Härte	strength Festigkeit	surface Oberfläche	Temperatur -klasse
35CD4S	Vergütungs Stahl	40-43	1100 MPa	Cd+MoS ₂	235°C
Z6NCT25	nichtrostender austenitischer Vakuumstahl	27-37	1100 MPa	Silber	425°C

thread Gewinde	Code	profile / Profil	tolerances Toleranzen	marking Markierung
ISO	M	NFL 05220 AICMA 0501A	NFL 05224 AICMA 2011A	none / keine
MJ [8-10-12]	MJ	ISO 5855	ISO 5855	MJ-SD

DHE 235 M
LN 29919

andere Ausführungen auf Anfrage / other design on request

Plastic plug UNF

size	part number
-3	N-X 2000 0001
-4	N-X 2000 0002
-6	N-X 2000 0003
-8	N-X 2000 0004
-10	N-X 2000 0005
-12	N-X 2000 0006
-16	N-X 2000 0007



Plastic plug metric

size	part number
M06x1	N-X 2001 0005
M08x1	N-X 2001 0012
M08x1.5	N-X 2001 0006
M10x1	N-X 2001 0011
M10x1.5	N-X 2001 0007
M12x1.5	N-X 2001 0001
M12x1.75	N-X 2001 0009
M14x1.5	N-X 2001 0002
M16x1.5	N-X 2001 0003
M18x1.5	N-X 2001 0008
M22x1.5	N-X 2001 0004



Plastic plug BSP

size	part number
R1/4"	N-X 2002 0005
R3/8"	N-X 2002 0004
R1/2"	N-X 2002 0006

Plastic cap UNF

size	part number
-3	N-X 2005 0001
-4	N-X 2005 0002
-6	N-X 2005 0003
-8	N-X 2005 0004
-10	N-X 2005 0005
-12	N-X 2005 0006
-16	N-X 2005 0007
-20	N-X 2005 0008



Material PVC

Ø	length	color	part number
6	10	red	N-X 2006 0045
7	15	yellow	N-X 2006 0021
9	15	red	N-X 2006 0046
9	15	yellow	N-X 2006 0001
10	15	yellow	N-X 2006 0002
11	15	red	N-X 2006 0047
11	15	yellow	N-X 2006 0023
12	25	red	N-X 2006 0026
13	20	yellow	N-X 2006 0003
15	20	red	N-X 2006 0031
15	25	yellow	N-X 2006 0004
17	25	red	N-X 2006 0005
18	20	red	N-X 2006 0048
18	50	red	N-X 2006 0017
19	25	yellow	N-X 2006 0022
19	35	red	N-X 2006 0006
20	20	red	N-X 2006 0666
20	105	black	N-X 2006 0024
23	35	yellow	N-X 2006 0007
23	60	red	N-X 2006 0041
25	20	red	N-X 2006 0077
28	20	red	N-X 2006 0010
32	20	red	N-X 2006 0011
35	20	red	N-X 2006 0049
36	30	blue	N-X 2006 0032
36	30	red	N-X 2006 0008
38	20	red	N-X 2006 0088
40	30	blue	N-X 2006 0099
40	30	red	N-X 2006 0009
42	25	red	N-X 2006 0014
43	20	blue	N-X 2006 0020
45	25	red	N-X 2006 0012
48	20	blue	N-X 2006 0066
50	25	red	N-X 2006 0015
58	40	red	N-X 2006 0036

Material PVC

Ø	length	color	part number
60	10	blue	N-X 2006 0070
60	30	red	N-X 2006 0018
60	45	red	N-X 2006 0013
62	30	red	N-X 2006 0075
63	30	red	N-X 2006 0038
64	30	red	N-X 2006 0027
66	20	red	N-X 2006 0089
68	30	red	N-X 2006 0080
72	20	red	N-X 2006 0039
72	30	red	N-X 2006 0028
72	40	red	N-X 2006 0034
72	50	red	N-X 2006 0050
74	20	red	N-X 2006 0037
75	40	red	N-X 2006 0016
75	45	red	N-X 2006 0019
78	30	red	N-X 2006 0029
80	20	red	N-X 2006 0040
80	30	red	N-X 2006 0030
80	40	red	N-X 2006 0025
84	40	red	N-X 2006 0092
85	20	red	N-X 2006 0043
85	40	red	N-X 2006 0042
88	20	blue	N-X 2006 0033
88	40	red	N-X 2006 0035
88	80	red	N-X 2006 0090
123	35	red	N-X 2006 0044



Tools / Werkzeuge

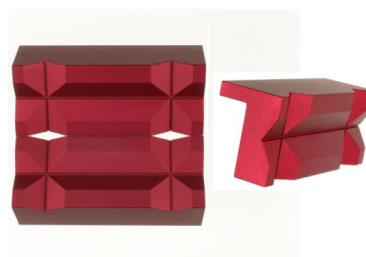
Wrench / Gabelschlüssel

size	material	part number
-3D	aluminium	N-W 1003 0001
-4D	aluminium	N-W 1004 0001
-6D	aluminium	N-W 1006 0001
-8D	aluminium	N-W 1008 0001
-10D	aluminium	N-W 1010 0001
-12D	aluminium	N-W 1012 0001
-16D	aluminium	N-W 1016 0001
-20D	aluminium	N-W 1020 0002



Vise jaw inserts / Alu Montagebacken

	part number
for fittings pair	N-W 6000 0003



Mounting plier / Wirbelzange

size	part number
6" automatic	N-W 5000 0001
9" automatic	N-W 5000 0002



Safety wire / Sicherungsdraht

diameter	part number
0.025" 0.6mm	N-W 5001 0001
0.032" 0.8mm	N-W 5001 0002
0.041" 1.0mm	N-W 5001 0003

sold in 1lb (450g) spools



Krytox® grease/ oil

Fett / Oel

	part number
Krytox® grease GPL 205	
57g tube	N-X 0001 0205
Krytox® grease GPL 205	
500g bottle	N-X 0001 0206
Krytox® oil GPL 105	
40g bottle	N-X 0001 0233
Krytox® oil GPL 105	
500g bottle	N-X 0001 0042



D = Aluminium

Liefer- und Zahlungsbedingungen

1. Allgemeines

Nachstehende Verkaufs- und Lieferbedingungen sind Bestandteil aller Lieferverträge. Erfolgt die Bestellung eines Auftraggebers unter Zugrundelegung seiner Einkaufs- und Zahlungsbedingungen, so gelten dessen Bedingungen als abgelehnt.

2. Liefertermin

Wir sind an keine Lieferfrist gebunden. Befindet sich der Auftraggeber aus früheren Aufträgen in Zahlungsverzug, so sind wir von der Einhaltung des Vertrages entbunden.

3. Preise

Die Preise gelten ab Versandlager zuzüglich der gesetzlichen Mehrwertsteuer, sie schließen jedoch Fracht, Porto und Verpackung nicht ein. Unsere Preise sind aufgrund der Gestehungskosten errechnet. Ändern sich diese, insbesondere durch Umrechnungskursen sowie durch Preisänderungen unserer Vorlieferer, behalten wir uns die Berichtigung unserer Verkaufspreise vor.

4. Zahlungsbedingungen

Unsere Preise sind nach 30 Tagen rein netto zu zahlen. Für die Fälligkeit des Rechnungsbetrags ist der Tag der Rechnungsstellung maßgebend. Bei nicht vertragsmäßiger Zahlung sind wir ohne Mahnung berechtigt, vom Fälligkeitstage an Zinsen in Höhe der von uns selbst zu zahlenden Kreditkosten zu berechnen. Auftraggeber, die in Zahlungsverzug geraten, werden nur noch gegen Vorkasse beliefert.

5. Versendung

Wir führen die Versendung auf Kosten des Auftraggebers durch. Die Gefahr geht auf den Auftraggeber über, sobald wir die Sache dem Spediteur oder der sonst zur Ausführung der Versendung bestimmten Person oder Anstalt ausgeliefert haben.

6. Gewährleistung

Wir leisten dafür Gewähr, dass die von uns gelieferten Erzeugnisse hinsichtlich Material und Ausführung frei von Fehlern sind. Materialbedingte Maßabweichungen, die außerhalb unserer Einflußnahme liegen, sind nicht Gegenstand der Gewährleistung. Der Auftraggeber hat die gelieferte Ware unverzüglich zu prüfen. Erkennbare Mängel sind innerhalb 8 Tagen ab Zugang der Lieferung schriftlich mitzuteilen. Die Versäumung der genannten Frist schließt jegliche Ansprüche des Bestellers aus. Gleiches gilt, wenn der Auftraggeber die Ware verändert oder verändern läßt. Für Folgeschäden übernehmen wir keine Haftung.

7. Eigentumsvorbehalt

Wir behalten uns das Eigentum an sämtlichen von uns gelieferten Waren bis zum Ausgleich des Kontokorrentsaldos zur Sicherung für sämtliche Forderungen aus der Geschäftsverbindung mit dem Auftraggeber vor. Die Hingabe eines Schecks oder Wechsels gilt nicht als Zahlung, solange die Einlösung des Papiers nicht erfolgt ist. Solange der Eigentumsvorbehalt besteht, darf der Auftragsgeber die Ware lediglich im normalen Geschäftsbetrieb veräußern. Er darf die Ware weder verpfänden noch zur Sicherung übereignen. Wird die Ware beim Auftraggeber gepfändet oder beschlagnahmt, so hat er uns hiervon sofort schriftlich zu benachrichtigen. Er trägt in diesem Falle alle Kosten Interventionsverfahrens und anderer Abwehrmaßnahmen. Wird die Ware vom Auftraggeber veräußert, so tritt der Auftraggeber schon jetzt seine Kaufpreisforderung gegen seine Kunden zur Sicherheit bis zur vollständigen Bezahlung der Forderung von uns an diese ab. Der Eigentumsvorbehalt erstreckt sich auch auf die durch Be- und Verarbeitung oder Umbildung entstehenden neuen Erzeugnisse. Ein Eigentumserwerb des Auftraggebers nach §950 BGB wird ausgeschlossen. Der Auftraggeber ist verpflichtet, die unter Eigentumsvorbehalt stehende Ware nach außen hin als solche zu kennzeichnen und sie von anderen Waren getrennt aufzubewahren. Das Recht des Auftraggebers, die unter Eigentumsvorbehalt gelieferten Waren oder Sachen, die durch Verbindung mit anderen Sachen oder durch Verarbeitung der unter Eigentumsvorbehalt gelieferten Waren entstanden sind, im normalen Geschäftsbetrieb zu veräußern, erlischt, wenn der Auftraggeber seine Zahlung einstellt, oder in Zahlungsrückstand gerät. In diesem Fall kann der Auftraggeber über die Ware und die Sache nur noch aus ausdrückliche Weisung hin verfügen. Wir können auch die Herausgabe der Ware verlangen; zu diesem Zweck dürfen die Räumlichkeiten des Auftraggebers bzw. des Empfängers jederzeit betreten werden. Im Falle der Rücknahme der Ware erteilen wir dem Auftraggeber über den bereits gezahlten Teil des Kaufpreises eine Gutschrift, vermindert um einen Betrag von 30% des Kaufpreises, der als Ersatz für entgangenen Gewinn, Abnutzung und Kosten der Wiederbesitznahme einbehalten wird.

8. Erfüllungsort

Der Erfüllungsort ist 69493 Hirschberg.

9. Gerichtsstand

Gerichtsstand ist Weinheim.

10. Anzuwendende Rechtsordnung

Auf alle Rechtstreitigkeiten ist nur das in der Bundesrepublik Deutschland geltende Recht anwendbar.

11. Abänderung der Lieferbedingungen

Eine Abänderung der vorstehenden Lieferbedingungen bedarf der schriftlichen Vereinbarung.

12. Schlußbestimmung

Sollte eine der vorstehenden vertraglichen Abmachungen - aus welchen Gründen auch immer - rechtsunwirksam sein, so wird dadurch die Gültigkeit der übrigen Vereinbarungen nicht berührt. In diesem Fall sind die Kontrahenten verpflichtet, eine dem beiderseitigen wirtschaftlichen Interesse gerecht werdende Regelung zu finden.

Conditions of delivery and payment

1. General points

The terms and conditions listed below form part of all contracts to supply. If a customer order is made to that customer's conditions of purchase and payment, these are hereby rendered invalid.

2. Delivery date

We are not obliged to observe delivery deadlines of any kind. If the customer is in arrears with respect to the payment of previous orders, we are released from our obligation to observe the agreement.

3. Prices

Prices are quoted ex-works, and are subject to value added tax (VAT) at the current rate. Freight, carriage and packing charges are not included. Our prices are calculated on basis of production costs. If these change, especially if due to exchange-rate fluctuations or changes in the price of our suppliers, we reserve the right to alter our sale prices.

4. Terms of payment

Our prices are quoted strictly net at 30 days. The payment due date depends on the date of issue of the invoice concerned. If the payment is not carried out as contractually agreed, we reserve the right, without issuing special notice to this effect, to charge interest from the date that payment fell due, at a rate designed to cover our own credit costs. Customers who fall into arrears with payments can then only be supplied on a prepayment basis.

5. Despatch

We arrange despatch at the customer's expense. Risk is transferred to the customer at the moment in which we hand the shipment over to the carrier or other person or organisation responsible for carrying out delivery.

6. Warranty

We guarantee that the items supplied by us are free of material defects and faulty workmanship. Material-related dimensional fluctuations that lie outside our control are not covered by the warranty. The customer should examine each shipment immediately upon arrival. Any damage detected must be reported in writing within eight days of the shipment concerned being received. Failure to observe this deadline voids any claim that may subsequently be made by the customer. The same applies if the customer alters the delivered merchandise in any way, or allows it to be altered. We accept no liability for consequential loss or damage.

7. Reservation of title

We reserve title on all merchandise supplied by us until verifiable settlement of all outstanding payments has been made with respect to the customer's account with us. Payments by cheque or bill of exchange are not regarded as complete until the document has been cleared. While title remains reserved, the customer may only dispose of the merchandise concerned in the normal course of business. It may not be pawned, mortgaged or otherwise used as security. If merchandise in the care of the customer is impounded or seized, we are to be informed accordingly in writing and without delay. If this should occur, the customer shall be liable for all costs relating to legal representations and appeals. If the customer disposes of the merchandise, he or she should demand immediate payment from the end-customer in order to provide a guarantee of full payment to us. Reservation of title also covers new items resulting from manufacture, processing or conversion. Acquisition by the customer under the terms of §950 of the German civil code is hereby excluded. The customer is obliged outwardly to identify as such all merchandise subject to reservation of title, and to store it separately from other items. The right of the customer in the normal course of business to dispose of the merchandise subject to reservation of title, or of other items resulting from or produced in conjunction with such merchandise, is rendered void if the customer ceases to make payment or falls into arrears with such payments. If this occurs, the customer can only dispose of the merchandise and items concerned if expressly permitted to do so. We may also demand the return of the merchandise. If this occurs, we are to be provided free access at any time to the premises of the customer and/or end user of the same. If the merchandise is returned, we will provide the customer with a credit note for any part of the purchase price already paid, less 30% of the purchase price as compensation for lost profits, wear and tear, and recovery costs.

8. Place of performance

The place of performance is 69493 Hirschberg, Germany.

9. Legal jurisdiction

The place of jurisdiction is Weinheim, Germany.

10. Applicable law

The laws of the Federal Republic of Germany shall apply to all disputes relating to this agreement.

11. Amendments to the terms and conditions

All amendments to these terms and conditions must be agreed to in writing.

12. Final provisions

If any of the above contractual items proves to be unworkable or illegal for any reason, this shall have no effect on the validity of the agreement as a whole. If this occurs, the parties to the agreement undertake to find a legal alternative that corresponds to the economic interests of both parties.



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