

UNITEK

CROSSHEADS

Extrusion Equipment & Consulting

We Make Leading Products Happen. www.unitek.at



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Standard crossheads

APPLICATIONS

UNITEK is providing extrusion crossheads now for over 40 years. We developed ever since crossheads for all product applications from 0,05mm (0,002") up to 140mm (5,551 ") outer diameter. These crossheads are suitable for all conventional polymers such as PVC, PE as well as cross-linked and HFFR types.

CENTERING

All crossheads are designed in the first place to be used as fixed centered type. The advantage of this configuration is a constantly high product quality and a low scrap production after start-ups. However some applications will require fine-centering or a proper manual centering that can be supplied as option for most of our crossheads.

HEAD DESIGN

Whenever possible UNITEK crossheads are designed with independent front- and baseheads in order to ensure a maximum flexibility. The frontheads can be interchanged if required to upgrade the crosshead to manual centering or to add a program insert for skin or stripe extrusion.

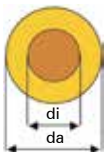
DISTRIBUTION CARTRIDGE

Our distribution cartridges are manufactured to the highest precision with minimal tolerances to enhance the mass-flow distribution and to minimize backpressure effects. Distributors for special polymers will be designed and manufactured upon request.

PROGRAM INSERTS

All co-extrusion crossheads are equipped with interchangeable program inserts for skin or stripe extrusion. The inserts can be as well adapted to customer's request: i.e. stripe number, stripe width or flow channel adaption for higher flow rates.



CROSSHEAD SIZES		
	di.max mm (inch) ¹	da.max mm (inch) ²
SIZE 4	2,6 (.102)	10,2 (.413)
SIZE 7	7 (.275)	10,2 (.413)
SIZE 14	12 (.472)	18,5 (.728)
SIZE 20	12 (.472)	30 (1.181)
SIZE 30	34 (1.338)	40 (1.575)
SIZE 50	52 (2.047)	65 (2.559)
SIZE 70	60 (2.362)	80 (3.150)
SIZE 100	100 (3.937)	130 (5.118)
SIZE 130	125 (4.921)	140 (5.512)

¹ : maximum conductor diameter

² : maximum inner die diameter



Special crossheads

PCD

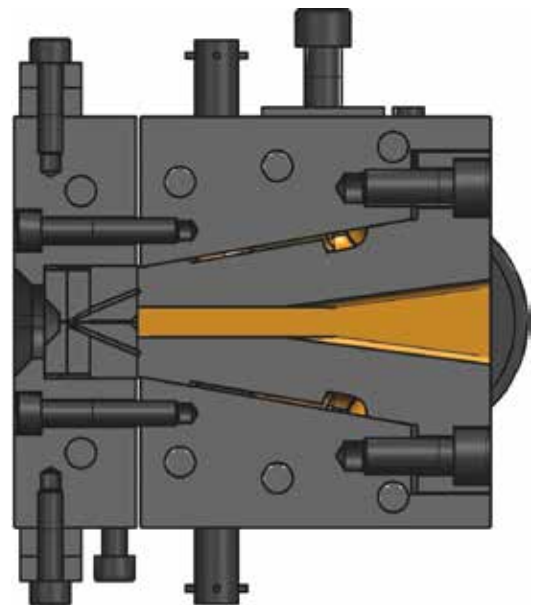
The Product Change Devices are specially designed for quick product changes. The crosshead has a fixed casing whereas all the internals can be exchanged.

FLAT PRODUCTS

Crossheads for flat cables are used for all flat, squared shaped products such as elevator cables or polymer straps.

CROSSHEADS w. HOLE DISTRIBUTOR

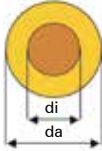
Crossheads with a heart-style distribution curve were long used for all standard extrusion products. Today there is a revival of this crosshead type because of its simplicity and easy handling.



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Crossheads for fluoro-polymers

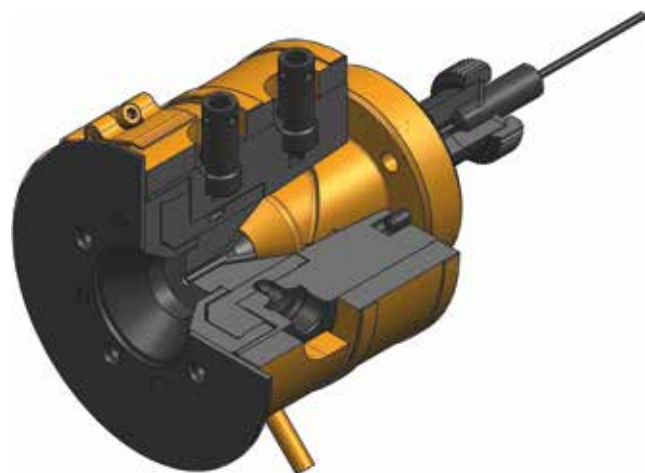
UNITEK is providing extrusion crossheads for fluoro-polymers since its very beginning. A special nickel based alloy combined to a unique heat treatment ensures a long lasting extrusion tool and highest product quality.



	di.max mm (inch) ¹	da.max mm (inch) ²
SIZE 1/7	1,0 (.039)	10,2 (.413)
SIZE 3/20	3 (.118)	20 (.787)
SIZE 7/20	7 (.276)	20 (.787)
SIZE 12/30	15 (.590)	36 (1.417)
SIZE 20/40	23 (.905)	40 (1.575)
SIZE 40/100	50 (1.968)	105 (4.134)

¹ : maximum conductor diameter

² : maximum inner die diameter



Crosshead options

We can provide a vast range of standard and custom made options for crossheads such as:

- distributors for special materials
- breaker plates
- extruder & crosshead adapters
- support trolleys
- frontheads & cartridges w. intermediate toolings
- crosshead w. thermal separation (TT)
- heating & cooling shells f. silicon applications
- cartridge exchange devices (CED) for an easy handling



Bypass systems

Bypass systems are used as 2 way valves for the deviation of the mass-flow during start-up, shut-down and for maintenance works with no need to turn-off the extruders.

MANUAL BYPASS

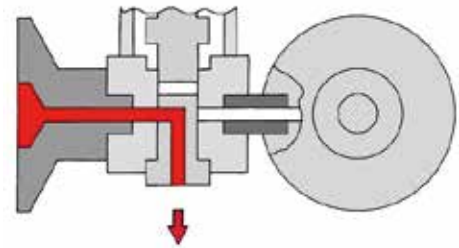
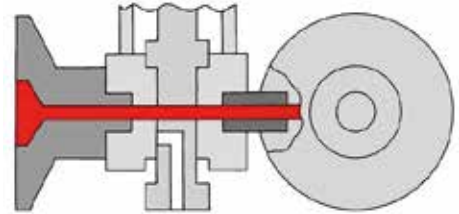
These are the most simple models available for extrusion lines with low working / bleeding switching cycles.

HYDRAULIC BYPASS

Hydraulic driven bypasses are used for production lines with high switching sequences in a fully automated environment (i.e. colour changing units).

OPTIONS

- pneumatic drive
- bore diameters acc. to the crosshead size
- short casings for narrow setups
- control cabinets



Colour changing systems

UNITEK quick colour changing systems (UFW) are used for the production of short and medium length products with the advantage of a continuous production. It consists in a fully automated combination of a crosshead, bypasses and colour changing units combined with a hydraulic drive and a dedicated control cabinet. Depending on the application these units can be fully integrated in the line control. The UFW system will be configured upon customer request as layer changing units, stripe or skin colour changers as well as with intermitting bypass function. A variety of around 24 preconfigured systems with up to 5 extruders is available.

OPTIONS

- support solutions
- control cabinets for full line integration
- hydraulic units



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Extrusion toolings

High quality extrusion toolings are essential for a perfect product quality. We can offer a wide range of standard toolings from size 4 up to size 140 as well as custom made ones ranging from profile toolings to special adapters as well as tool kits for flat heads.

Typically the following materials can be supplied:

- tool steel (ST)
- tool steel w. tungsten carbide inserts (ST+TC)
- fully tungsten carbide (TC)
- tool steel w. PCD inserts (DIA)
- nickel base alloy - UNALLOY (UN)



Cleaning & microfinishing systems

UNITEK developed years ago with partner companies efficient cleaning and surface treatment systems based on the media blasting technology. Carefully selected soft polymer granulate will be used for cleaning purposes in the UNICLEAN branded blasting cabinets. For critical polymers we then further recommend a MICROFINISH surface treatment by glass beads or a special surface coating.

OPTIONS

- turntables for easier parts handling
- screw support & handling devices

Parts refurbishing

As a part of a strategy for a more sustainable usage of raw materials and energy we are offering the refurbishing of used parts such as:

- bypasses
- colour changing systems
- extruder screws & barrels



Other products & services

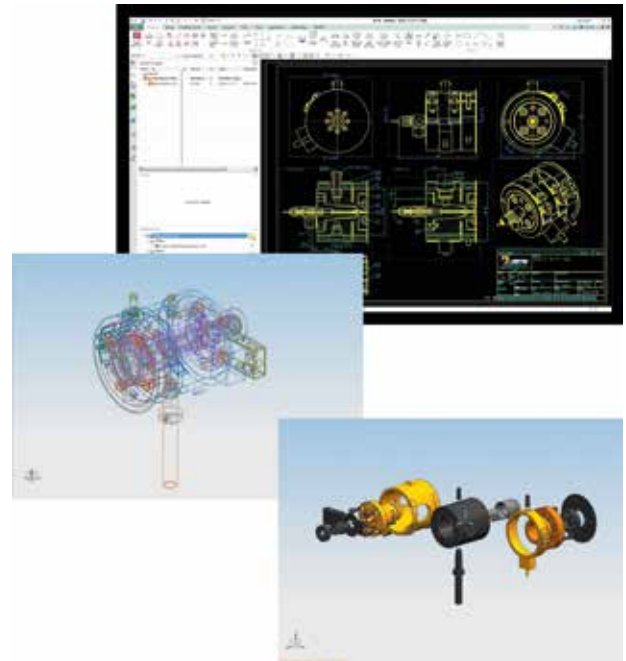
UPGRADES

You would like to increase your line speed? Do you want to reduce your scrap production? We are offering upgrades of any kind for existing extrusion lines such as:

- distributor modifications
- automation upgrades w. line integration
- line upgrades w. (co-) extruders
- line modifications f. quick colour changing applications

CONSULTING

Do you have a new product requirement? Do you need to modify your existing extrusion line? Or you simply want to reduce the total cost of ownership? Just ask our sales experts! UNITEK and our partner companies have more than 40 years of experience in the modification, upgrade & adaption of extrusion lines and processes.



Product & spare parts availability

For your efficient and cost effective production the head-quarter and our sales offices are offering a comprehensive stock of parts for a minimum line downtime. We also offer taylor made solutions for your spare part management and maintenance cycles. We guarantee a lifelong spare parts availability or an adequate upgrade for your extrusion equipment.

Quality management & documentation

As a manufacturer and reseller of high-end extrusion tools and equipment we are driven by the highest quality standards. All products leaving our factory are submitted to severe internal quality checks and tests - quality check documentation will be submitted on request. A comprehensive documentation, user and parts manuals are delivered for each of our projects and stored lifelong in our archives.

Do not hesitate to contact our sales team for any question or concern. Please check our homepage at www.unitek.at for the latest news, exhibitions & contact information.



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THE COMPANY AT A GLANCE

UNITEK is the worldwide leading manufacturer of fixed centered crossheads and add-on extrusion equipment for the wire and cable industry. The company was founded in 1979 and has been ever since dedicated to provide innovative solutions for increased productivity to the extrusion industry around the world. Close contacts with cable and machinery manufacturers, highest design and quality standards,

innovative product developments as well as state-of-the-art manufacturing facilities have been the basis of UNITEK's philosophy from the very beginning. The UNITEK team of engineers, technicians & sales agents has a very strong background in the extrusion and cable industry and is dedicated to provide cutting-edge solutions for the requirements encountered by today's cable industry.

- Crossheads and extrusion equipment
- Special steel and nickel based alloys with unique heat treatment and surface technology
- Extreme durability with lifetimes up to 60.000 hours of operation
- Close to zero scrap production because of minimal production tolerances
- Unrivalled concentricity levels for reduced cost of materials
- Over 20 worldwide patents
- Hundreds of satisfied customers worldwide



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