

# POLYURETHANE FLAT BELTS in many different variations



**BLACK FLAT flat belts are finite, extruded belts made from high-strength polyurethane that are primarily used in lifting and conveyor applications.**

Our flat belts are adapted to a wide variety of mechanical requirements. Thanks to combinations of different types of polyurethane and cords, we can offer a broad assortment.

For use in food environments, Black Flats with FDA and EU food approval are available on request.

The belts can be fastened with clamping plates or the FIX FLAT system.

## Highlights

- Particularly suitable for lifting applications with heavy loads or conveyor applications
- For applications with small travel diameters
- Smooth, low-vibration running
- High strength with little stretching
- Sealed belt edges prevent the escape of cords

# Overview and BFL20 flat belts

## Overview

	Cords	Belt thickness [mm]	Standard roller length [m]	Minimum permissible diameter [mm]	Minimum diameter for tensioning plate on back of belt [mm]	
BFL20	Steel cords	2	100	45	67.5	
BFL20 ARAMID	Aramid cords					
BFL20 HF	Highly flexible steel cords					
BFL20 RSL	Reinforced steel cords			48		72
BFL20 RKV	Reinforced aramid cords					
BFL20 RHF	Reinforced, highly flexible steel cords			38		57
BFL20 NIRO	Stainless steel cords			64		96
BFL32	Steel cords	3.2	100	60	120	
BFL32 ARAMID	Aramid cords					
BFL32 HF	Highly flexible steel cords					
BFL32 RSL	Reinforced steel cords			80		120
BFL32 RKV	Reinforced aramid cords					
BFL32 RHF	Reinforced, highly flexible steel cords			64		96
BFL38	Steel cords	3.8	50	160	240	
BFL48	Steel cords	4.8	50	150	225	

BFL20 (steel cords)					
Standard width [mm]	25	50	75	100	150
Breaking strength $F_{Break}$ [N] Mean value	7,140	14,700	22,260	29,820	44,940
Permissible load side force $F_{1perm}$ [N] Open	2,386	4,912	7,438	9,963	15,015
Permissible load side force $F_{1perm}$ [N] Sealed	1,193	2,456	3,719	4,982	7,508
Specific belt rigidity $C_{sp}$ [N]	477,125	982,316	1,487,507	1,992,699	3,003,081

BFL20 ARAMID (aramid cords)					
Standard width [mm]	25	50	75	100	150
Breaking strength $F_{Break}$ [N] Mean value	8,085	16,709	25,333	33,957	51,205
Permissible load side force $F_{1perm}$ [N] Open	1,329	2,747	4,165	5,583	8,419
Permissible load side force $F_{1perm}$ [N] Sealed	665	1,374	2,083	2,792	4,210
Specific belt rigidity $C_{sp}$ [N]	265,875	549,475	833,075	1,116,675	1,683,875

# BFL20 flat belts

<b>BFL20 HF</b> (highly flexible steel cords)					
Standard width [mm]	25	50	75	100	150
Breaking strength $F_{Break}$ [N] Mean value	10,540	21,700	32,860	44,020	66,340
Permissible load side force $F_{1perm}$ [N] Open	2,925	6,022	9,119	12,216	18,410
Permissible load side force $F_{1perm}$ [N] Sealed	1,463	3,011	4,560	6,108	9,205
Specific belt rigidity $C_{sp}$ [N]	585,000	1,204,412	1,823,824	2,443,235	3,682,059

<b>BFL20 RSL</b> (reinforced steel cords)					
Standard width [mm]	25	50	75	100	150
Breaking strength $F_{Break}$ [N] Mean value	14,250	29,450	44,650	59,850	90,250
Permissible load side force $F_{1perm}$ [N] Open	4,676	9,664	14,652	19,640	29,616
Permissible load side force $F_{1perm}$ [N] Sealed	2,338	4,832	7,326	9,820	14,808
Specific belt rigidity $C_{sp}$ [N]	935,250	1,932,850	2,930,450	3,928,050	5,923,250

<b>BFL20 RKV</b> (reinforced aramid cords)					
Standard width [mm]	25	50	75	100	150
Breaking strength $F_{Break}$ [N] Mean value	16,158	33,449	50,713	67,977	102,505
Permissible load side force $F_{1perm}$ [N] Open	2,188	4,521	6,854	9,188	13,854
Permissible load side force $F_{1perm}$ [N] Sealed	1,094	2,260	3,427	4,594	6,927
Specific belt rigidity $C_{sp}$ [N]	437,500	904,167	1,370,833	1,837,500	2,770,833

<b>BFL20 RHF</b> (reinforced highly flexible steel cords)					
Standard width [mm]	25	50	75	100	150
Breaking strength $F_{Break}$ [N] Mean value	12,975	26,815	40,655	54,495	82,175
Permissible load side force $F_{1perm}$ [N] Open	4,320	8,928	13,536	18,144	27,360
Permissible load side force $F_{1perm}$ [N] Sealed	2,160	4,464	6,768	9,072	13,680
Specific belt rigidity $C_{sp}$ [N]	864,000	1,785,600	2,707,200	3,628,800	5,472,000

<b>BFL20 NIRO</b> (stainless steel cords)					
Standard width [mm]	25	50	75	100	150
Breaking strength $F_{Break}$ [N] Mean value	10,688	22,088	33,488	44,888	67,688
Permissible load side force $F_{1perm}$ [N] Open	3,507	7,248	10,989	14,730	22,212
Permissible load side force $F_{1perm}$ [N] Sealed	1,754	3,624	5,495	7,365	11,106
Specific belt rigidity $C_{sp}$ [N]	701,438	1,449,639	2,197,839	2,946,040	4,442,441

# BFL32 flat belts

<b>BFL32 (steel cords)</b>					
Standard width [mm]	25	50	75	100	150
Breaking strength $F_{Break}$ [N] Mean value	7,140	14,700	22,260	29,820	44,940
Permissible load side force $F_{1perm}$ [N] Open	2,386	4,912	7,438	9,963	15,015
Permissible load side force $F_{1perm}$ [N] Sealed	1,193	2,456	3,719	4,982	7,508
Specific belt rigidity $C_{sp}$ [N]	477,125	982,316	1,487,507	1,992,699	3,003,081

<b>BFL32 ARAMID (aramid cords)</b>					
Standard width [mm]	25	50	75	100	150
Breaking strength $F_{Break}$ [N] Mean value	8,085	16,709	25,333	33,957	51,205
Permissible load side force $F_{1perm}$ [N] Open	1,329	2,747	4,165	5,583	8,419
Permissible load side force $F_{1perm}$ [N] Sealed	665	1,374	2,083	2,792	4,210
Specific belt rigidity $C_{sp}$ [N]	265,875	549,475	833,075	1,116,675	1,683,875

<b>BFL32 HF (highly flexible steel cords)</b>					
Standard width [mm]	25	50	75	100	150
Breaking strength $F_{Break}$ [N] Mean value	10,540	21,700	32,860	44,020	66,340
Permissible load side force $F_{1perm}$ [N] Open	2,925	6,022	9,119	12,216	18,410
Permissible load side force $F_{1perm}$ [N] Sealed	1,463	3,011	4,560	6,108	9,205
Specific belt rigidity $C_{sp}$ [N]	585,000	1,204,412	1,823,824	2,443,235	3,682,059

<b>BFL32 RSL (reinforced steel cords)</b>					
Standard width [mm]	25	50	75	100	150
Breaking strength $F_{Break}$ [N] Mean value	24,220	50,170	76,120	102,070	153,970
Permissible load side force $F_{1perm}$ [N] Open	7,325	15,173	23,021	30,870	46,566
Permissible load side force $F_{1perm}$ [N] Sealed	3,663	7,587	11,511	15,435	23,283
Specific belt rigidity $C_{sp}$ [N]	1,465,000	3,034,643	4,604,286	6,173,929	9,313,214

<b>BFL32 RKV (reinforced aramid cords)</b>					
Standard width [mm]	25	50	75	100	150
Breaking strength $F_{Break}$ [N] Mean value	21,789	45,153	65,508	91,863	138,573
Permissible load side force $F_{1perm}$ [N] Open	2,188	4,531	9,219	13,906	
Permissible load side force $F_{1perm}$ [N] Sealed	1,094	2,266	3,438	4,609	6,953
Specific belt rigidity $C_{sp}$ [N]	437,500	906,250	1,375,000	1,843,750	2,781,250

# BFL32, BFL38 and BFL48 flat belts

<b>BFL32 RHF</b> (reinforced, highly flexible steel cords)					
Standard width [mm]	25	50	75	100	150
Breaking strength $F_{\text{Break}}$ [N] Mean value	26,950	55,825	84,700	113,575	171,325
Permissible load side force $F_{1\text{perm}}$ [N] Open	6,349	13,151	19,953	26,755	40,360
Permissible load side force $F_{1\text{perm}}$ [N] Sealed	3,174	6,575	9,977	13,378	20,180
Specific belt rigidity $C_{\text{sp}}$ [N]	1,269,750	2,630,196	3,990,643	5,351,089	8,071,982

<b>BFL38</b> (steel cords)					
Standard width [mm]	25	50	75	100	150
Breaking strength $F_{\text{Break}}$ [N] Mean value	33,600	70,400	107,200	144,000	217,600
Permissible load side force $F_{1\text{perm}}$ [N] Open	8,892	19,563	29,345	40,016	60,469
Permissible load side force $F_{1\text{perm}}$ [N] Sealed	4,446	9,782	14,673	20,008	30,234
Specific belt rigidity $C_{\text{sp}}$ [N]	1,778,498	3,912,696	5,869,043	8,003,241	12,093,786

<b>BFL48</b> (steel cords)					
Standard width [mm]	25	50	75	100	150
Breaking strength $F_{\text{Break}}$ [N] Mean value	45,000	97,500	150,000	202,500	307,500
Permissible load side force $F_{1\text{perm}}$ [N] Open	13,378	28,986	44,594	60,201	91,417
Permissible load side force $F_{1\text{perm}}$ [N] Sealed	6,689	14,493	22,297	30,101	45,709
Specific belt rigidity $C_{\text{sp}}$ [N]	2,675,622	5,797,181	8,918,740	12,040,299	18,283,417

## FIX FLAT connection

You can fasten all flat belts quickly, easily and safely with this patented development. The fastening is possible for all BLACK FLAT flat belts in their different variations.

**We would be happy to help and advise you with your individual dimensioning requirements.**

